



Episode Quality Payment Program Episode Playbook

Prometheus Episode Definition Summaries

Version 2

Updated: July 12th, 2022

DISCLAIMER: These episode summaries are provided to illustrate episode construction and help EQIP participants understand what is included in episode costs. Direct recreation of episodes will not be possible from these summaries. The codes included in each episode are independently developed and verified by Change Healthcare.

Outline

1) Episode Components Key

2) Performance Year Two (2023) Prometheus Episodes of Care

- | | |
|---|---|
| 1. <u>Acute Myocardial Infarction (AMI)</u> | 15. <u>Hip/ Pelvic Fracture (HIPLFR)</u> |
| 2. <u>Allergic Rhinitis/Chronic Sinusitis (RHNTS)</u> | 16. <u>Hip Replacement & Hip Revision (HIPRPL)</u> |
| 3. <u>Asthma (ASTHMA)</u> | 17. <u>Knee Arthroscopy (KNARTH)</u> |
| 4. <u>CABG &/or Valve Procedures (CxCABG)</u> | 18. <u>Knee Replacement & Knee Revision (KNRPL)</u> |
| 5. <u>Cataract Surgery (CTRTSU)</u> | 19. <u>Low Back Pain (LBP)</u> |
| 6. <u>Catheter Associate UTIs (CTHUTI)</u> | 20. <u>Lumbar Laminectomy (LBRLAM)</u> |
| 7. <u>Cellulitis, Skin Infection (CELUTS)</u> | 21. <u>Lumbar Spine Fusion (FUSION)</u> |
| 8. <u>Colonoscopy (COLOS)</u> | 22. <u>Osteoarthritis (OSTEOA)</u> |
| 9. <u>Colorectal Resection (COLON)</u> | 23. <u>Pacemaker/ Defibrillator (PCMDFR)</u> |
| 10. <u>Coronary Angioplasty (PCI)</u> | 24. <u>Prostatectomy (PRSCMY)</u> |
| 11. <u>Decubitus Ulcer (DECUB)</u> | 25. <u>Shoulder Replacement (SHLDRP)</u> |
| 12. <u>Dermatitis, Urticaria (DRMTIS)</u> | 26. <u>Transurethral Resection Prostate (TURP)</u> |
| 13. <u>Gall Bladder Surgery (GBSURG)</u> | 27. <u>Upper GI Endoscopy (EGD)</u> |
| 14. <u>Glaucoma (GLCOMA)</u> | 28. <u>Urinary Tract Infection (UTI)</u> |

3) Performance Year Two (2023) Non-Prometheus Episodes of Care

1. Emergency Department Episodes

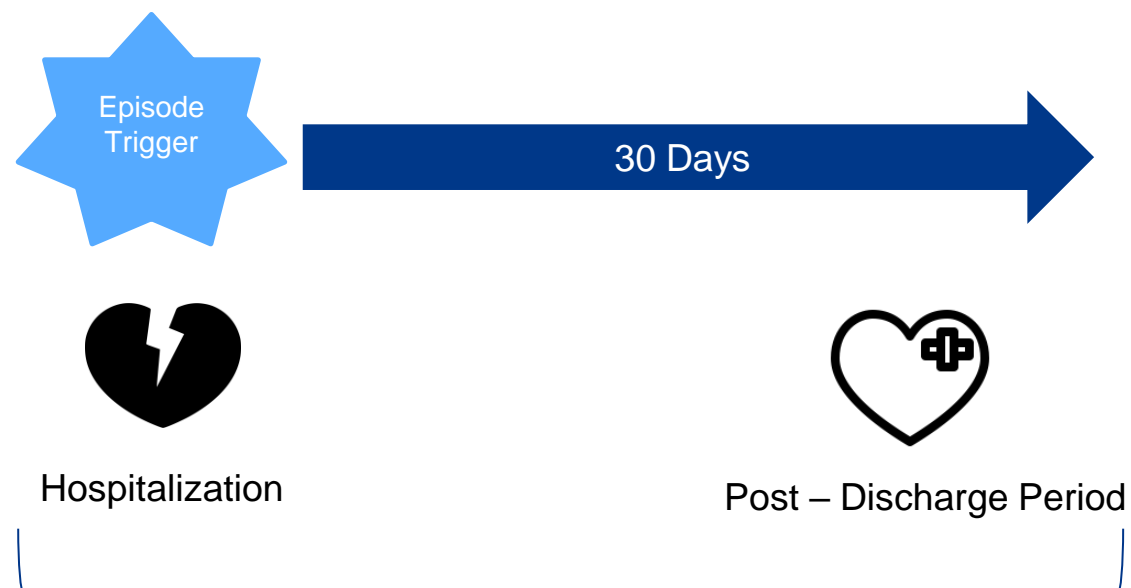
Episode Components Key

Trigger Codes	Codes that, when coupled with a trigger diagnosis and meet trigger criteria, indicate an episode exists.
Trigger Diagnoses	Descriptive diagnoses codes that must be present on the claim with a 'Trigger Code' in order for an episode to initiate.
Relevant Procedures	These include all services that are relevant to a given episode but would only be included in the episode if they have a relevant diagnosis code on the claim.
Relevant Diagnoses	These are diagnosis codes that could steer services to an episode's costs. These have been clinically validated to identify claims that are for routine/typical care for an episode and include codes that represent signs and symptoms related to the episode, diagnosis codes for similar conditions, status codes, family history codes or for aftercare.
Complications	Codes that indicate the occurrence of complication care and potentially avoidable episode complication (PAEC) during the episode time window.

Acute Myocardial Infarction (AMI)

An Acute Myocardial Infarction Episode needs longer term treatment and secondary prevention for successful management of AMI patients. Services with diagnosis codes for signs and symptoms related to underlying coronary artery disease such as chest pain or shortness of breath, and for care of other associated conditions such as hypertension and hyperlipidemia, have been defined as typical care for AMI. Secondary diagnoses on the index AMI stay or other services for conditions such as unstable angina, fluid and electrolyte disturbances, and stroke have been labeled as complications. The AMI episode is first constructed with the index hospitalization and the 30-day post-discharge services bundled together.

Episode Length – AMI



Total Episode Cost = All expected services and complication costs associated from index hospitalization until the end of the post-trigger window.

Duration Pre-Trigger Window	Duration Post-Trigger Window
N/A	30 Days

Episode Triggers – AMI

Trigger Group Name	Code Type	Codes
STEMI	ICD10	I2101-I2130
Subendocardial Infarct	ICD10	I214

Trigger Diagnoses – ICD-10

STEMI

Subendocardial Infarct

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	E & M - home visit	Imaging - nuclear - kidney - radiopharmaceutical	Lab - cytology
Alcohol / Drug Use Management	E & M - hospital	Imaging - nuclear - kidney - scan	Lab - endocrine
Alcohol / Drug Use Screening	E & M - nursing home	Imaging - nuclear - localization of inflammation	Lab - endocrine response test
Ancillary Services	E & M - other	Imaging - nuclear - lung scan	Lab - genetic testing - brugada syndrome
Anti-TNF agents	E & M - prevention	Imaging - nuclear - lymphatics	Lab - genetic testing - cardiac ion channel syndrome
Aortic resection, replacement or anastomosis	Electrocardiogram - EKG monitoring	Imaging - nuclear - other	Lab - gi - fat absorption
Bleeding Status	Electrophysiology Studies, Cryoablation	Imaging - nuclear - other - automated data add - on	Lab - hematology - blood count
Blood Count	HbA1C	Imaging - nuclear - other blood / related	Lab - hematology - blood count - eosinophil count
Blood Gases, Pulse Oximetry	Hearing Test	Imaging - nuclear - other musculoskeletal	Lab - hematology - coagulation
Blood transfusion	Heart Echo / Ultrasound	Imaging - nuclear - platelet kinetics	Lab - immunology
Blood Type, Coomb's test	Heart valve procedures	Imaging - nuclear - radiopharmaceutical - radiopharmaceutical - other	Lab - infectious agent antibody
Bundled Payment / Medical Home	Hepatitis B vaccine	Imaging - nuclear - red cell survival	Lab - infectious agent antigen
Cardiac cath & Angiogram	High dose steroids	Imaging - nuclear - shilling test - radiopharmaceutical	Lab - infectious agent dna
Cardiac Stress Test	Home Health / Hospice	Imaging - nuclear - thyroid - radiopharmaceutical	Lab - microbiology
Care Plan Oversight	Home Health Services	Imaging - nuclear - tumor localization	Lab - microbiology - c & s
Case Management Services	Hormone Therapy	Imaging - nuclear - venous thrombosis - radiopharmaceutical	Lab - microbiology - microscopic exam
Case Management Services - Behavioral	HPV VACCINE	Imaging - nuclear - venous thrombosis - scan	Lab - microbiology - other
Case Management Services - Maternity	Imaging - arteriography - extremities	Imaging - other imaging	Lab - microbiology - viral culture
CHEMOTHERAPY	Imaging - arteriography - other	Imaging - other imaging - fluoroscopy	Lab - microscopic - koh prep
Chest X-Ray	Imaging - arteriography - renal	Imaging - other imaging - fluoroscopy - guidance	Lab - microscopic - wet mount
CHLAMYDIA SCREENING	Imaging - ct - aorta	Imaging - pet - colorectal cancer - recurrence / metastasis	Lab - other clinical lab
Chronic Care Management	Imaging - ct - cardiac	Imaging - pet - lymphoma - staging	Lab - other hematology
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - ct - chest	Imaging - pet - other	Lab - pathology consultation
Coordinated Care Fees/Services	Imaging - ct - follow - up	Imaging - pet - tumor imaging	Lab - specimen collection - blood - arterial - arterial puncture
Coronary Thrombolysis	Imaging - ct - guidance	Imaging - supplies - contrast agent - high osmolar	Lab - specimen collection - blood - venous - venipuncture
Counseling Services	Imaging - ct - head / brain	Imaging - supplies - contrast agent - low osmolar	Lab - specimen collection - blood - venous - venous port
Diagnostic bronchoscopy and biopsy of bronchus	Imaging - ct - other	Imaging - supplies - ultrasound related	Lab - specimen collection - specimen handling
Diagnostic physical therapy	Imaging - cta - aorta	Imaging - therapeutic procedure - abscess drainage	Lab - specimen collection - urine
Diagnostic ultrasound of abdomen or retroperitoneum	Imaging - cta - chest	Imaging - therapeutic procedure - other therapeutic procedure	Lab - stat request
Diagnostic ultrasound of heart (echocardiogram)	Imaging - cta - coronary	Imaging - us - extremity	Lab - surgical pathology
DME - bath / toilet aids	Imaging - cta - head / neck	Imaging - us - eye	Lab - therapeutic drug assay
DME - beds / accessories	Imaging - mra - chest	Imaging - us - guide - biopsy	Lab - tissue typing
DME - heat/cold application	Imaging - mra - head	Imaging - us - guide - other	Lab - transfusion medicine
DME - mobility aids	Imaging - mri - brain	Imaging - us - head / neck	Lab - urinalysis
DME - other	Imaging - mri - chest	Imaging - us - intravascular	Laboratory - Chemistry and Hematology
DME - patient lifts	Imaging - mri - contrast agent	Imaging - us - other	LEAD SCREENING
DME - repair / maintenance	Imaging - mri - guidance	Imaging - us - retroperitoneum	Lipid Level Monitoring
DME - restraints	Imaging - mri - lower extremity	Imaging - venography - other	Low dose steroids
DME - safety equipment	Imaging - mri - other	Imaging - x-ray - other - joint survey	Lung Function Tests
DME - traction	Imaging - nuclear - bladder / ureter	Imaging - x-ray - ribs	LVEF < 40% or LV systolic dysfunction
DME - trapeze / other orthopedic device	Imaging - nuclear - blood / plasma volume - radiopharmaceutical	Imaging Abdomen	Magnetic resonance imaging
DME - whirlpool - equipment	Imaging - nuclear - blood / plasma volume - scan	IMMUNOTHERAPY	Markers for Inflammation
DME - wound therapy	Imaging - nuclear - bone scan - radiopharmaceutical	Insertion, revision, replacement, removal of cardiac pacemaker or cardioverter/d	Medication Assisted Management (MAT)
DME and supplies	Imaging - nuclear - brain - radiopharmaceutical	Lab - blood gases	Medication Therapy Management Services
Drug Delivery implantation	Imaging - nuclear - csf - radiopharmaceutical	Lab - chemistry	Medications (Injections, infusions and other forms)
E & M - consultation	Imaging - nuclear - csf - scan	Lab - chemistry and toxicology tests	Metabolic Renal Hepatic Chemistry Panel
E & M - emergency care	Imaging - nuclear - hepatobiliary ductal scan - radiopharmaceutical	Lab - cytogenetics	NewBorn Blood Tests

Relevant Procedures – CPT / HCPCS, ICD-10

Online Management	Other care - nutrition - enteral - pump	Pacemaker Defibrillator Check	Procedure - pacemaker / defibrillator - transcutaneous pacing
Opioid Administration / Dispensing (OTP)	Other care - nutrition - enteral - tubing	Pathology	Procedure - pericardiocentesis
Other - non - covered	Other care - nutrition - medical food	Peer Services	Procedure - peripheral nerve repair / graft - graft / guide
Other care - bladder / bowel care - catheter	Other care - nutrition - parenteral	Personal Care Services	Procedure - peripheral venous catheter
Other care - bladder / bowel care - drainage bag	Other care - nutrition - parenteral - nutrition solution	Physical Therapy / Rehab	Procedure - related supplies - ablation - catheter
Other care - bladder / bowel care - other supplies	Other care - nutrition - parenteral - pump	Physician Services	Procedure - related supplies - access catheter
Other care - bladder / bowel care - other supplies - diaper / related	Other care - observation	Physician Services - Inpatient	Procedure - related supplies - catheter
Other care - bladder / bowel care - other supplies - skin barrier	Other care - other	Physician Services - Outpatient	Procedure - related supplies - dilation / stenting
Other care - chronic edema - appliance - limb compression	Other care - other - ancillary services	PQRI	Procedure - related supplies - drainage
Other care - chronic edema - appliance - non - segmental	Other care - other - education	Preventive Medicine, Care Coordination	Procedure - related supplies - graft - tendon repair
Other care - chronic edema - appliance - segmental	Other care - other - exercise classes	Procedure - anesthesia	Procedure - related supplies - graft / repair
Other care - chronic edema - compression stocking	Other care - other - external counterpulsation	Procedure - anesthesia - related supplies	Procedure - related supplies - implant
Other care - chronic edema - compressor	Other care - other - external defibrillator	Procedure - artery - abdomen - angioplasty - transluminal / percutaneous	Procedure - related supplies - other
Other care - chronic edema - compressor - non - segmental	Other care - other - infection control	Procedure - artery - abdomen - atherectomy - transluminal / percutaneous	Procedure - related supplies - resection - morcellator
Other care - chronic edema - compressor - segmental	Other care - other - irrigation	Procedure - artery - extremity - angioplasty - transluminal / percutaneous	Procedure - related supplies - retrieval - device
Other care - chronic edema - surgical stockings	Other care - other - lodging	Procedure - artery - extremity - atherectomy - transluminal / percutaneous	Procedure - sedation
Other care - diabetes care - glucose monitoring	Other care - other - meals	Procedure - artery - nos - angioplasty / stenting	Procedure - spinal canal - catheter
Other care - diabetes care - insulin pump	Other care - other - medical records	Procedure - artery - nos - atherectomy - catheter	Procedure - suture - skin - repair of superficial wound
Other care - home care - emergency response system	Other care - other - pacemaker - monitor	Procedure - artery - nos - thrombolysis	Procedure - thyroid ablation - radionuclide
Other care - home care - home health aide	Other care - other - pvd - compressor	Procedure - artery / vein - nos - closure / closure device	Procedure - vascular - occlusion / embolization - transcatheter
Other care - home care - meals	Other care - other - weight management	Procedure - artery / vein - nos - other	Procedure - vascular - related supplies - angioplasty
Other care - home care - nursing care	Other care - pain management - pca / related	Procedure - artery / vein - nos - thrombectomy catheter	Procedure - vascular - related supplies - atherectomy
Other care - home care - nursing care - lpn	Other care - prevention - smoking cessation	Procedure - biopsy - endocardium	Procedure - vascular - related supplies - embolization protective system
Other care - home care - nursing care - np	Other care - respiratory - equipment / supplies	Procedure - block - nerve	Procedure - vascular - related supplies - graft material
Other care - home care - nursing care - rn	Other care - respiratory - equipment / supplies - apnea monitor	Procedure - bronchoscopy - dx + / - wash / brushing - bronchoscopy - dx + / - wa	Procedure - vascular - related supplies - occlusion catheter
Other care - home care - other care	Other care - respiratory - equipment / supplies - cpap	Procedure - bronchoscopy - other	Procedure - vascular access - port / pump - insertion
Other care - home care - other care - attendant care	Other care - respiratory - equipment / supplies - ippb	Procedure - bronchoscopy w / alveolar lavage	Procedure - vein - nos - angioplasty
Other care - home care - other care - chore care	Other care - respiratory - equipment / supplies - nebulizer	Procedure - bronchoscopy w / biopsy	Procedure - vein - vena cava - filter
Other care - home care - other care - companion care	Other care - respiratory - equipment / supplies - peak flow meter	Procedure - cardiac - other	Procedures and Reporting
Other care - home care - other care - day care	Other care - respiratory - equipment / supplies - spirometer	Procedure - cardiac - other or	Prophylactic vaccinations and inoculations
Other care - home care - other care - homemaker	Other care - respiratory - equipment / supplies - ventilator	Procedure - cardiac assist device - intra - aortic balloon	Prosthetics - other
Other care - home care - other care - respite care	Other care - respiratory - other	Procedure - cardiac assist device - lvad	Psychiatry Evaluations
Other care - home care - physician supervision	Other care - respiratory - oxygen / oxygen concentrator	Procedure - cardioversion	Psychiatry Services
Other care - home care - rehabilitation - occupational therapy	Other care - respiratory - tracheostomy care	Procedure - catheter - arterial - arterial line for monitoring	Psychological and psychiatric evaluation and therapy
Other care - home care - rehabilitation - physical therapy	Other care - respiratory - ventilator management	Procedure - central venous catheter - fluoroscopy - guidance	RADIATION TREATMENTS
Other care - home care - social worker	Other care - respiratory therapy	Procedure - central venous catheter - insertion	Risk Assessment
Other care - home care - specialized visit	Other care - wound care	Procedure - central venous catheter - repair / maintenance	Routine Immunizations
Other care - home care - training	Other care - wound care - electromagnetic therapy	Procedure - chest tube / thoracentesis - insertion of chest tube	Rx - administration - infusion
Other care - hospice	Other care - wound care - growth factor	Procedure - chest tube / thoracentesis - thoracentesis	Rx - administration - injection
Other care - long term care - assisted living	Other care - wound care - hyperbaric oxygen	Procedure - coronary - ptca - stent	Rx - allergy - antihistamines / comb
Other care - long term care - residential care	Other diagnostic cardiovascular procedures	Procedure - coronary - debriement of nails	Rx - analg/antipy/nsaids - narcotics
Other care - nutrition - assessment	Other diagnostic procedures (interview, evaluation, consultation)	Procedure - extracorporeal circulation	Rx - analg/antipy/nsaids - nsaids
Other care - nutrition - counseling - dietician	Other diagnostic ultrasound	Procedure - graft - skin - graft material	Rx - antibiotics - aminoglycosides
Other care - nutrition - education	Other Laboratory	Procedure - maintenance - cns / spinal pump / port	Rx - antibiotics - anti-infectives, misc
Other care - nutrition - enteral	Other non-OR therapeutic cardiovascular procedures	Procedure - ortho - related supplies - other	Rx - antibiotics - cephalosporins
Other care - nutrition - enteral - administration	Other OR heart procedures	Procedure - other anal / rectal procedures - other procedures - rectum / anus	Rx - antibiotics - chloramphenicol / comb
Other care - nutrition - enteral - formula	Other OR procedures on vessels other than head and neck	Procedure - other non - or rx - other non - or skin procedures	Rx - antibiotics - macrolides

Relevant Procedures – CPT / HCPCS, ICD-10

Rx - antibiotics - penicillins	Rx - electrolytic, caloric, water - caloric rx, amino acid prep	Tests - cardiac - analysis - pace / defib	Therapy - habilitation
Rx - antibiotics - quinolones	Rx - electrolytic, caloric, water - hydration - unspecified	Tests - cardiac - doppler	Therapy - hyperbaric oxygen
Rx - antibiotics - sulfonamides / comb	Rx - electrolytic, caloric, water - multi-mineral prep	Tests - cardiac - ecg - ecg - 12 lead	Therapy - neurostimulator - incontinence
Rx - antibiotics - tetracyclines	Rx - electrolytic, caloric, water - potassium supp	Tests - cardiac - ecg - other	Therapy - neurostimulator - other
Rx - antibiotics / antivirals / antifungals - infusion	Rx - electrolytic, caloric, water - replacement preparations, misc	Tests - cardiac - ecg monitoring - event recorder	Therapy - neurostimulator - tens - device
Rx - antibiotics, misc	Rx - electrolytic, caloric, water - sodium chlor preps	Tests - cardiac - echo - contrast agent	Therapy - neurostimulator - tens - leads
Rx - antidiabetic rx - insulins	Rx - endocrine - other - parathyroid hormones	Tests - cardiac - echo - intracardiac	Therapy - neurostimulator - tens - supplies
Rx - antifungals	Rx - gi - antichol/antispasmodics	Tests - cardiac - electrophysiology - other	Therapy - other
Rx - antivirals	Rx - gi - antiemetics	Tests - cardiac - electrophysiology - supplies - other	Therapy - phlebotomy
Rx - autonomic rx - nicotine preps	Rx - gi - h2 antagonists	Tests - cardiac - electrophysiology - tilt table evaluation	Therapy - pt - exercises / activities
Rx - autonomic rx - parasympathomimetics	Rx - gi - ppis	Tests - cardiac - monitoring - chf	Therapy - pt - modalities
Rx - autonomic rx - sympathomimetic rx	Rx - gi drug misc,nec	Tests - cardiac - other	Therapy - rehabilitation
Rx - b-lactam antibiotics	Rx - gu - other - bladder rx	Tests - cardiac - radiopharmaceuticals	Therapy - rehabilitation - other
Rx - blood derivatives	Rx - hematopoietic system - hematopoietic growth factors	Tests - cardiac - swan ganz	Therapy - transfusion - administration
Rx - cardiovascular system - antiarrhythmic rx	Rx - hematopoietic system - iron / related	Tests - cardiac stress tests - cardiac perfusion scan - rest / exercise	Therapy - transfusion - blood
Rx - cardiovascular system - beta blockers	Rx - hematopoietic system - other	Tests - cardiac stress tests - cardiac stress tests - other	Therapy - transfusion - granulocytes
Rx - cardiovascular system - cardiac drugs	Rx - immune system - dmard / related	Tests - cardiovascular - other	Therapy - transfusion - plasma
Rx - cardiovascular system - cardiac glycosides	Rx - immune system - interferons	Tests - ent - other dx	Therapy - transfusion - platelets
Rx - cardiovascular system - hypotensive rx	Rx - miscellaneous rx	Tests - eye - dx - other	Therapy - ultraviolet light therapy
Rx - cardiovascular system - natriuretic peptides	Rx - miscellaneous rx - anesthetics, local	Tests - gi - other dx	Therapy - vaccination - chicken pox
Rx - cardiovascular system - vasodilating agents, nec	Rx - miscellaneous rx - enzymes	Tests - gu - post void residual / bladder capacity	Therapy - vaccination - dtp / related
Rx - cardiovascular system - vasodilating rx	Rx - muscle relaxants - muscle relax, neuromusc block	Tests - gu - urodynamics - voiding pressure	Therapy - vaccination - hepatitis a vaccine
Rx - central nervous system - anticonvulsants	Rx - muscle relaxants - muscle relax, skeletal central	Tests - neuro - eeg	Therapy - vaccination - hepatitis b
Rx - central nervous system - antidepressants	Rx - muscle relaxants - muscle relax, skeletal, misc	Tests - neuro - evoked potentials	Therapy - vaccination - hib vaccine
Rx - central nervous system - anxiolytic/sedative/hypnot nec	Rx - other	Tests - neuro - muscle testing	Therapy - vaccination - mmr / related
Rx - central nervous system - barbiturates	Rx - pharmacy fee	Tests - neuro - ncv / emg	Therapy - vaccination - other vaccine
Rx - central nervous system - benzodiazepines	Rx - reproductive system - progestins	Tests - neuro - other	Therapy - vaccination - poliovirus vaccine
Rx - central nervous system - non-amphetamine stimulants	Rx - respiratory - beta agonists	Tests - neuro - sleep studies	Therapy - vaccination - vaccine administration
Rx - central nervous system - symnpatholytic rx	Rx - respiratory - methylxanthines	Tests - other cardiac scans	Thyroid Function Tests
Rx - central nervous system - tranq/antipsychotics	Rx - respiratory - mucolytics/cold comb	Tests - other cardiac scans - infarct scan	Traction, splints, and other wound care
Rx - central nervous system - vascular 5ht1 agonists	Rx - respiratory - phenylephrine	Tests - pulmonary - other	Transitional Care Management
Rx - coagulation system - anticoagulants	Rx - serums, toxoids, vaccines - serums	Tests - pulmonary - peak flow	Transportation - other transportation
Rx - coagulation system - antiheparin agnt	Rx - serums, toxoids, vaccines - toxins	Tests - vascular - arterial - extremity	Transportation - paramedic
Rx - coagulation system - antiplatelet rx	Rx - skin / mucous membrane - antiinflam s/mm agnts / comb nec	Tests - vascular - cerebrovascular	Ungrouped Codes
Rx - coagulation system - hemostatics	Rx - skin / mucous membrane - s/mm miscellaneous	Tests - vascular - other	Upper GI endoscopy
Rx - coagulation system - thrombolytic rx	Rx - vitamins - multivit prep	Tests - vascular - venous	Urine Protein
Rx - diagnostic rx - gastric function	Rx - vitamins - vitamin b / b complex	Therapy - acupuncture	Vaccine for flu or Pneumonia
Rx - diagnostic rx - roentgenography	Rx - vitamins - vitamin d	Therapy - activity therapy	Vitamin K administration
Rx - diagnostic rx - thyroid function	Screen for amino acid disorders	Therapy - allergy treatment	Wellness Assessment
Rx - diagnostic rx, misc	Shock / Cardiac Arrest	Therapy - apheresis	
Rx - diuretics - diuretic, carb anhydrase inhib	Smoking / Tobacco Cessation	Therapy - behavior - evaluation and therapy	
Rx - diuretics, loop diuretics	Subsequent Physician Services Inpatient	Therapy - behavior - other	
Rx - diuretics, osmotic	Supplies	Therapy - behavior - partial hospitalization	
Rx - diuretics, thiazides / related	Tests - allergy tests - intradermal	Therapy - biofeedback	
Rx - eent - topical - eye/ear/nose/throat misc	Tests - allergy tests - other	Therapy - cardiac rehab	
Rx - electrolytic, caloric, water - calcium supplements	Tests - allergy tests - patch	Therapy - chiropractic / osteopathic manipulation	
Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Tests - allergy tests - percutaneous	Therapy - dialysis - supplies	

Relevant Diagnoses – ICD-10

STEMI
Subendocardial Infarct

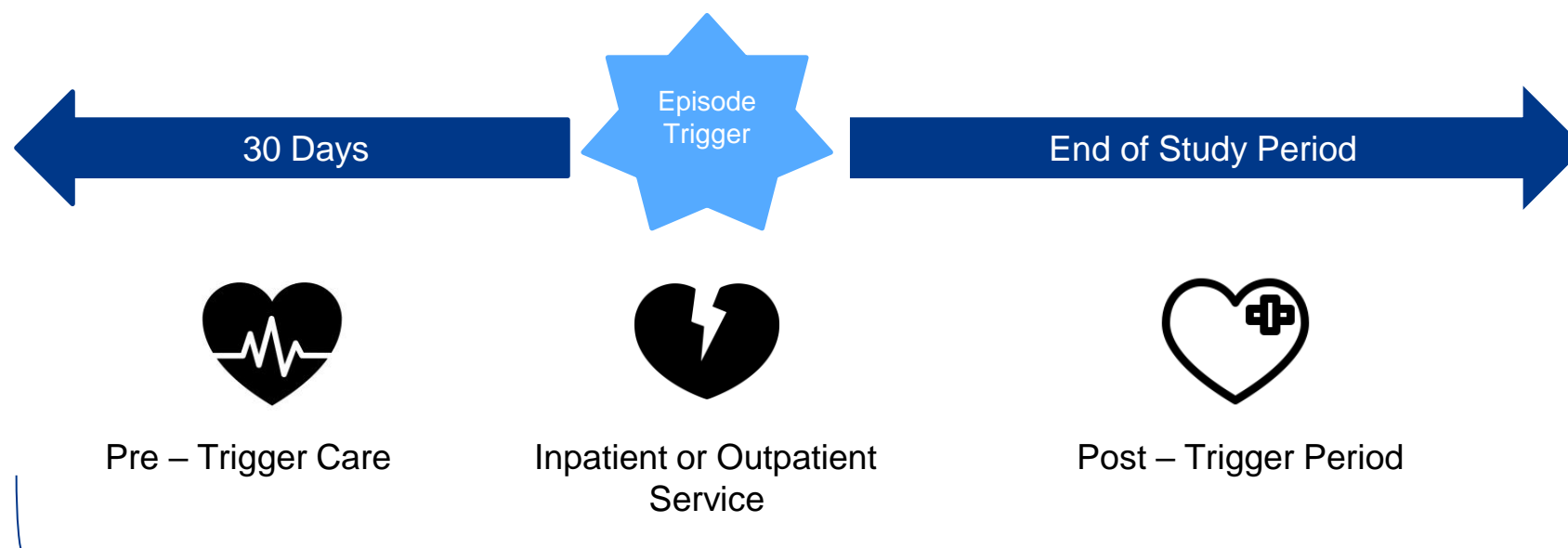
Complications – ICD-10

Accidental Falls	Decubitus Ulcer	Influenza with Pneumonia	Sepsis
Acute CHF / pulm edema	Dehydration	IVC & other intra-abd venous thrombosis	Severe Sepsis
Acute cor pulmonale	Delirium, Encephalopathy	Malfunction / Complication of Heart Device	Shock / Cardiac Arrest
Acute esophagitis, acute gastritis, duodenitis	Dermatitis, Urticaria	Meningitis / Encephalitis	Shock during or following cardiac surgery
Acute Kidney Failure	Diabetes, poor control	MRSA Pneumonia	Shock during or post-procedure
Adverse effects of drugs	dic, coagulation, hemorrhagic disorders	MRSA, Drug Resistant Infections	Skin - other
Altered mental status	empyema, lung abscess	Opportunistic Infections	Suicide or Self-inflicted Injury
arterial thromboembolism	Esophageal Reflux and Other Esophagitis	Other bacterial infections	Thromboembolic Stroke
Aspiration Pneumonia	Fluid Electrolyte Acid Base Problems	Other Bacterial Pneumonia	Tracheostomy Complications
Bacteremia, SIRS, no organ dysfunction	Foreign body left during procedure	Other lower respiratory disease	Transfusion, Infusion related complications
C-Difficile Infection	Gastroenteritis	other lung complications	Transient cerebral ischemia, TIA
Chronic Fungal and Other Pneumonias	GI Bleed	Other lung problems	Urethral Stricture
Coma, persistent vegetative state	Gram Negative Pneumonia	Other Mental Disorders	Urinary Frequency & other symptoms
Complication of genitourinary device	HAC 02: Air Embolism	Other Phlebitis, Lymphangitis, varices	Urinary Tract Infection
Complication of Implanted device, graft	HAC 04: Stage III and IV Pressure Ulcers	Other Staph Pneumonia	Vascular Prosthetic Device/Graft Complication
Complications after heart procedures	HAC 09: Manifestations of Poor Glycemic Control	Phlebitis, Deep vein thrombosis (DVT)	Ventilator Associated Pnuemonia
Complications from Central Line	Hemoptysis	Pulmonary Embolism	Ventilator Dependence
Complications from chemotherapy	Hemorrhage	Renovascular and other secondary hypertension	Viral Pneumonia
Complications of anesthesia	Hemorrhagic Stroke	Resp Failure following trauma / surgery	Wound Dehiscence
complications of medical care	Hepatorenal Syndrome	Respiratory Failure	Wound Infections
complications of surgical procedures	Hypertensive Urgency	Respiratory Insufficiency	
Debilitating Viral Pneumonia	Hypotension / Syncope	rhabdomyolysis	

Allergic Rhinitis/Chronic Sinusitis (RHNTS)

Allergic Rhinitis/Chronic Sinusitis (RHNTS) is a chronic condition open from 30 days prior to the date of the trigger service until the end of the study period. The trigger service can be an inpatient service with a rhinitis/sinusitis-specific principal diagnosis code or an outpatient or professional E&M service with a rhinitis/sinusitis-specific diagnosis code in any position. The professional trigger also requires a confirming inpatient, outpatient or professional rhinitis/sinusitis-related E&M service at least 30 days later. Services with diagnosis codes for signs and symptoms related to either allergic rhinitis or chronic sinusitis such as postnasal drip or headache have been defined as typical care for RHNTS, and conditions such as fluid and electrolyte disturbances have been labeled as complications.

Episode Length – RHNTS



Total Episode Cost = All expected services and complication costs associated from index service until the end of the post-trigger window.

Duration Pre-Trigger Window	Duration Post-Trigger Window
30	End of Study Period

Episode Triggers – RHNTS

Trigger Group Name	Code Type	Codes
Allergic rhinitis	ICD10	J300, J301 J302, J305 J3081, J3089 J309, J310 J393
Chronic ENT/ Upper Respiratory Problems	ICD10	J311, J312 J340, J341 J343, J3489 J349, R0981
Chronic sinusitis	ICD10	J320, J321 J322, J323 J324, J328 J329

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	Lab - microbiology - microscopic exam	Procedures and Reporting	Therapy - behavior - medication management
Alcohol / Drug Use Screening	Lab - microbiology - viral culture	Prophylactic vaccinations and inoculations	Therapy - behavior - other
Ancillary Services	Lab - panel - hepatitis panel	Psychiatry Evaluations	Therapy - phlebotomy
Bleeding Status	Lab - stat request	Psychiatry Services	Therapy - vaccination - flu vaccine
Blood Gases, Pulse Oximetry	Lab - surgical pathology	Psychological and psychiatric evaluation and therapy	Transitional Care Management
Care Plan Oversight	Lab - therapeutic drug assay	Risk Assessment	Transportation - other transportation
Case Management Services	Low dose steroids	Rx - administration - infusion	Ungrouped Codes
Case Management Services - Behavioral	Markers for Inflammation	Rx - administration - injection	Upper GI endoscopy
Case Management Services - Educational	Medication Assisted Management (MAT)	Rx - allergy - antihistamines / comb	Vaccine for flu or Pneumonia
Case Management Services - Oncology	Medication Therapy Management Services	Rx - analg/antipy/naids - nsoids	Wellness Assessment
CHEMOTHERAPY	Medications (Injections, infusions and other forms)	Rx - antibiotics - aminoglycosides	
Chronic Care Management	Metabolic Renal Hepatic Chemistry Panel	Rx - antibiotics - anti-infectives, misc	
Control of epistaxis	Online Management	Rx - antibiotics - cephalosporins	
Current Tobacco / Cigarette Smoker	Ophthalmologic and otologic diagnosis and treatment	Rx - antibiotics - chloramphenicol / comb	
Depression Screening	Opioid Administration / Dispensing (OTP)	Rx - antibiotics - macrolides	
Diagnostic procedures on nose, mouth and pharynx	Other care - diabetes care - glucose monitoring - lancet	Rx - antibiotics - penicillins	
DME and supplies	Other care - home care - physician supervision	Rx - antibiotics - quinolones	
Drug Delivery implantation	Other care - home care - specialized visit	Rx - antibiotics - sulfonamides / comb	
E & M - consultation	Other care - hospice	Rx - antibiotics - tetracyclines	
E & M - emergency care	Other care - nutrition - assessment	Rx - antibiotics, misc	
E & M - home visit	Other care - observation	Rx - antifungals	
E & M - hospital	Other care - other	Rx - b-lactam antibiotics	
E & M - nursing home	Other care - other - ancillary services	Rx - corticosteroids	
E & M - other	Other care - other - education	Rx - gi - antiemetics	
E & M - prevention	Other care - respiratory - other	Rx - hematopoietic system - hematopoietic growth factors	
Ethmoidectomy, Sphenoidectomy and other Sinusectomy	Other care - respiratory - ventilator management	Rx - miscellaneous rx	
High dose steroids	Other diagnostic procedures (interview, evaluation, consultation)	Rx - miscellaneous rx - enzymes	
Home Health / Hospice	Other Laboratory	Rx - other	
Hormone Therapy	Other OR therapeutic procedures on nose, mouth and pharynx	Septoplasty and other Nasal Procedures	
Imaging - ct - follow - up	Other therapeutic ear procedures	Sinus Drainage Procedures	
Imaging - ct - guidance	Other therapeutic procedures	Smoking / Tobacco Cessation	
Imaging - ct - head / brain	Physical Therapy / Rehab	Supplies	
Imaging - ct - maxillofacial	Physician Services	Tests - allergy tests - intradermal	
Imaging - ct - orbit / ear / fossa wo dye	Physician Services - Inpatient	Tests - allergy tests - other	
Imaging - ct - other	Physician Services - Outpatient	Tests - allergy tests - patch	
Imaging - ct - soft tissues neck	Preventive Medicine, Care Coordination	Tests - allergy tests - percutaneous	
Imaging - cta - head / neck	Procedure - anesthesia	Tests - cardiovascular - other	
Imaging - mri - contrast agent	Procedure - control of nosebleed	Tests - ent - acoustic reflex testing	
Imaging - mri - orbit / face / neck	Procedure - laryngoscopy - dx	Tests - ent - audiometry	
Imaging - x-ray - head/neck - other	Procedure - laryngoscopy - other	Tests - ent - other dx	
Imaging - x-ray - sinuses	Procedure - laryngoscopy w / biopsy	Tests - ent - speech / language evaluation	
Incision and excision of CNS	Procedure - nasal / sinus endoscopy - dx - other - endoscopy - nasal / sinus dx	Tests - ent - tympanometry	
Lab - blood gases	Procedure - nasal / sinus endoscopy - rx - other	Tests - neuro - cognitive testing	
Lab - hematology - blood count - eosinophil count	Procedure - nasal / sinus endoscopy w / biopsy / polypectomy / debridement	Tests - neuro - other	
Lab - immunology	Procedure - nasopharyngoscopy - dx	Tests - neuro - sleep studies	
Lab - infectious agent dna	Procedure - other non - or rx on nose / mouth / pharynx	Therapy - allergy treatment	
Lab - microbiology - c & s	Procedure - other or rx on nose / mouth / pharynx - other	Therapy - behavior - evaluation and therapy	

Relevant Diagnoses – ICD-10

Adverse effects of drugs	NS - headache - symptom	Prvn - routine medical exam	Resp - vocal cord paralysis
Aftercare	NS - headache - tension	Resp - abnormal sputum	Resp - voice disturbance
allergic rhinitis	NS - insomnia	Resp - cough	Resp - wheezing
Anxiety Disorders	NS - other sleep ds	Resp - deviated nasal septum	Retropharyngeal Abscess
Blockage of ear canal	Observation/Examination	Resp - epistaxis	Retropharyngeal and parapharyngeal abscess
Blood - eosinophilia	Orthostatic Hypotension / Dizziness	Resp - head / neck symptoms	Sleep Apnea
Chronic ENT/ Upper Respiratory Problems	Other lung problems	Resp - hyperventilation	Sxs - abnormal findings - lab or exam
chronic sinusitis	Othr - follow-up exam - nec	Resp - laryngitis - chronic	Sxs - chronic fatigue syndrome
complications of surgical procedures	Othr - long-term use other medication	Resp - nasal polyps	Sxs - malaise / fatigue
CV - abnl imaging study	Othr - other	Resp - other abnormal findings - nos	Sxs - other general symptoms
Ear - otalgia	Othr - other aftercare	Resp - other resp ds	Sxs - swelling in head & neck
Fever & Chills	Othr - post op care	Resp - other respiratory symptoms	Sxs - symptoms -other
Follow up after cancer treatment	Othr - rehabilitation	Resp - other upper resp ds	Sxs - symptoms -other - other
ID - immunizations / screening	Pain, unspecified	Resp - pharynx - other conditions - nec / nos	Tobacco Use
Inj - nasal sinus - effects	Parapharyngeal abscess	Resp - pharynx / retropharynx - cellulitis / abscess	Toxic effect of Tobacco
Malaise & Fatigue	Poisoning by Assault	Resp - post nasal drip	Toxic Effects of Radiation
Mild - Moderate Neurological Deficit	Preventive Screening	Resp - screening	Viral Pneumonia
Neoplsn - malignant neoplsn - personal hx - nose / sinus	Prvn - encounter for lab test	Resp - shortness of breath	
NS - abnormal skull & head	Prvn - encounter for x-ray	Resp - throat pain	

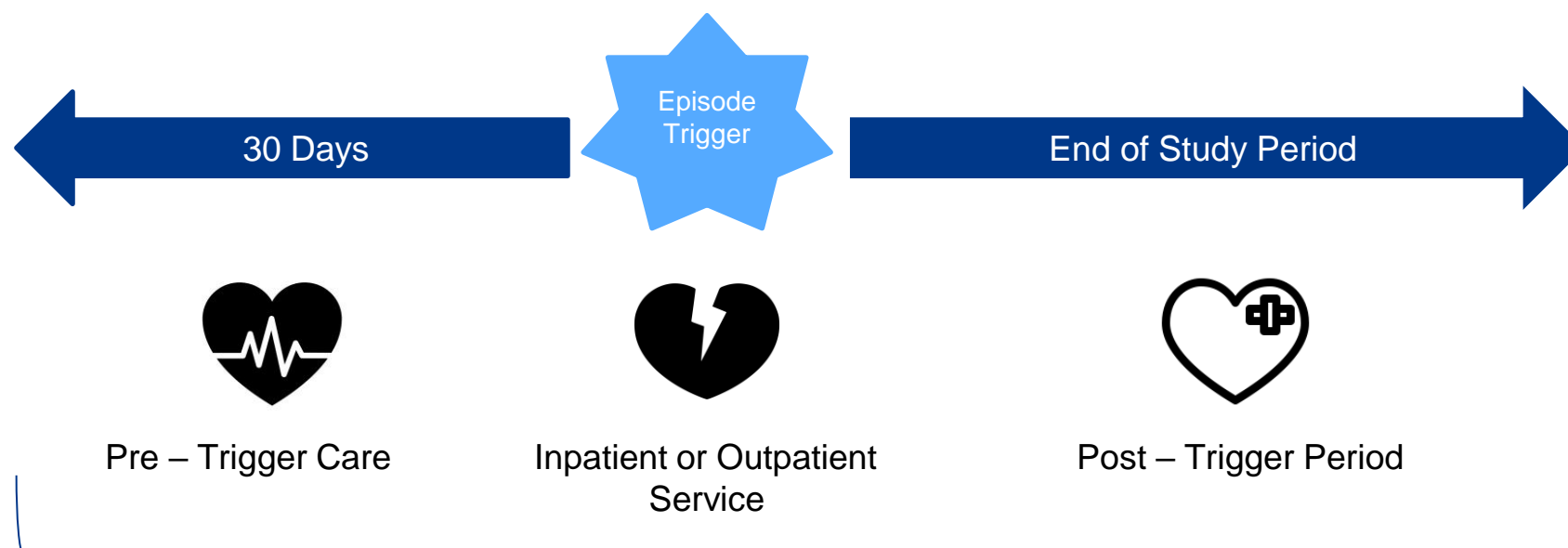
Complications – ICD-10

Acute otitis media	complications of surgical procedures	MRSA, Drug Resistant Infections	Respiratory Insufficiency
Adverse effects of drugs	Dehydration	Ocular Prosthetic Device/Graft Complication	Sepsis
Bacteremia, SIRS, no organ dysfunction	Dermatitis, Urticaria	Other bacterial infections	Severe Sepsis
bronchiectasis	Fluid Electrolyte Acid Base Problems	Other Bacterial Pneumonia	Shock / Cardiac Arrest
C-Difficile Infection	Foreign body left during procedure	Other cerebral complications	Shock during or post-procedure
Chronic otitis media	HAC 02: Air Embolism	other lung complications	Transfusion, Infusion related complications
Complications after eye surgery	Hemoptysis	Other lung problems	Urethral Stricture
Complications from Central Line	Hemorrhage	Other visual impairment	Vascular Prosthetic Device/Graft Complication
Complications from chemotherapy	laryngeal problems	Overdose, Poisonings	Ventilator Dependence
Complications of anesthesia	Mastoiditis	Peritonsillar abscess	Wound Dehiscence
complications of medical care	Meningitis / Encephalitis	Respiratory Failure	Wound Infections

Asthma (ASTHMA)

An Asthma Episode is a chronic condition open from 30 days prior to the date of the trigger service until the end of the study period. The trigger service can be an inpatient service with an asthma-specific principal diagnosis code or an outpatient or professional E&M service with an asthma-specific diagnosis code in any position. The professional trigger also requires a confirming inpatient, outpatient or professional asthma-related E&M service at least 30 days later. Services with diagnosis codes for signs and symptoms related to Asthma such as wheezing or shortness of breath, and for other associated conditions such as exercise-induced bronchospasm or allergic broncho-pulmonary disease, have been defined by physician consultants as typical care for Asthma, but admission for similar conditions or for acute exacerbation of Asthma have been labeled as complications.

Episode Length – ASTHMA



Total Episode Cost = All expected services and complication costs associated from index service until the end of the post-trigger window.

Duration Pre-Trigger Window	Duration Post-Trigger Window
30	End of Study Period

Episode Triggers – ASTHMA

Trigger Group Name	Code Type	Codes
Acute exacerbation of copd, asthma	ICD10	J4521, J4531 J4541, J4551 J45901
Asthma	ICD10	J4520, J4530 J4540, J4550 J45909, J45990 J45991, J45998
Status Asthmaticus	ICD10	J4522, J4532 J4542, J4552 J45902

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	E & M - other	Imaging - nuclear - tumor localization	Lab - microbiology - viral culture
Alcohol / Drug Use Management	E & M - prevention	Imaging - nuclear - venous thrombosis - radiopharmaceutical	Lab - microscopic - koh prep
Alcohol / Drug Use Screening	Electrocardiogram - EKG monitoring	Imaging - nuclear - venous thrombosis - scan	Lab - microscopic - pinworm
Ancillary Services	Electroencephalogram (EEG)	Imaging - other imaging	Lab - microscopic - wet mount
Anti-TNF agents	Enteral and parenteral nutrition	Imaging - other imaging - fluoroscopy	Lab - other clinical lab
Arterial blood gases	HbA1C	Imaging - other imaging - fluoroscopy - guidance	Lab - other hematology
Azathioprine / Mercaptopurine	Hearing Test	Imaging - pet - other	Lab - panel - hepatitis panel
Bleeding Status	Heart Echo / Ultrasound	Imaging - supplies - contrast agent - high osmolar	Lab - pathology consultation
Blood Count	Hepatitis B vaccine	Imaging - supplies - contrast agent - low osmolar	Lab - specimen collection - blood - arterial - arterial puncture
Blood Gases, Pulse Oximetry	High dose steroids	Imaging - supplies - ultrasound related	Lab - specimen collection - blood - venous - venipuncture
Blood transfusion	High Risk Behavior Screening	Imaging - therapeutic procedure - abscess drainage	Lab - specimen collection - blood - venous - venous port
Blood Type, Coomb's test	Home Health / Hospice	Imaging - therapeutic procedure - other therapeutic procedure	Lab - specimen collection - specimen handling
Bundled Payment / Medical Home	Hormone Therapy	Imaging - us - guide - biopsy	Lab - specimen collection - urine
Cardiac cath & Angiogram	HPV VACCINE	Imaging - us - guide - other	Lab - stat request
Cardiac Stress Test	Imaging - arteriography - lungs	Imaging - us - intravascular	Lab - surgical pathology
Care Plan Oversight	Imaging - arteriography - other	Imaging - us - other	Lab - therapeutic drug assay
Case Management Services	Imaging - ct - cardiac	Imaging - venography - other	Lab - tissue typing
Case Management Services - Behavioral	Imaging - ct - chest	Imaging - x-ray - chest - other	Lab - transfusion medicine
Case Management Services - Educational	Imaging - ct - follow - up	Imaging - x-ray - other - joint survey	Lab - tumor marker
CHEMOTHERAPY	Imaging - ct - guidance	Imaging - x-ray - ribs	Lab - urinalysis
Chest X-Ray	Imaging - ct - other	Imaging - x-ray - upper gi - other	Laboratory - Chemistry and Hematology
CHLAMYDIA SCREENING	Imaging - cta - chest	Imaging - x-ray - upper gi - small bowel - contrast	LEAD SCREENING
Chronic Care Management	Imaging - mra - chest	Imaging - x-ray - urinary tract - cystography / voiding cystourethrogram	Lipid Level Monitoring
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - mri - chest	Imaging - x-ray - urinary tract - other	Low dose steroids
Coordinated Care Fees/Services	Imaging - mri - contrast agent	Imaging Abdomen	Lung Function Tests
CT scan chest	Imaging - mri - guidance	IMMUNOTHERAPY	Markers for Inflammation
Current Tobacco / Cigarette Smoker	Imaging - mri - other	Incision and excision of CNS	Medication Assisted Management (MAT)
Cyclosporin	Imaging - nuclear - bladder / ureter	Incision of pleura, thoracentesis, chest drainage	Medication Therapy Management Services
Depression Screening	Imaging - nuclear - blood / plasma volume - radiopharmaceutical	Indwelling catheter	Medications (Injections, infusions and other forms)
Diagnostic bronchoscopy and biopsy of bronchus	Imaging - nuclear - blood / plasma volume - scan	Lab - blood gases	Metabolic Renal Hepatic Chemistry Panel
DME - bath / toilet aids	Imaging - nuclear - bone scan - radiopharmaceutical	Lab - chemistry	NewBorn Blood Tests
DME - beds / accessories	Imaging - nuclear - brain - radiopharmaceutical	Lab - chemistry and toxicology tests	Online Management
DME - heat/cold application	Imaging - nuclear - csf - radiopharmaceutical	Lab - cytogenetics	Opioid Administration / Dispensing (OTP)
DME - mobility aids	Imaging - nuclear - csf - scan	Lab - cytology	Orthotics - upper extremity
DME - other	Imaging - nuclear - kidney - radiopharmaceutical	Lab - genetic testing - brugada syndrome	Other - non - covered
DME - patient lifts	Imaging - nuclear - kidney - scan	Lab - genetic testing - cardiac ion channel syndrome	Other care - bladder / bowel care - catheter
DME - repair / maintenance	Imaging - nuclear - localization of inflammation	Lab - hematology - blood count	Other care - bladder / bowel care - drainage bag
DME - restraints	Imaging - nuclear - lung scan	Lab - hematology - blood count - eosinophil count	Other care - bladder / bowel care - other supplies
DME - safety equipment	Imaging - nuclear - lymphatics	Lab - hematology - coagulation	Other care - bladder / bowel care - other supplies - diaper / related
DME - whirlpool - equipment	Imaging - nuclear - other	Lab - immunology	Other care - bladder / bowel care - other supplies - skin barrier
DME and supplies	Imaging - nuclear - other - automated data add - on	Lab - infectious agent antibody	Other care - child care - specialized
Drug Delivery implantation	Imaging - nuclear - other blood / related	Lab - infectious agent antigen	Other care - chronic edema - appliance - segmental
E & M - consultation	Imaging - nuclear - other musculoskeletal	Lab - infectious agent dna	Other care - chronic edema - surgical stockings
E & M - emergency care	Imaging - nuclear - platelet kinetics	Lab - microbiology	Other care - diabetes care - glucose monitoring
E & M - home visit	Imaging - nuclear - radiopharmaceutical - radiopharmaceutical - other	Lab - microbiology - c & s	Other care - diabetes care - glucose monitoring - lancet
E & M - hospital	Imaging - nuclear - red cell survival	Lab - microbiology - microscopic exam	Other care - diabetes care - glucose monitoring - other supplies
E & M - nursing home	Imaging - nuclear - shilling test - radiopharmaceutical	Lab - microbiology - other	Other care - diabetes care - insulin pump

Relevant Procedures – CPT / HCPCS, ICD-10

Other care - home care - emergency response system	Other care - other - lightbox	Physician Services - Inpatient	Prophylactic vaccinations and inoculations
Other care - home care - home health aide	Other care - other - lodging	Physician Services - Outpatient	Prosthetics - implant
Other care - home care - meals	Other care - other - meals	PQRI	Prosthetics - other
Other care - home care - nursing care	Other care - other - medical records	Preventive Medicine, Care Coordination	Psychiatry Evaluations
Other care - home care - nursing care - lpn	Other care - other - weight management	Procedure - anesthesia	Psychiatry Services
Other care - home care - nursing care - np	Other care - pain management - pca / related	Procedure - anesthesia - related supplies	Psychological and psychiatric evaluation and therapy
Other care - home care - nursing care - rn	Other care - prevention - smoking cessation	Procedure - artery - nos - thrombolysis	Radioisotope scan and function studies
Other care - home care - other care	Other care - respiratory - education	Procedure - artery / vein - nos - other	Respiratory intubation and mechanical ventilation
Other care - home care - other care - attendant care	Other care - respiratory - equipment / supplies	Procedure - artery / vein - nos - thrombectomy catheter	Risk Assessment
Other care - home care - other care - chore care	Other care - respiratory - equipment / supplies - apnea monitor	Procedure - block - nerve	Routine Immunizations
Other care - home care - other care - companion care	Other care - respiratory - equipment / supplies - cpap	Procedure - central venous catheter - fluoroscopy - guidance	Rx - administration - infusion
Other care - home care - other care - day care	Other care - respiratory - equipment / supplies - ippb	Procedure - central venous catheter - insertion	Rx - administration - injection
Other care - home care - other care - homemaker	Other care - respiratory - equipment / supplies - nebulizer	Procedure - central venous catheter - repair / maintenance	Rx - allergy - antihistamines / comb
Other care - home care - other care - respite care	Other care - respiratory - equipment / supplies - peak flow meter	Procedure - chest tube / thoracentesis - insertion of chest tube	Rx - analg/antipy/nsaids - narcotics
Other care - home care - physician supervision	Other care - respiratory - equipment / supplies - spirometer	Procedure - chest tube / thoracentesis - thoracentesis	Rx - analg/antipy/nsaids - nsaids
Other care - home care - rehabilitation - occupational therapy	Other care - respiratory - equipment / supplies - ventilator	Procedure - esophageal / gastric intubation	Rx - antibiotics - aminoglycosides
Other care - home care - rehabilitation - physical therapy	Other care - respiratory - other	Procedure - gastrostomy	Rx - antibiotics - anti-infectives, misc
Other care - home care - rehabilitation - speech therapy	Other care - respiratory - oxygen / oxygen concentrator	Procedure - graft - skin - graft material	Rx - antibiotics - cephalosporins
Other care - home care - social worker	Other care - respiratory - rehabilitation	Procedure - gu - other non - or rx	Rx - antibiotics - chloramphenicol / comb
Other care - home care - specialized visit	Other care - respiratory - tracheostomy care	Procedure - lung volume reduction	Rx - antibiotics - macrolides
Other care - home care - training	Other care - respiratory - ventilator management	Procedure - maintenance - cns / spinal pump / port	Rx - antibiotics - penicillins
Other care - hospice	Other care - respiratory therapy	Procedure - ortho - related supplies - other	Rx - antibiotics - quinolones
Other care - long term care - assisted living	Other care - special needs children	Procedure - other anal / rectal procedures - other procedures - rectum / anus	Rx - antibiotics - sulfonamides / comb
Other care - long term care - residential care	Other care - speech - device - synthesized speech	Procedure - other non - or rx - other non - or skin procedures	Rx - antibiotics - tetracyclines
Other care - nutrition - assessment	Other care - wound care	Procedure - pacemaker / defibrillator - transcutaneous pacing	Rx - antibiotics / antivirals / antifungals - infusion
Other care - nutrition - counseling - dietician	Other care - wound care - electromagnetic therapy	Procedure - peripheral nerve repair / graft - graft / guide	Rx - antibiotics, misc
Other care - nutrition - education	Other care - wound care - growth factor	Procedure - peripheral venous catheter	Rx - antidiabetic rx - insulins
Other care - nutrition - enteral	Other care - wound care - hyperbaric oxygen	Procedure - related supplies - ablation - catheter	Rx - antifungals
Other care - nutrition - enteral - administration	Other diagnostic nervous system procedures	Procedure - related supplies - access catheter	Rx - antivirals
Other care - nutrition - enteral - formula	Other diagnostic procedures (interview, evaluation, consultation)	Procedure - related supplies - catheter	Rx - autonomic rx - nicotine preps
Other care - nutrition - enteral - pump	Other diagnostic radiology and related techniques	Procedure - related supplies - dilation / stenting	Rx - autonomic rx - parasympathomimetics
Other care - nutrition - enteral - tubing	Other diagnostic ultrasound	Procedure - related supplies - drainage	Rx - autonomic rx - sympathomimetic rx
Other care - nutrition - medical food	Other Laboratory	Procedure - related supplies - graft - tendon repair	Rx - b-lactam antibiotics
Other care - nutrition - parenteral	Other non-OR therapeutic procedures on respiratory system	Procedure - related supplies - graft / repair	Rx - blood derivatives
Other care - nutrition - parenteral - all - inclusive	Other OR lower GI therapeutic procedures	Procedure - related supplies - implant	Rx - cardiovascular system - antiarrhythmic rx
Other care - nutrition - parenteral - nutrition solution	Other OR therapeutic nervous system procedures	Procedure - related supplies - other	Rx - cardiovascular system - beta blockers
Other care - nutrition - parenteral - pump	Other OR therapeutic procedures on respiratory system	Procedure - related supplies - retrieval - device	Rx - cardiovascular system - cardiac drugs
Other care - observation	Other OR therapeutic procedures, female organs	Procedure - respiratory - other non - or rx	Rx - cardiovascular system - cardiac glycosides
Other care - ostomy - nursing care	Other physical therapy and rehabilitation	Procedure - sedation	Rx - cardiovascular system - hypotensive rx
Other care - other	Other respiratory therapy	Procedure - spinal canal - catheter	Rx - cardiovascular system - natriuretic peptides
Other care - other - ancillary services	Other therapeutic procedures	Procedure - suture - skin - repair of superficial wound	Rx - cardiovascular system - vasodilating agents, nec
Other care - other - education	Other vascular catheterization, not heart	Procedure - vascular - occlusion / embolization - transcatheter	Rx - cardiovascular system - vasodilating rx
Other care - other - exercise classes	Peer Services	Procedure - vascular - related supplies - graft material	Rx - central nervous system - anticonvulsants
Other care - other - external counterpulsation	Personal Care Services	Procedure - vascular - related supplies - occlusion catheter	Rx - central nervous system - antidepressants
Other care - other - infection control	Physical Therapy / Rehab	Procedure - vascular access - port / pump - insertion	Rx - central nervous system - anxiolytic/sedative/hypnot nec
Other care - other - irrigation	Physical therapy exercises, manipulation, and other procedures	Procedure - vein - vena cava - filter	Rx - central nervous system - barbiturates
Other care - other - lead assessment	Physician Services	Procedures and Reporting	Rx - central nervous system - benzodiazepines

Relevant Procedures – CPT / HCPCS, ICD-10

Rx - central nervous system - non-amphetamine stimulants	Rx - muscle relaxants - muscle relax, skeletal central	Tests - pulmonary - co diffusing capacity	Toxicology Screening
Rx - central nervous system - parkinson's rx	Rx - muscle relaxants - muscle relax, skeletal, misc	Tests - pulmonary - exhaled air analysis	Transitional Care Management
Rx - central nervous system - sympatholytic rx	Rx - other	Tests - pulmonary - other	Transportation - other transportation
Rx - central nervous system - tranq/antipsychotics	Rx - other anti-infectives - antimalarials	Tests - pulmonary - peak flow	Transportation - paramedic
Rx - central nervous system - vascular 5ht1 agonists	Rx - pharmacy fee	Tests - vascular - cerebrovascular	Ungrouped Codes
Rx - coagulation system - anticoagulants	Rx - respiratory - anticholinergic	Tests - vascular - other	Urine Protein
Rx - coagulation system - antiheparin agnt	Rx - respiratory - beta agonists	Tests - vascular - venous	Vaccine for flu or Pneumonia
Rx - coagulation system - antiplatelet rx	Rx - respiratory - mast cell stabilizers	Therapy - acupuncture	Vitamin K administration
Rx - coagulation system - hemostatics	Rx - respiratory - methylxanthines	Therapy - activity therapy	Wellness Assessment
Rx - coagulation system - thrombolytic rx	Rx - respiratory - mucolytics/cold comb	Therapy - allergy treatment	
Rx - corticosteroids	Rx - respiratory - phenylephrine	Therapy - apheresis	
Rx - diagnostic rx - gastric function	Rx - serums, toxoids, vaccines - serums	Therapy - behavior - evaluation and therapy	
Rx - diagnostic rx - roentgenography	Rx - serums, toxoids, vaccines - toxins	Therapy - behavior - medication management	
Rx - diagnostic rx - thyroid function	Rx - skin / mucous membrane - antiinflam s/mm agnts / comb nec	Therapy - behavior - other	
Rx - diagnostic rx, misc	Rx - skin / mucous membrane - s/mm miscellaneous	Therapy - behavior - partial hospitalization	
Rx - diuretics - diuretic, carb anhydrase inhib	Rx - vitamins - multivit prep	Therapy - biofeedback	
Rx - diuretics, loop diuretics	Rx - vitamins - vitamin b / b complex	Therapy - dialysis - supplies	
Rx - diuretics, osmotic	Rx - vitamins - vitamin d	Therapy - habilitation	
Rx - diuretics, thiazides / related	Screen for amino acid disorders	Therapy - hyperbaric oxygen	
Rx - electrolytic, caloric, water - calcium supplements	Sexual Behavior Counseling	Therapy - neurostimulator - incontinence	
Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Shock / Cardiac Arrest	Therapy - neurostimulator - other	
Rx - electrolytic, caloric, water - caloric rx, amino acid prep	Smoking / Tobacco Cessation	Therapy - neurostimulator - tens - device	
Rx - electrolytic, caloric, water - hydration - unspecified	Subsequent Physician Services Inpatient	Therapy - neurostimulator - tens - leads	
Rx - electrolytic, caloric, water - multi-mineral prep	Supplies	Therapy - neurostimulator - tens - supplies	
Rx - electrolytic, caloric, water - potassium supp	Tests - allergy tests - intradermal	Therapy - other	
Rx - electrolytic, caloric, water - replacement preparations, misc	Tests - allergy tests - other	Therapy - phlebotomy	
Rx - electrolytic, caloric, water - sodium chlor preps	Tests - allergy tests - patch	Therapy - pt - exercises / activities	
Rx - endocrine - other - antigout rx	Tests - allergy tests - percutaneous	Therapy - pt - modalities	
Rx - endocrine - other - parathyroid hormones	Tests - cardiac - doppler	Therapy - rehabilitation	
Rx - endocrine - other - pituitary hormones	Tests - cardiac - ecg - ecg - 12 lead	Therapy - rehabilitation - other	
Rx - gi - antichol/antispasmodics	Tests - cardiac - ecg - other	Therapy - transfusion - administration	
Rx - gi - antiemetics	Tests - cardiac - echo - contrast agent	Therapy - transfusion - blood	
Rx - gi - h2 antagonists	Tests - cardiac - electrophysiology - other	Therapy - transfusion - granulocytes	
Rx - gi - ppi	Tests - cardiac - radiopharmaceuticals	Therapy - transfusion - plasma	
Rx - gi drug misc,nec	Tests - cardiovascular - other	Therapy - transfusion - platelets	
Rx - gu - other - bladder rx	Tests - ent - other dx	Therapy - ultraviolet light therapy	
Rx - hematopoietic system - hematopoietic growth factors	Tests - gi - other dx	Therapy - vaccination - chicken pox	
Rx - hematopoietic system - iron / related	Tests - gu - post void residual / bladder capacity	Therapy - vaccination - dtp / related	
Rx - hematopoietic system - other	Tests - gu - urodynamics - voiding pressure	Therapy - vaccination - flu vaccine	
Rx - immune system - dmard / related	Tests - neuro - cognitive testing	Therapy - vaccination - hepatitis a vaccine	
Rx - immune system - immunosuppressants	Tests - neuro - eeg	Therapy - vaccination - hepatitis b	
Rx - immune system - interferons	Tests - neuro - evoked potentials	Therapy - vaccination - hib vaccine	
Rx - miscellaneous rx	Tests - neuro - muscle testing	Therapy - vaccination - mmr / related	
Rx - miscellaneous rx - anesthetics, local	Tests - neuro - ncv / emg	Therapy - vaccination - other vaccine	
Rx - miscellaneous rx - enzymes	Tests - neuro - other	Therapy - vaccination - poliovirus vaccine	
Rx - miscellaneous rx - heavy metal antagonists	Tests - neuro - sleep studies	Therapy - vaccination - vaccine administration	
Rx - muscle relaxants - muscle relax, neuromusc block	Tests - other cardiac scans	Thyroid Function Tests	

Relevant Diagnoses – ICD-10

Abnormal Weight Gain	Observation/Examination	Resp - abnormal sputum	Resp - pulmonary eosinophilia
Abnormal weight loss	Orthostatic Hypotension / Dizziness	Resp - chest mass / lump	Resp - screening
acute exacerbation of copd, asthma	Other lower respiratory disease	Resp - cough	Resp - shortness of breath
Adverse effects of drugs	Other lung problems	Resp - hiccup	Resp - wheezing
Aftercare	Othr - follow-up exam - nec	Resp - hx of other resp disease / procedure	Respiratory Insufficiency
Anxiety Disorders	Othr - long-term use other medication	Resp - hx of recurrent pneumonia	Sleep Apnea
Asthma	Othr - other	Resp - hyperventilation	Sxs - abnormal findings - lab or exam
Blood - lymphadenitis	Othr - other aftercare	Resp - larynx - other conditions - nec / nos	Sxs - chronic fatigue syndrome
CV - abnl ecg	Othr - rehabilitation	Resp - lung in sickle cell disease	Sxs - general symptoms / debility / morbidity - nec
Dysphagia	Pain, unspecified	Resp - lung involvement in other diseases	Sxs - malaise / fatigue
Follow up after cancer treatment	Poisoning by Assault	Resp - other abnormal findings - nos	Sxs - symptoms -other
Hepatotoxicity	Preventive Screening	Resp - other lower respiratory ds	Sxs - symptoms -other - other
ID - immunizations / screening	Prvn - encounter for lab test	Resp - other resp ds	Tobacco Use
Malaise & Fatigue	Prvn - routine medical exam	Resp - other resp ds - nec / nos	Toxic effect of Tobacco
MS - muscle - nos - muscle weakness	Resp - abnormal blood gas results	Resp - other respiratory symptoms	Toxic Effects of Radiation
NS - chronic pain - other	Resp - abnormal chest sounds	Resp - painful breathing	Unstable angina
NS - headache - symptom	Resp - abnormal imaging study - respiratory system	Resp - pharynx - other conditions - nec / nos	Viral Pneumonia
NS - insomnia	Resp - abnormal pulmonary study / scan	Resp - pharynx / retropharynx - cellulitis / abscess	
Abnormal Weight Gain	Observation/Examination	Resp - abnormal sputum	

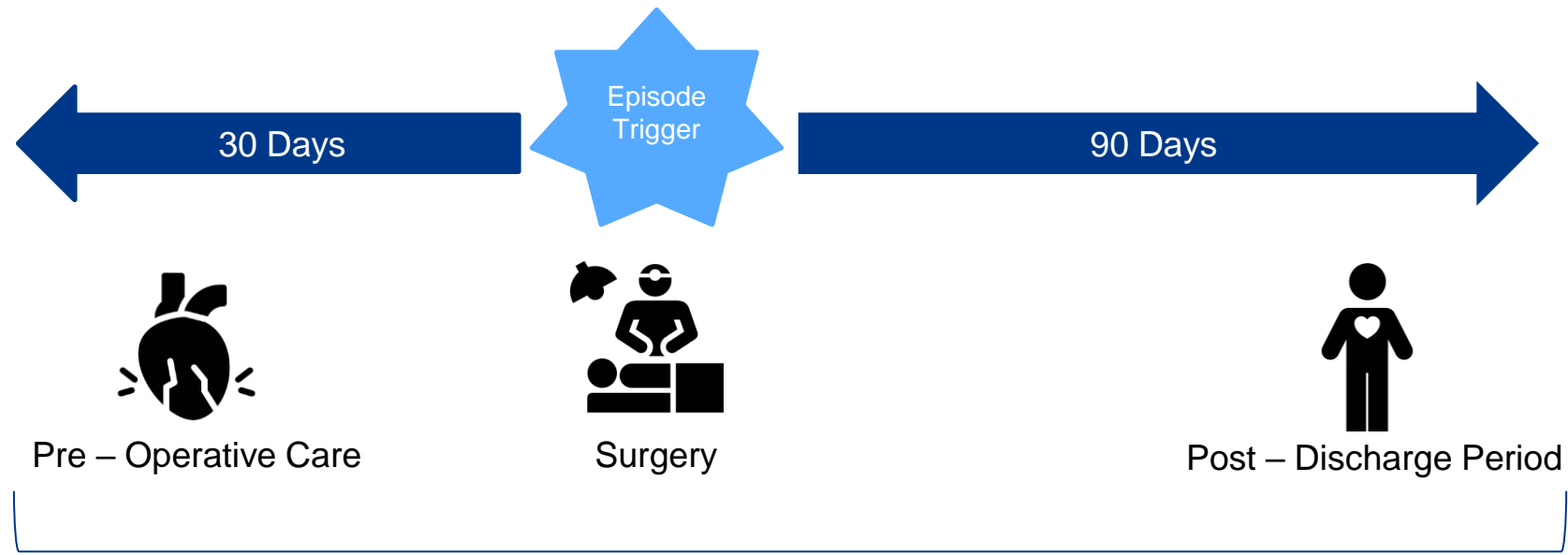
Complications – ICD-10

Accidental Falls	complications of surgical procedures	laryngeal problems	Sepsis
Acute CHF / pulm edema	Decubitus Ulcer	Lung disease from opportunistic infections	Severe Protein Calorie Malnutrition
Acute cor pulmonale	Dehydration	Malfunction / Complication of Heart Device	Severe Sepsis
Acute esophagitis, acute gastritis, duodenitis	Delirium, Encephalopathy	Meningitis / Encephalitis	Shock / Cardiac Arrest
acute exacerbation of copd, asthma	Dermatitis, Urticaria	MRSA, Drug Resistant Infections	Status Asthmaticus
Acute Kidney Failure	empyema, lung abscess	Opportunistic Infections	STEMI
Adverse effects of drugs	Fluid Electrolyte Acid Base Problems	Other bacterial infections	Subendocardial infarct
Altered mental status	Foreign body left during procedure	Other Bacterial Pneumonia	Thromboembolic Stroke
Aspiration Pneumonia	Gastroenteritis	other lung complications	Tracheostomy Complications
Bacteremia, SIRS, no organ dysfunction	GI Bleed	Other lung problems	Transfusion, Infusion related complications
bronchiectasis	HAC 02: Air Embolism	Other Mental Disorders	Transient cerebral ischemia, TIA
C-Difficile Infection	HAC 04: Stage III and IV Pressure Ulcers	Other Phlebitis, Lymphangitis, varices	Urethral Stricture
Chronic Fungal and Other Pneumonias	HAC: Blood Incompatibility	Other psychotic disorders	Urinary Tract Infection
Coma, persistent vegetative state	HAC: Catheter Associated UTIs	Other Staph Pneumonia	Ventilator Associated Pnuemonia
Community Acquired Pneumonia	HAC: Infection due to central venous catheter	Overdose, Poisonings	Ventilator Dependence
Complications from Central Line	Hemoptysis	Pneumothorax	Wound Infections
Complications from chemotherapy	Hemorrhagic Stroke	Pulmonary Embolism	
Complications of anesthesia	Hypotension / Syncope	Respiratory Failure	
complications of medical care	Interstitial Emphysema	Respiratory Insufficiency	

CABG &/or Valve Procedures (CxCABG)

The services and costs associated with a procedure of coronary artery bypass grafting, with or without valve surgery, arrhythmia surgery, or other related open-heart procedures, are grouped together into a complex coronary artery bypass graft (Cx CABG) episode. If the procedure is performed in the setting of an AMI, it is regarded as typical care for the AMI episode.

Episode Length – CxCABG



Total Episode Cost = All expected services and complication costs associated during the entire index period of the CxCABG episode.

Duration Pre-Trigger Window	Duration Post-Trigger Window
30 Days	90 Days

Episode Triggers – CxCABG

Trigger Group Name	Code Type	Codes
Coronary Artery Bypass Graft (CABG)	CPT	33510-33536
Heart Valve Repair, Outflow Reconstruction	CPT	33400-33496 33860-33870
Heart Valve Replacement	CPT	33405-33413, 33430, 33465, 33475
REDO CABG	CPT	33530

Trigger Diagnoses – ICD-10

Acute CHF / pulm edema	Myocarditis
Acute myocardial infarction	Other cardiac arrhythmias
Acute pericarditis	Other Cardiovascular Disease
Atrial Flutter / Fibrillation	Other Heart Blocks / Conduction Disorders
Cardiomyopathy	Other heart disease
Chronic Heart Failure, Degeneration	Other lung problems
Congestive heart failure; nonhypertensive	Premature Beats
Coronary Artery Anomaly	Previous CABG
Coronary Artery Bypass Graft (CABG)	Previous heart valve replacement
CV - atherosclerosis - aorta	Previous PCI
CV - other heart ds	Pulmonary heart disease
Endocarditis	Recent AMI
Heart Aneurysm and other Sequelae of AMI	redo cabg
Heart Failure unspecified as acute or chronic	Resp - abnormal chest sounds
Heart Valve Disorders	Sinus Node Dysfunction
Heart Valve Repair, Outflow Reconstruction	STEMI
heart valve replacement	Subendocardial Infarct
Highgrade Heart Block	Supraventricular Tachyarrhythmias
Hypertensive Heart Disease	Transplanted Heart w Angina
Hypertensive Heart Disease w Heart Failure	Unstable angina
Hypertensive Heart Disease w Heart Failure & CKD	Ventricular Arrhythmias
Marfan's Syndrome	

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	E & M - nursing home	Imaging - nuclear - hepatobiliary ductal scan - radiopharmaceutical	Lab - cytology
Alcohol / Drug Use Management	E & M - other	Imaging - nuclear - kidney - radiopharmaceutical	Lab - endocrine
Alcohol / Drug Use Screening	E & M - prevention	Imaging - nuclear - kidney - scan	Lab - genetic testing - brugada syndrome
Ancillary Services	Electrocardiogram - EKG monitoring	Imaging - nuclear - localization of inflammation	Lab - genetic testing - cardiac ion channel syndrome
Anesthesia	Electrographic cardiac monitoring	Imaging - nuclear - lung scan	Lab - gi - fat absorption
Aortic resection, replacement or anastomosis	Electrophysiology Studies, Cryoablation	Imaging - nuclear - lymphatics	Lab - hematology - blood count
Bleeding Status	Endovascular Repair of Heart Valves	Imaging - nuclear - other	Lab - hematology - blood count - eosinophil count
Blood Count	Extracorporeal shock wave, other than urinary	Imaging - nuclear - other - automated data add - on	Lab - hematology - coagulation
Blood Gases, Pulse Oximetry	HbA1C	Imaging - nuclear - other blood / related	Lab - immunology
Blood transfusion	Hearing Test	Imaging - nuclear - other musculoskeletal	Lab - infectious agent antibody
Blood Type, Coomb's test	Heart Echo / Ultrasound	Imaging - nuclear - platelet kinetics	Lab - infectious agent antigen
Bundled Payment / Medical Home	Heart valve procedures	Imaging - nuclear - radiopharmaceutical - radiopharmaceutical - other	Lab - infectious agent dna
Bypass Coronary Artery, Percutaneous Endoscopic Approach	Heart Valve Repair, Outflow Reconstruction	Imaging - nuclear - red cell survival	Lab - microbiology
Cardiac cath & Angiogram	heart valve replacement	Imaging - nuclear - shilling test - radiopharmaceutical	Lab - microbiology - c & s
Cardiac Stress Test	Hepatitis B vaccine	Imaging - nuclear - tumor localization	Lab - microbiology - microscopic exam
Care Plan Oversight	High dose steroids	Imaging - nuclear - venous thrombosis - radiopharmaceutical	Lab - microbiology - other
Case Management Services	Home Health / Hospice	Imaging - nuclear - venous thrombosis - scan	Lab - microbiology - viral culture
Case Management Services - Behavioral	Home Health Services	Imaging - other imaging	Lab - microscopic - koh prep
CHEMOTHERAPY	Hormone Therapy	Imaging - other imaging - fluoroscopy	Lab - microscopic - wet mount
Chest X-Ray	HPV VACCINE	Imaging - other imaging - fluoroscopy - guidance	Lab - other clinical lab
CHLAMYDIA SCREENING	Imaging - arteriography - extremities	Imaging - pet - other	Lab - other hematology
Chronic Care Management	Imaging - arteriography - other	Imaging - supplies - contrast agent - high osmolar	Lab - pathology consultation
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - arteriography - renal	Imaging - supplies - contrast agent - low osmolar	Lab - specimen collection - blood - arterial - arterial puncture
Coordinated Care Fees/Services	Imaging - ct - aorta	Imaging - supplies - ultrasound related	Lab - specimen collection - blood - venous - venipuncture
Coronary Artery Bypass Graft (CABG)	Imaging - ct - cardiac	Imaging - therapeutic procedure - abscess drainage	Lab - specimen collection - blood - venous - venous port
Coronary Thrombolysis	Imaging - ct - chest	Imaging - therapeutic procedure - other therapeutic procedure	Lab - specimen collection - specimen handling
Counseling Services	Imaging - ct - follow - up	Imaging - us - extremity	Lab - specimen collection - urine
Diagnostic physical therapy	Imaging - ct - guidance	Imaging - us - eye	Lab - stat request
Diagnostic ultrasound of abdomen or retroperitoneum	Imaging - ct - head / brain	Imaging - us - guide - biopsy	Lab - surgical pathology
Diagnostic ultrasound of heart (echocardiogram)	Imaging - ct - other	Imaging - us - guide - other	Lab - therapeutic drug assay
Dilation of Coronary Artery, Open Approach	Imaging - cta - aorta	Imaging - us - head / neck	Lab - transfusion medicine
DME - bath / toilet aids	Imaging - cta - chest	Imaging - us - intravascular	Lab - urinalysis
DME - beds / accessories	Imaging - cta - coronary	Imaging - us - other	Laboratory - Chemistry and Hematology
DME - heat/cold application	Imaging - cta - head / neck	Imaging - us - retroperitoneum	LEAD SCREENING
DME - mobility aids	Imaging - mra - chest	Imaging - venography - other	Lipid Level Monitoring
DME - other	Imaging - mra - head	Imaging - x-ray - other - joint survey	Low dose steroids
DME - patient lifts	Imaging - mri - brain	Imaging - x-ray - ribs	Lung Function Tests
DME - repair / maintenance	Imaging - mri - chest	Imaging - x-ray - upper gi - other	LVEF < 40% or LV systolic dysfunction
DME - restraints	Imaging - mri - contrast agent	Imaging - x-ray - upper gi - small bowel - contrast	Magnetic resonance imaging
DME - safety equipment	Imaging - mri - guidance	Imaging - x-ray - urinary tract - cystography / voiding cystourethrogram	Markers for Inflammation
DME - wound therapy	Imaging - mri - lower extremity	Imaging - x-ray - urinary tract - other	Medication Assisted Management (MAT)
DME and supplies	Imaging - mri - other	Imaging Abdomen	Medication Therapy Management Services
Drug Delivery implantation	Imaging - nuclear - bladder / ureter	Insertion of catheter or spinal stimulator and injection into spinal canal	Medications (Injections, infusions and other forms)
E & M - consultation	Imaging - nuclear - blood / plasma volume - radiopharmaceutical	Insertion, revision, replacement, removal of cardiac pacemaker or cardioverter/d	Metabolic Renal Hepatic Chemistry Panel
E & M - emergency care	Imaging - nuclear - blood / plasma volume - scan	Lab - blood gases	Minimally Invasive CABG
E & M - home visit	Imaging - nuclear - brain - radiopharmaceutical	Lab - chemistry	NewBorn Blood Tests
E & M - hospital	Imaging - nuclear - csf - scan	Lab - chemistry and toxicology tests	Online Management

Relevant Procedures – CPT / HCPCS, ICD-10

Open Coronary Endarterectomy	Other care - nutrition - education	Other diagnostic ultrasound	Procedure - central venous catheter - repair / maintenance
Opioid Administration / Dispensing (OTP)	Other care - nutrition - enteral	Other Laboratory	Procedure - chest tube / thoracentesis - insertion of chest tube
Orthotics - upper extremity	Other care - nutrition - enteral - administration	Other non-OR therapeutic cardiovascular procedures	Procedure - chest tube / thoracentesis - thoracentesis
Other - non - covered	Other care - nutrition - enteral - formula	Other OR heart procedures	Procedure - coronary - cabg
Other care - bladder / bowel care - catheter	Other care - nutrition - enteral - pump	Other OR procedures on vessels other than head and neck	Procedure - coronary - ptca - stent
Other care - bladder / bowel care - drainage bag	Other care - nutrition - enteral - tubing	Other Surgery of Heart & Valve	Procedure - debridement - wound / infection / burn - debridement
Other care - bladder / bowel care - other supplies	Other care - nutrition - medical food	Pacemaker Defibrillator Check	Procedure - debridement of nails
Other care - bladder / bowel care - other supplies - diaper / related	Other care - nutrition - parenteral	Pathology	Procedure - esophageal / gastric intubation
Other care - bladder / bowel care - other supplies - skin barrier	Other care - nutrition - parenteral - all - inclusive	PCI with stents, atherectomy	Procedure - extracorporeal circulation
Other care - chronic edema - appliance - limb compression	Other care - nutrition - parenteral - nutrition solution	Peer Services	Procedure - gastrostomy
Other care - chronic edema - appliance - non - segmental	Other care - nutrition - parenteral - pump	Personal Care Services	Procedure - graft
Other care - chronic edema - appliance - segmental	Other care - observation	Physical Therapy / Rehab	Procedure - graft - skin - graft material
Other care - chronic edema - compression stocking	Other care - other	Physician Services	Procedure - great vessels - thorax - repair / graft
Other care - chronic edema - compressor	Other care - other - ancillary services	Physician Services - Inpatient	Procedure - gu - other non - or rx
Other care - chronic edema - compressor - non - segmental	Other care - other - education	Physician Services - Outpatient	Procedure - heart valve - other
Other care - chronic edema - compressor - segmental	Other care - other - exercise classes	PQRI	Procedure - i&d - skin - drainage of abscess
Other care - chronic edema - surgical stockings	Other care - other - external counterpulsation	Preventive Medicine, Care Coordination	Procedure - maintenance - cns / spinal pump / port
Other care - diabetes care - glucose monitoring	Other care - other - external defibrillator	Procedure - ablation - arrhythmia - open	Procedure - other anal / rectal procedures - other procedures - rectum / anus
Other care - diabetes care - glucose monitoring - lancet	Other care - other - infection control	Procedure - anesthesia	Procedure - other non - or rx - other non - or skin procedures
Other care - diabetes care - glucose monitoring - other supplies	Other care - other - irrigation	Procedure - anesthesia - related supplies	Procedure - pacemaker / defibrillator - transcutaneous pacing
Other care - diabetes care - insulin pump	Other care - other - lodging	Procedure - aorta - repair - aneurysm / dissection - endovascular	Procedure - pericardiocentesis
Other care - home care - emergency response system	Other care - other - meals	Procedure - aorta - repair - aneurysm / dissection - open	Procedure - peripheral nerve repair / graft - graft / guide
Other care - home care - home health aide	Other care - other - medical records	Procedure - artery - abdomen - angioplasty - transluminal / open	Procedure - peripheral venous catheter
Other care - home care - meals	Other care - other - pacemaker - monitor	Procedure - artery - abdomen - angioplasty - transluminal / percutaneous	Procedure - related supplies - ablation - catheter
Other care - home care - nursing care	Other care - other - pvd - compressor	Procedure - artery - abdomen - atherectomy - transluminal / percutaneous	Procedure - related supplies - access catheter
Other care - home care - nursing care - lpn	Other care - other - weight management	Procedure - artery - extremity - angioplasty - transluminal / percutaneous	Procedure - related supplies - catheter
Other care - home care - nursing care - np	Other care - pain management - pca / related	Procedure - artery - extremity - atherectomy - transluminal / percutaneous	Procedure - related supplies - dilation / stenting
Other care - home care - nursing care - rn	Other care - prevention - smoking cessation	Procedure - artery - iliac - repair / graft - endovascular	Procedure - related supplies - drainage
Other care - home care - other care	Other care - respiratory - equipment / supplies	Procedure - artery - nos - angioplasty / stenting	Procedure - related supplies - graft - tendon repair
Other care - home care - other care - attendant care	Other care - respiratory - equipment / supplies - apnea monitor	Procedure - artery - nos - atherectomy - catheter	Procedure - related supplies - graft / repair
Other care - home care - other care - chore care	Other care - respiratory - equipment / supplies - cpap	Procedure - artery - nos - thrombolysis	Procedure - related supplies - implant
Other care - home care - other care - companion care	Other care - respiratory - equipment / supplies - ippb	Procedure - artery - pulmonary - angioplasty - percutaneous	Procedure - related supplies - other
Other care - home care - other care - day care	Other care - respiratory - equipment / supplies - nebulizer	Procedure - artery - thorax - embolectomy / thrombectomy	Procedure - related supplies - resection - morcellator
Other care - home care - other care - homemaker	Other care - respiratory - equipment / supplies - peak flow meter	Procedure - artery / vein - nos - closure / closure device	Procedure - related supplies - retrieval - device
Other care - home care - other care - respite care	Other care - respiratory - equipment / supplies - spirometer	Procedure - artery / vein - nos - other	Procedure - sedation
Other care - home care - physician supervision	Other care - respiratory - equipment / supplies - ventilator	Procedure - artery / vein - nos - thrombectomy catheter	Procedure - suture - skin - complex wound repair
Other care - home care - rehabilitation - occupational therapy	Other care - respiratory - other	Procedure - biopsy - endocardium	Procedure - suture - skin - layer closure of wound
Other care - home care - rehabilitation - physical therapy	Other care - respiratory - oxygen / oxygen concentrator	Procedure - block - nerve	Procedure - suture - skin - repair of superficial wound
Other care - home care - rehabilitation - speech therapy	Other care - respiratory - tracheostomy care	Procedure - cardiac - other	Procedure - vascular - occlusion / embolization - transcatheter
Other care - home care - social worker	Other care - respiratory - ventilator management	Procedure - cardiac - other or	Procedure - vascular - related supplies - angioplasty
Other care - home care - specialized visit	Other care - respiratory therapy	Procedure - cardiac assist device - intra - aortic balloon	Procedure - vascular - related supplies - atherectomy
Other care - home care - training	Other care - wound care	Procedure - cardiac assist device - lvad	Procedure - vascular - related supplies - embolization protective system
Other care - hospice	Other care - wound care - electromagnetic therapy	Procedure - cardioversion	Procedure - vascular - related supplies - graft material
Other care - long term care - assisted living	Other care - wound care - growth factor	Procedure - catheter - arterial - arterial line for monitoring	Procedure - vascular - related supplies - occlusion catheter
Other care - long term care - residential care	Other care - wound care - hyperbaric oxygen	Procedure - catheter - arterial - selective branch catheter	Procedure - vascular access - port / pump - insertion
Other care - nutrition - assessment	Other diagnostic cardiovascular procedures	Procedure - central venous catheter - fluoroscopy - guidance	Procedure - vein - nos - angioplasty
Other care - nutrition - counseling - dietician	Other diagnostic procedures (interview, evaluation, consultation)	Procedure - central venous catheter - insertion	Procedure - vein - nos - vein harvest

Relevant Procedures – CPT / HCPCS, ICD-10

Procedure - vein - upper extremity - vein harvest	Rx - central nervous system - benzodiazepines	Rx - respiratory - phenylephrine	Tests - pulmonary - other
Procedure - vein - vena cava - filter	Rx - central nervous system - non-amphetamine stimulants	Rx - serums, toxoids, vaccines - serums	Tests - pulmonary - peak flow
Procedures and Reporting	Rx - central nervous system - sympnatholytic rx	Rx - serums, toxoids, vaccines - toxins	Tests - vascular - arterial - extremity
Prophylactic vaccinations and inoculations	Rx - central nervous system - tranq/antipsychotics	Rx - skin / mucous membrane - antiinflam s/mm agnts / comb nec	Tests - vascular - cerebrovascular
Prosthetics - other	Rx - central nervous system - vascular 5ht1 agonists	Rx - skin / mucous membrane - s/mm miscellaneous	Tests - vascular - other
Psychiatry Evaluations	Rx - coagulation system - anticoagulants	Rx - vitamins - multivit prep	Tests - vascular - venous
Psychiatry Services	Rx - coagulation system - antiheparin agnt	Rx - vitamins - vitamin b / b complex	Therapy - acupuncture
Psychological and psychiatric evaluation and therapy	Rx - coagulation system - antiplatelet rx	Rx - vitamins - vitamin d	Therapy - activity therapy
redo cabg	Rx - coagulation system - hemostatics	Screen for amino acid disorders	Therapy - allergy treatment
Risk Assessment	Rx - coagulation system - thrombolytic rx	Shock / Cardiac Arrest	Therapy - apheresis
Robotic Surgery	Rx - diagnostic rx - gastric function	Smoking / Tobacco Cessation	Therapy - behavior - evaluation and therapy
Rx - administration - infusion	Rx - diagnostic rx - roentgenography	Supplies	Therapy - behavior - other
Rx - administration - injection	Rx - diagnostic rx, misc	Surgery for cardiac arrhythmia	Therapy - behavior - partial hospitalization
Rx - allergy - antihistamines / comb	Rx - diuretics - diuretic, carb anhydrase inhib	TAVR	Therapy - biofeedback
Rx - analg/antipy/nsaids - narcotics	Rx - diuretics, loop diuretics	Tests - allergy tests - intradermal	Therapy - cardiac rehab
Rx - analg/antipy/nsaids - nsaids	Rx - diuretics, osmotic	Tests - allergy tests - other	Therapy - chiropractic / osteopathic manipulation
Rx - antibiotics - aminoglycosides	Rx - diuretics, thiazides / related	Tests - allergy tests - patch	Therapy - dialysis - home
Rx - antibiotics - anti-infectives, misc	Rx - eent - topical - eye/ear/nose/throat misc	Tests - allergy tests - percutaneous	Therapy - dialysis - supplies
Rx - antibiotics - cephalosporins	Rx - electrolytic, caloric, water - calcium supplements	Tests - cardiac - analysis - pace / defib	Therapy - habilitation
Rx - antibiotics - chloramphenicol / comb	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Tests - cardiac - doppler	Therapy - hyperbaric oxygen
Rx - antibiotics - macrolides	Rx - electrolytic, caloric, water - caloric rx, amino acid prep	Tests - cardiac - eeg - eeg - 12 lead	Therapy - neurostimulator - incontinence
Rx - antibiotics - penicillins	Rx - electrolytic, caloric, water - hydration - unspecified	Tests - cardiac - eeg - other	Therapy - neurostimulator - other
Rx - antibiotics - quinolones	Rx - electrolytic, caloric, water - multi-mineral prep	Tests - cardiac - eeg monitoring - event recorder	Therapy - neurostimulator - tens - device
Rx - antibiotics - sulfonamides / comb	Rx - electrolytic, caloric, water - potassium supp	Tests - cardiac - echo - contrast agent	Therapy - neurostimulator - tens - leads
Rx - antibiotics - tetracyclines	Rx - electrolytic, caloric, water - replacement preparations, misc	Tests - cardiac - echo - intracardiac	Therapy - neurostimulator - tens - supplies
Rx - antibiotics / antivirals / antifungals - infusion	Rx - electrolytic, caloric, water - sodium chlor preps	Tests - cardiac - electrophysiology - other	Therapy - other
Rx - antibiotics, misc	Rx - endocrine - other - parathyroid hormones	Tests - cardiac - electrophysiology - supplies - other	Therapy - phlebotomy
Rx - antidiabetic rx - insulins	Rx - gi - antichol/antispasmodics	Tests - cardiac - electrophysiology - tilt table evaluation	Therapy - pt - exercises / activities
Rx - antifungals	Rx - gi - antiemetics	Tests - cardiac - monitoring - chf	Therapy - pt - modalities
Rx - autonomic rx - nicotine preps	Rx - gi - h2 antagonists	Tests - cardiac - other	Therapy - rehabilitation
Rx - autonomic rx - parasympathomimetics	Rx - gi - ppis	Tests - cardiac - radiopharmaceuticals	Therapy - rehabilitation - other
Rx - autonomic rx - sympathomimetic rx	Rx - gi drug misc,nec	Tests - cardiac - swan ganz	Therapy - transfusion - administration
Rx - b-lactam antibiotics	Rx - gu - other - bladder rx	Tests - cardiac stress tests - cardiac perfusion scan - rest / exercise	Therapy - transfusion - blood
Rx - blood derivatives	Rx - hematopoietic system - hematopoietic growth factors	Tests - cardiac stress tests - cardiac stress tests - other	Therapy - transfusion - granulocytes
Rx - cardiovascular system - antiarrhythmic rx	Rx - hematopoietic system - iron / related	Tests - cardiac - cardiovascular - other	Therapy - transfusion - plasma
Rx - cardiovascular system - beta blockers	Rx - hematopoietic system - other	Tests - ent - other dx	Therapy - transfusion - platelets
Rx - cardiovascular system - cardiac drugs	Rx - miscellaneous rx	Tests - gi - duodenal motility study	Therapy - ultraviolet light therapy
Rx - cardiovascular system - cardiac glycosides	Rx - miscellaneous rx - anesthetics, local	Tests - gi - other dx	Therapy - vaccination - hepatitis b
Rx - cardiovascular system - hypotensive rx	Rx - miscellaneous rx - enzymes	Tests - gu - post void residual / bladder capacity	Thyroid Function Tests
Rx - cardiovascular system - natriuretic peptides	Rx - muscle relaxants - muscle relax, neuromusc block	Tests - gu - urodynamics - voiding pressure	Traction, splints, and other wound care
Rx - cardiovascular system - vasodilating agents, nec	Rx - muscle relaxants - muscle relax, skeletal central	Tests - neuro - eeg	Transitional Care Management
Rx - cardiovascular system - vasodilating rx	Rx - muscle relaxants - muscle relax, skeletal, misc	Tests - neuro - eeg	Transportation - other transportation
Rx - central nervous system - amphetamines	Rx - other	Tests - neuro - evoked potentials	Transportation - paramedic
Rx - central nervous system - anticonvulsants	Rx - pharmacy fee	Tests - neuro - muscle testing	Ungrouped Codes
Rx - central nervous system - antidepressants	Rx - respiratory - beta agonists	Tests - neuro - ncv / emg	Urine Protein
Rx - central nervous system - anxiolytic/sedative/hypnot nec	Rx - respiratory - methylxanthines	Tests - neuro - other	Vaccine for flu or Pneumonia
Rx - central nervous system - barbiturates	Rx - respiratory - mucolytics/cold comb	Tests - neuro - sleep studies	Ventricular Repair, Postinfarct VSD
		Tests - other cardiac scans	Vitamin K administration
			Wellness Assessment

Relevant Diagnoses – ICD-10

Acute CHF / pulm edema	Other cardiac arrhythmias
Acute myocardial infarction	Other Cardiovascular Disease
Acute pericarditis	Other Heart Blocks / Conduction Disorders
Atrial Flutter / Fibrillation	Other heart disease
Cardiomyopathy	Other lung problems
Chronic Heart Failure, Degeneration	Premature Beats
Congestive heart failure; nonhypertensive	Previous CABG
Coronary Artery Anomaly	Previous heart valve replacement
CV - atherosclerosis - aorta	Previous PCI
CV - other heart ds	Pulmonary heart disease
Endocarditis	Recent AMI
Heart Aneurysm and other Sequelae of AMI	Resp - abnormal chest sounds
Heart Failure unspecified as acute or chronic	Sinus Node Dysfunction
Heart Valve Disorders	STEMI
Highgrade Heart Block	Subendocardial Infarct
Hypertensive Heart Disease	Supraventricular Tachyarrhythmias
Hypertensive Heart Disease w Heart Failure	Transplanted Heart w Angina
Hypertensive Heart Disease w Heart Failure & CKD	Unstable angina
Marfan's Syndrome	Ventricular Arrhythmias
Myocarditis	

Complications – ICD-10

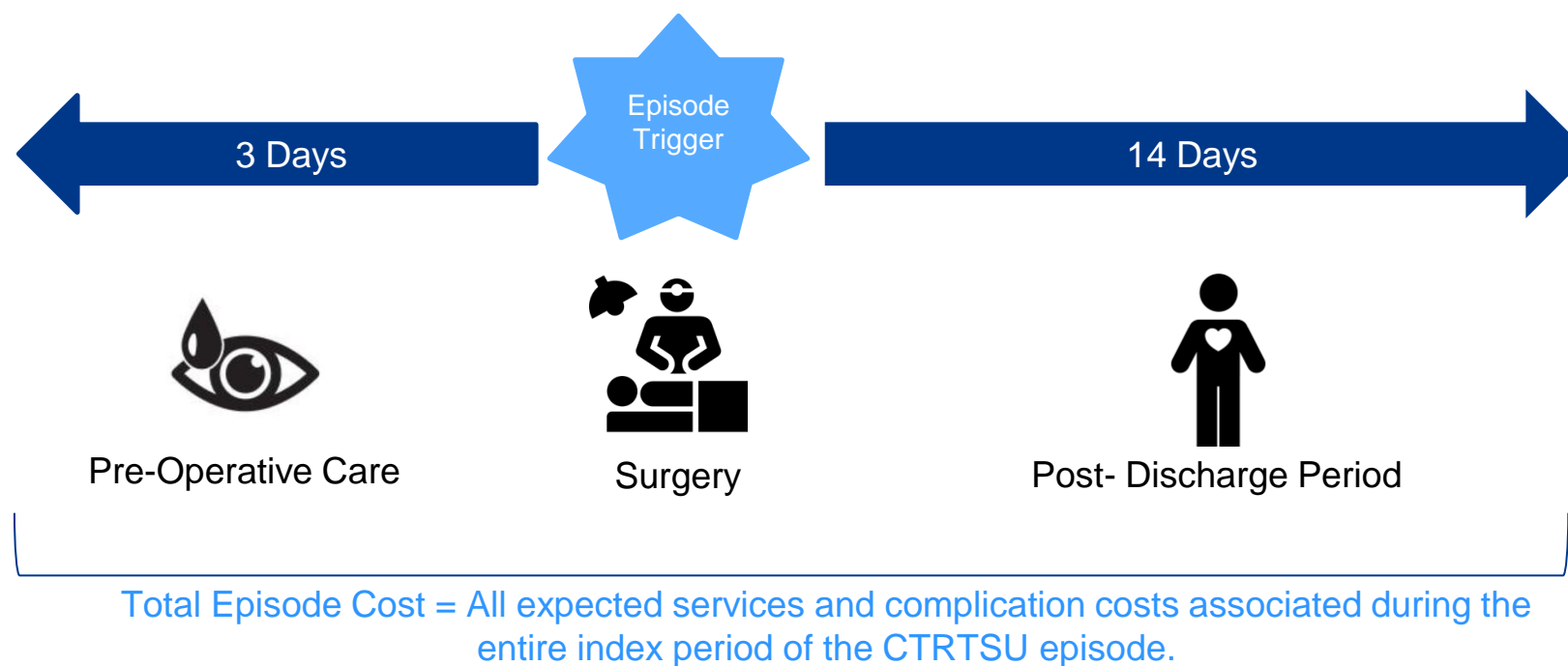
Accidental Falls	Decubitus Ulcer	Malfunction / Complication of Heart Device	Shock during or following cardiac surgery
Acute CHF / pulm edema	Dehydration	Meningitis / Encephalitis	Shock during or post-procedure
Acute cor pulmonale	Delirium, Encephalopathy	MRSA Pneumonia	Sinus Node Dysfunction
Acute esophagitis, acute gastritis, duodenitis	Dermatitis, Urticaria	MRSA, Drug Resistant Infections	Skin - other
Acute Kidney Failure	Diabetes, poor control	Opportunistic Infections	STEMI
Acute myocardial infarction	dic, coagulation, hemorrhagic disorders	Other bacterial infections	Subendocardial Infarct
Acute Pancreatitis, pseudo cyst	empyema, lung abscess	Other Bacterial Pneumonia	Suicide or Self-inflicted Injury
Adverse effects of drugs	Endocarditis	Other cardiac arrhythmias	Supraventricular Tachyarrhythmias
Altered mental status	Esophageal Reflux and Other Esophagitis	Other cerebral complications	Thromboembolic Stroke
arterial thromboembolism	Fluid Electrolyte Acid Base Problems	Other Heart Blocks / Conduction Disorders	Tracheostomy Complications
Aspiration Pneumonia	Foreign body left during procedure	Other lower respiratory disease	Transfusion, Infusion related complications
Atrial Flutter / Fibrillation	Gastroenteritis	other lung complications	Transient cerebral ischemia, TIA
Bacteremia, SIRS, no organ dysfunction	GI Bleed	Other lung problems	Transplanted Heart w Angina
Bladder Dysfunction, hemorrhage	Gram Negative Pneumonia	Other Mental Disorders	Unstable angina
C-Difficile Infection	HAC 02: Air Embolism	Other Phlebitis, Lymphangitis, varices	Urethral Stricture
Candida Infection	HAC 04: Stage III and IV Pressure Ulcers	Other Staph Pneumonia	Urinary Complications
Chronic Fungal and Other Pneumonias	HAC 08: Surgical Site Infection-Mediastinitis after CABG	Othr - other	Urinary Frequency & other symptoms
Coma, persistent vegetative state	HAC 09: Manifestations of Poor Glycemic Control	Perforation, Peritonitis, Abd Abscess	Urinary Incontinence
Complication of genitourinary device	Heart Aneurysm and other Sequelae of AMI	Phlebitis, Deep vein thrombosis (DVT)	Urinary Tract Infection
Complication of Implanted device, graft	Heart Failure unspecified as acute or chronic	Pulmonary Embolism	Vascular Insufficiency of intestine
Complication of nervous system device	Hemoptysis	Pyogenic Arthritis	Vascular Prosthetic Device/Graft Complication
Complications after heart procedures	Hemorrhage	Recent AMI	Ventilator Associated Pnuemonia
Complications from Central Line	Hemorrhagic Stroke	Renovascular and other secondary hypertension	Ventilator Dependence
Complications from chemotherapy	Hepatorenal Syndrome	Resp Failure following trauma / surgery	Ventricular Arrhythmias
Complications of anesthesia	Highgrade Heart Block	Respiratory Failure	Viral Pneumonia
Complications of colostomy, enterostomy	Hypertensive Urgency	Respiratory Insufficiency	Wound Dehiscence
complications of medical care	Hypotension / Syncope	rhabdomyolysis	Wound Infections
complications of surgical procedures	Influenza with Pneumonia	Sepsis	
Complications of surgical procedures or medical care	Interstitial Emphysema	Severe Sepsis	
Debilitating Viral Pneumonia	IVC & other intra-abd venous thrombosis	Shock / Cardiac Arrest	

Cataract Surgery (CTRTSU)

Services and costs associated with a procedure of Cataract Surgery (CTRTSU) are grouped together to include the index event during which the procedure was performed, a 3-day look back period to capture pre-operative diagnostic workup leading to the surgery and a 14-day post-discharge period. Patients are identified as those with a procedure code of Cataract Surgery in any position on an outpatient facility/professional service, along with a qualifying diagnosis code.

As part of the Cataract Surgery episode, we evaluate services that are 1) typical or routine and considered part of expected care for Cataract Surgery; and 2) those that are related to complications associated with Cataract Surgery.

Episode Length – CTRTSU



Duration Pre-Trigger Window	Duration Post-Trigger Window
3 Days	14 Days

Episode Triggers – CTRTSU

Trigger Group Name	Code Type	Codes
Cataract Surgery	CPT	66982 66983 66984 66987 66988
Removal of Lens	CPT	66840 66850 66852 66920 66930 66940

Trigger Diagnoses – ICD-10

After Cataract
Cataract
Congenital Cataract
Diabetic cataract
Lens and cataract procedures
Mature or Hypermature Cataract
Secondary Cataract
Toxic Effects of Radiation
Traumatic Cataract

Relevant Procedures – CPT / HCPCS, ICD-10

Alcohol / Drug Use Screening	Other Laboratory	Surgery For Glaucoma
Ancillary Services	Other therapeutic procedures on eyelids, conjunctiva, cornea	Tests - eye - contact lens fitting
Anesthesia for eye	Physical Therapy / Rehab	Tests - eye - dx - other
Blood Count	Physician Services - Outpatient	Tests - eye - exam
Cataract Surgery w lens implant	PQRI	Tests - eye - orthoptic / peoptic training
CHEMOTHERAPY	Preventive Medicine, Care Coordination	Tests - eye - retinal exam
Chronic Care Management	Procedure - anesthesia	Tests - eye - sensorimotor evaluation
Diagnostic procedures on eye	Procedure - eye - biopsy or exploration	Tests - neuro - cognitive testing
DME and supplies	Procedure - eye - other implants / supplies	Tests - neuro - evoked potentials
Drug Delivery implantation	Procedure - lens / cataract - iol	Therapy - nonoperative removal of foreign body
E & M - consultation	Procedure - lens / cataract - laser posterior capsulotomy	Therapy - other
E & M - other	Procedure - lens / cataract - other	Ungrouped Codes
Electrocardiogram - EKG monitoring	Procedure - other eye procedures - other	Visual aids and other optical supplies
Eye Exam	Procedure - other intraocular rx - other	Surgery For Glaucoma
Home Health / Hospice	Procedure - related supplies - implant	Tests - eye - contact lens fitting
Hormone Therapy	Procedure - retinal tear / detachment - other	Tests - eye - dx - other
Imaging - us - eye	Procedure - retinal tear / detachment - prophylaxis - laser / related	Tests - eye - exam
Imaging - venography - other	Procedure - retinal tear / detachment - scleral buckling w and w / o vitrectomy	Tests - eye - orthoptic / peoptic training
Lab - infectious agent dna	Procedure - retinal tear / detachment - vitrectomy w / laser photocoagulation	Tests - eye - retinal exam
Lab - panel - hepatitis panel	Procedure - rx on eyelids / conjunctiva / cornea - other	Tests - eye - sensorimotor evaluation
Lab - specimen collection - blood - venous - venipuncture	Procedure - sedation	
Lab - therapeutic drug assay	Procedures and Reporting	
Lens and cataract procedures	Psychiatry Services	
Low dose steroids	Psychological and psychiatric evaluation and therapy	
Medication Assisted Management (MAT)	Removal of lens material wout lens implant	
Medications (Injections, infusions and other forms)	Repair of retinal tear, detachment	
Metabolic Renal Hepatic Chemistry Panel	Risk Assessment	
Microscopic examination (bacterial smear, culture, toxicology)	Rx - central nervous system - benzodiazepines	
Ophthalmologic and otologic diagnosis and treatment	Rx - gi - antiemetics	
Other care - other	Rx - hematopoietic system - hematopoietic growth factors	
Other care - vision - service	Rx - miscellaneous rx	
Other diagnostic procedures (interview, evaluation, consultation)	Rx - miscellaneous rx - anesthetics, local	
Other extraocular muscle and orbit therapeutic procedures	Rx - miscellaneous rx - enzymes	
Other Eye Services, Glaucoma	Rx - other	
Other intraocular therapeutic procedures	Supplies	

Relevant Diagnoses – ICD-10

Aftercare	Preventive Screening
Astigmatism	Prvn - pre-op exam
Blurred vision / Diplopia	Prvn - screening - other
Cataract	Residual codes, unclassified
complications of surgical procedures	Secondary Cataract
Congenital Cataract	Sudden or profound visual loss
diabetes mellitus with ophthalmic manifestations	Superficial injury; contusion
Diabetes related retinal detachment	Toxic Effects of Radiation
Diabetes, poor control	Traumatic Cataract
Diabetic cataract	Visual field defects
Eye - cataract	Visual loss, blindness
Eye - dry eyes	
Eye - other eye ds	
Eye - refraction ds	
Eye - retinal detachment w/ defect	
Eye - severe impairment or blindness	
Eye - strabismus / related	
Eye - vision exam	
Eye - vitreous opacities	
Fever & Chills	
Foreign body in eye	
High risk cataract surgical anatomy	
Mature or Hypermature Cataract	
Mild - Moderate Neurological Deficit	
NS - acute pain - post op	
Observation/Examination	
Orthostatic Hypotension / Dizziness	
Other visual impairment	
Othr - aftercare	
Othr - follow-up exam - nec	
Othr - longterm anticoaguation	
Othr - other	
Othr - other aftercare	
Othr - post-surgical states nec	
Pain, swelling, redness of eye	

Complications – ICD-10

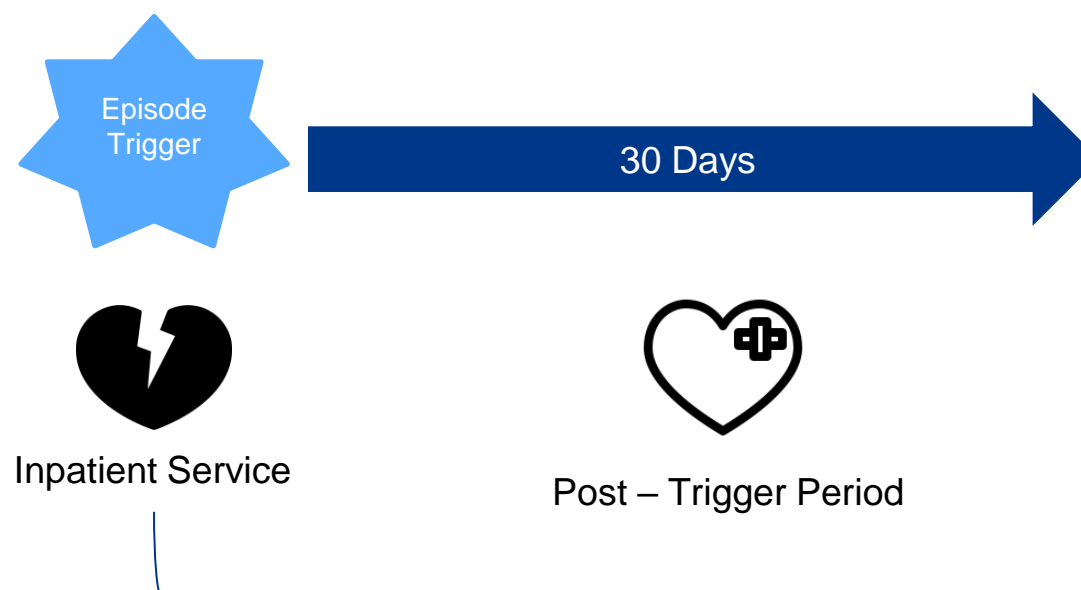
acute eye infections	Ocular Prosthetic Device/Graft Complication
Acute infection of conjunctiva or eyelids	Optic & Retrobulbar Neuritis
Acute iridocyclitis	Other bacterial infections
Adverse effects of drugs	Overdose, Poisonings
After Cataract	Pain, swelling, redness of eye
Chronic Iridocyclitis	Poisoning by Opiates
Complication of Implanted device, graft	Poisoning by Psychostimulants
Complications after eye surgery	Postprocedural Blebitis
Complications of anesthesia	Preglaucoma/Open Angle Glaucoma
complications of medical care	Ptosis of eye
complications of surgical procedures	Residual/Chronic Glaucoma
Corneal Edema and inflammation	Respiratory Failure
Corneal Ulcer	Retinal Complications
Dehydration	Retinal Detachment
Digestive system complications	Retinal Detachment, tear, defects
Dislocation of lens	Retinal Vascular Occlusion
Endophthalmitis, other deep eye infections	Secondary Cataract
Eye - other eye ds	Secondary/Low Tension Glaucoma
Fluid Electrolyte Acid Base Problems	Sudden or profound visual loss
Foreign body in eye	Superficial Injury during eye surgery
Foreign body left during procedure	Superficial injury; contusion
Hypotension / Syncope	Urethral Stricture
Hypotony of eye	Vitreous hemorrhage and degeneration
Macular degeneration	Wound Dehiscence
MRSA, Drug Resistant Infections	Wound Infections

Catheter Associated UTIs (CTHUTI)

This is a complication episode. For a complication episode to trigger, it needs the trigger diagnosis code to be present in the principal position of an inpatient claim. The episode window for a complication episode is equal to the length of an inpatient stay with a zero day look back and a 30-day look forward period. It includes services related to the inpatient stay as well as all relevant associated professional, laboratory, radiology and ancillary claims during the inpatient time window.

Complication episodes are opened only after all other episodes have been constructed. Only then can a stay, which is not assigned to any other episode and has a trigger code in the principal position, open a complication episode.

Episode Length – CTHUTI



Total Episode Cost = All expected services and complication costs associated from index service until the end of the post-trigger window.

Duration Pre-Trigger Window	Duration Post-Trigger Window
0	30

Episode Triggers – CTHUTI

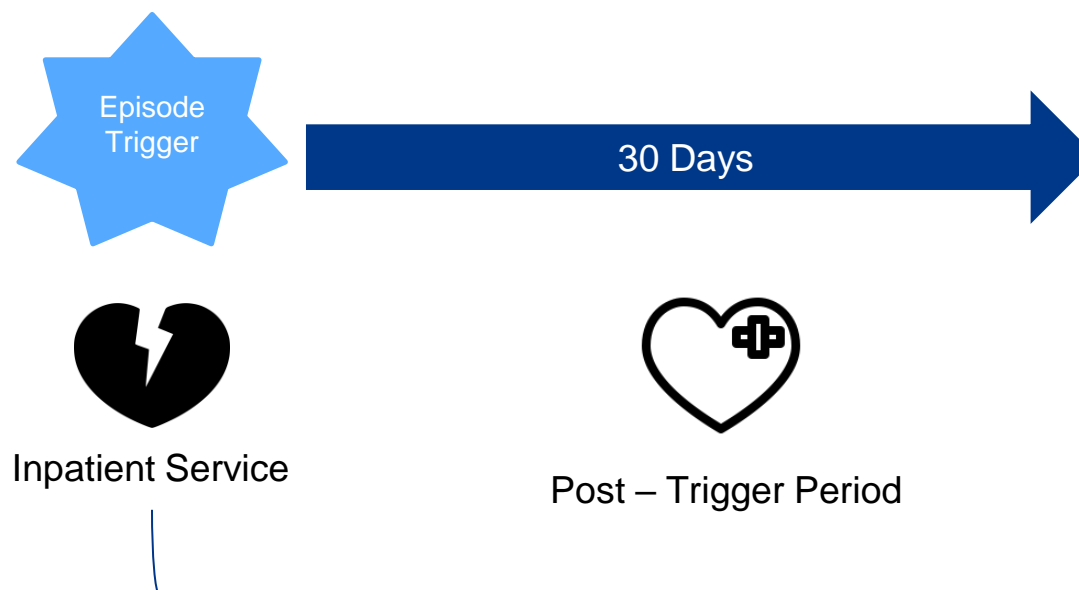
Trigger Group Name	Code Type	Codes
Complication of genitourinary device	ICD10	T83510A T83511A T83512A T83518A T8351XA

Cellulitis, Skin Infection (CELUTS)

This is a complication episode. For a complication episode to trigger, it needs the trigger diagnosis code to be present in the principal position of an inpatient claim. The episode window for a complication episode is equal to the length of an inpatient stay with a zero day look back and a 30-day look forward period. It includes services related to the inpatient stay as well as all relevant associated professional, laboratory, radiology and ancillary claims during the inpatient time window.

Complication episodes are opened only after all other episodes have been constructed. Only then can a stay, which is not assigned to any other episode and has a trigger code in the principal position, open a complication episode.

Episode Length – CELUTS



Total Episode Cost = All expected services and complication costs associated from index service until the end of the post-trigger window.

Duration Pre-Trigger Window	Duration Post-Trigger Window
0	30

Episode Triggers – CELUTS

Trigger Group Name	Code Type	Codes
Cellulitis, Skin Infection	ICD10	B781, L0201, L0211, L02211, L02212, L02213, L02214, L02215, L02216, L02219, L0231, L02411, L02412, L02413, L02414, L02415, L02416, L02419, L02511, L02512, L02519, L02611, L02612, L02619, L02811, L02818, L0291, L03111, L03112, L03113, L03114, L03115, L03116, L03119, L03121, L03122, L03123, L03124, L03125, L03126, L03129, L03211, L03212, L03213, L03221, L03222, L03311, L03312, L03313, L03314, L03315, L03316, L03317, L03319, L03321, L03322, L03323, L03324, L03325, L03326, L03327, L03329, L03811, L03818, L03891, L03898, L0390, L0391, L0882, L089, L983
Chronic Skin Ulcer	ICD10	L97101, L97102, L97103, L97104, L97109, L97111, L97112, L97113, L97114, L97119, L97121, L97122, L97123, L97124, L97129, L97201, L97202, L97203, L97204, L97209, L97211, L97212, L97213, L97214, L97219, L97221, L97222, L97223, L97224, L97229, L97301, L97302, L97303, L97304, L97309, L97311, L97312, L97313, L97314, L97319, L97321, L97322, L97323, L97324, L97329, L97401, L97402, L97403, L97404, L97409, L97411, L97412, L97413, L97414, L97419, L97421, L97422, L97423, L97424, L97429, L97501, L97502, L97503, L97504, L97509, L97511, L97512, L97513, L97514, L97519, L97521, L97522, L97523, L97524, L97529, L97801, L97802, L97803, L97804, L97809, L97811, L97812, L97813, L97814, L97819, L97821, L97822, L97823, L97824, L97829, L97901, L97902, L97903, L97904, L97909, L97911, L97912, L97913, L97914, L97919, L97921, L97922, L97923, L97924, L97929

Episode Triggers – CELUTS

Trigger Group Name	Code Type	Codes
Periph vascular dis w ulcer	ICD10	I70231, I70232, I70233, I70234, I70235, I70238, I70239, I70241, I70242, I70243, I70244, I70245, I70248, I70249, I70331, I70332, I70333, I70334, I70335, I70338, I70339, I70341, I70342, I70343, I70344, I70345, I70348, I70349, I70431, I70432, I70433, I70434, I70435, I70438, I70439, I70441, I70442, I70443, I70444, I70445, I70448, I70449, I70531, I70532, I70533, I70534, I70535, I70538, I70539, I70541, I70542, I70543, I70544, I70545, I70548, I70549, I70631, I70632, I70633, I70634, I70635, I70638, I70639, I70641, I70642, I70643, I70644, I70645, I70648, I70649, I70731, I70732, I70733, I70734, I70735, I70738, I70739, I70741, I70742, I70743, I70744, I70745, I70748, I70749
Pyoderma	ICD10	L080, L0881, L88
Skin and subcutaneous tissue infections	ICD10	L0889
Toxic Erythema	ICD10	L1230, L1231, L1235, L511, L512, L513, L530, L531, L532, L533

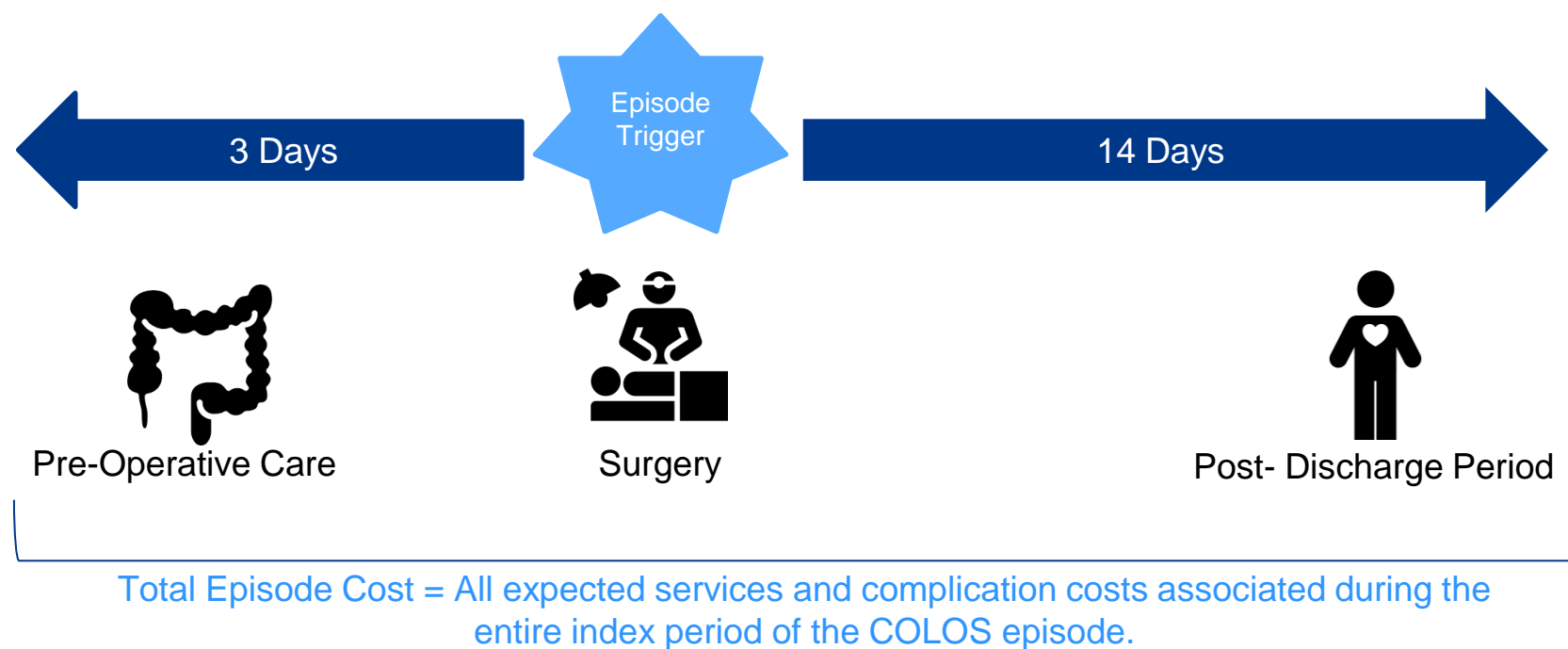
Complications – ICD-10

Cellulitis, Skin Infection
Chronic Skin Ulcer
Pyoderma
Skin and subcutaneous tissue infections
Toxic Erythema

Colonoscopy (COLOS)

The COLOS Episode focuses on screening, surveillance and diagnostic colonoscopies. It evaluates services that are typical/routine for the expected care and services that are related to associated complications. Patients are defined as those with a procedure code of Colonoscopy on an outpatient facility/professional service, along with a qualifying diagnosis code.

Episode Length – COLOS



Duration Pre-Trigger Window	Duration Post-Trigger Window
3 Days	14 Days

Episode Triggers – COLOS

Trigger Group Name	Code Type	Codes
Colonoscopy	CPT	45378, 45381
Colonoscopy through Stoma	CPT	44388, 44403-44404
Colonoscopy thru stoma w biopsy, polypectomy	CPT	44389, 44392, 44395
Colonoscopy w biopsy, polypectomy	CPT	45380, 45384-45385
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	HCPCS ICD10	G0104-G0106, G120-G0122
Flexible Sigmoidoscopy /Colonoscopy	CPT	45390
Other therapeutic Sigmoidoscopy	CPT	45335
Sigmoidoscopy	CPT	45330
Sigmoidoscopy w biopsy, polypectomy	CPT	45331, 45333, 45338

Trigger Diagnoses – ICD-10

Allergic, Dietetic, Eosinophilic Gastroenteritis	Diverticulitis, colitis	Neoplsm - screening - small intestine
Angiodysplasia of intestine	Diverticulosis, Meckel's diverticulum, Angiodyspalsia	Neuroendocrine, Myeloproliferative Cancers
Benign Carcinoid Tumor of the GI tract	Gastroenteritis	Nonspecific Gastroenteritis
Cancer in situ, Anorectal	GI - family hx of GI disease	Personal history of cancer
Cancer in situ, Colon	GI - flatulence / gas pain	Personal history of GI cancer
Cancer of colon	GI - personal hx of GI disease	Post GI Surgery Syndromes
Cancer of other GI organs; peritoneum	GI Bleed	Premalignancy anus/rectum
Cancer of rectum and anus	Hx of colon polyps, family Hx of colon cancer	Previous bowel surgery, ostomy status
Cancer; other and unspecified primary	Intestinal Malabsorption, Celiac Disease	Pseudopolyposis of colon
Congenital GI Problems in NB	Intestinal Obstruction	Secondary malignancies, Unspecified
Crohn's Disease	Iron deficiency and other anemias	Thyroid Cancer
Crohn's Disease w Abscess	Irritable Bowel and other functional GI disor	Toxic Effects of Radiation
Crohn's Disease w Fistula	Metastatic Cancer and Acute Leukemia	Toxic Gastroenteritis
Crohn's disease w intestinal obstruction	Neoplasms of unspecified nature or uncertain behavior	Ulc Colitis w Abscess
Crohn's disease w other complications	Neoplsm - gi - premalignant - anus / rectum	Ulc Colitis w Fistula
Crohn's disease w rectal bleeding	Neoplsm - hemangioma - gi - nos	Ulc Colitis w Obstruction
Digestive congenital anomalies	Neoplsm - lipoma - gi - nos	Ulcerative Colitis
Digestive system complications	Neoplsm - screening - colon - nos	Ulcerative colitis w other complications
Disseminated Metastatic Cancer	Neoplsm - screening - gi - nos	Ulcerative colitis w rectal bleeding
Diverticulitis w Perf, Abscess	Neoplsm - screening - nos	
Diverticulitis with hemorrhage	Neoplsm - screening - rectum	

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	DME - repair / maintenance	Imaging - nuclear - other gi	Lab - chemistry
Alcohol / Drug Use Management	DME - restraints	Imaging - nuclear - platelet kinetics	Lab - chemistry and toxicology tests
Alcohol / Drug Use Screening	DME - safety equipment	Imaging - nuclear - radiopharmaceutical - radiopharmaceutical - other	Lab - cytogenetics
Ancillary Services	DME and supplies	Imaging - nuclear - red cell survival	Lab - cytology
Anesthesia	Drug Delivery implantation	Imaging - nuclear - shilling test	Lab - endocrine
Aortic resection, replacement or anastomosis	E & M - consultation	Imaging - nuclear - shilling test - radiopharmaceutical	Lab - endocrine response test
Bleeding Status	E & M - emergency care	Imaging - nuclear - tumor localization	Lab - genetic testing - brugada syndrome
Blood Count	E & M - home visit	Imaging - nuclear - venous thrombosis - radiopharmaceutical	Lab - genetic testing - cardiac ion channel syndrome
Blood Gases, Pulse Oximetry	E & M - hospital	Imaging - nuclear - venous thrombosis - scan	Lab - gi - fat absorption
Blood transfusion	E & M - nursing home	Imaging - other imaging	Lab - hematology - blood count
Blood Type, Coomb's test	E & M - other	Imaging - other imaging - fluoroscopy	Lab - hematology - blood count - eosinophil count
Bundled Payment / Medical Home	E & M - prevention	Imaging - other imaging - fluoroscopy - guidance	Lab - hematology - coagulation
Care Plan Oversight	Electrocardiogram - EKG monitoring	Imaging - pet - colorectal cancer - recurrence / metastasis	Lab - immunology
Case Management Services	Esophageal Motility and Diagnostic Workup	Imaging - pet - lymphoma - staging	Lab - infectious agent antibody
Case Management Services - Oncology	Flexible Sigmoidoscopy /Colonoscopy	Imaging - pet - other	Lab - infectious agent antigen
CHEMOTHERAPY	HbA1C	Imaging - pet - tumor imaging	Lab - infectious agent dna
CHLAMYDIA SCREENING	Hemorrhoid procedures	Imaging - supplies - contrast agent - high osmolar	Lab - microbiology
Chronic Care Management	Hepatitis B vaccine	Imaging - supplies - contrast agent - low osmolar	Lab - microbiology - c & s
Colon Cancer, Unknown Disease Status	High dose steroids	Imaging - supplies - ultrasound related	Lab - microbiology - microscopic exam
Colonoscopy	Home Health / Hospice	Imaging - therapeutic procedure - abscess drainage	Lab - microbiology - other
Colonoscopy - therapeutic	Home Health Services	Imaging - us - guide - biopsy	Lab - microbiology - viral culture
Colonoscopy through Stoma	Hormone Therapy	Imaging - us - guide - other	Lab - microscopic - koh prep
Colonoscopy thru stoma w biopsy, polypectomy	HPV VACCINE	Imaging - us - other	Lab - microscopic - pinworm
Colonoscopy w biopsy, polypectomy	Imaging - ct - follow - up	Imaging - us - retroperitoneum	Lab - microscopic - wet mount
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - ct - guidance	Imaging - us - transrectal	Lab - other clinical lab
Coordinated Care Fees/Services	Imaging - ct - other	Imaging - x-ray - abdomen	Lab - other hematology
Diagnostic physical therapy	Imaging - mri - contrast agent	Imaging - x-ray - lower gi - large bowel - contrast	Lab - pathology consultation
Diagnostic ultrasound of abdomen or retroperitoneum	Imaging - mri - guidance	Imaging - x-ray - other - joint survey	Lab - specimen collection - blood - venous - venipuncture
DME - bath / toilet aids	Imaging - mri - other	Imaging - x-ray - upper gi - duodenogram	Lab - specimen collection - specimen handling
DME - beds / accessories	Imaging - nuclear - blood / plasma volume - scan	Imaging - x-ray - upper gi - esophagus - contrast	Lab - specimen collection - urine
DME - heat/cold application	Imaging - nuclear - gi blood loss	Imaging - x-ray - upper gi - other	Lab - stat request
DME - mobility aids	Imaging - nuclear - localization of inflammation	Imaging - x-ray - upper gi - small bowel - contrast	Lab - surgical pathology
DME - other	Imaging - nuclear - lymphatics	Imaging Abdomen	Lab - therapeutic drug assay
DME - patient lifts	Imaging - nuclear - other - automated data add - on	Insertion of catheter or spinal stimulator and injection into spinal canal	Lab - tissue typing
DME - rehabilitation	Imaging - nuclear - other blood / related	Lab - blood gases	Lab - transfusion medicine

Relevant Procedures – CPT / HCPCS, ICD-10

Lab - tumor marker	Other care - home care - nursing care - rn	Other care - other - infection control	Procedure - hemorrhoidectomy
Lab - urinalysis	Other care - home care - other care	Other care - other - irrigation	Procedure - maintenance - cns / spinal pump / port
Laboratory - Chemistry and Hematology	Other care - home care - other care - attendant care	Other care - other - lead assessment	Procedure - other anal / rectal procedures - other procedures - rectum / anus
LEAD SCREENING	Other care - home care - other care - chore care	Other care - other - lodging	Procedure - other gi dx
Lipid Level Monitoring	Other care - home care - other care - companion care	Other care - other - meals	Procedure - other hemorrhoid procedures
Low dose steroids	Other care - home care - other care - day care	Other care - other - medical records	Procedure - other lower gi procedures - other bowel dx
Lung Function Tests	Other care - home care - other care - homemaker	Other care - other - weight management	Procedure - other lower gi procedures - other non - or rx
Markers for Inflammation	Other care - home care - other care - respite care	Other care - pain management - pca / related	Procedure - other lower gi procedures - other or rx
Medication Assisted Management (MAT)	Other care - home care - physician supervision	Other care - prevention - smoking cessation	Procedure - other non - or rx - other non - or skin procedures
Medication Therapy Management Services	Other care - home care - rehabilitation - occupational therapy	Other care - respiratory - equipment / supplies	Procedure - other procedures - pancreas
Medications (Injections, infusions and other forms)	Other care - home care - rehabilitation - physical therapy	Other care - respiratory - equipment / supplies - apnea monitor	Procedure - proctoscopy - screening
Metabolic Renal Hepatic Chemistry Panel	Other care - home care - social worker	Other care - respiratory - equipment / supplies - nebulizer	Procedure - proctoscopy / anoscopy - other
NewBorn Blood Tests	Other care - home care - specialized visit	Other care - respiratory - equipment / supplies - peak flow meter	Procedure - proctosigmoidoscopy - dx
Online Management	Other care - home care - training	Other care - respiratory - equipment / supplies - spirometer	Procedure - proctosigmoidoscopy - rx
Opioid Administration / Dispensing (OTP)	Other care - hospice	Other care - respiratory - oxygen / oxygen concentrator	Procedure - related supplies - access catheter
Other - non - covered	Other care - long term care - assisted living	Other care - respiratory therapy	Procedure - related supplies - catheter
Other bowel diagnostic procedures	Other care - long term care - residential care	Other diagnostic procedures (interview, evaluation, consultation)	Procedure - related supplies - dilation / stenting
Other care - bladder / bowel care - catheter	Other care - nutrition - assessment	Other Laboratory	Procedure - related supplies - drainage
Other care - bladder / bowel care - drainage bag	Other care - nutrition - counseling - dietician	Other therapeutic Sigmoidoscopy	Procedure - related supplies - implant
Other care - bladder / bowel care - other supplies	Other care - nutrition - education	Partial Colectomy	Procedure - related supplies - other
Other care - bladder / bowel care - other supplies - diaper / related	Other care - nutrition - enteral	Pathology	Procedure - sedation
Other care - bladder / bowel care - other supplies - skin barrier	Other care - nutrition - enteral - administration	Peer Services	Procedure - ugi endoscopy - other
Other care - child care - foster care	Other care - nutrition - enteral - formula	Personal Care Services	Procedure - ugi endoscopy - small bowel endoscopy
Other care - chronic edema - appliance - segmental	Other care - nutrition - enteral - pump	Physical Therapy / Rehab	Procedure - vascular access - port / pump - insertion
Other care - chronic edema - surgical stockings	Other care - nutrition - enteral - tubing	Physician Services	Procedures and Reporting
Other care - diabetes care - glucose monitoring	Other care - nutrition - medical food	Physician Services - Inpatient	Prophylactic vaccinations and inoculations
Other care - diabetes care - glucose monitoring - lancet	Other care - nutrition - parenteral	Physician Services - Outpatient	Prosthetics - other
Other care - diabetes care - glucose monitoring - other supplies	Other care - nutrition - parenteral - all - inclusive	PQRI	Psychiatry Evaluations
Other care - diabetes care - insulin pump	Other care - nutrition - parenteral - nutrition solution	Preventive Medicine, Care Coordination	Psychiatry Services
Other care - home care - emergency response system	Other care - nutrition - parenteral - pump	Procedure - anesthesia	Psychological and psychiatric evaluation and therapy
Other care - home care - home health aide	Other care - observation	Procedure - anoscopy	Robotic Surgery
Other care - home care - meals	Other care - other	Procedure - central venous catheter - fluoroscopy - guidance	Routine Immunizations
Other care - home care - nursing care	Other care - other - ancillary services	Procedure - central venous catheter - insertion	Rx - administration - infusion
Other care - home care - nursing care - lpn	Other care - other - education	Procedure - esophageal / gastric intubation	Rx - administration - injection
Other care - home care - nursing care - np	Other care - other - exercise classes	Procedure - hemorrhoid destruction / ligation	Rx - allergy - antihistamines / comb

Relevant Procedures – CPT / HCPCS, ICD-10

Rx - analg/antipy/nsaids - narcotics	Rx - diagnostic rx - gastric function	Rx - respiratory - beta agonists	Therapy - behavior - other
Rx - analg/antipy/nsaids - nsaids	Rx - diagnostic rx - roentgenography	Rx - respiratory - methylxanthines	Therapy - behavior - partial hospitalization
Rx - antibiotics - anti-infectives, misc	Rx - diagnostic rx, misc	Rx - respiratory - mucolytics/cold comb	Therapy - dialysis - supplies
Rx - antibiotics - cephalosporins	Rx - diuretics - diuretic, carb anhydrase inhib	Rx - respiratory - phenylephrine	Therapy - habilitation
Rx - antibiotics - chloramphenicol / comb	Rx - diuretics, loop diuretics	Rx - serums, toxoids, vaccines - serums	Therapy - neurostimulator - nausea / vomiting
Rx - antibiotics - macrolides	Rx - diuretics, osmotic	Rx - serums, toxoids, vaccines - toxins	Therapy - neurostimulator - tens - leads
Rx - antibiotics - penicillins	Rx - diuretics, thiazides / related	Rx - skin / mucous membrane - antiinflam s/mm agnts / comb nec	Therapy - nonoperative removal of foreign body
Rx - antibiotics - quinolones	Rx - electrolytic, caloric, water - calcium supplements	Rx - skin / mucous membrane - s/mm miscellaneous	Therapy - other
Rx - antibiotics - sulfonamides / comb	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Rx - vitamins - multivit prep	Therapy - phlebotomy
Rx - antibiotics - tetracyclines	Rx - electrolytic, caloric, water - caloric rx, amino acid prep	Rx - vitamins - vitamin b / b complex	Therapy - pt - exercises / activities
Rx - antibiotics / antivirals / antifungals - infusion	Rx - electrolytic, caloric, water - hydration - unspecified	Rx - vitamins - vitamin d	Therapy - pt - modalities
Rx - antibiotics, misc	Rx - electrolytic, caloric, water - multi-mineral prep	Screen for amino acid disorders	Therapy - rehabilitation - other
Rx - antidiabetic rx - insulins	Rx - electrolytic, caloric, water - potassium supp	Sigmoidoscopy	Therapy - transfusion - blood
Rx - antidiabetic rx, misc	Rx - electrolytic, caloric, water - replacement preparations, misc	Sigmoidoscopy w biopsy, polypectomy	Therapy - transfusion - granulocytes
Rx - antifungals	Rx - electrolytic, caloric, water - sodium chlor preps	Smoking / Tobacco Cessation	Therapy - transfusion - plasma
Rx - autonomic rx - sympathomimetic rx	Rx - endocrine - other - parathyroid hormones	Supplies	Therapy - transfusion - platelets
Rx - b-lactam antibiotics	Rx - gi - antichol/antispasmodics	Tests - allergy tests - intradermal	Therapy - vaccination - chicken pox
Rx - blood derivatives	Rx - gi - antiemetics	Tests - allergy tests - other	Therapy - vaccination - dtp / related
Rx - cardiovascular system - beta blockers	Rx - gi - h2 antagonists	Tests - allergy tests - patch	Therapy - vaccination - hepatitis a vaccine
Rx - cardiovascular system - cardiac glycosides	Rx - gi - ppis	Tests - allergy tests - percutaneous	Therapy - vaccination - hepatitis b
Rx - cardiovascular system - natriuretic peptides	Rx - gi drug misc,nec	Tests - cardiac - ecg - ecg - 12 lead	Therapy - vaccination - hib vaccine
Rx - cardiovascular system - vasodilating agents, nec	Rx - gu - other - bladder rx	Tests - cardiac - radiopharmaceuticals	Therapy - vaccination - mmr / related
Rx - cardiovascular system - vasodilating rx	Rx - hematopoietic system - hematopoietic growth factors	Tests - ent - other dx	Therapy - vaccination - other vaccine
Rx - central nervous system - amphetamines	Rx - hematopoietic system - iron / related	Tests - ent - swallowing evaluation	Therapy - vaccination - poliovirus vaccine
Rx - central nervous system - antidepressants	Rx - hematopoietic system - other	Tests - gi - duodenal motility study	Therapy - vaccination - vaccine administration
Rx - central nervous system - anxiolytic/sedative/hypnot nec	Rx - immune system - interferons	Tests - gi - esophageal balloon distension test	Thyroid Function Tests
Rx - central nervous system - barbiturates	Rx - miscellaneous rx	Tests - gi - gastric motility study	Transportation - other transportation
Rx - central nervous system - benzodiazepines	Rx - miscellaneous rx - anesthetics, local	Tests - gi - other dx	Transportation - paramedic
Rx - central nervous system - non-amphetamine stimulants	Rx - miscellaneous rx - enzymes	Tests - neuro - sleep studies	Ungrouped Codes
Rx - central nervous system - tranq/antipsychotics	Rx - miscellaneous rx - heavy metal antagonists	Tests - pulmonary - other	Upper GI endoscopy
Rx - coagulation system - anticoagulants	Rx - muscle relaxants - muscle relax, neuromusc block	Tests - pulmonary - peak flow	Urine Protein
Rx - coagulation system - antiheparin agnt	Rx - muscle relaxants - muscle relax, skeletal central	Therapy - acupuncture	Vaccine for flu or Pneumonia
Rx - coagulation system - antiplatelet rx	Rx - muscle relaxants - muscle relax, skeletal, misc	Therapy - activity therapy	Vitamin K administration
Rx - coagulation system - hemostatics	Rx - other	Therapy - allergy treatment	Wellness Assessment
Rx - coagulation system - thrombolytic rx	Rx - pharmacy fee	Therapy - behavior - evaluation and therapy	

Relevant Diagnoses – ICD-10

Allergic, Dietetic, Eosinophilic Gastroenteritis	Diverticulitis, colitis	Neoplsm - screening - small intestine
Angiodysplasia of intestine	Diverticulosis, Meckel's diverticulum, Angiodysplasia	Neuroendocrine, Myeloproliferative Cancers
Benign Carcinoid Tumor of the GI tract	Gastroenteritis	Nonspecific Gastroenteritis
Cancer in situ, Anorectal	GI - family hx of GI disease	Personal history of cancer
Cancer in situ, Colon	GI - flatulence / gas pain	Personal history of GI cancer
Cancer of colon	GI - personal hx of GI disease	Post GI Surgery Syndromes
Cancer of other GI organs; peritoneum	GI Bleed	Premalignancy anus/rectum
Cancer of rectum and anus	Hx of colon polyps, family Hx of colon cancer	Previous bowel surgery, ostomy status
Cancer; other and unspecified primary	Intestinal Malabsorption, Celiac Disease	Pseudopolyposis of colon
Congenital GI Problems in NB	Intestinal Obstruction	Secondary malignancies, Unspecified
Crohn's Disease	Iron deficiency and other anemias	Thyroid Cancer
Crohn's Disease w Abscess	Irritable Bowel and other functional GI disor	Toxic Effects of Radiation
Crohn's Disease w Fistula	Metastatic Cancer and Acute Leukemia	Toxic Gastroenteritis
Crohn's disease w intestinal obstruction	Neoplasms of unspecified nature or uncertain behavior	Ulc Colitis w Abscess
Crohn's disease w other complications	Neoplsm - gi - premalignant - anus / rectum	Ulc Colitis w Fistula
Crohn's disease w rectal bleeding	Neoplsm - hemangioma - gi - nos	Ulc Colitis w Obstruction
Digestive congenital anomalies	Neoplsm - lipoma - gi - nos	Ulcerative Colitis
Digestive system complications	Neoplsm - screening - colon - nos	Ulcerative colitis w other complications
Disseminated Metastatic Cancer	Neoplsm - screening - gi - nos	Ulcerative colitis w rectal bleeding
Diverticulitis w Perf, Abscess	Neoplsm - screening - nos	
Diverticulitis with hemorrhage	Neoplsm - screening - rectum	

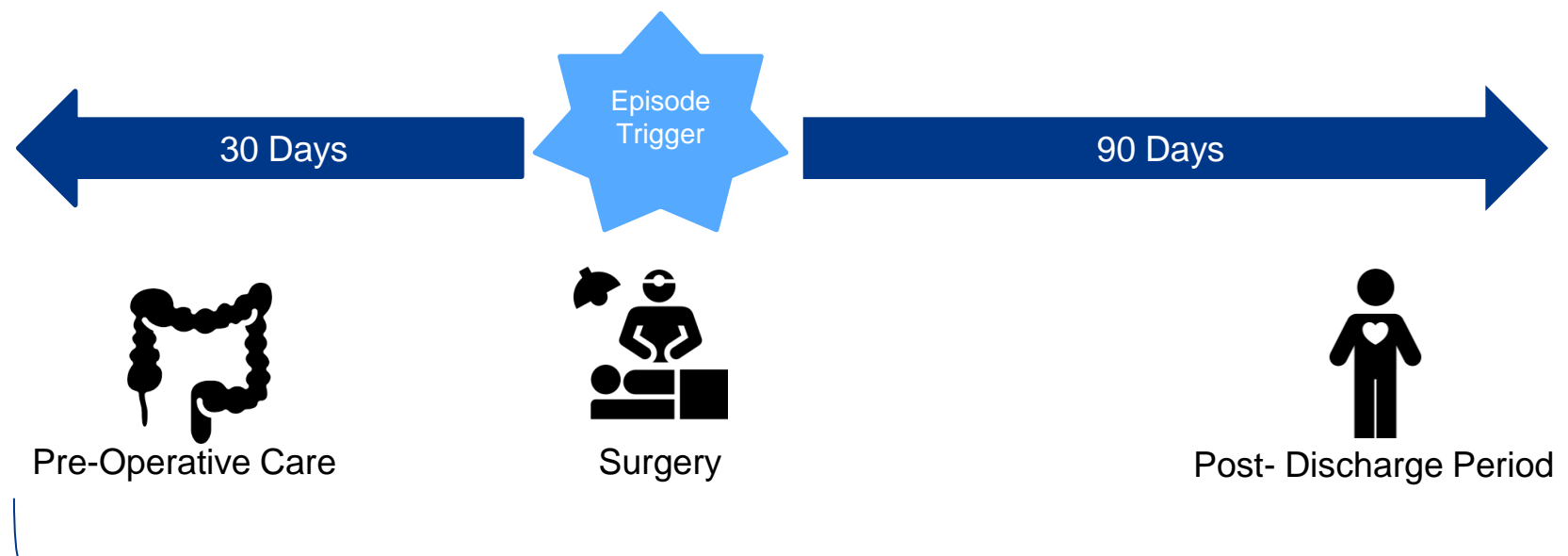
Complications – ICD-10

Acute cor pulmonale	HAC 02: Air Embolism	Retroperitoneal Abscess
Acute Kidney Failure	Hemoperitoneum	Sepsis
Adverse effects of drugs	Hemorrhage	Severe Sepsis
Altered mental status	Hemorrhagic Stroke	Shock / Cardiac Arrest
Aspiration Pneumonia	Hypertensive Urgency	Shock during or post-procedure
Atrial Flutter / Fibrillation	Hypotension / Syncope	Sinus Node Dysfunction
Bacteremia, SIRS, no organ dysfunction	Influenza with Pneumonia	STEMI
C-Difficile Infection	IVC & other intra-abd venous thrombosis	Subendocardial Infarct
Chronic Fungal and Other Pneumonias	Meningitis / Encephalitis	Supraventricular Tachyarrhythmias
Complications from Central Line	MRSA Pneumonia	Thromboembolic Stroke
Complications of anesthesia	MRSA, Drug Resistant Infections	Transfusion, Infusion related complications
Complications of colostomy, enterostomy	Opportunistic Infections	Transient cerebral ischemia, TIA
complications of medical care	Other bacterial infections	Urethral Stricture
complications of surgical procedures	Other Bacterial Pneumonia	Urinary Complications
Complications of surgical procedures or medical care	Other cardiac arrhythmias	Urinary Tract Infection
Debilitating Viral Pneumonia	Other lower respiratory disease	Ventilator Associated Pnuemonia
Dehydration	other lung complications	Ventilator Dependence
Delirium, Encephalopathy	Other lung problems	Ventricular Arrhythmias
Dermatitis, Urticaria	Other Phlebitis, Lymphangitis, varices	Viral Pneumonia
dic, coagulation, hemorrhagic disorders	Other Staph Pneumonia	Wound Dehiscence
Digestive system complications	Perforation, Peritonitis, Abd Abscess	Wound Infections
empyema, lung abscess	Phlebitis, Deep vein thrombosis (DVT)	
Fluid Electrolyte Acid Base Problems	Pulmonary Embolism	
Foreign body left during procedure	Recent AMI	
Gram Negative Pneumonia	Resp Failure following trauma / surgery	
	Respiratory Failure	
	Respiratory Insufficiency	

Colorectal Resection (COLON)

The COLON Episode evaluates services that are typical/routine for the expected care and services that are related to associated complications. Patients are identified as those with a primary procedure code of colon resection on an inpatient stay service or a colon resection procedure code in any position on an outpatient facility/professional service, along with a qualifying diagnosis code.

Episode Length – COLON



Total Episode Cost = All expected services and complication costs associated during the entire period of the COLON episode.

Duration Pre-Trigger Window	Duration Post-Trigger Window
30 Days	90 Days

Episode Triggers – COLON

Trigger Group Name	Code Type	Codes
Abdominoperineal Resection	CPT	45110-45119
Colectomy with proctectomy	CPT	44155-44158
Laparoscopic colectomy with proctectomy	CPT	44211-44212, 45395, 45397
Laparoscopic partial colectomy	CPT	44204-44208
Laparoscopic total intra-abd colectomy	CPT	44210
Partial Colectomy	CPT	44140-44160
Pelvic Exenteration	CPT	45126
Procedure - colorectal resection – other	CPT	45160
Procedure - other anal / rectal procedures - other procedures - rectum / anus	CPT	45170-45172
Rectal Resection	CPT	45111-45123
Total intra-Abdominal colectomy	CPT	44150-44151

Trigger Diagnoses – ICD-10, CPT

Abdominal mass	Diverticulitis with hemorrhage	Nonspecific Gastroenteritis
Abdominal pain	Diverticulitis, colitis	Partial Colectomy
Abdominal tenderness	Diverticulosis, Meckel's diverticulum, Angiodysplasia	Pelvic Exenteration
Abdominoperineal Resection	Gastroenteritis	Perforation, Peritonitis, Abd Abscess
Allergic, Dietetic, Eosinophilic Gastroenteritis	GI - abdominal mass	Personal history of cancer
Anal and rectal conditions	GI - abdominal pain	Personal history of GI cancer
Angiodysplasia of intestine	GI - abdominal tenderness	Previous bowel surgery, ostomy status
Cancer in situ, Anorectal	GI - abnormal abdominal imaging study	Procedure - colorectal resection - other
Cancer in situ, Colon	GI - abnormal gi imaging study	Procedure - other anal / rectal procedures - other procedures - rectum / anus
Cancer of colon	GI - constipation	Pseudopolyposis of colon
Cancer of other GI organs; peritoneum	GI - peritoneal ds - nec / nos	Rectal Resection
Cancer of rectum and anus	GI - symptoms - nec / nos	Retroperitoneal Abscess
Cancer small bowel	GI Bleed	Secondary malignancies, Unspecified
Cancer; other and unspecified primary	GI inflammation from chemotherapy	Thyroid Cancer
Colectomy with proctectomy	Hemoperitoneum	Total intra-Abdominal colectomy
Congenital GI Problems in NB	Hx of colon polyps, family Hx of colon cancer	Toxic Effects of Radiation
Crohn's Disease	Inj - anus / rectum - other	Toxic Gastroenteritis
Crohn's Disease w Abscess	Inj - gi tract - foreign body	Ulc Colitis w Abscess
Crohn's Disease w Fistula	Intestinal Malabsorption, Celiac Disease	Ulc Colitis w Fistula
Crohn's disease w intestinal obstruction	Intestinal Obstruction	Ulc Colitis w Obstruction
Crohn's disease w other complications	Irritable Bowel and other functional GI disor	Ulceration of Intestine
Crohn's disease w rectal bleeding	Laparoscopic colectomy with proctectomy	Ulcerative Colitis
Digestive congenital anomalies	Laparoscopic partial colectomy	Ulcerative colitis w other complications
Digestive system complications	Laparoscopic total intra-abd colectomy	Ulcerative colitis w rectal bleeding
Disseminated Metastatic Cancer	Neoplasms of unspecified nature or uncertain behavior	Vascular Insufficiency of intestine
Diverticulitis w Perf, Abscess	Neuroendocrine, Myeloproliferative Cancers	

Relevant Procedures – CPT / HCPCS, ICD-10

Abdominoperineal Resection	DME and supplies	Imaging - therapeutic procedure - other therapeutic procedure	Medication Assisted Management (MAT)
Advance care planning	Drainage of Abdominal Abscess		Medication Therapy Management Services
Alcohol / Drug Use Screening	Drug Delivery implantation	Imaging - us - guide - biopsy	Medications (Injections, infusions and other forms)
Ancillary Services	E & M - emergency care	Imaging - us - guide - other	Metabolic Renal Hepatic Chemistry Panel
Anesthesia	E & M - home visit	Imaging - us - other	Online Management
Aortic resection, replacement or anastomosis	E & M - hospital	Imaging - us - retroperitoneum	Other care - bladder / bowel care - drainage bag
Bleeding Status	E & M - nursing home	Imaging - venography - extremities	Other care - bladder / bowel care - other supplies - diaper / related
Blood Gases, Pulse Oximetry	E & M - other	Imaging - x-ray - abdomen	Other care - bladder / bowel care - other supplies - skin barrier
Blood transfusion	E & M - prevention	Imaging - x-ray - lower gi - large bowel - contrast	Other care - chronic edema - surgical stockings
Blood Type, Coomb's test	Esophageal Motility and Diagnostic Workup	Imaging - x-ray - upper gi - duodenogram	Other care - home care - physician supervision
Bundled Payment / Medical Home	Flexible Sigmoidoscopy /Colonoscopy	Imaging - x-ray - upper gi - other	Other care - home care - specialized visit
Cardiac Stress Test	Home Health / Hospice	Imaging - x-ray - upper gi - small bowel - contrast	Other care - nutrition - assessment
Care Plan Oversight	Home Health Services	Imaging Abdomen	Other care - observation
Case Management Services	Hormone Therapy	Lab - blood gases	Other care - ostomy - nursing care
Case Management Services - Behavioral	Image guided drainage of abdominal abscess	Lab - chemistry	Other care - ostomy - supplies
Case Management Services - Oncology	Imaging - ct - follow - up	Lab - infectious agent dna	Other care - other - ancillary services
CHEMOTHERAPY	Imaging - ct - other	Lab - microbiology - c & s	Other care - respiratory - ventilator management
Chronic Care Management	Imaging - mri - other	Lab - microbiology - other	Other care - wound care
Colectomy with proctectomy	Imaging - nuclear - bladder / ureter	Lab - other clinical lab	Other care - wound care - hyperbaric oxygen
Colon Cancer, Unknown Disease Status	Imaging - nuclear - gi blood loss	Lab - pathology consultation	Other diagnostic cardiovascular procedures
Colonoscopy - therapeutic	Imaging - nuclear - localization of inflammation	Lab - specimen collection - specimen handling	Other diagnostic procedures (interview, evaluation, consultation)
Colonoscopy through Stoma	Imaging - nuclear - other	Lab - surgical pathology	Other Laboratory
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - nuclear - other gi	Lab - therapeutic drug assay	Other OR lower GI therapeutic procedures
Colorectal resection	Imaging - nuclear - radiopharmaceutical - radiopharmaceutical - other	Lab - transfusion medicine	Other therapeutic Sigmoidoscopy
Diagnostic physical therapy	Imaging - nuclear - shilling test	Lab - urinalysis	Partial Colectomy
Diagnostic ultrasound of abdomen or retroperitoneum	Imaging - nuclear - venous thrombosis - scan	Laparoscopic colectomy with proctectomy	Pathology
DME - bath / toilet aids	Imaging - other imaging	Laparoscopic partial colectomy	Pelvic Exenteration
DME - beds / accessories	Imaging - therapeutic procedure - abscess drainage	Laparoscopic total intra-abd colectomy	Personal Care Services
		Lipid Level Monitoring	

Relevant Procedures – CPT / HCPCS, ICD-10

Physical Therapy / Rehab	Procedure - laparoscopy - abdomen - biopsy	Procedure - proctoscopy / anoscopy - other	Rx - hematopoietic system - hematopoietic growth factors
Physician Services	Procedure - laparoscopy - abdomen - dx	Procedure - proctosigmoidoscopy - dx	Rx - miscellaneous rx
Physician Services - Inpatient	Procedure - laparoscopy - gi - other	Procedure - proctosigmoidoscopy - rx	Rx - miscellaneous rx - enzymes
Physician Services - Outpatient	Procedure - laparotomy / related	Procedure - related supplies - graft / repair	Rx - other
Preventive Medicine, Care Coordination	Procedure - lymphadenectomy	Procedure - related supplies - implant	Rx - serums, toxoids, vaccines - serums
Procedure - anesthesia	Procedure - lysis of adhesions	Procedure - repair - cystocele / rectocele	Smoking / Tobacco Cessation
Procedure - anoscopy	Procedure - neuro - other non - or rx	Procedure - small bowel resection	Supplies
Procedure - appendectomy / related - appendectomy	Procedure - neuro - other or rx	Procedure - spinal canal - injection into spinal canal	Tests - cardiac stress tests - cardiac perfusion scan - rest / exercise
Procedure - appendectomy / related - drainage of appendiceal abscess	Procedure - obesity procedure - restriction	Procedure - spinal canal - other	Tests - cardiac stress tests - cardiac stress tests - other
Procedure - artery - extremity - injection of thrombin	Procedure - other anal / rectal procedures - other	Procedure - ugi endoscopy - other	Tests - gi - other dx
Procedure - catheter - arterial - arterial line for monitoring	procedures - rectum / anus	Procedure - ugi endoscopy - small bowel endoscopy	Therapy - acupuncture
Procedure - catheter - arterial - other	Procedure - other dx on musculoskeletal system	Procedure - vascular access - port / pump - insertion	Therapy - dialysis - supplies
Procedure - catheter - arterial - pulmonary artery catheter	Procedure - other gi dx	Procedure - vascular access - port / pump - removal	Therapy - habilitation
Procedure - catheter - arterial - selective branch catheter	Procedure - other hemorrhoid procedures	Procedure - vascular access - port / pump - revision	Therapy - nasogastric tube
Procedure - catheter - venous - other - other	Procedure - other lower gi procedures - closure of enterostomy	Procedures and Reporting	Therapy - nonoperative removal of foreign body
Procedure - catheter - venous - other - vena cava or selective branch catheter	Procedure - other lower gi procedures - other bowel dx	Psychiatry Evaluations	Therapy - other
Procedure - colorectal resection - other	Procedure - other lower gi procedures - other non - or rx	Psychiatry Services	Therapy - phlebotomy
Procedure - colorectal resection - partial w / ostomy	Procedure - other lower gi procedures - other or rx	Psychological and psychiatric evaluation and therapy	Therapy - pt - exercises / activities
Procedure - colostomy	Procedure - other non - or rx - other non - or skin procedures	RADIATION TREATMENTS	Therapy - transfusion - administration
Procedure - debridement - wound / infection / burn - debridement	Procedure - other or gi rx - excision of lesion - abdomen / retroperitoneum	Rectal Resection	Therapy - transfusion - blood
Procedure - gastrostomy	Procedure - other or gi rx - other procedure - abdomen	Risk Assessment	Total intra-Abdominal colectomy
Procedure - heme / lymph - other rx	Procedure - other or rx - drainage / excision of pilonidal cyst	Robotic Surgery	Transitional Care Management
Procedure - hemorrhoid destruction / ligation	Procedure - other or rx on musculoskeletal system	Rx - administration - infusion	Transportation - other transportation
Procedure - hemorrhoidectomy	Procedure - other procedures - pancreas	Rx - administration - injection	Ungrouped Codes
Procedure - i&d - skin - drainage - post - op infection	Procedure - other procedures - stomach	Rx - b-lactam antibiotics	Urine Protein
Procedure - ileostomy / other enterostomy	Procedure - other rx on muscles and tendons	Rx - coagulation system - anticoagulants	
Procedure - injection - tendons / joints / etc.	Procedure - paracentesis	Rx - coagulation system - hemostatics	
Procedure - laminectomy / related	Procedure - peripheral venous catheter	Rx - gi - antiemetics	
	Procedure - proctoscopy - screening		

Relevant Diagnoses – ICD-10

Abdominal mass	Disseminated Metastatic Cancer	Irritable Bowel and other functional GI disor
Abdominal pain	Diverticulitis w Perf, Abscess	Neoplasms of unspecified nature or uncertain behavior
Abdominal tenderness	Diverticulitis with hemorrhage	Neuroendocrine, Myeloproliferative Cancers
Allergic, Dietetic, Eosinophilic Gastroenteritis	Diverticulitis, colitis	Nonspecific Gastroenteritis
Anal and rectal conditions	Diverticulosis, Meckel's diverticulum, Angiodyspalsia	Perforation, Peritonitis, Abd Abscess
Angiodysplasia of intestine	Gastroenteritis	Personal history of cancer
Cancer in situ, Anorectal	GI - abdominal mass	Personal history of GI cancer
Cancer in situ, Colon	GI - abdominal pain	Previous bowel surgery, ostomy status
Cancer of colon	GI - abdominal tenderness	Pseudopolyposis of colon
Cancer of other GI organs; peritoneum	GI - abnormal abdominal imaging study	Retroperitoneal Abscess
Cancer of rectum and anus	GI - abnormal gi imaging study	Secondary malignancies, Unspecified
Cancer small bowel	GI - constipation	Thyroid Cancer
Cancer; other and unspecified primary	GI - peritoneal ds - nec / nos	Toxic Effects of Radiation
Congenital GI Problems in NB	GI - symptoms - nec / nos	Toxic Gastroenteritis
Crohn's Disease	GI Bleed	Ulc Colitis w Abscess
Crohn's Disease w Abscess	GI inflammation from chemotherapy	Ulc Colitis w Fistula
Crohn's Disease w Fistula	Hemoperitoneum	Ulc Colitis w Obstruction
Crohn's disease w intestinal obstruction	Hx of colon polyps, family Hx of colon cancer	Ulceration of Intestine
Crohn's disease w other complications	Inj - anus / rectum - other	Ulcerative Colitis
Crohn's disease w rectal bleeding	Inj - gi tract - foreign body	Ulcerative colitis w other complications
Digestive congenital anomalies	Intestinal Malabsorption, Celiac Disease	Ulcerative colitis w rectal bleeding
Digestive system complications	Intestinal Obstruction	Vascular Insufficiency of intestine

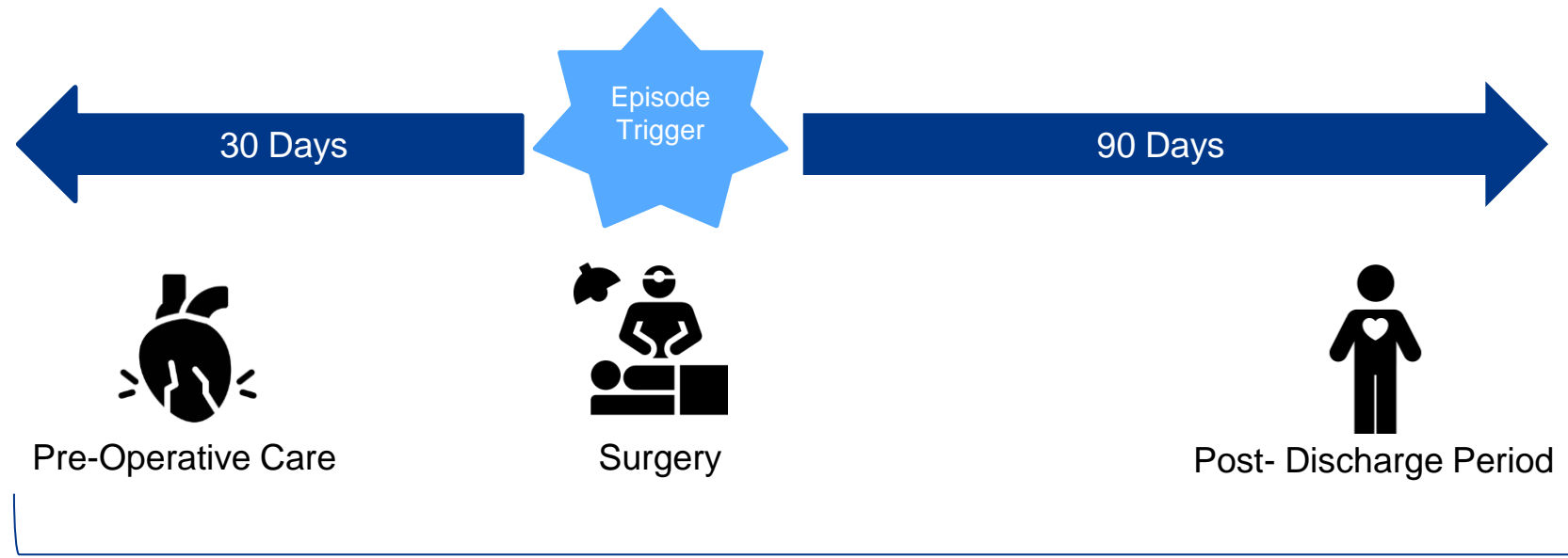
Complications – ICD-10

Abdominal Hernia w Gangrene/Obstruction	Delirium, Encephalopathy	Marginal Ulcer	Sepsis
Abdominal Hernia w/out Gangrene/Obstruction	Dermatitis, Urticaria	Marginal Ulcer w hmg / obstr / perf	Severe Sepsis
Accidental Falls	Diabetes, poor control	MRSA Pneumonia	Shock / Cardiac Arrest
Acute cor pulmonale	dic, coagulation, hemorrhagic disorders	MRSA, Drug Resistant Infections	Shock during or following cardiac surgery
Acute esophagitis, acute gastritis, duodenitis	Digestive system complications	Opportunistic Infections	Shock during or post-procedure
Acute Kidney Failure	empyema, lung abscess	Other bacterial infections	Sinus Node Dysfunction
Adverse effects of drugs	Esophageal Reflux and Other Esophagitis	Other Bacterial Pneumonia	Skin - other
Anal and rectal conditions	Fistula GI tract	Other cardiac arrhythmias	STEMI
Aspiration Pneumonia	Fluid Electrolyte Acid Base Problems	Other cerebral complications	Subendocardial Infarct
Bacteremia, SIRS, no organ dysfunction	Foreign body left during procedure	Other lower respiratory disease	Supraventricular Tachyarrhythmias
C-Difficile Infection	Gastroenteritis	other lung complications	Thromboembolic Stroke
Chronic Fungal and Other Pneumonias	GI Bleed	Other lung problems	Transfusion, Infusion related complications
Chronic Skin Ulcer	Gram Negative Pneumonia	Other Phlebitis, Lymphangitis, varices	Transient cerebral ischemia, TIA
Coma, persistent vegetative state	HAC 02: Air Embolism	Other Staph Pneumonia	Urethral Stricture
Complication of genitourinary device	HAC 04: Stage III and IV Pressure Ulcers	Perforation, Peritonitis, Abd Abscess	Urinary Complications
Complication of Implanted device, graft	HAC 09: Manifestations of Poor Glycemic Control	Perianal disease	Urinary Frequency & other symptoms
Complications from Central Line	Hemoperitoneum	Phlebitis, Deep vein thrombosis (DVT)	Urinary Tract Infection
Complications from chemotherapy	Hemorrhage	Postop adhesions	Urogenital fistula
Complications of anesthesia	Hemorrhagic Stroke	Pulmonary Embolism	Vascular Prosthetic Device/Graft Complication
Complications of colostomy, enterostomy	Hepatorenal Syndrome	Recent AMI	Ventilator Associated Pnuemonia
complications of medical care	Hypertensive Urgency	Renovascular and other secondary hypertension	Ventilator Dependence
complications of surgical procedures	Hypotension / Syncope	Resp Failure following trauma / surgery	Ventricular Arrhythmias
Complications of surgical procedures or medical care	Influenza with Pneumonia	Respiratory Failure	Viral Pneumonia
Debilitating Viral Pneumonia	Intestinal infection	Respiratory Insufficiency	Wound Dehiscence
Decubitus Ulcer	Intestinal Obstruction	Retroperitoneal Abscess	Wound Infections
Dehydration	IVC & other intra-abd venous thrombosis	rhabdomyolysis	

Coronary Angioplasty (PCI)

The Coronary Angioplasty Episode evaluates services that are typical/routine for the expected care and services that are related to associated complications. Patients are defined as those with a primary procedure code of PCI on an inpatient stay service or a PCI procedure code in any position on an outpatient facility/professional service, along with a qualifying diagnosis code. If the PCI procedure is performed for AMI, it is associated back to this episode.

Episode Length – PCI



Total Episode Cost= All expected services and complication costs associated during the entire period of the PCI episode.

Duration Pre-Trigger Window	Duration Post-Trigger Window
30 Days	90 Days

Episode Triggers – PCI

Trigger Group Name	Code Type	Codes
PCI with stents, atherectomy	CPT HCPCS	92920-92944, 92980-92996 C9600-C9608, G0290-G0291
Procedure - coronary - ptca - angioplasty	CPT	92982-92984
Procedure - coronary - thrombectomy	CPT	92973

Trigger Diagnoses – ICD-10, CPT / HCPCS

Acute CHF / pulm edema	Other Heart Blocks / Conduction Disorders
Acute myocardial infarction	PCI with stents, atherectomy
Acute pericarditis	Premature Beats
Chronic Heart Failure, Degeneration	Previous CABG
Congestive heart failure; nonhypertensive	Previous PCI
Coronary Artery Anomaly	Procedure - coronary - ptca - angioplasty
CV - av block - 1st degree	Procedure - coronary - thrombectomy
CV - other heart ds	Recent AMI
CV - right bundle branch block	Resp - abnormal chest sounds
Heart Aneurysm and other Sequelae of AMI	Sinus Node Dysfunction
Heart Failure unspecified as acute or chronic	STEMI
Highgrade Heart Block	Subendocardial Infarct
Hypertensive Heart Disease	Supraventricular Tachyarrhythmias
Hypertensive Heart Disease w Heart Failure	Transplanted Heart w Angina
Hypertensive Heart Disease w Heart Failure & CKD	Unstable angina
Other cardiac arrhythmias	Ventricular Arrhythmias
Other Cardiovascular Disease	

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	E & M - prevention	Imaging - nuclear - other	Lab - immunology
Alcohol / Drug Use Management	Electrocardiogram - EKG monitoring	Imaging - nuclear - other - automated data add - on	Lab - infectious agent antibody
Alcohol / Drug Use Screening	Electrophysiology Studies, Cryoablation	Imaging - nuclear - other blood / related	Lab - infectious agent antigen
Ancillary Services	HbA1C	Imaging - nuclear - other musculoskeletal	Lab - infectious agent dna
Anesthesia	Hearing Test	Imaging - nuclear - platelet kinetics	Lab - microbiology
Anti-TNF agents	Heart Echo / Ultrasound	Imaging - nuclear - radiopharmaceutical - radiopharmaceutical - other	Lab - microbiology - c & s
Aortic resection, replacement or anastomosis	Heart valve procedures	Imaging - nuclear - red cell survival	Lab - microbiology - microscopic exam
Bleeding Status	Hepatitis B vaccine	Imaging - nuclear - shilling test - radiopharmaceutical	Lab - microbiology - other
Blood Count	High dose steroids	Imaging - nuclear - tumor localization	Lab - microbiology - viral culture
Blood Gases, Pulse Oximetry	Home Health / Hospice	Imaging - nuclear - venous thrombosis - radiopharmaceutical	Lab - microscopic - koh prep
Blood transfusion	Home Health Services	Imaging - nuclear - venous thrombosis - scan	Lab - microscopic - wet mount
Blood Type, Coomb's test	Hormone Therapy	Imaging - other imaging	Lab - other clinical lab
Bundled Payment / Medical Home	HPV VACCINE	Imaging - other imaging - fluoroscopy	Lab - other hematology
Cardiac cath & Angiogram	Imaging - arteriography - extremities	Imaging - other imaging - fluoroscopy - guidance	Lab - pathology consultation
Cardiac Stress Test	Imaging - arteriography - other	Imaging - pet - other	Lab - specimen collection - blood - arterial - arterial puncture
Care Plan Oversight	Imaging - arteriography - renal	Imaging - supplies - contrast agent - high osmolar	Lab - specimen collection - blood - venous - venipuncture
Case Management Services	Imaging - ct - aorta	Imaging - supplies - contrast agent - low osmolar	Lab - specimen collection - blood - venous - venous port
Case Management Services - Behavioral	Imaging - ct - cardiac	Imaging - supplies - ultrasound related	Lab - specimen collection - specimen handling
CHEMOTHERAPY	Imaging - ct - chest	Imaging - therapeutic procedure - abscess drainage	Lab - specimen collection - urine
Chest X-Ray	Imaging - ct - follow - up	Imaging - therapeutic procedure - other therapeutic procedure	Lab - stat request
CHLAMYDIA SCREENING	Imaging - ct - guidance	Imaging - us - extremity	Lab - therapeutic drug assay
Chronic Care Management	Imaging - ct - head / brain	Imaging - us - eye	Lab - tissue typing
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - ct - other	Imaging - us - guide - biopsy	Lab - transfusion medicine
Coordinated Care Fees/Services	Imaging - cta - aorta	Imaging - us - guide - other	Lab - urinalysis
Coronary Thrombolysis	Imaging - cta - chest	Imaging - us - head / neck	Laboratory - Chemistry and Hematology
Counseling Services	Imaging - cta - coronary	Imaging - us - intravascular	LEAD SCREENING
Diagnostic physical therapy	Imaging - cta - head / neck	Imaging - us - other	Lipid Level Monitoring
Diagnostic ultrasound of abdomen or retroperitoneum	Imaging - mra - chest	Imaging - us - retroperitoneum	Low dose steroids
Diagnostic ultrasound of heart (echocardiogram)	Imaging - mra - head	Imaging - venography - other	Lung Function Tests
DME - bath / toilet aids	Imaging - mri - brain	Imaging - x-ray - other - joint survey	LVEF < 40% or LV systolic dysfunction
DME - beds / accessories	Imaging - mri - chest	Imaging - x-ray - ribs	Magnetic resonance imaging
DME - heat/cold application	Imaging - mri - contrast agent	Imaging - x-ray - upper gi - other	Markers for Inflammation
DME - mobility aids	Imaging - mri - guidance	Imaging - x-ray - upper gi - small bowel - contrast	Medication Assisted Management (MAT)
DME - other	Imaging - mri - lower extremity	Imaging - x-ray - urinary tract - cystography / voiding cystourethrogram	Medication Therapy Management Services
DME - patient lifts	Imaging - mri - other	Imaging - x-ray - urinary tract - other	Medications (Injections, infusions and other forms)
DME - repair / maintenance	Imaging - nuclear - bladder / ureter	Imaging Abdomen	Metabolic Renal Hepatic Chemistry Panel
DME - restraints	Imaging - nuclear - blood / plasma volume - radiopharmaceutical	IMMUNOTHERAPY	NewBorn Blood Tests
DME - safety equipment	Imaging - nuclear - blood / plasma volume - scan	Insertion, revision, replacement, removal of cardiac pacemaker or cardioverter/d	Online Management
DME - wound therapy	Imaging - nuclear - brain - radiopharmaceutical	Lab - blood gases	Opioid Administration / Dispensing (OTP)
DME and supplies	Imaging - nuclear - csf - radiopharmaceutical	Lab - chemistry	Other - non - covered
Drug Delivery Implantation	Imaging - nuclear - csf - scan	Lab - endocrine	Other care - bladder / bowel care - catheter
E & M - consultation	Imaging - nuclear - hepatobiliary ductal scan - radiopharmaceutical	Lab - genetic testing - brugada syndrome	Other care - bladder / bowel care - drainage bag
E & M - emergency care	Imaging - nuclear - kidney - radiopharmaceutical	Lab - genetic testing - cardiac ion channel syndrome	Other care - bladder / bowel care - other supplies
E & M - home visit	Imaging - nuclear - kidney - scan	Lab - gi - fat absorption	Other care - bladder / bowel care - other supplies - diaper / related
E & M - hospital	Imaging - nuclear - localization of inflammation	Lab - hematology - blood count	Other care - bladder / bowel care - other supplies - skin barrier
E & M - nursing home	Imaging - nuclear - lung scan	Lab - hematology - blood count - eosinophil count	Other care - chronic edema - appliance - limb compression
E & M - other	Imaging - nuclear - lymphatics	Lab - hematology - coagulation	Other care - chronic edema - appliance - non - segmental

Relevant Procedures – CPT / HCPCS, ICD-10

Other care - chronic edema - appliance - segmental	Other care - observation	Personal Care Services	Procedure - heart valve - other
Other care - chronic edema - compression stocking	Other care - other	Physical Therapy / Rehab	Procedure - i&d - skin - drainage of abscess
Other care - chronic edema - compressor	Other care - other - ancillary services	Physician Services	Procedure - maintenance - cns / spinal pump / port
Other care - chronic edema - compressor - non - segmental	Other care - other - education	Physician Services - Inpatient	Procedure - other anal / rectal procedures - other procedures - rectum / anus
Other care - chronic edema - compressor - segmental	Other care - other - exercise classes	Physician Services - Outpatient	Procedure - other non - or rx - other non - or skin procedures
Other care - chronic edema - surgical stockings	Other care - other - external counterpulsation	PQRI	Procedure - pacemaker / defibrillator - transcutaneous pacing
Other care - diabetes care - glucose monitoring	Other care - other - external defibrillator	Preventive Medicine, Care Coordination	Procedure - pericardiocentesis
Other care - diabetes care - glucose monitoring - lancet	Other care - other - infection control	Procedure - anesthesia	Procedure - peripheral nerve repair / graft - graft / guide
Other care - diabetes care - glucose monitoring - other supplies	Other care - other - irrigation	Procedure - anesthesia - related supplies	Procedure - peripheral venous catheter
Other care - diabetes care - insulin pump	Other care - other - lead assessment	Procedure - artery - abdomen - angioplasty - transluminal / open	Procedure - related supplies - ablation - catheter
Other care - home care - emergency response system	Other care - other - lodging	Procedure - artery - abdomen - angioplasty - transluminal / percutaneous	Procedure - related supplies - access catheter
Other care - home care - home health aide	Other care - other - meals	Procedure - artery - abdomen - atherectomy - transluminal / percutaneous	Procedure - related supplies - catheter
Other care - home care - meals	Other care - other - medical records	Procedure - artery - extremity - angioplasty - transluminal / percutaneous	Procedure - related supplies - dilation / stenting
Other care - home care - nursing care	Other care - other - pacemaker - monitor	Procedure - artery - extremity - atherectomy - transluminal / percutaneous	Procedure - related supplies - drainage
Other care - home care - nursing care - lpn	Other care - other - pvd - compressor	Procedure - artery - iliac - repair / graft - endovascular	Procedure - related supplies - graft - tendon repair
Other care - home care - nursing care - np	Other care - other - weight management	Procedure - artery - nos - angioplasty / stenting	Procedure - related supplies - graft / repair
Other care - home care - nursing care - rn	Other care - pain management - pca / related	Procedure - artery - nos - atherectomy - catheter	Procedure - related supplies - implant
Other care - home care - other care	Other care - prevention - smoking cessation	Procedure - artery - nos - thrombolysis	Procedure - related supplies - other
Other care - home care - other care - attendant care	Other care - respiratory - equipment / supplies	Procedure - artery - pulmonary - angioplasty - percutaneous	Procedure - related supplies - resection - morcellator
Other care - home care - other care - chore care	Other care - respiratory - equipment / supplies - apnea monitor	Procedure - artery / vein - nos - closure / closure device	Procedure - related supplies - retrieval - device
Other care - home care - other care - companion care	Other care - respiratory - equipment / supplies - cpap	Procedure - artery / vein - nos - other	Procedure - sedation
Other care - home care - other care - day care	Other care - respiratory - equipment / supplies - ippb	Procedure - artery / vein - nos - thrombectomy catheter	Procedure - suture - skin - complex wound repair
Other care - home care - other care - homemaker	Other care - respiratory - equipment / supplies - nebulizer	Procedure - biopsy - endocardium	Procedure - suture - skin - layer closure of wound
Other care - home care - other care - respite care	Other care - respiratory - equipment / supplies - peak flow meter	Procedure - block - nerve	Procedure - suture - skin - repair of superficial wound
Other care - home care - physician supervision	Other care - respiratory - equipment / supplies - spirometer	Procedure - cardiac - cardiac - other	Procedure - vascular - occlusion / embolization - transcatheter
Other care - home care - rehabilitation - occupational therapy	Other care - respiratory - equipment / supplies - ventilator	Procedure - cardiac - other or	Procedure - vascular - related supplies - angioplasty
Other care - home care - rehabilitation - physical therapy	Other care - respiratory - other	Procedure - cardiac assist device - intra - aortic balloon	Procedure - vascular - related supplies - atherectomy
Other care - home care - rehabilitation - speech therapy	Other care - respiratory - oxygen / oxygen concentrator	Procedure - cardiac assist device - lvad	Procedure - vascular - related supplies - embolization protective system
Other care - home care - social worker	Other care - respiratory - tracheostomy care	Procedure - cardioversion	Procedure - vascular - related supplies - graft material
Other care - home care - specialized visit	Other care - respiratory - ventilator management	Procedure - catheter - arterial - arterial line for monitoring	Procedure - vascular - related supplies - occlusion catheter
Other care - home care - training	Other care - respiratory therapy	Procedure - catheter - arterial - selective branch catheter	Procedure - vascular access - port / pump - insertion
Other care - hospice	Other care - wound care	Procedure - central venous catheter - fluoroscopy - guidance	Procedure - vein - nos - angioplasty
Other care - long term care - assisted living	Other care - wound care - electromagnetic therapy	Procedure - central venous catheter - insertion	Procedure - vein - vena cava - filter
Other care - long term care - residential care	Other care - wound care - growth factor	Procedure - central venous catheter - repair / maintenance	Procedures and Reporting
Other care - nutrition - assessment	Other care - wound care - hyperbaric oxygen	Procedure - chest tube / thoracentesis - insertion of chest tube	Prophylactic vaccinations and inoculations
Other care - nutrition - counseling - dietician	Other diagnostic cardiovascular procedures	Procedure - chest tube / thoracentesis - thoracentesis	Prosthetics - other
Other care - nutrition - education	Other diagnostic procedures (interview, evaluation, consultation)	Procedure - coronary - ptca - angioplasty	Psychiatry Evaluations
Other care - nutrition - enteral	Other diagnostic ultrasound	Procedure - coronary - ptca - stent	Psychiatry Services
Other care - nutrition - enteral - administration	Other Laboratory	Procedure - coronary - coronary - thrombectomy	Psychological and psychiatric evaluation and therapy
Other care - nutrition - enteral - formula	Other non-OR therapeutic cardiovascular procedures	Procedure - debridement - wound / infection / burn - debridement	Risk Assessment
Other care - nutrition - enteral - pump	Other OR heart procedures	Procedure - debridement of nails	Robotic Surgery
Other care - nutrition - enteral - tubing	Other OR procedures on vessels other than head and neck	Procedure - esophageal / gastric intubation	Rx - administration - infusion
Other care - nutrition - medical food	Pacemaker Defibrillator Check	Procedure - extracorporeal circulation	Rx - administration - injection
Other care - nutrition - parenteral	Pathology	Procedure - gastrostomy	Rx - allergy - antihistamines / comb
Other care - nutrition - parenteral - all - inclusive	PCI with stents, atherectomy	Procedure - graft	Rx - analg/antipy/nsaids - narcotics
Other care - nutrition - parenteral - nutrition solution	Peer Services	Procedure - graft - graft - skin - graft material	Rx - analg/antipy/nsaids - nsaids
Other care - nutrition - parenteral - pump	Percutaneous transluminal coronary angioplasty (PTCA)	Procedure - gu - other non - or rx	Rx - antibiotics - aminoglycosides

Relevant Procedures – CPT / HCPCS, ICD-10

Rx - antibiotics - anti-infectives, misc	Rx - diuretics, osmotic	Rx - vitamins - multivit prep	Tests - vascular - venous
Rx - antibiotics - cephalosporins	Rx - diuretics, thiazides / related	Rx - vitamins - vitamin b / b complex	Therapy - acupuncture
Rx - antibiotics - chloramphenicol / comb	Rx - eent - topical - eye/ear/nose/throat misc	Rx - vitamins - vitamin d	Therapy - activity therapy
Rx - antibiotics - macrolides	Rx - electrolytic, caloric, water - calcium supplements	Screen for amino acid disorders	Therapy - allergy treatment
Rx - antibiotics - penicillins	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Shock / Cardiac Arrest	Therapy - apheresis
Rx - antibiotics - quinolones	Rx - electrolytic, caloric, water - caloric rx, amino acid prep	Smoking / Tobacco Cessation	Therapy - behavior - evaluation and therapy
Rx - antibiotics - sulfonamides / comb	Rx - electrolytic, caloric, water - hydration - unspecifed	Supplies	Therapy - behavior - other
Rx - antibiotics - tetracyclines	Rx - electrolytic, caloric, water - multi-mineral prep	Tests - allergy tests - intradermal	Therapy - behavior - partial hospitalization
Rx - antibiotics / antivirals / antifungals - infusion	Rx - electrolytic, caloric, water - potassium supp	Tests - allergy tests - other	Therapy - biofeedback
Rx - antibiotics, misc	Rx - electrolytic, caloric, water - replacement preparations, misc	Tests - allergy tests - patch	Therapy - cardiac rehab
Rx - antidiabetic rx - insulins	Rx - electrolytic, caloric, water - sodium chlor preps	Tests - allergy tests - percutaneous	Therapy - chiropractic / osteopathic manipulation
Rx - antidiabetic rx, misc	Rx - endocrine - other - antigout rx	Tests - cardiac - analysis - pace / defib	Therapy - dialysis - supplies
Rx - antifungals	Rx - endocrine - other - parathyroid hormones	Tests - cardiac - doppler	Therapy - habilitation
Rx - antivirals	Rx - endocrine - other - pituitary hormones	Tests - cardiac - eeg - eeg - 12 lead	Therapy - hyperbaric oxygen
Rx - autonomic rx - nicotine preps	Rx - gi - antichol/antispasmodics	Tests - cardiac - eeg - other	Therapy - neurostimulator - incontinence
Rx - autonomic rx - parasympathomimetics	Rx - gi - antiemetics	Tests - cardiac - eeg monitoring - event recorder	Therapy - neurostimulator - other
Rx - autonomic rx - sympathomimetic rx	Rx - gi - h2 antagonists	Tests - cardiac - echo - contrast agent	Therapy - neurostimulator - tens - device
Rx - b-lactam antibiotics	Rx - gi - ppis	Tests - cardiac - echo - intracardiac	Therapy - neurostimulator - tens - leads
Rx - blood derivatives	Rx - gi drug misc,nec	Tests - cardiac - electrophysiology - other	Therapy - neurostimulator - tens - supplies
Rx - cardiovascular system - antiarrhythmic rx	Rx - gu - other - bladder rx	Tests - cardiac - electrophysiology - supplies - other	Therapy - other
Rx - cardiovascular system - beta blockers	Rx - hematopoietic system - hematopoietic growth factors	Tests - cardiac - electrophysiology - tilt table evaluation	Therapy - phlebotomy
Rx - cardiovascular system - cardiac drugs	Rx - hematopoietic system - iron / related	Tests - cardiac - monitoring - chf	Therapy - pt - exercises / activities
Rx - cardiovascular system - cardiac glycosides	Rx - hematopoietic system - other	Tests - cardiac - other	Therapy - pt - modalities
Rx - cardiovascular system - hypotensive rx	Rx - immune system - dmard / related	Tests - cardiac - radiopharmaceuticals	Therapy - radiation - physics / dosimetry / special svcs
Rx - cardiovascular system - natriuretic peptides	Rx - immune system - gold compounds	Tests - cardiac - swan ganz	Therapy - rehabilitation
Rx - cardiovascular system - vasodilating agents, nec	Rx - immune system - interferons	Tests - cardiac stress tests - cardiac perfusion scan - rest / exercise	Therapy - rehabilitation - other
Rx - cardiovascular system - vasodilating rx	Rx - miscellaneous rx	Tests - cardiac stress tests - cardiac stress tests - other	Therapy - transfusion - administration
Rx - central nervous system - amphetamines	Rx - miscellaneous rx - anesthetics, local	Tests - cardiovascular - other	Therapy - transfusion - blood
Rx - central nervous system - anticonvulsants	Rx - miscellaneous rx - enzymes	Tests - ent - other dx	Therapy - transfusion - plasma
Rx - central nervous system - antidepressants	Rx - muscle relaxants - muscle relax, neuromusc block	Tests - eye - dx - other	Therapy - transfusion - platelets
Rx - central nervous system - anxiolytic/sedative/hypnot nec	Rx - muscle relaxants - muscle relax, skeletal central	Tests - gi - duodenal motility study	Therapy - ultraviolet light therapy
Rx - central nervous system - barbiturates	Rx - muscle relaxants - muscle relax, skeletal, misc	Tests - gi - other dx	Therapy - vaccination - hepatitis b
Rx - central nervous system - benzodiazepines	Rx - other	Tests - gu - post void residual / bladder capacity	Thyroid Function Tests
Rx - central nervous system - non-amphetamine stimulants	Rx - pharmacy fee	Tests - gu - urodynamics - voiding pressure	Traction, splints, and other wound care
Rx - central nervous system - symptholytic rx	Rx - reproductive system - androgens / comb	Tests - neuro - eeg	Transitional Care Management
Rx - central nervous system - tranq/antipsychotics	Rx - reproductive system - estrogens / comb	Tests - neuro - evoked potentials	Transportation - other transportation
Rx - central nervous system - vascular 5ht1 agonists	Rx - reproductive system - gonadotropin rel horm agnsts	Tests - neuro - muscle testing	Transportation - paramedic
Rx - coagulation system - anticoagulants	Rx - reproductive system - gonadotropins	Tests - neuro - ncv / emg	Ungrouped Codes
Rx - coagulation system - antiheparin agnt	Rx - reproductive system - oxytocics	Tests - neuro - other	Urine Protein
Rx - coagulation system - antiplatelet rx	Rx - reproductive system - progestins	Tests - neuro - sleep studies	Vaccine for flu or Pneumonia
Rx - coagulation system - hemostatics	Rx - respiratory - beta agonists	Tests - other cardiac scans	Vitamin K administration
Rx - coagulation system - thrombolytic rx	Rx - respiratory - methylxanthines	Tests - other cardiac scans - infarct scan	Wellness Assessment
Rx - diagnostic rx - gastric function	Rx - respiratory - mucolytics/cold comb	Tests - pulmonary - other	
Rx - diagnostic rx - roentgenography	Rx - respiratory - phenylephrine	Tests - pulmonary - peak flow	
Rx - diagnostic rx, misc	Rx - serums, toxoids, vaccines - serums	Tests - vascular - arterial - extremity	
Rx - diuretics - diuretic, carb anhydrase inhib	Rx - skin / mucous membrane - antiinflam s/mm agnts / comb nec	Tests - vascular - cerebrovascular	
Rx - diuretics, loop diuretics	Rx - skin / mucous membrane - s/mm miscellaneous	Tests - vascular - other	

Relevant Diagnoses – ICD-10

Acute CHF / pulm edema	Other cardiac arrhythmias
Acute myocardial infarction	Other Cardiovascular Disease
Acute pericarditis	Other Heart Blocks / Conduction Disorders
Chronic Heart Failure, Degeneration	Premature Beats
Congestive heart failure; nonhypertensive	Previous CABG
Coronary Artery Anomaly	Previous PCI
CV - av block - 1st degree	Recent AMI
CV - other heart ds	Resp - abnormal chest sounds
CV - right bundle branch block	Sinus Node Dysfunction
Heart Aneurysm and other Sequelae of AMI	STEMI
Heart Failure unspecified as acute or chronic	Subendocardial Infarct
Highgrade Heart Block	Supraventricular Tachyarrhythmias
Hypertensive Heart Disease	Transplanted Heart w Angina
Hypertensive Heart Disease w Heart Failure	Unstable angina
Hypertensive Heart Disease w Heart Failure & CKD	Ventricular Arrhythmias

Complications – ICD-10

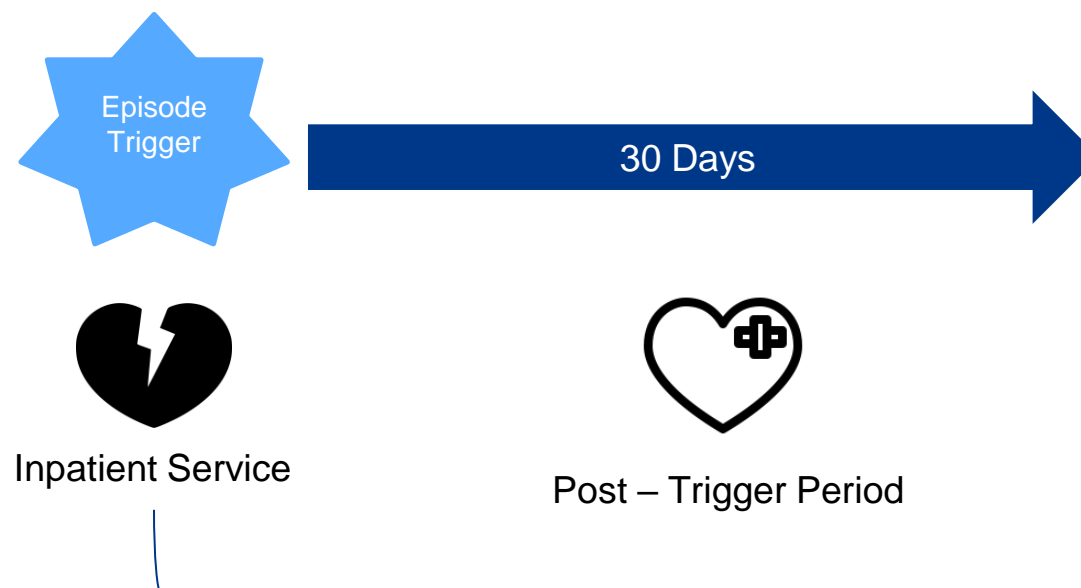
Accidental Falls	Esophageal Reflux and Other Esophagitis	Other Staph Pneumonia
Acute CHF / pulm edema	Fluid Electrolyte Acid Base Problems	Othr - other
Acute cor pulmonale	Foreign body left during procedure	Phlebitis, Deep vein thrombosis (DVT)
Acute esophagitis, acute gastritis, duodenitis	Gastroenteritis	Pulmonary Embolism
Acute Kidney Failure	GI Bleed	Recent AMI
Acute myocardial infarction	Gram Negative Pneumonia	Resp Failure following trauma / surgery
Acute Pancreatitis, pseudo cyst	HAC 02: Air Embolism	Respiratory Failure
Adverse effects of drugs	HAC 04: Stage III and IV Pressure Ulcers	Respiratory Insufficiency
Altered mental status	HAC 09: Manifestations of Poor Glycemic Control	rhabdomyolysis
arterial thromboembolism	Heart Failure unspecified as acute or chronic	Sepsis
Aspiration Pneumonia	Hemorrhage	Severe Sepsis
Atrial Flutter / Fibrillation	Hemorrhagic Stroke	Shock / Cardiac Arrest
Bacteremia, SIRS, no organ dysfunction	Hepatorenal Syndrome	Shock during or following cardiac surgery
C-Difficile Infection	Highgrade Heart Block	Shock during or post-procedure
Chronic Fungal and Other Pneumonias	Hypertensive Urgency	Sinus Node Dysfunction
Coma, persistent vegetative state	Hypotension / Syncope	Skin - other
Complication of genitourinary device	Influenza with Pneumonia	Supraventricular Tachyarrhythmias
Complications after heart procedures	Interstitial Emphysema	Thromboembolic Stroke
Complications from Central Line	Malfunction / Complication of Heart Device	Tracheostomy Complications
Complications of anesthesia	Meningitis / Encephalitis	Transfusion, Infusion related complications
complications of medical care	MRSA Pneumonia	Transient cerebral ischemia, TIA
complications of surgical procedures	MRSA, Drug Resistant Infections	Urethral Stricture
Congestive heart failure; nonhypertensive	Other bacterial infections	Urinary Frequency & other symptoms
Debilitating Viral Pneumonia	Other Bacterial Pneumonia	Urinary Tract Infection
Decubitus Ulcer	Other cardiac arrhythmias	Vascular Prosthetic Device/Graft Complication
Dehydration	Other cerebral complications	Ventilator Associated Pnuemonia
Delirium, Encephalopathy	Other Heart Blocks / Conduction Disorders	Ventilator Dependence
Dermatitis, Urticaria	Other lower respiratory disease	Ventricular Arrhythmias
Diabetes, poor control	other lung complications	Wound Dehiscence
dic, coagulation, hemorrhagic disorders	Other lung problems	Wound Infections
empyema, lung abscess	Other Mental Disorders	
Endocarditis	Other Phlebitis, Lymphangitis, varices	

Decubitus Ulcer (DECUB)

This is a complication episode. For a complication episode to trigger, it needs the trigger diagnosis code to be present in the principal position of an inpatient claim. The episode window for a complication episode is equal to the length of an inpatient stay with a zero day look back and a 30-day look forward period. It includes services related to the inpatient stay as well as all relevant associated professional, laboratory, radiology and ancillary claims during the inpatient time window.

Complication episodes are opened only after all other episodes have been constructed. Only then can a stay, which is not assigned to any other episode and has a trigger code in the principal position, open a complication episode.

Episode Length – DECUB



Total Episode Cost = All expected services and complication costs associated from index service until the end of the post-trigger window.

Duration Pre-Trigger Window	Duration Post-Trigger Window
0	30

Episode Triggers – DECUB

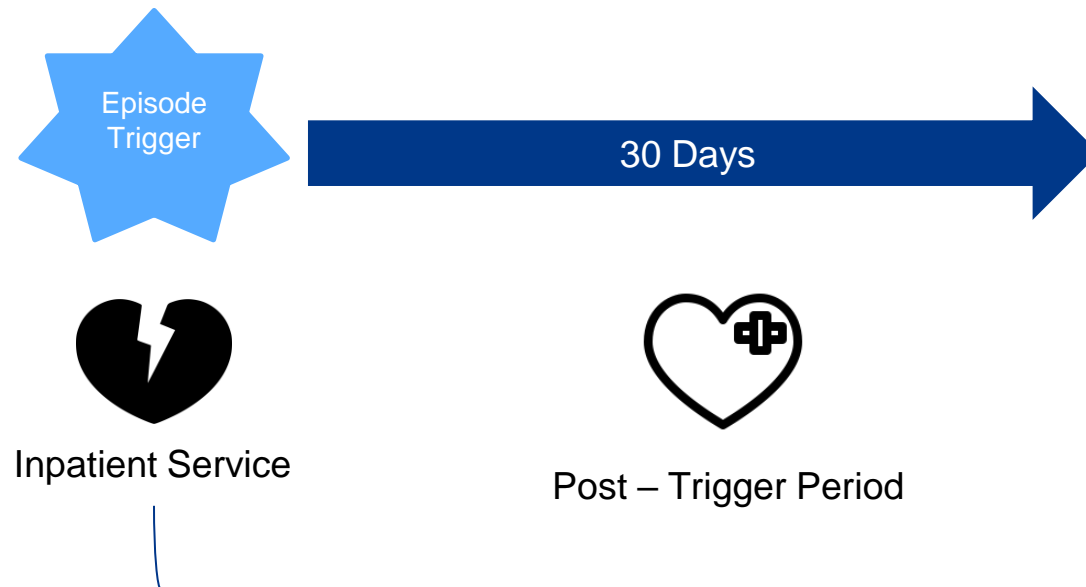
Trigger Group Name	Code Type	Codes
Decubitus Ulcer	ICD10	L89000, L89001, L89002, L89009, L89010, L89011, L89012, L89019, L89020, L89021, L89022, L89029, L89100, L89101, L89102, L89109, L89110, L89111, L89112, L89119, L89120, L89121, L89122, L89129, L89130, L89131, L89132, L89139, L89140, L89141, L89142, L89149, L89150, L89151, L89152, L89159, L89200, L89201, L89202, L89209, L89210, L89211, L89212, L89219, L89220, L89221, L89222, L89229, L89300, L89301, L89302, L89309, L89310, L89311, L89312, L89319, L89320, L89321, L89322, L89329, L8940, L8941, L8942, L8945, L89500, L89501, L89502, L89509, L89510, L89511, L89512, L89519, L89520, L89521, L89522, L89529, L89600, L89601, L89602, L89609, L89610, L89611, L89612, L89619, L89620, L89621, L89622, L89629, L89810, L89811, L89812, L89819, L89890, L89891, L89892, L89899, L8990, L8991, L8992, L8995,
HAC 04: Stage III and IV Pressure Ulcers	ICD10	L89003, L89004, L89006, L89013, L89014, L89016, L89023, L89024, L89026, L89103, L89104, L89106, L89113, L89114, L89116, L89123, L89124, L89126, L89133, L89134, L89136, L89143, L89144, L89146, L89153, L89154, L89156, L89203, L89204, L89206, L89213, L89214, L89216, L89223, L89224, L89226, L89303, L89304, L89306, L89313, L89314, L89316, L89323, L89324, L89326, L8943, L8944, L8946, L89503, L89504, L89506, L89513, L89514, L89516, L89523, L89524, L89526, L89603, L89604, L89606, L89613, L89614, L89616, L89623, L89624, L89626, L89813, L89814, L89816, L89893, L89894, L89896, L8993, L8994, L8996,

Dermatitis, Urticaria (DRMTIS)

This is a complication episode. For a complication episode to trigger, it needs the trigger diagnosis code to be present in the principal position of an inpatient claim. The episode window for a complication episode is equal to the length of an inpatient stay with a zero day look back and a 30-day look forward period. It includes services related to the inpatient stay as well as all relevant associated professional, laboratory, radiology and ancillary claims during the inpatient time window.

Complication episodes are opened only after all other episodes have been constructed. Only then can a stay, which is not assigned to any other episode and has a trigger code in the principal position, open a complication episode.

Episode Length – DRMTIS



Total Episode Cost = All expected services and complication costs associated from index service until the end of the post-trigger window.

Duration Pre-Trigger Window	Duration Post-Trigger Window
0	30

Episode Triggers – DRMTIS

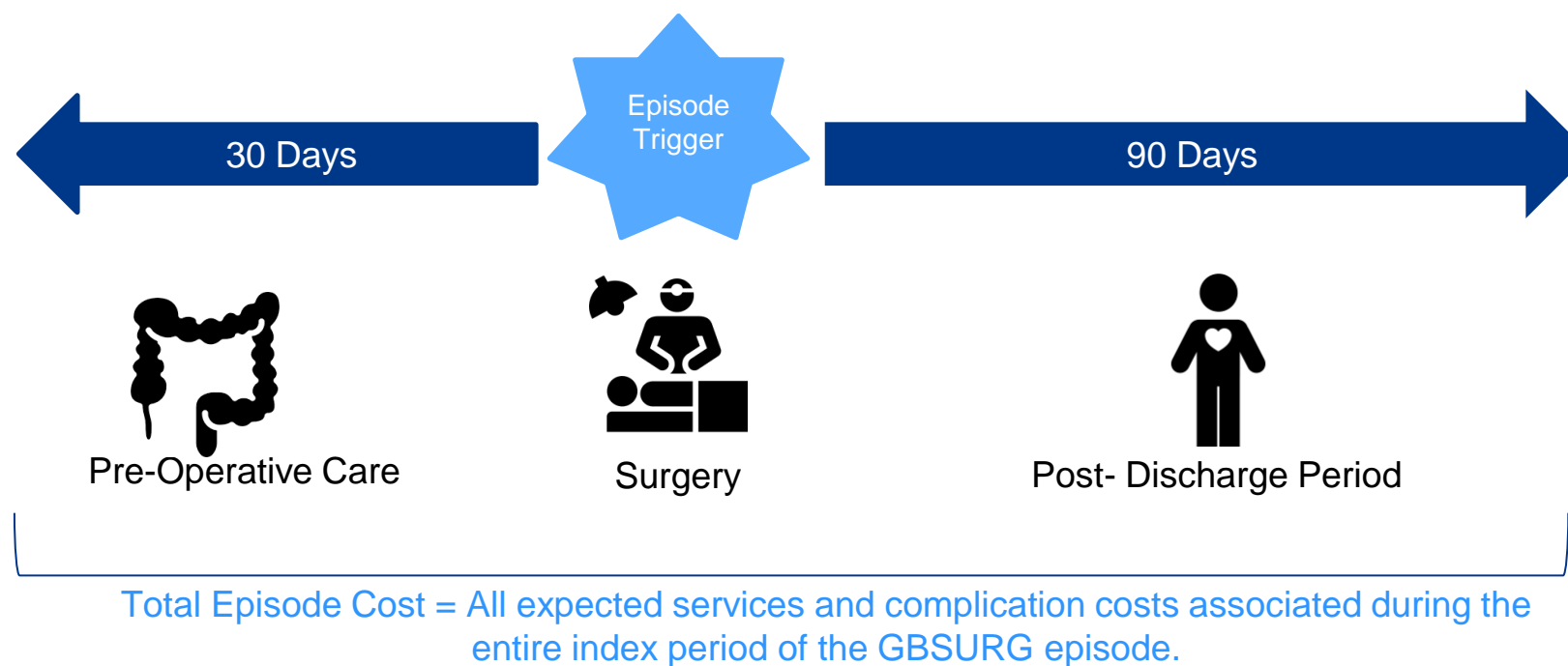
Trigger Group Name	Code Type	Codes
Dermatitis, Urticaria	ICD10	L2081, L2082, L2084, L2089, L209, L22, L231, L233, L234, L235, L2381, L2389, L239, L244, L245, L2489, L249, L251, L252, L253, L258, L259, L270, L271, L278, L279, L300, L302, L308, L309, L500, L501, L503, L504, L505, L506, L508, L509, T7841XA,

Gall Bladder Surgery (GBSURG)

Services and costs associated with a procedure of Gall Bladder Surgery (GBSURG) are grouped together to include the index stay during which the procedure was performed, a 30-day look back period to capture pre-operative diagnostic workup leading to the surgery and a 90-day post-discharge period. Patients are identified as those with a primary procedure code of Gall Bladder Surgery on an inpatient stay service or a Gall Bladder Surgery procedure code in any position on an outpatient facility/professional service, along with a qualifying diagnosis code.

As part of the Gall Bladder Surgery episode, we evaluate services that are 1) typical or routine and considered part of expected care for Gall Bladder Surgery; and 2) those that are related to complications associated with Gall Bladder Surgery.

Episode Length – GBSURG



Duration Pre-Trigger Window	Duration Post-Trigger Window
30 Days	90 Days

Episode Triggers – GBSURG

Trigger Group Name	Code Type	Codes
Laparoscopic Cholecystectomy	CPT	47562 47563 47564
Open Cholecystectomy w/wout CBD expl	CPT	47600 47605 47610 47612 47620

Trigger Diagnoses – ICD-10

Abdominal mass	GI - abnormal stool exam
Abdominal pain	GI - diarrhea
Abdominal tenderness	GI - flatulence / gas pain
Acute Cholecystitis	GI - symptoms - nec / nos
Alcoholic Fatty Liver	GI - visible peristalsis
Cancer GB, Hepatobiliary Region	Heartburn
Cholangitis, Cholelithiasis with Obstruction	Hepatitis, Cirrhosis, Other Liver Disorders
Chronic cholecystitis, other GB disease	Injury to GI Tract
Dyspepsia	Intestinal Malabsorption, Celiac Disease
Esophageal Reflux and Other Esophagitis	Intestinal Obstruction
Gall Bladder related complications	Irritable Bowel and other functional GI disor
Gastroparesis	Nausea, vomiting
GERD, Hiatal Hernia, Other Upper GI Disorders	Other abn of GB, pancreas, liver
GI - abnormal abdominal imaging study	Other bacterial infections
GI - abnormal bowel sounds	Other disorders of stomach and duodenum
GI - abnormal feces	Pancreatic Disease
GI - abnormal gi imaging study	Perforation, Peritonitis, Abd Abscess

Relevant Procedures – CPT / HCPCS, ICD-10

Adjust / Revise Lap Adjustable Gastric Band	DME - repair / maintenance	Imaging - mri - contrast agent	Imaging - x-ray - biliary tract - other
Advance care planning	DME - safety equipment	Imaging - mri - guidance	Imaging - x-ray - lower gi - large bowel - contrast
Alcohol / Drug Use Management	DME - whirlpool - equipment	Imaging - mri - other	Imaging - x-ray - other - joint survey
Alcohol / Drug Use Screening	DME - wound therapy	Imaging - nuclear - bladder / ureter	Imaging - x-ray - upper gi - duodenogram
Ancillary Services	DME and supplies	Imaging - nuclear - gi blood loss	Imaging - x-ray - upper gi - esophagus - contrast
Biopsy of liver	Drainage of Abdominal Abscess	Imaging - nuclear - hepatobiliary ductal scan	Imaging - x-ray - upper gi - other
Bleeding Status	Drug Delivery implantation	Imaging - nuclear - hepatobiliary ductal scan - radiopharmaceutical	Imaging - x-ray - upper gi - small bowel - contrast
Blood Count	E & M - consultation	Imaging - nuclear - liver	Imaging Abdomen
Blood Gases, Pulse Oximetry	E & M - emergency care	Imaging - nuclear - localization of inflammation	Injection or ligation of esophageal varices
Blood transfusion	E & M - home visit	Imaging - nuclear - lung scan	Intraoperative cholangiogram
Blood Type, Coomb's test	E & M - hospital	Imaging - nuclear - lymphatics	Lab - blood gases
Bundled Payment / Medical Home	E & M - nursing home	Imaging - nuclear - other	Lab - chemistry
Cardiac Stress Test	E & M - other	Imaging - nuclear - other - automated data add - on	Lab - chemistry and toxicology tests
Care Plan Oversight	E & M - prevention	Imaging - nuclear - other gi	Lab - cytology
Case Management Services	Endoscopic retrograde cannulation of pancreas (ERCP)	Imaging - nuclear - radiopharmaceutical - radiopharmaceutical - other	Lab - endocrine
CHEMOTHERAPY	Esophageal dilatation	Imaging - nuclear - shilling test	Lab - endocrine response test
CHLAMYDIA SCREENING	Esophageal Motility and Diagnostic Workup	Imaging - nuclear - shilling test - radiopharmaceutical	Lab - gi - fat absorption
Cholecystectomy and common duct exploration	Excision, lysis peritoneal adhesions	Imaging - nuclear - venous thrombosis - radiopharmaceutical	Lab - hematology - blood count
Chronic Care Management	Extracorporeal shock wave, other than urinary	Imaging - nuclear - venous thrombosis - scan	Lab - hematology - blood count - eosinophil count
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	HbA1C	Imaging - other imaging	Lab - hematology - coagulation
Computer Assisted Procedure	Hepatitis B vaccine	Imaging - other imaging - fluoroscopy	Lab - immunology
Coordinated Care Fees/Services	High dose steroids	Imaging - other imaging - fluoroscopy - guidance	Lab - infectious agent antibody
Counseling Services	Home Health / Hospice	Imaging - supplies - contrast agent - high osmolar	Lab - infectious agent antigen
CT scan abdomen	Hormone Therapy	Imaging - supplies - contrast agent - low osmolar	Lab - infectious agent dna
CT scan chest	HPV VACCINE	Imaging - supplies - ultrasound related	Lab - microbiology
Debridement of wound, infection or burn	Image guided drainage of abdominal abscess	Imaging - therapeutic procedure - abscess drainage	Lab - microbiology - c & s
Diagnostic ultrasound of abdomen or retroperitoneum	Imaging - arteriography - other	Imaging - therapeutic procedure - other therapeutic procedure	Lab - microbiology - microscopic exam
Diagnostic ultrasound of gastrointestinal tract	Imaging - ct - cardiac	Imaging - us - guide - biopsy	Lab - microbiology - other
DME - bath / toilet aids	Imaging - ct - follow - up	Imaging - us - guide - other	Lab - microbiology - viral culture
DME - beds / accessories	Imaging - ct - guidance	Imaging - us - intravascular	Lab - microscopic - koh prep
DME - heat/cold application	Imaging - ct - other	Imaging - us - other	Lab - microscopic - wet mount
DME - mobility aids	Imaging - cta - other	Imaging - us - retroperitoneum	Lab - other clinical lab
DME - other	Imaging - lymphangiography	Imaging - venography - other	Lab - other hematology
DME - patient lifts	Imaging - mra - chest	Imaging - x-ray - abdomen	Lab - panel - hepatitis panel
DME - rehabilitation	Imaging - mri - chest	Imaging - x-ray - biliary tract - cholangiogram - intraoperative	Lab - pathology consultation

Relevant Procedures – CPT / HCPCS, ICD-10

Lab - specimen collection - blood - venous - venipuncture	Other care - diabetes care - glucose monitoring	Other care - nutrition - enteral - tubing	Other diagnostic procedures (interview, evaluation, consultation)
Lab - specimen collection - specimen handling	Other care - diabetes care - glucose monitoring - lancet	Other care - nutrition - medical food	Other diagnostic radiology and related techniques
Lab - specimen collection - urine	Other care - diabetes care - glucose monitoring - other supplies	Other care - nutrition - parenteral	Other gastrointestinal diagnostic procedures
Lab - stat request	Other care - diabetes care - insulin pump	Other care - nutrition - parenteral - all - inclusive	Other hernia repair
Lab - surgical pathology	Other care - home care - emergency response system	Other care - nutrition - parenteral - nutrition solution	Other Laboratory
Lab - therapeutic drug assay	Other care - home care - home health aide	Other care - nutrition - parenteral - pump	Other non-OR gastrointestinal therapeutic procedures
Lab - transfusion medicine	Other care - home care - meals	Other care - observation	Other non-OR lower GI therapeutic procedures
Lab - urinalysis	Other care - home care - nursing care	Other care - other	Other non-OR or closed therapeutic nervous system procedures
Laboratory - Chemistry and Hematology	Other care - home care - nursing care - lpn	Other care - other - ancillary services	Other non-OR therapeutic procedures on respiratory system
Laparoscopic Cholecystectomy	Other care - home care - nursing care - np	Other care - other - education	Other non-OR upper GI therapeutic procedures
LEAD SCREENING	Other care - home care - nursing care - rn	Other care - other - exercise classes	Other OR gastrointestinal therapeutic procedures
Lipid Level Monitoring	Other care - home care - other care	Other care - other - infection control	Other OR lower GI therapeutic procedures
Low dose steroids	Other care - home care - other care - attendant care	Other care - other - irrigation	Other OR procedures on vessels other than head and neck
Lower gastrointestinal X-ray	Other care - home care - other care - chore care	Other care - other - lead assessment	Other OR therapeutic procedures on bone
Lung Function Tests	Other care - home care - other care - companion care	Other care - other - lightbox	Other OR therapeutic procedures on respiratory system
Markers for Inflammation	Other care - home care - other care - day care	Other care - other - lodging	Other OR upper GI therapeutic procedures
Medication Assisted Management (MAT)	Other care - home care - other care - homemaker	Other care - other - meals	Other therapeutic procedures
Medication Therapy Management Services	Other care - home care - other care - respite care	Other care - other - medical records	Other therapeutic procedures on muscles and tendons
Medications (Injections, infusions and other forms)	Other care - home care - physician supervision	Other care - other - weight management	Peer Services
Metabolic Renal Hepatic Chemistry Panel	Other care - home care - rehabilitation - occupational therapy	Other care - pain management - pca / related	Personal Care Services
Microscopic examination (bacterial smear, culture, toxicology)	Other care - home care - rehabilitation - physical therapy	Other care - prevention - smoking cessation	Physical Therapy / Rehab
NewBorn Blood Tests	Other care - home care - rehabilitation - speech therapy	Other care - respiratory - equipment / supplies	Physician Services
Online Management	Other care - home care - social worker	Other care - respiratory - equipment / supplies - apnea monitor	Physician Services - Inpatient
Open Cholecystectomy w/wout CBD expl	Other care - home care - specialized visit	Other care - respiratory - equipment / supplies - nebulizer	Physician Services - Outpatient
Opioid Administration / Dispensing (OTP)	Other care - home care - training	Other care - respiratory - equipment / supplies - peak flow meter	PQRI
Oral and Dental Services	Other care - hospice	Other care - respiratory - equipment / supplies - spirometer	Preventive Medicine, Care Coordination
Other - non - covered	Other care - long term care - assisted living	Other care - respiratory - other	Preventive Medicine, Counseling, Coordination
Other bowel diagnostic procedures	Other care - long term care - residential care	Other care - respiratory - oxygen / oxygen concentrator	Procedure - anesthesia
Other care - bladder / bowel care - catheter	Other care - nutrition - assessment	Other care - respiratory - ventilator management	Procedure - artery - nos - angioplasty / stenting
Other care - bladder / bowel care - drainage bag	Other care - nutrition - counseling - dietician	Other care - respiratory therapy	Procedure - artery - nos - thrombolysis
Other care - bladder / bowel care - other supplies	Other care - nutrition - education	Other care - wound care	Procedure - artery / vein - nos - other
Other care - bladder / bowel care - other supplies - diaper / related	Other care - nutrition - enteral	Other care - wound care - electromagnetic therapy	Procedure - artery / vein - nos - thrombectomy catheter
Other care - bladder / bowel care - other supplies - skin barrier	Other care - nutrition - enteral - administration	Other care - wound care - growth factor	Procedure - biopsy - liver - needle biopsy of liver
Other care - chronic edema - appliance - segmental	Other care - nutrition - enteral - formula	Other care - wound care - hyperbaric oxygen	Procedure - biopsy - liver - wedge biopsy of liver
Other care - chronic edema - surgical stockings	Other care - nutrition - enteral - pump	Other diagnostic cardiovascular procedures	Procedure - central venous catheter - fluoroscopy - guidance

Relevant Procedures – CPT / HCPCS, ICD-10

Procedure - central venous catheter - insertion	Procedure - other procedures - biliary tract	Rx - allergy - antihistamines / comb	Rx - coagulation system - anticoagulants
Procedure - central venous catheter - repair / maintenance	Procedure - other procedures - pancreas	Rx - analg/antipy/nsaids - narcotics	Rx - coagulation system - antiheparin agnt
Procedure - colostomy	Procedure - other procedures - stomach	Rx - analg/antipy/nsaids - nsaids	Rx - coagulation system - antiplatelet rx
Procedure - debridement - wound / infection / burn - debridement	Procedure - pancreas - biopsy	Rx - antibiotics - aminoglycosides	Rx - coagulation system - hemostatics
Procedure - debridement of nails	Procedure - pancreatectomy	Rx - antibiotics - anti-infectives, misc	Rx - coagulation system - thrombolytic rx
Procedure - drainage pancreatic cyst / pseudocyst	Procedure - paracentesis	Rx - antibiotics - cephalosporins	Rx - diagnostic rx - gastric function
Procedure - ercp - dx	Procedure - related supplies - ablation - catheter	Rx - antibiotics - chloramphenicol / comb	Rx - diagnostic rx - roentgenography
Procedure - ercp - other rx	Procedure - related supplies - access catheter	Rx - antibiotics - macrolides	Rx - diagnostic rx - thyroid function
Procedure - ercp - radiology component	Procedure - related supplies - catheter	Rx - antibiotics - penicillins	Rx - diagnostic rx, misc
Procedure - ercp w / sphincterotomy or dilation	Procedure - related supplies - drainage	Rx - antibiotics - quinolones	Rx - diuretics - diuretic, carb anhydrase inhib
Procedure - ercp w / stent	Procedure - related supplies - graft - tendon repair	Rx - antibiotics - sulfonamides / comb	Rx - diuretics, loop diuretics
Procedure - ercp w / stone removal / destruction	Procedure - related supplies - graft / repair	Rx - antibiotics - tetracyclines	Rx - diuretics, osmotic
Procedure - esophageal / gastric intubation	Procedure - related supplies - implant	Rx - antibiotics / antivirals / antifungals - infusion	Rx - diuretics, thiazides / related
Procedure - eswl - biliary tract	Procedure - related supplies - other	Rx - antibiotics, misc	Rx - eent - topical - eye/ear/nose/throat misc
Procedure - gastrostomy	Procedure - sedation	Rx - antidiabetic rx - insulins	Rx - electrolytic, caloric, water - calcium supplements
Procedure - graft - skin - graft material	Procedure - small bowel resection	Rx - antidiabetic rx, misc	Rx - electrolytic, caloric, water - caloric rx dextrose / rel
Procedure - gu - other non - or rx	Procedure - spinal canal - catheter	Rx - antifungals	Rx - electrolytic, caloric, water - caloric rx, amino acid prep
Procedure - heme / lymph - other rx	Procedure - suture - skin - repair of superficial wound	Rx - antivirals	Rx - electrolytic, caloric, water - hydration - unspecified
Procedure - i&d - skin - drainage - post - op infection	Procedure - ugi endoscopy - other	Rx - autonomic rx - parasympathomimetics	Rx - electrolytic, caloric, water - multi-mineral prep
Procedure - ileostomy / other enterostomy	Procedure - vascular - occlusion / embolization - transcatheter	Rx - autonomic rx - sympathomimetic rx	Rx - electrolytic, caloric, water - potassium supp
Procedure - injection - tendons / joints / etc.	Procedure - vascular - related supplies - occlusion catheter	Rx - b-lactam antibiotics	Rx - electrolytic, caloric, water - replacement preparations, misc
Procedure - laparoscopy - abdomen - biopsy	Procedure - vascular access - port / pump - insertion	Rx - blood derivatives	Rx - electrolytic, caloric, water - sodium chlor preps
Procedure - laparoscopy - abdomen - dx	Procedure - vein - nos - angioplasty	Rx - cardiovascular system - antiarrhythmic rx	Rx - gi - antichol/antispasmodics
Procedure - laparoscopy - gi - other	Procedure - vein - vena cava - filter	Rx - cardiovascular system - beta blockers	Rx - gi - antiemetics
Procedure - laparotomy / related	Procedures and Reporting	Rx - cardiovascular system - cardiac drugs	Rx - gi - h2 antagonists
Procedure - lysis of adhesions	Prophylactic vaccinations and inoculations	Rx - cardiovascular system - cardiac glycosides	Rx - gi - ppis
Procedure - other anal / rectal procedures - other procedures - rectum / anus	Psychiatry Evaluations	Rx - cardiovascular system - hypotensive rx	Rx - gi drug misc,nec
Procedure - other dx on musculoskeletal system	Psychiatry Services	Rx - cardiovascular system - natriuretic peptides	Rx - gu - other - bladder rx
Procedure - other gi dx	Psychological and psychiatric evaluation and therapy	Rx - cardiovascular system - vasodilating agents, nec	Rx - hematopoietic system - hematopoietic growth factors
Procedure - other lower gi procedures - closure of enterostomy	Risk Assessment	Rx - cardiovascular system - vasodilating rx	Rx - hematopoietic system - iron / related
Procedure - other lower gi procedures - other bowel dx	Robotic Assisted Procedure	Rx - central nervous system - antidepressants	Rx - hematopoietic system - other
Procedure - other lower gi procedures - other non - or rx	Robotic Surgery	Rx - central nervous system - anxiolytic/sedative/hypnot nec	Rx - immune system - interferons
Procedure - other lower gi procedures - other or rx	Routine Immunizations	Rx - central nervous system - barbiturates	Rx - miscellaneous rx
Procedure - other non - or rx - other non - or skin procedures	Rx - administration - infusion	Rx - central nervous system - benzodiazepines	Rx - miscellaneous rx - anesthetics, local
Procedure - other or gi rx - other procedure - abdomen	Rx - administration - injection	Rx - central nervous system - tranq/antipsychotics	Rx - miscellaneous rx - enzymes

Relevant Procedures – CPT / HCPCS, ICD-10

Rx - miscellaneous rx - heavy metal antagonists	Tests - cardiac - echo - contrast agent	Therapy - habilitation	Transitional Care Management
Rx - muscle relaxants - muscle relax, neuromusc block	Tests - cardiac - radiopharmaceuticals	Therapy - hyperbaric oxygen	Transportation - other transportation
Rx - muscle relaxants - muscle relax, skeletal central	Tests - cardiac stress tests - cardiac perfusion scan - rest / exercise	Therapy - nasogastric tube	Transportation - paramedic
Rx - muscle relaxants - muscle relax, skeletal, misc	Tests - cardiac stress tests - cardiac stress tests - other	Therapy - neurostimulator - incontinence	Ungrouped Codes
Rx - other	Tests - cardiovascular - other	Therapy - neurostimulator - nausea / vomiting	Upper gastrointestinal endoscopy, biopsy
Rx - other anti-infectives - antimalarials	Tests - ent - other dx	Therapy - neurostimulator - other	Upper gastrointestinal X-ray
Rx - pharmacy fee	Tests - ent - swallowing evaluation	Therapy - neurostimulator - tens - device	Upper GI endoscopy
Rx - respiratory - beta agonists	Tests - gi - duodenal motility study	Therapy - neurostimulator - tens - leads	Urine Protein
Rx - respiratory - methylxanthines	Tests - gi - esophageal balloon distension test	Therapy - neurostimulator - tens - supplies	Vaccine for flu or Pneumonia
Rx - respiratory - mucolytics/cold comb	Tests - gi - gastric motility study	Therapy - other	Vitamin K administration
Rx - respiratory - phenylephrine	Tests - gi - other dx	Therapy - phlebotomy	Wellness Assessment
Rx - serums, toxoids, vaccines - serums	Tests - neuro - cognitive testing	Therapy - pt - exercises / activities	
Rx - serums, toxoids, vaccines - toxins	Tests - neuro - sleep studies	Therapy - pt - modalities	
Rx - skin / mucous membrane - antiinflam s/mm agnts / comb nec	Tests - pulmonary - other	Therapy - rehabilitation	
Rx - skin / mucous membrane - s/mm miscellaneous	Tests - pulmonary - peak flow	Therapy - rehabilitation - other	
Rx - vitamins - multivit prep	Tests - vascular - other	Therapy - transfusion - blood	
Rx - vitamins - vitamin b / b complex	Tests - vascular - venous	Therapy - transfusion - granulocytes	
Rx - vitamins - vitamin d	Therapy - acupuncture	Therapy - transfusion - plasma	
Screen for amino acid disorders	Therapy - activity therapy	Therapy - transfusion - platelets	
Smoking / Tobacco Cessation	Therapy - apheresis	Therapy - vaccination - hepatitis a vaccine	
Supplies	Therapy - behavior - evaluation and therapy	Therapy - vaccination - hepatitis b	
Tests - allergy tests - intradermal	Therapy - behavior - other	Therapy - vaccination - other vaccine	
Tests - allergy tests - other	Therapy - behavior - partial hospitalization	Therapy - vaccination - vaccine administration	
Tests - allergy tests - patch	Therapy - biofeedback	Thyroid Function Tests	
Tests - allergy tests - percutaneous	Therapy - dialysis - supplies	Traction, splints, and other wound care	

Relevant Diagnoses – ICD-10

Abdominal mass	complications of surgical procedures	GI - abdominal pain	Injury to GI Tract
Abdominal pain	CV - abnl imaging study	GI - abdominal tenderness	Intestinal Malabsorption, Celiac Disease
Abdominal tenderness	diabetes mellitus with neurologic manifestations	GI - abnormal abdominal imaging study	Intestinal Obstruction
Achalasia, Esophageal Spasm, Stricture, Dysphagia	Diseases of GB, Biliary Tract, Pancreas	GI - abnormal bowel sounds	Irritable Bowel and other functional GI disorder
Acute Cholecystitis	Dyspepsia	GI - abnormal feces	Nausea, vomiting
Acute esophagitis, acute gastritis, duodenitis	Dysphagia	GI - abnormal gi imaging study	NS - acute pain - post op
Alcoholic Fatty Liver	Esophageal Reflux and Other Esophagitis	GI - abnormal stool exam	Orthostatic Hypotension / Dizziness
Alcoholic Gastritis	Fever & Chills	GI - diarrhea	Other abn of GB, pancreas, liver
Allergic, Dietetic, Eosinophilic Gastroenteritis	Fistula GI tract	GI - esophagitis	Other bacterial infections
Anxiety Disorders	Gall Bladder related complications	GI - flatulence / gas pain	Other disorders of stomach and duodenum
Cancer GB, Hepatobiliary Region	Gastroenteritis	GI - symptoms - nec / nos	Pancreatic Disease
Cholangitis, Cholelithiasis with Obstruction	Gastroparesis	GI - visible peristalsis	Perforation, Peritonitis, Abd Abscess
Chronic cholecystitis, other GB disease	GERD, Hiatal Hernia, Other Upper GI Disorders	Heartburn	
Complication of Implanted device, graft	GI - abdominal mass	Hepatitis, Cirrhosis, Other Liver Disorders	

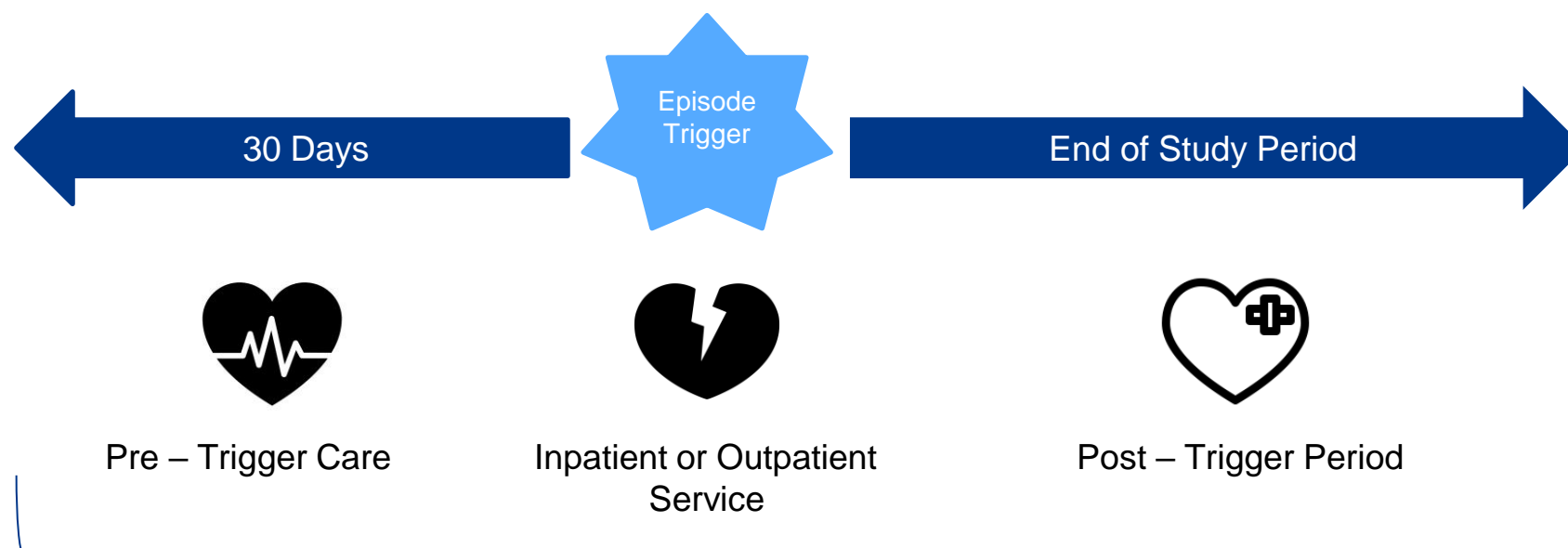
Complications – ICD-10

Abdominal Hernia w Gangrene/Obstruction	Delirium, Encephalopathy	Influenza with Pneumonia	Resp Failure following trauma / surgery
Abdominal Hernia w/out Gangrene/Obstruction	Dermatitis, Urticaria	Intestinal infection	Respiratory Failure
Accidental Falls	Diabetes, poor control	Intestinal Obstruction	Respiratory Insufficiency
Acute CHF / pulm edema	dic, coagulation, hemorrhagic disorders	IVC & other intra-abd venous thrombosis	Retroperitoneal Abscess
Acute cor pulmonale	Digestive system complications	Malfunction / Complication of Heart Device	Sepsis
Acute esophagitis, acute gastritis, duodenitis	E. Coli Infection	Meningitis / Encephalitis	Severe Sepsis
Acute Kidney Failure	empyema, lung abscess	MRSA Pneumonia	Shock / Cardiac Arrest
Acute Pancreatitis, pseudo cyst	Fluid Electrolyte Acid Base Problems	MRSA, Drug Resistant Infections	Shock during or following cardiac surgery
Adverse effects of drugs	Foreign body left during procedure	Opportunistic Infections	Shock during or post-procedure
Altered mental status	Gall Bladder related complications	Other bacterial infections	STEMI
Aspiration Pneumonia	Gastroenteritis	Other Bacterial Pneumonia	Subendocardial infarct
Atrial Flutter / Fibrillation	GERD, Hiatal Hernia, Other Upper GI Disorders	Other cardiac arrhythmias	Suicide or Self-inflicted Injury
Bacteremia, SIRS, no organ dysfunction	GI Bleed	other lung complications	Supraventricular Tachyarrhythmias
C-Difficile Infection	Gram Negative Pneumonia	Other lung problems	Thromboembolic Stroke
Chronic Fungal and Other Pneumonias	HAC 02: Air Embolism	Other Mental Disorders	Transfusion, Infusion related complications
Chronic Skin Ulcer	HAC 04: Stage III and IV Pressure Ulcers	Other Phlebitis, Lymphangitis, varices	Transient cerebral ischemia, TIA
Complication of genitourinary device	HAC 09: Manifestations of Poor Glycemic Control	Other psychotic disorders	Urethral Stricture
Complication of Implanted device, graft	HAC: Blood Incompatibility	Other Staph Pneumonia	Urinary Complications
Complications from Central Line	HAC: Catheter Associated UTIs	Overdose, Poisonings	Urinary Frequency & other symptoms
Complications from chemotherapy	HAC: Foreign Body Retained After Surgery	Perforation, Peritonitis, Abd Abscess	Urinary Tract Infection
Complications of anesthesia	HAC: Infection due to central venous catheter	Periph vascular dis w ulcer	Vascular Insufficiency of intestine
Complications of colostomy, enterostomy	Hemoperitoneum	Phlebitis, Deep vein thrombosis (DVT)	Ventilator Associated Pneumonia
complications of medical care	Hemorrhage	Poisoning by Opiates	Ventilator Dependence
complications of surgical procedures	Hemorrhagic Stroke	Poisoning by Psychostimulants	Ventricular Arrhythmias
Debilitating Viral Pneumonia	Hepatorenal Syndrome	Postop adhesions	Viral Pneumonia
Decubitus Ulcer	Hypertensive Urgency	Pulmonary Embolism	Wound Dehiscence
Dehydration	Hypotension / Syncope	Recent AMI	Wound Infections

Glaucoma (GLCOMA)

Glaucoma (GLCOMA) is a chronic condition open from 30 days prior to the date of the trigger service until the end of the study period. The trigger service can be an inpatient service with a glaucoma-specific principal diagnosis code or an outpatient or professional E&M service with a glaucoma-specific diagnosis code in any position. The professional trigger also requires a confirming inpatient, outpatient or professional glaucoma-related E&M service at least 30 days later. Services with diagnosis codes for signs and symptoms related to Glaucoma such as vision impairment have been defined as typical care for Glaucoma, and conditions such as corneal edema have been labeled as complications.

Episode Length – GLCOMA



Total Episode Cost = All expected services and complication costs associated from index service until the end of the post-trigger window.

Duration Pre-Trigger Window	Duration Post-Trigger Window
30	End of Study Period

Episode Triggers – GLCOMA

Trigger Group Name	Code Type	Codes
Acute Glaucoma	ICD10	H4021, H40211, H40212, H40213, H40219, H44511, H44512, H44513, H44519,
Angle Closure Glaucoma	ICD10	H21251, H21252, H21253, H21259, H21521, H21522, H21523, H21529, H2182, H4003, H40031, H40032, H40033, H40039, H4006, H40061, H40062, H40063, H40069, H4015, H402, H4020, H4020X0, H4020X1, H4020X2, H4020X3, H4020X4, H4022, H40221, H402210, H402211, H402212, H402213, H402214, H40222, H402220, H402221, H402222, H402223, H402224, H40223, H402230, H402231, H402232, H402233, H402234, H40229, H402290, H402291, H402292, H402293, H402294, H4023, H40231, H40232, H40233, H40239
Congenital glaucoma	ICD10	Q134, Q1381, Q139, Q150
Preglaucoma/Open Angle Glaucoma	ICD10	H21551, H21552, H21553, H21559, H40, H4000, H40001, H40002, H40003, H40009, H4001, H40011, H40012, H40013, H40019, H4002, H40021, H40022, H40023, H40029, H40041, H40042, H40043, H40049, H40051, H40052, H40053, H40059, H4010X0, H4010X1, H4010X2, H4010X3, H4010X4, H401110, H401111, H401112, H401113, H401114, H401120, H401121, H401122, H401123, H401124, H401130, H401131, H401132, H401133, H401134, H401190, H401191, H401192, H401193, H401194, H4011X0, H4011X1, H4011X2, H4011X3, H4011X4, H408, H4081, H40811, H40812, H40813, H40819, H4082, H40821, H40822, H40823, H40829, H40831, H40832, H40833, H40839, H4089, H409
Residual/Chronic Glaucoma	ICD10	H40151, H40152, H40153, H40159, H4024, H40241, H40242, H40243, H40249

Episode Triggers – GLCOMA

Trigger Group Name	Code Type	Codes
Secondary/Low Tension Glaucoma	ICD10	H4012, H40121, H401210, H401211, H401212, H401213, H401214, H40122, H401220, H401221, H401222, H401223, H401224, H40123, H401230, H401231, H401232, H401233, H401234, H40129, H401290, H401291, H401292, H401293, H401294, H4013, H40131, H401310, H401311, H401312, H401313, H401314, H40132, H401320, H401321, H401322, H401323, H401324, H40133, H401330, H401331, H401332, H401333, H401334, H40139, H401390, H401391, H401392, H401393, H401394, H4014, H40141, H401410, H401411, H401412, H401413, H401414, H40142, H401420, H401421, H401422, H401423, H401424, H40143, H401430, H401431, H401432, H401433, H401434, H40149, H401490, H401491, H401492, H401493, H401494, H403, H4030, H4030X0, H4030X1, H4030X2, H4030X3, H4030X4, H4031, H4031X0, H4031X1, H4031X2, H4031X3, H4031X4, H4032, H4032X0, H4032X1, H4032X2, H4032X3, H4032X4, H4033, H4033X0, H4033X1, H4033X2, H4033X3, H4033X4, H404, H4040, H4040X0, H4040X1, H4040X2, H4040X3, H4040X4, H4041, H4041X0, H4041X1, H4041X2, H4041X3, H4041X4, H4042, H4042X0, H4042X1, H4042X2, H4042X3, H4042X4, H4043, H4043X0, H4043X1, H4043X2, H4043X3, H4043X4, H405, H4050, H4050X0, H4050X1, H4050X2, H4050X3, H4050X4, H4051, H4051X0, H4051X1, H4051X2, H4051X3, H4051X4, H4052, H4052X0, H4052X1, H4052X2, H4052X3, H4052X4, H4053, H4053X0, H4053X1, H4053X2, H4053X3, H4053X4, H406, H4060, H4060X0, H4060X1, H4060X2, H4060X3, H4060X4, H4061, H4061X0, H4061X1, H4061X2, H4061X3, H4061X4, H4062, H4062X0, H4062X1, H4062X2, H4062X3, H4062X4, H4063, H4063X0, H4063X1, H4063X2, H4063X3, H4063X4, H42

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	Imaging - mri - orbit / face / neck	Other extraocular muscle and orbit therapeutic procedures	Rx - antibiotics - cephalosporins
Alcohol / Drug Use Screening	Imaging - mri - other	Other Eye Services, Glaucoma	Rx - central nervous system - benzodiazepines
Ancillary Services	Imaging - us - eye	Other intraocular therapeutic procedures	Rx - diuretics - diuretic, carb anhydrase inhib
Anesthesia for eye	Imaging - venography - other	Other Laboratory	Rx - electrolytic, caloric, water - sodium chlor preps
Bleeding Status	Lab - immunology	Other OR therapeutic procedures on nose, mouth and pharynx	Rx - gi - antiemetics
Blood Count	Lab - infectious agent dna	Other therapeutic procedures on eyelids, conjunctiva, cornea	Rx - miscellaneous rx
Care Plan Oversight	Lab - panel - hepatitis panel	Physical Therapy / Rehab	Rx - miscellaneous rx - anesthetics, local
Case Management Services	Lab - specimen collection - blood - venous - venipuncture	Physician Services	Rx - other
Case Management Services - Behavioral	Lab - surgical pathology	Physician Services - Inpatient	Smoking / Tobacco Cessation
Case Management Services - Oncology	Lab - therapeutic drug assay	Physician Services - Outpatient	Supplies
Chronic Care Management	Low dose steroids	PQRI	Surgery For Glaucoma
Corneal transplant	Markers for Inflammation	Preventive Medicine, Care Coordination	Tests - eye - contact lens fitting
Depression Screening	Medication Assisted Management (MAT)	Procedure - anesthesia	Tests - eye - dx - other
Diagnostic procedures on eye	Medication Therapy Management Services	Procedure - corneal transplant	Tests - eye - exam
DME and supplies	Medications (Injections, infusions and other forms)	Procedure - eye - biopsy or exploration	Tests - eye - orthoptic / peoptic training
Drug Delivery implantation	Metabolic Renal Hepatic Chemistry Panel	Procedure - eye - other implants / supplies	Tests - eye - retinal exam
E & M - consultation	Microscopic examination (bacterial smear, culture, toxicology)	Procedure - other eye procedures - other	Tests - eye - screening - glaucoma
E & M - emergency care	Online Management	Procedure - other intraocular rx - other	Tests - eye - sensorimotor evaluation
E & M - home visit	Ophthalmologic and otologic diagnosis and treatment	Procedure - related supplies - implant	Tests - neuro - cognitive testing
E & M - hospital	Opioid Administration / Dispensing (OTP)	Procedure - rx on eyelids / conjunctiva / cornea - other	Tests - neuro - evoked potentials
E & M - nursing home	Other care - diabetes care - glucose monitoring - lancet	Procedure - sedation	Tests - neuro - other
E & M - other	Other care - home care - physician supervision	Procedure - tear duct procedure	Tests - neuro - sleep studies
E & M - prevention	Other care - home care - specialized visit	Procedures and Reporting	Tests - vascular - cerebrovascular
Electrocardiogram - EKG monitoring	Other care - hospice	Psychiatry Services	Therapy - behavior - evaluation and therapy
Eye Exam	Other care - nutrition - assessment	Psychological and psychiatric evaluation and therapy	Therapy - behavior - medication management
Glaucoma procedures	Other care - observation	Repair of retinal tear, detachment	Therapy - behavior - other
High dose steroids	Other care - other	Risk Assessment	Therapy - other
Home Health / Hospice	Other care - other - ancillary services	Rx - administration - infusion	Therapy - phlebotomy
Hormone Therapy	Other care - vision - miscellaneous	Rx - administration - injection	Transitional Care Management
Imaging - ct - head / brain	Other care - vision - service	Rx - allergy - antihistamines / comb	Transportation - other transportation
Imaging - mri - brain	Other diagnostic procedures (interview, evaluation, consultation)	Rx - antibiotics - aminoglycosides	

Relevant Diagnoses – ICD-10

Accidental Poisoning by Alcohol	Dislocation of Jaw	Mild - Moderate Neurological Deficit	Preventive Screening
Acute Glaucoma	Dislocation of Knee	Neoplasm - benign neoplasm - choroid	Prvn - encounter for lab test
Adverse effects of drugs	Eye - cataract	NS - headache - other syndromes	Prvn - encounter for x-ray
Aftercare	Eye - dry eyes	NS - headache - symptom	Prvn - routine medical exam
Angle Closure Glaucoma	Eye - other eye ds	NS - headache - tension	Prvn - screening - other
Anterior Cruciate Ligament Sprain	Eye - other retinal ds	Observation/Examination	Ptosis of eye
Anxiety Disorders	Eye - refraction ds	Open wounds of extremities	Residual codes, unclassified
Astigmatism	Eye - retinal changes c/w diabetes	Open wounds of head; neck; and trunk	Residual/Chronic Glaucoma
Blurred vision / Diplopia	Eye - severe impairment or blindness	Optic atrophy	Retinal Detachment, tear, defects
Burns	Eye - strabismus / related	Orthostatic Hypotension / Dizziness	Secondary/Low Tension Glaucoma
Chronic Iridocyclitis	Eye - vision exam	Other injuries and conditions due to external	Shock / Cardiac Arrest
Compl of joint prosthesis, orthopedic proced	Eye - vitreous opacities	Other visual impairment	Sprains and Strains
Complication of genitourinary device	Follow up after cancer treatment	Othr - aftercare	Sudden or profound visual loss
Complication of Implanted device, graft	Foreign body in eye	Othr - follow-up exam - nec	Suicide or Self-inflicted Injury
Complication of nervous system device	Frostbite/Chillblains	Pain, swelling, redness of eye	Superficial injury; contusion
Complications after eye surgery	HAC 02: Air Embolism	Patella Injuries and Disorders	Tobacco Use
Complications from chemotherapy	Head injury	Poisoning by Assault	Ungrouped Codes
complications of medical care	Injury to nerves, shoulder region	Poisoning by Cannabis	Vascular Prosthetic Device/Graft Complication
complications of surgical procedures	Injury to other ligaments, articular cartilage, Knee	Poisoning by Opiates	Visual field defects
Congenital glaucoma	Macular degeneration	Poisoning by Psychostimulants	Visual loss, blindness
Cruciate Ligament Sprain	Malfunction / Complication of Heart Device	Posterior Cruciate Ligament Sprain	Wound Dehiscence
Dialysis Catheter Complication	Meniscus Injury of Knee	Preglaucoma/Open Angle Glaucoma	

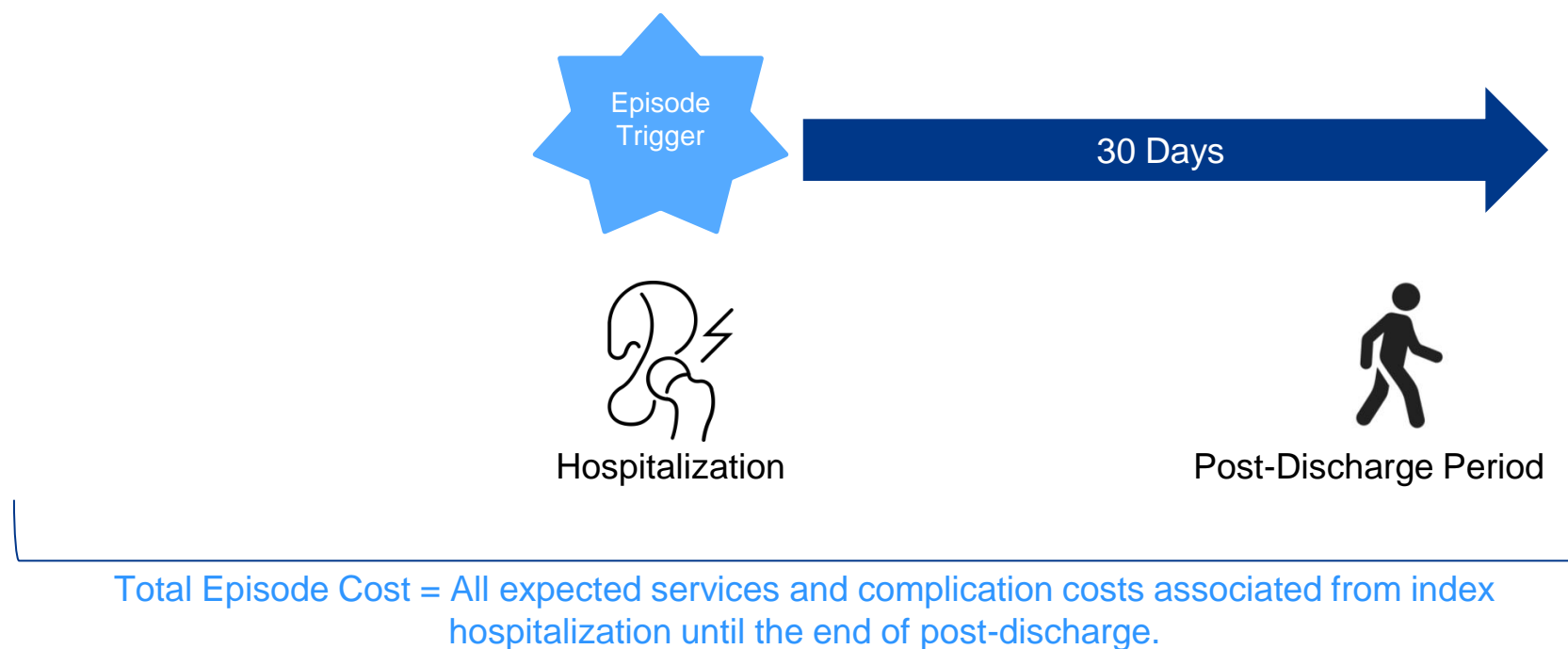
Complications – ICD-10

acute eye infections	complications of medical care	Ocular Prosthetic Device/Graft Complication	Shock during or post-procedure
Acute infection of conjunctiva or eyelids	complications of surgical procedures	Optic & Retrobulbar Neuritis	Sudden or profound visual loss
Acute iridocyclitis	Corneal Edema and inflammation	Optic atrophy	Superficial Injury during eye surgery
Adverse effects of drugs	Endophthalmitis, other deep eye infections	Orbital Infection	Superficial injury; contusion
Choroidal Hemorrhage and Rupture	Foreign body left during procedure	Other bacterial infections	Transfusion, Infusion related complications
Complication of Implanted device, graft	HAC: Foreign Body Retained After Surgery	Overdose, Poisonings	Wound Dehiscence
Complications after eye surgery	Hypotension / Syncope	Pain, swelling, redness of eye	Wound Infections
Complications from Central Line	Insulin Pump Complications	Postprocedural Blebitis	
Complications of anesthesia	MRSA, Drug Resistant Infections	Respiratory Failure	

Hip/ Pelvic Fracture (HIPLFR)

The Hip/Pelvic Fracture (HIPLFR) episode is an acute episode. Services with diagnosis codes for signs and symptoms related to the episode, such as pain and swelling, have been defined as typical care for Hip/Pelvic Fracture, while secondary diagnoses on the index stay or other services for conditions such as fluid and electrolyte disturbances and infections have been labeled as complications.

Episode Length – HIPLFR



Duration Pre-Trigger Window	Duration Post-Trigger Window
N/A	30 Days

Episode Triggers – HIPLFR

Trigger Group Name	Code Type	Codes
Closed Fracture Neck of Femur Left	ICD10	M80052S-M8458S, S72002A-S7225XS
Closed Fracture Neck of Femur Right	ICD10	M80051S-M84757S, S72001A- 7224XS
Closed Fracture Neck of Femur Unsp	ICD10	M80059S-M84659S, S72009A-S7226XS
Closed Fracture of Pelvis, Right	ICD10	S32301A-S32431A
Closed Fracture of Pelvis, Unsp	ICD10	S32426A-S32811A, S3289XA, S329XXA
Closed Fracture Pelvis, Left	ICD10	S32302A-S32692A
Closed Fracture Pelvis, Right	ICD10	S32434A-S32691A
Closed Fracture Pelvis, Unsp	ICD10	S32309A-S32423A
Compl of joint prosthesis, orthopedic proced	ICD10	T84010A-T849XXA
Complication of Implanted device, graft	ICD10	T85693A, T8572XA
Open Fracture Neck of Femur Left	ICD10	S72002B-S7225XC
Open Fracture Neck of Femur Right	ICD10	S72001B-S7224XC
Open Fracture Neck of Femur Unsp	ICD10	S72009B-S7226XC

Episode Triggers – HIPLFR

Trigger Group Name	Code Type	Codes
Open Fracture of Pelvis Left	ICD10	S32302B-S32692B
Open Fracture of Pelvis Right	ICD10	S32301B-S32691B
Open Fracture of Pelvis Unsp	ICD10	S32309B-S329XXB
Other Close Fracture Femur Left	ICD10	S72302A-S7292XA
Other Close Fracture Femur Right	ICD10	S72301A-S7291XA
Other Close Fracture Femur Unsp	ICD10	S72309A-S7290XA
Pathologic, stress fracture Left Femur, Pelv	ICD10	M80052A-M84758A
Pathologic, stress fracture Right Femur, Pelv	ICD10	M80051A-M84757A
Pathologic, stress fracture Unsp Femur, Pelv	ICD10	M80059A-M84759A

Trigger Diagnoses – ICD-10

Closed Fracture Neck of Femur Left
Closed Fracture Neck of Femur Right
Closed Fracture Neck of Femur Unsp
Closed Fracture of Pelvis, Left
Closed Fracture of Pelvis, Right
Closed Fracture of Pelvis, Unsp
Compl of joint prosthesis, orthopedic proced
Complication of Implanted device, graft
Open Fracture Neck of Femur Left
Open Fracture Neck of Femur Right
Open Fracture Neck of Femur Unsp
Open Fracture of Pelvis Left
Open Fracture of Pelvis Right
Open Fracture of Pelvis Unsp
Other Close Fracture Femur Left
Other Close Fracture Femur Right
Other Close Fracture Femur Unsp
Pathologic, stress fracture Left Femur, Pelv
Pathologic, stress fracture Right Femur, Pelv
Pathologic, stress fracture Unsp Femur, Pelv

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	E & M - hospital	Lab - immunology	Other care - chronic edema - appliance - non - segmental
Alcohol / Drug Use Screening	E & M - nursing home	Lab - infectious agent dna	Other care - chronic edema - appliance - segmental
Ancillary Services	E & M - other	Lab - microbiology	Other care - chronic edema - complex therapy
Aortic resection, replacement or anastomosis	E & M - prevention	Lab - microbiology - c & s	Other care - chronic edema - compression stocking
Bleeding Status	Electrocardiogram - EKG monitoring	Lab - microbiology - microscopic exam	Other care - chronic edema - compressor
Blood Count	HbA1C	Lab - microscopic - koh prep	Other care - chronic edema - compressor - non - segmental
Blood Gases, Pulse Oximetry	Home Health / Hospice	Lab - other clinical lab	Other care - chronic edema - compressor - segmental
Blood transfusion	Home Health Services	Lab - other hematology	Other care - chronic edema - exterior wrap
Blood Type, Coomb's test	Hormone Therapy	Lab - pathology consultation	Other care - chronic edema - sleeve
Bundled Payment / Medical Home	Imaging - ct - abdomen - pelvis	Lab - specimen collection - blood - arterial - arterial puncture	Other care - chronic edema - surgical stockings
Care Plan Oversight	Imaging - ct - follow - up	Lab - specimen collection - blood - venous - venipuncture	Other care - diabetes care - glucose monitoring
Case Management Services	Imaging - ct - guidance	Lab - specimen collection - blood - venous - venous port	Other care - diabetes care - glucose monitoring - other supplies
Case Management Services - Behavioral	Imaging - ct - other	Lab - specimen collection - specimen handling	Other care - diabetes care - insulin pump
CHEMOTHERAPY	Imaging - ct - study	Lab - specimen collection - urine	Other care - diabetes care - shoes
CHLAMYDIA SCREENING	Imaging - mra - lower extremity	Lab - stat request	Other care - home care - emergency response system
Chronic Care Management	Imaging - mra - pelvis	Lab - surgical pathology	Other care - home care - home health aide
Closed Surg for Hip socket/Pelvis w/manipulat	Imaging - mri - contrast agent	Lab - therapeutic drug assay	Other care - home care - meals
Closed Surg for Neck/Proximal Femur w/manipul	Imaging - mri - guidance	Lab - tissue typing	Other care - home care - nursing care
Closed Surg for Neck/Proximal Femur, no manip	Imaging - mri - lower extremity	Lab - transfusion medicine	Other care - home care - nursing care - lpn
Closed Surg for Shaft or Distal Femur, no man	Imaging - mri - other	Lab - urinalysis	Other care - home care - nursing care - np
Closed Surg Hip Socket or Pelvis, no manipul	Imaging - mri - pelvis	Laboratory - Chemistry and Hematology	Other care - home care - nursing care - rn
Closed Surgery Fracture Head of Femur	Imaging - nuclear - bone scan	LEAD SCREENING	Other care - home care - other care
Closed treatment of Hip Dislocation, post sur	Imaging - nuclear - localization of inflammation	Lipid Level Monitoring	Other care - home care - other care - attendant care
Closed treatment of Hip Dislocation, Spontane	Imaging - nuclear - other	Low dose steroids	Other care - home care - other care - chore care
Closed treatment of Hip Dislocation, Traumat	Imaging - nuclear - other musculoskeletal	Markers for Inflammation	Other care - home care - other care - day care
Closed treatment of Slipped Femoral Epiphysis	Imaging - other imaging	Medication Assisted Management (MAT)	Other care - home care - other care - homemaker
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - other imaging - bone density	Medication Therapy Management Services	Other care - home care - other care - respite care
Diagnostic physical therapy	Imaging - other imaging - bone density - dexta	Medications (Injections, infusions and other forms)	Other care - home care - physician supervision
DME - bath / toilet aids	Imaging - other imaging - fluoroscopy	Metabolic Renal Hepatic Chemistry Panel	Other care - home care - rehabilitation - occupational therapy
DME - beds / accessories	Imaging - supplies - contrast agent - high osmolar	Microscopic examination (bacterial smear, culture, toxicology)	Other care - home care - rehabilitation - physical therapy
DME - heat/cold application	Imaging - supplies - contrast agent - low osmolar	NewBorn Blood Tests	Other care - home care - rehabilitation - speech therapy
DME - mobility aids	Imaging - us - guide - other	Online Management	Other care - home care - social worker
DME - other	Imaging - us - other	Open Surgery for Hip socket or Pelvis	Other care - home care - specialized visit
DME - patient lifts	Imaging - venography - extremities	Open Surgery for Neck or Proximal Femur	Other care - home care - training
DME - repair / maintenance	Imaging - x-ray - hip - arthrogram	Open Surgery for Shaft or Distal Femur	Other care - hospice
DME - restraints	Imaging - x-ray - other - bone survey	Open treatment of Hip Dislocation, Spontaneous	Other care - nutrition - assessment
DME - safety equipment	Imaging - x-ray - other - joint survey	Open treatment of Hip Dislocation, Traumatic	Other care - nutrition - counseling - dietician
DME - traction	Imaging Abdomen	Open treatment of Slipped Femoral Epiphysis	Other care - nutrition - education
DME - trapeze / other orthopedic device	Joint X-Rays	Opioid Administration / Dispensing (OTP)	Other care - nutrition - enteral
DME - whirlpool - equipment	Lab - chemistry	Other - non - covered	Other care - nutrition - medical food
DME - wound therapy	Lab - chemistry and toxicology tests	Other care - bladder / bowel care - catheter	Other care - observation
DME and supplies	Lab - cytogenetics	Other care - bladder / bowel care - drainage bag	Other care - other
Drug Delivery implantation	Lab - cytology	Other care - bladder / bowel care - other supplies	Other care - other - ancillary services
E & M - consultation	Lab - hematology - blood count	Other care - bladder / bowel care - other supplies - diaper / related	Other care - other - back care
E & M - emergency care	Lab - hematology - blood count - eosinophil count	Other care - bladder / bowel care - other supplies - skin barrier	Other care - other - exercise classes
E & M - home visit	Lab - hematology - coagulation	Other care - chronic edema - appliance - limb compression	Other care - other - infection control

Relevant Procedures – CPT / HCPCS, ICD-10

Other care - other - interpretation	Procedure - i&d - skin - drainage - post - op infection	Rx - antibiotics - aminoglycosides	Tests - pulmonary - co diffusing capacity
Other care - other - lodging	Procedure - i&d - skin - drainage of abscess	Rx - antibiotics - anti-infectives, misc	Tests - pulmonary - exhaled air analysis
Other care - other - meals	Procedure - i&d - skin - drainage of hematoma	Rx - antibiotics - cephalosporins	Tests - pulmonary - other
Other care - other - medical records	Procedure - injection - tendons / joints / etc.	Rx - antibiotics - chloramphenicol / comb	Tests - pulmonary - peak flow
Other care - other - pvd - compressor	Procedure - injection of skin lesion	Rx - antibiotics - macrolides	Tests - skin
Other care - other - therapeutic riding	Procedure - lymphadenectomy	Rx - antibiotics - penicillins	Tests - vascular - arterial - extremity
Other care - other - weight management	Procedure - microsurgery	Rx - antibiotics - quinolones	Tests - vascular - venous
Other care - pain management - pca / related	Procedure - neuro - other dx - other	Rx - antibiotics - sulfonamides / comb	Therapy - acupuncture
Other care - prevention - smoking cessation	Procedure - neuro - other non - or rx	Rx - antibiotics / antivirals / antifungals - infusion	Therapy - activity therapy
Other care - respiratory - equipment / supplies	Procedure - neuro - other or rx	Rx - antibiotics, misc	Therapy - allergy treatment
Other care - respiratory - equipment / supplies - nebulizer	Procedure - other dx on musculoskeletal system	Rx - b-lactam antibiotics	Therapy - behavior - other
Other care - respiratory - equipment / supplies - peak flow meter	Procedure - other non - or rx - other non - or skin procedures	Rx - blood derivatives	Therapy - biofeedback
Other care - respiratory - equipment / supplies - spirometer	Procedure - other non - or rx on musculoskeletal system	Rx - cardiovascular system - vasodilating agents, nec	Therapy - chiropractic / osteopathic manipulation
Other care - respiratory - other	Procedure - other or rx - other or skin procedures	Rx - cardiovascular system - vasodilating rx	Therapy - dialysis - supplies
Other care - respiratory - oxygen / oxygen concentrator	Procedure - other or rx - peripheral neurostimulator procedures	Rx - coagulation system - anticoagulants	Therapy - habilitation
Other care - wound care	Procedure - other or rx on bone	Rx - coagulation system - antiheparin agnt	Therapy - hyperbaric oxygen
Other care - wound care - growth factor	Procedure - other or rx on joints	Rx - coagulation system - hemostatics	Therapy - neurostimulator - muscle training
Other care - wound care - hyperbaric oxygen	Procedure - other or rx on musculoskeletal system	Rx - diagnostic rx - roentgenography	Therapy - neurostimulator - nausea / vomiting
Other diagnostic cardiovascular procedures	Procedure - other rx on muscles and tendons	Rx - diuretics, loop diuretics	Therapy - neurostimulator - tens - device
Other diagnostic procedures (interview, evaluation, consultation)	Procedure - other spine - rx / dx - injection	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Therapy - osteogenesis stimulator
Other diagnostic radiology and related techniques	Procedure - partial excision bone	Rx - electrolytic, caloric, water - hydration - unspecified	Therapy - other
Other fracture and dislocation procedure	Procedure - peripheral nerve - decompression - other	Rx - electrolytic, caloric, water - multi-mineral prep	Therapy - phlebotomy
Other Laboratory	Procedure - peripheral nerve repair / graft	Rx - electrolytic, caloric, water - potassium supp	Therapy - pt - exercises / activities
Personal Care Services	Procedure - peripheral venous catheter	Rx - electrolytic, caloric, water - sodium chlor preps	Therapy - pt - modalities
Physical Therapy / Rehab	Procedure - related supplies - ablation - catheter	Rx - gi - antiemetics	Therapy - rehabilitation - related supplies / equipment - motion device
Physician Services	Procedure - related supplies - access catheter	Rx - gi - ppis	Therapy - transfusion - administration
Physician Services - Inpatient	Procedure - related supplies - catheter	Rx - hematopoietic system - hematopoietic growth factors	Therapy - transfusion - blood
Physician Services - Outpatient	Procedure - related supplies - drainage	Rx - hematopoietic system - iron / related	Therapy - transfusion - granulocytes
Preventive Medicine, Care Coordination	Procedure - related supplies - graft / repair	Rx - miscellaneous rx	Therapy - transfusion - plasma
Procedure - anesthesia	Procedure - related supplies - other	Rx - miscellaneous rx - enzymes	Therapy - transfusion - platelets
Procedure - arthrocentesis	Procedure - removal of pins or fixation	Rx - muscle relaxants - muscle relax, skeletal central	Thyroid Function Tests
Procedure - block - nerve	Procedure - rx - fracture / dislocation - hip / femur	Rx - other	Transitional Care Management
Procedure - bone graft	Procedure - sedation	Rx - pharmacy fee	Transportation - other transportation
Procedure - casting / splinting - application	Procedure - spinal canal - catheter	Rx - serums, toxoids, vaccines - serums	Transportation - paramedic
Procedure - casting / splinting - supplies	Procedure - suture - skin - complex wound repair	Rx - vitamins - multivit prep	Ungrouped Codes
Procedure - central venous catheter - fluoroscopy - guidance	Procedure - suture - skin - delayed wound closure	Screen for amino acid disorders	Urine Protein
Procedure - central venous catheter - insertion	Procedure - vascular access - port / pump - insertion	Supplies	Vaccine for flu or Pneumonia
Procedure - central venous catheter - removal	Procedures and Reporting	Tests - cardiac - ecg - ecg - 12 lead	Wellness Assessment
Procedure - central venous catheter - repair / maintenance	Psychiatry Evaluations	Tests - cardiac - echo - contrast agent	X-Ray Thoracolumbar Spine / Pelvis
Procedure - central venous catheter - replacement	Psychiatry Services	Tests - cardiac - echo - contrast agent	
Procedure - debridement - wound / infection / burn - debridement	Psychological and psychiatric evaluation and therapy	Tests - neuro - muscle testing	
Procedure - destruction - nerve	Risk Assessment	Tests - neuro - ncv / emg	
Procedure - excision - skin - remove subcutaneous lesion	Robotic Surgery	Tests - neuro - other	
Procedure - excision - skin - shave skin lesion	Rx - administration - infusion	Tests - neuro - sleep studies	
Procedure - graft	Rx - administration - injection		
Procedure - graft - skin - graft material	Rx - analg/antipy/nsaids - narcotics		

Relevant Diagnoses – ICD-10

Closed Fracture Neck of Femur Left	Open Fracture Neck of Femur Unsp
Closed Fracture Neck of Femur Right	Open Fracture of Pelvis Left
Closed Fracture Neck of Femur Unsp	Open Fracture of Pelvis Right
Closed Fracture of Pelvis, Left	Open Fracture of Pelvis Unsp
Closed Fracture of Pelvis, Right	Other Close Fracture Femur Left
Closed Fracture of Pelvis, Unsp	Other Close Fracture Femur Right
Compl of joint prosthesis, orthopedic proced	Other Close Fracture Femur Unsp
Complication of Implanted device, graft	Pathologic, stress fracture Left Femur, Pelv
Open Fracture Neck of Femur Left	Pathologic, stress fracture Right Femur, Pelv
Open Fracture Neck of Femur Right	Pathologic, stress fracture Unsp Femur, Pelv

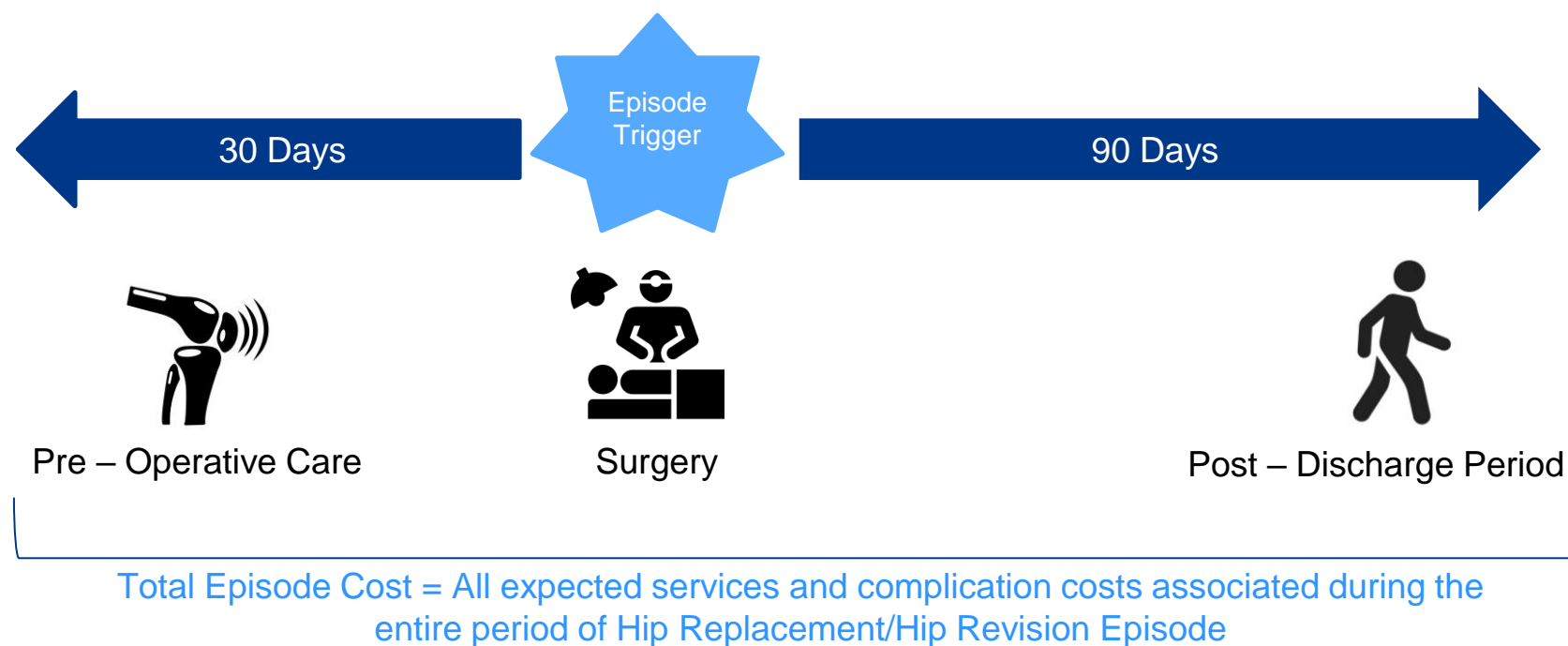
Complications – ICD-10

Accidental Falls	Decubitus Ulcer	Necrotising Fasciitis	Shock / Cardiac Arrest
Acute CHF / pulm edema	Dehydration	Opioid intoxication	Shock during or following cardiac surgery
Acute cor pulmonale	Delirium, Encephalopathy	Opportunistic Infections	Shock during or post-procedure
Acute Kidney Failure	Diabetes, poor control	Orthostatic Hypotension / Dizziness	Skin - other
Acute Osteomyelitis	dic, coagulation, hemorrhagic disorders	Other bacterial infections	STEMI
Adverse effects of drugs	Drug induced Mental Disorder	Other Bacterial Pneumonia	Stimulant intoxication
Altered mental status	empyema, lung abscess	Other cerebral complications	Stress Incontinence
arterial thromboembolism	Fluid Electrolyte Acid Base Problems	Other lower respiratory disease	Subendocardial Infarct
Aseptic Necrosis, Left	Foreign body left during procedure	other lung complications	Suicide or Self-inflicted Injury
Aseptic Necrosis, Right	Gastroenteritis	Other lung problems	Thromboembolic Stroke
Aseptic Necrosis, Unspecified	GI Bleed	Other Mental Disorders	Toxic Effects of Substances
Aspiration Pneumonia	Gram Negative Pneumonia	Other Phlebitis, Lymphangitis, varices	Tracheostomy Complications
Bacteremia, SIRS, no organ dysfunction	HAC 02: Air Embolism	Other psychoactive substance intoxication	Transfusion, Infusion related complications
C-Difficile Infection	HAC 04: Stage III and IV Pressure Ulcers	Other Staph Pneumonia	Transient cerebral ischemia, TIA
Cannabis intoxication	HAC 09: Manifestations of Poor Glycemic Control	Overdose, Poisonings	Urethral Stricture
Chronic and Unspecified Osteomyelitis	Hallucinogen intoxication	Periprosthetic fracture	Urinary Complications
Chronic Fungal and Other Pneumonias	Hemorrhage	Phlebitis, Deep vein thrombosis (DVT)	Urinary Frequency & other symptoms
Chronic Skin Ulcer	Hemorrhagic Stroke	Poisoning by Psychostimulants	Urinary Incontinence
Coma, persistent vegetative state	Hepatorenal Syndrome	Pulmonary Embolism	Urinary Retention
Compl of joint prosthesis, orthopedic proced	Hypertensive Urgency	Pyogenic Arthritis	Urinary Tract Infection
Complication of genitourinary device	Hypotension / Syncope	Recent AMI	Vascular Prosthetic Device/Graft Complication
Complication of Implanted device, graft	Infective Arthritis	Renovascular and other secondary hypertension	Ventilator Associated Pnuemonia
Complications from Central Line	Inhalant intoxication	Resp Failure following trauma / surgery	Ventilator Dependence
Complications from chemotherapy	Insulin Pump Complications	Respiratory Failure	Viral Pneumonia
Complications of anesthesia	Intestinal Obstruction	Respiratory Insufficiency	Wound Dehiscence
complications of medical care	IVC & other intra-abd venous thrombosis	rhabdomyolysis	Wound Infections
complications of surgical procedures	Meningitis / Encephalitis	Sedative, hypnotic or anxiolytic intoxication	
Complications of surgical procedures or medical care	MRSA Pneumonia	Sepsis	
Debilitating Viral Pneumonia	MRSA, Drug Resistant Infections	Severe Sepsis	

Hip Replacement & Hip Revision (HIPRPL)

The Hip Replacement & Hip Revision Episode evaluates services that are typical/routine for the expected care for hip replacement & hip revision, and services that are related to associated complications. Patients are defined as those with a primary procedure code of Hip Replacement or Hip Revision on an inpatient stay service or a trigger procedure code in any position on an outpatient facility/professional service, along with a qualifying diagnosis code. If the Hip Replacement/Hip Revision occurs during the time window of a Hip/Pelvic Fracture episode the Hip Replacement/Hip Revision is related to the Hip/Pelvic Fracture as typical care at the patient level.

Episode Length – HIPRPL



Duration Pre-Trigger Window	Duration Post-Trigger Window
30 Days	90 Days

Episode Triggers – HIPRPL

Trigger Group Name	Code Type	Codes
Partial Hip Replacement	CPT	27125
Partial Hip Revision	CPT	27137, 27138
Total Hip Replacement	CPT	27130, 27132
Total Hip Resurfacing	HCPCS	S2118
Total Hip Revision	CPT	27134

Trigger Diagnoses – ICD-10

Arthropathy hip, pelvis, thigh, LEFT	Malunion, Left side	Osteoporosis, osteitis deformans, Left
Arthropathy hip, pelvis, thigh, RIGHT	Malunion, Right side	Osteoporosis, osteitis deformans, Right
Arthropathy hip, pelvis, thigh, Unspecified	Malunion, Unspecified	Osteoporosis, osteitis deformans, Unspecified
Aseptic Necrosis, Left	MS - bone - nos - chondrodystrophy	Other arthropathies
Aseptic Necrosis, Right	MS - bone - nos - nec / nos	Other arthropathies, Left side
Aseptic Necrosis, Unspecified	MS - face - acqrd defrmt	Other arthropathies, Right side
Congenital Dislocation of Hip, Bilateral	MS - hip - protrusion of acetabulum	Other Close Fracture Femur Left
Congenital Dislocation of Hip, Left	MS - hip jt replacement	Other Close Fracture Femur Right
Congenital Dislocation of Hip, Right	MS - joint - nos - effusion	Other Close Fracture Femur Unsp
Congenital Dislocation of Hip, Unspecified	MS - joint nos - difficulty walking	Other deformities, limb, other sites, Left
Deformities, Left lower limb	MS - joint nos - jnt derangmnt - loose body	Other deformities, limb, other sites, Right
Deformities, lower limb	MS - joint nos - jnt derangmnt - other	Other deformities, limb, other, Unspecified
Deformities, Right lower limb	MS - joint nos - other arthropathy	Other osteopathic disorders, Unspecified
diabetes mellitus with neurologic manifestations	MS - muscle - nos - muscle atrophy	Partial Hip Replacement
Diabetes, other manifestation	MS - muscle - nos - muscle weakness	Partial Hip Revision
Dislocation Hip, Left	MS - s / p bone transplant	Pathologic, stress fracture Left Femur, Pelv
Dislocation Hip, Right	Neoplsm - benign neoplsm - bone / cartilage - nos	Pathologic, stress fracture Right Femur, Pelv
Dislocation Hip, Unspecified	Neoplsm - benign neoplsm - femur / fibula / tibia	Pathologic, stress fracture Unsp Femur, Pelv
Fistula, Effusion in Joint	Neoplsm - benign neoplsm - lower extremity	Periprosthetic fracture
Gout and other crystal arthropathies	Nonunion, Left side	Personal history of musculoskeletal disorders
Gout and other crystal arthropathies, Left	Nonunion, Right side	Rheumatoid Arthritis and Inflammatory Con, LT
Gout and other crystal arthropathies, Right	Nonunion, Unspecified	Rheumatoid Arthritis and Inflammatory Con, RT
Hip / Pelvis deformities, Left	NS - polyneuropathy - collagen vascular disease	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease
Hip / Pelvis deformities, Right	NS polyneuropathy-collagen vascul disease, LT	Rheumatoid Arthritis, Left
Hip / Pelvis deformities, Unspecified	NS polyneuropathy-collagen vascul disease, RT	Rheumatoid Arthritis, Right
Infective Arthritis	Open wounds of extremities	Rheumatoid Arthritis, Unspecified
Infective Arthritis, Left	Osteoarthritis	Total Hip Replacement
Infective Arthritis, Right	Osteoarthritis, Hip, Left	Total Hip Resurfacing
Inflammatory Arthropathies, Left	Osteoarthritis, Hip, Right	Total Hip Revision
Inflammatory Arthropathies, Right	Osteoarthritis, Hip, Unspecified	Wasting of Muscles and Neuro Muscular Dystrophy
Inflammatory Arthropathies, Unspecified	Osteoarthritis, other joints	

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	E & M - hospital	Lab - infectious agent antigen	Other care - chronic edema - appliance - non - segmental
Alcohol / Drug Use Screening	E & M - nursing home	Lab - infectious agent dna	Other care - chronic edema - appliance - segmental
Ancillary Services	E & M - other	Lab - microbiology	Other care - chronic edema - complex therapy
Anesthesia	E & M - prevention	Lab - microbiology - c & s	Other care - chronic edema - compression stocking
Anti-TNF agents	HbA1C	Lab - microbiology - microscopic exam	Other care - chronic edema - compressor
Aortic resection, replacement or anastomosis	Hip replacement; total and partial	Lab - microbiology - other	Other care - chronic edema - compressor - non - segmental
Bleeding Status	Home Health / Hospice	Lab - other clinical lab	Other care - chronic edema - compressor - segmental
Blood Count	Home Health Services	Lab - other hematology	Other care - chronic edema - exterior wrap
Blood Gases, Pulse Oximetry	Hormone Therapy	Lab - pathology consultation	Other care - chronic edema - gauntlet
Blood transfusion	Imaging - ct - follow - up	Lab - specimen collection - blood - arterial - arterial puncture	Other care - chronic edema - sleeve
Blood Type, Coomb's test	Imaging - ct - guidance	Lab - specimen collection - blood - venous - venipuncture	Other care - chronic edema - surgical stockings
Bundled Payment / Medical Home	Imaging - ct - lower extremity	Lab - specimen collection - blood - venous - venous port	Other care - home care - emergency response system
Cardiac Stress Test	Imaging - ct - other	Lab - stat request	Other care - home care - home health aide
Care Plan Oversight	Imaging - ct - study	Lab - surgical pathology	Other care - home care - meals
Case Management Services	Imaging - mra - lower extremity	Lab - therapeutic drug assay	Other care - home care - nursing care
Case Management Services - Behavioral	Imaging - mra - pelvis	Lab - tissue typing	Other care - home care - nursing care - lpn
CHEMOTHERAPY	Imaging - mri - contrast agent	Lab - transfusion medicine	Other care - home care - nursing care - np
CHLAMYDIA SCREENING	Imaging - mri - guidance	Lab - urinalysis	Other care - home care - nursing care - rn
Chronic Care Management	Imaging - mri - other	Laboratory - Chemistry and Hematology	Other care - home care - other care
Closed Surg for Hip socket/Pelvis w/manipulat	Imaging - mri - pelvis	LEAD SCREENING	Other care - home care - other care - attendant care
Closed Surg for Neck/Proximal Femur w/manipul	Imaging - nuclear - bone scan	Lipid Level Monitoring	Other care - home care - other care - chore care
Closed Surg for Neck/Proximal Femur, no manip	Imaging - nuclear - other	Low dose steroids	Other care - home care - other care - companion care
Closed Surg for Shaft or Distal Femur, no man	Imaging - nuclear - other musculoskeletal	Markers for Inflammation	Other care - home care - other care - day care
Closed Surg Hip Socket or Pelvis, no manipul	Imaging - other imaging	Medication Therapy Management Services	Other care - home care - other care - homemaker
Closed treatment of Hip Dislocation, post sur	Imaging - other imaging - bone density	Medications (Injections, infusions and other forms)	Other care - home care - other care - respite care
Closed treatment of Hip Dislocation, Spontane	Imaging - other imaging - bone density - dexta	Metabolic Renal Hepatic Chemistry Panel	Other care - home care - physician supervision
Closed treatment of Hip Dislocation, Traumat	Imaging - other imaging - fluoroscopy	Microscopic examination (bacterial smear, culture, toxicology)	Other care - home care - rehabilitation - occupational therapy
Closed treatment of Slipped Femoral Epiphysis	Imaging - supplies - contrast agent - high osmolar	NewBorn Blood Tests	Other care - home care - rehabilitation - physical therapy
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - supplies - contrast agent - low osmolar	Online Management	Other care - home care - social worker
Diagnostic physical therapy	Imaging - us - guide - biopsy	Open Surgery for Hip socket or Pelvis	Other care - home care - specialized visit
DME - bath / toilet aids	Imaging - us - guide - other	Open Surgery for Neck or Proximal Femur	Other care - home care - training
DME - beds / accessories	Imaging - us - other	Open Surgery for Shaft or Distal Femur	Other care - hospice
DME - heat/cold application	Imaging - x-ray - hip - arthrogram	Open treatment of Hip Dislocation, Spontaneou	Other care - long term care - assisted living
DME - mobility aids	Imaging - x-ray - other - bone survey	Open treatment of Hip Dislocation, Traumatic	Other care - long term care - residential care
DME - other	Imaging - x-ray - other - joint survey	Open treatment of Slipped Femoral Epiphysis	Other care - nutrition - assessment
DME - patient lifts	Imaging - x-ray - si joints - arthrogram	Opioid Administration / Dispensing (OTP)	Other care - nutrition - counseling - dietician
DME - repair / maintenance	Imaging Abdomen	Orthotics - lower extremity	Other care - nutrition - education
DME - safety equipment	IMMUNOTHERAPY	Orthotics - orthopedic shoes	Other care - nutrition - medical food
DME - traction	Insertion of catheter or spinal stimulator and injection into spinal canal	Orthotics - other	Other care - nutrition - parenteral - all - inclusive
DME - trapeze / other orthopedic device	Joint X-Rays	Orthotics - upper extremity	Other care - nutrition - parenteral - pump
DME - whirlpool - equipment	Lab - blood gases	Other - non - covered	Other care - observation
DME - wound therapy	Lab - chemistry	Other care - bladder / bowel care - catheter	Other care - other
DME and supplies	Lab - hematology - blood count	Other care - bladder / bowel care - drainage bag	Other care - other - ancillary services
Drug Delivery implantation	Lab - hematology - blood count - eosinophil count	Other care - bladder / bowel care - other supplies	Other care - other - exercise classes
E & M - consultation	Lab - hematology - coagulation	Other care - bladder / bowel care - other supplies - diaper / related	Other care - other - infection control
E & M - emergency care	Lab - immunology	Other care - bladder / bowel care - other supplies - skin barrier	Other care - other - interpretation
E & M - home visit	Lab - infectious agent antibody	Other care - chronic edema - appliance - limb compression	Other care - other - lodging

Relevant Procedures – CPT / HCPCS, ICD-10

Other care - other - meals	Procedure - injection - tendons / joints / etc.	Rx - administration - infusion	Tests - pulmonary - exhaled air analysis
Other care - other - medical records	Procedure - injection of skin lesion	Rx - administration - injection	Tests - pulmonary - other
Other care - other - pvd - compressor	Procedure - lymphadenectomy	Rx - antibiotics - aminoglycosides	Tests - pulmonary - peak flow
Other care - other - weight management	Procedure - microsurgery	Rx - antibiotics - anti-infectives, misc	Tests - skin
Other care - pain management - pca / related	Procedure - neuro - other non - or rx	Rx - antibiotics - cephalosporins	Tests - vascular - arterial - extremity
Other care - prevention - smoking cessation	Procedure - neuro - other or rx	Rx - antibiotics - chloramphenicol / comb	Tests - vascular - venous
Other care - respiratory - equipment / supplies	Procedure - other dx on musculoskeletal system	Rx - antibiotics - macrolides	Therapy - acupuncture
Other care - respiratory - equipment / supplies - nebulizer	Procedure - other fracture / dislocation - rx	Rx - antibiotics - penicillins	Therapy - activity therapy
Other care - respiratory - equipment / supplies - peak flow meter	Procedure - other non - or rx - chemodenervation of eccrine glands	Rx - antibiotics - quinolones	Therapy - behavior - partial hospitalization
Other care - respiratory - equipment / supplies - spirometer	Procedure - other non - or rx - other non - or skin procedures	Rx - antibiotics - sulfonamides / comb	Therapy - biofeedback
Other care - respiratory - other	Procedure - other non - or rx on musculoskeletal system	Rx - antibiotics - tetracyclines	Therapy - chiropractic / osteopathic manipulation
Other care - wound care	Procedure - other or rx - other or skin procedures	Rx - antibiotics / antivirals / antifungals - infusion	Therapy - habilitation
Other care - wound care - growth factor	Procedure - other or rx - peripheral neurostimulator procedures	Rx - antibiotics, misc	Therapy - hyperbaric oxygen
Other care - wound care - hyperbaric oxygen	Procedure - other or rx on bone	Rx - b-lactam antibiotics	Therapy - neurostimulator - muscle training
Other diagnostic cardiovascular procedures	Procedure - other or rx on joints	Rx - blood derivatives	Therapy - neurostimulator - nausea / vomiting
Other diagnostic procedures (interview, evaluation, consultation)	Procedure - other or rx on musculoskeletal system	Rx - cardiovascular system - vasodilating agents, nec	Therapy - neurostimulator - tens - device
Other diagnostic radiology and related techniques	Procedure - other rx on muscles and tendons	Rx - cardiovascular system - vasodilating rx	Therapy - osteogenesis stimulator
Other Laboratory	Procedure - other spine - rx / dx - injection	Rx - coagulation system - anticoagulants	Therapy - other
Partial Hip Replacement	Procedure - partial excision bone	Rx - coagulation system - antiheparin agnt	Therapy - phlebotomy
Partial Hip Resurfacing	Procedure - peripheral nerve repair / graft	Rx - coagulation system - hemostatics	Therapy - pt - exercises / activities
Partial Hip Revision	Procedure - related supplies - ablation - catheter	Rx - diagnostic rx - roentgenography	Therapy - pt - modalities
Partial Hip Revision, Left	Procedure - related supplies - access catheter	Rx - diuretics, loop diuretics	Therapy - rehabilitation - related supplies / equipment - motion device
Partial Hip Revision, Right	Procedure - related supplies - arthroplasty	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Therapy - transfusion - administration
Pathology	Procedure - related supplies - graft / repair	Rx - electrolytic, caloric, water - hydration - unspecified	Therapy - transfusion - blood
Personal Care Services	Procedure - related supplies - implant	Rx - electrolytic, caloric, water - multi-mineral prep	Therapy - transfusion - granulocytes
Physical Therapy / Rehab	Procedure - related supplies - other	Rx - electrolytic, caloric, water - potassium supp	Therapy - transfusion - plasma
Physician Services	Procedure - removal of pins or fixation	Rx - gi - antiemetics	Therapy - transfusion - platelets
Physician Services - Inpatient	Procedure - rx - fracture / dislocation - hip / femur	Rx - gi - ppis	Thyroid Function Tests
Physician Services - Outpatient	Procedure - spinal canal - catheter	Rx - hematopoietic system - hematopoietic growth factors	Total Hip Replacement
Preventive Medicine, Care Coordination	Procedure - spinal canal - injection into spinal canal	Rx - hematopoietic system - iron / related	Total Hip Replacement, Left
Procedure - anesthesia	Procedure - spinal canal - other	Rx - miscellaneous rx	Total Hip Replacement, Right
Procedure - arthroscopy - other joints	Procedure - suture - skin - complex wound repair	Rx - miscellaneous rx - enzymes	Total Hip Resurfacing
Procedure - block - nerve	Procedure - suture - skin - delayed wound closure	Rx - muscle relaxants - muscle relax, skeletal central	Total Hip Revision
Procedure - bone graft	Procedure - vascular access - port / pump - insertion	Rx - other	Total Hip Revision, Left
Procedure - casting / splinting - application	Procedures and Reporting	Rx - pharmacy fee	Total Hip Revision, Right
Procedure - casting / splinting - supplies	Prosthetic Implant	Rx - serums, toxoids, vaccines - serums	Transitional Care Management
Procedure - central venous catheter - insertion	Prosthetics - external power	Rx - vitamins - multivit prep	Transportation - other transportation
Procedure - debridement - wound / infection / burn - debridement	Prosthetics - implant	Screen for amino acid disorders	Transportation - paramedic
Procedure - destruction - nerve	Prosthetics - lower extremity	Supplies	Ungrouped Codes
Procedure - excision - skin - remove subcutaneous lesion	Prosthetics - other	Tests - cardiac - ecg - ecg - 12 lead	Urine Protein
Procedure - excision - skin - shave skin lesion	Prosthetics - repair	Tests - cardiac - ecg - other	Vaccine for flu or Pneumonia
Procedure - gastric neurostimulator - implantation	Prosthetics - upper extremity	Tests - cardiac stress tests - cardiac perfusion scan - rest / exercise	Wellness Assessment
Procedure - graft	Psychiatry Evaluations	Tests - cardiac stress tests - cardiac stress tests - other	X-Ray Thoracolumbar Spine / Pelvis
Procedure - graft - skin - graft material	Psychiatry Services	Tests - neuro - muscle testing	
Procedure - i&d - skin - drainage - post - op infection	Psychological and psychiatric evaluation and therapy	Tests - neuro - ncv / emg	
Procedure - i&d - skin - drainage of abscess	Risk Assessment	Tests - neuro - other	
Procedure - i&d - skin - drainage of hematoma	Robotic Surgery	Tests - neuro - sleep studies	

Relevant Diagnoses – ICD-10

Arthropathy hip, pelvis, thigh, LEFT	Inflammatory Arthropathies, Unspecified	Osteoarthritis, Hip, Unspecified
Arthropathy hip, pelvis, thigh, RIGHT	Malunion, Left side	Osteoarthritis, other joints
Arthropathy hip, pelvis, thigh, Unspecified	Malunion, Right side	Osteoporosis, osteitis deformans, Left
Aseptic Necrosis, Left	Malunion, Unspecified	Osteoporosis, osteitis deformans, Right
Aseptic Necrosis, Right	MS - bone - nos - chondrodystrophy	Osteoporosis, osteitis deformans, Unspecified
Aseptic Necrosis, Unspecified	MS - bone - nos - nec / nos	Other arthropathies
Congenital Dislocation of Hip, Bilateral	MS - face - acqrd defrmty	Other arthropathies, Left side
Congenital Dislocation of Hip, Left	MS - hip - protrusion of acetabulum	Other arthropathies, Right side
Congenital Dislocation of Hip, Right	MS - hip jt replacement	Other Close Fracture Femur Left
Congenital Dislocation of Hip, Unspecified	MS - joint - nos - effusion	Other Close Fracture Femur Right
Deformities, Left lower limb	MS - joint nos - difficulty walking	Other Close Fracture Femur Unsp
Deformities, lower limb	MS - joint nos - jnt derangmnt - loose body	Other deformities, limb, other sites, Left
Deformities, Right lower limb	MS - joint nos - jnt derangmnt - other	Other deformities, limb, other sites, Right
diabetes mellitus with neurologic manifestations	MS - joint nos - other arthropathy	Other deformities, limb, other, Unspecified
Diabetes, other manifestation	MS - muscle - nos - muscle atrophy	Other osteopathic disorders, Unspecified
Dislocation Hip, Left	MS - muscle - nos - muscle weakness	Pathologic, stress fracture Left Femur, Pelv
Dislocation Hip, Right	MS - s / p bone transplant	Pathologic, stress fracture Right Femur, Pelv
Dislocation Hip, Unspecified	Neoplsm - benign neoplsm - bone / cartilage - nos	Pathologic, stress fracture Unsp Femur, Pelv
Fistula, Effusion in Joint	Neoplsm - benign neoplsm - femur / fibula / tibia	Periprosthetic fracture
Gout and other crystal arthropathies	Neoplsm - benign neoplsm - lower extremity	Personal history of musculoskeletal disorders
Gout and other crystal arthropathies, Left	Nonunion, Left side	Rheumatoid Arthritis and Inflammatory Con, LT
Gout and other crystal arthropathies, Right	Nonunion, Right side	Rheumatoid Arthritis and Inflammatory Con, RT
Hip / Pelvis deformities, Left	Nonunion, Unspecified	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease
Hip / Pelvis deformities, Right	NS - polyneuropathy - collagen vascular disease	Rheumatoid Arthritis, Left
Hip / Pelvis deformities, Unspecified	NS polyneuropathy-collagen vascul disease, LT	Rheumatoid Arthritis, Right
Infective Arthritis	NS polyneuropathy-collagen vascul disease, RT	Rheumatoid Arthritis, Unspecified
Infective Arthritis, Left	Open wounds of extremities	Wasting of Muscles and Neuro Muscular Dystrophy
Infective Arthritis, Right	Osteoarthritis	
Inflammatory Arthropathies, Left	Osteoarthritis, Hip, Left	
Inflammatory Arthropathies, Right	Osteoarthritis, Hip, Right	

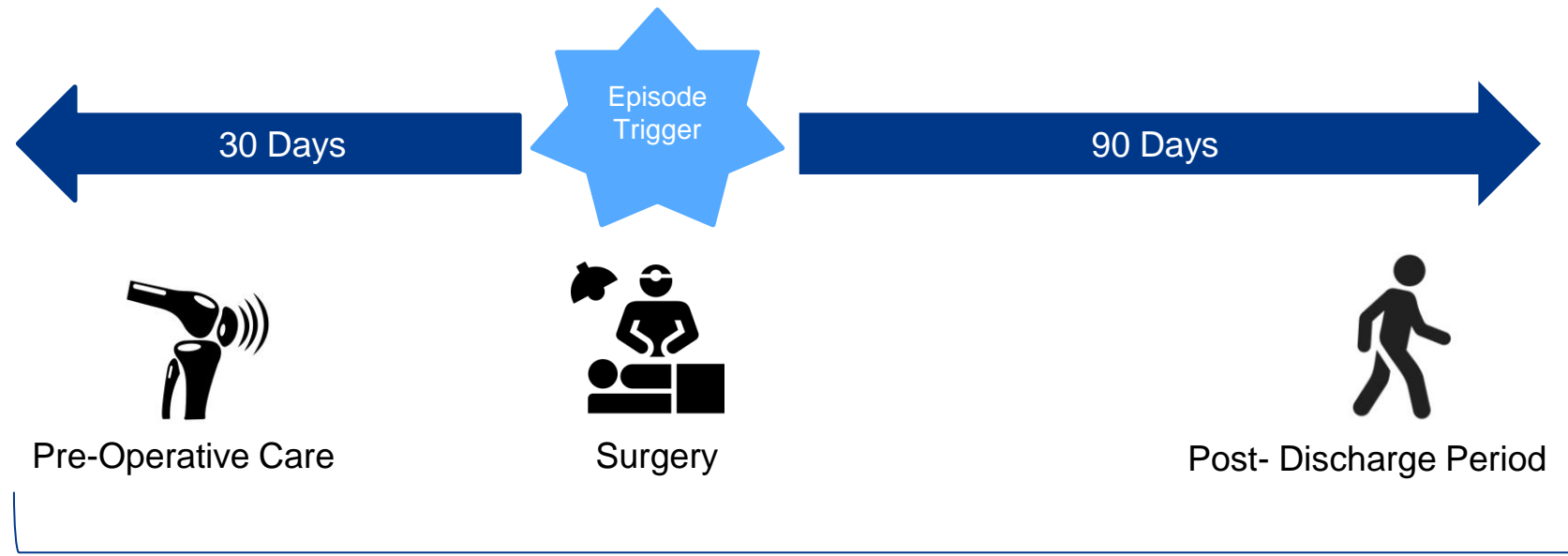
Complications – ICD-10

Accidental Falls	Debilitating Viral Pneumonia	Meningitis / Encephalitis	Shock / Cardiac Arrest
Acute CHF / pulm edema	Decubitus Ulcer	MRSA Pneumonia	Shock during or following cardiac surgery
Acute cor pulmonale	Dehydration	MRSA, Drug Resistant Infections	Shock during or post-procedure
Acute esophagitis, acute gastritis, duodenitis	Delirium, Encephalopathy	Opportunistic Infections	Skin - other
Acute Kidney Failure	Dermatitis, Urticaria	Other bacterial infections	Skin and subcutaneous tissue infections
Acute myocardial infarction	Diabetes, poor control	Other Bacterial Pneumonia	STEMI
Acute Osteomyelitis	dic, coagulation, hemorrhagic disorders	Other cardiac arrhythmias	Subendocardial Infarct
Adverse effects of drugs	empyema, lung abscess	Other cerebral complications	Supraventricular Tachyarrhythmias
Altered mental status	Esophageal Reflux and Other Esophagitis	Other lower respiratory disease	Thromboembolic Stroke
arterial thromboembolism	Fluid Electrolyte Acid Base Problems	other lung complications	Tracheostomy Complications
Aspiration Pneumonia	Foreign body left during procedure	Other lung problems	Transfusion, Infusion related complications
Atrial Flutter / Fibrillation	Gastroenteritis	Other Mental Disorders	Transient cerebral ischemia, TIA
Bacteremia, SIRS, no organ dysfunction	GI Bleed	Other Phlebitis, Lymphangitis, varices	Urethral Stricture
Bladder Dysfunction, hemorrhage	Gram Negative Pneumonia	Other Staph Pneumonia	Urinary Complications
C-Difficile Infection	HAC 02: Air Embolism	Perforation, Peritonitis, Abd Abscess	Urinary Frequency & other symptoms
Cellulitis, Skin Infection	HAC 04: Stage III and IV Pressure Ulcers	Periprosthetic fracture	Urinary Incontinence
Chronic and Unspecified Osteomyelitis	HAC 09: Manifestations of Poor Glycemic Control	Phlebitis, Deep vein thrombosis (DVT)	Urinary Tract Infection
Chronic Fungal and Other Pneumonias	Hemarthrosis: Bleeding into Joints	Pulmonary Embolism	Vascular Insufficiency of intestine
Chronic Skin Ulcer	Hemorrhage	Pyoderma	Vascular Prosthetic Device/Graft Complication
Coma, persistent vegetative state	Hemorrhagic Stroke	Pyogenic Arthritis	Ventilator Associated Pnuemonia
Compl of joint prosthesis, orthopedic proced	Hepatorenal Syndrome	Recent AMI	Ventilator Dependence
Complication of genitourinary device	Hypertensive Urgency	Renovascular and other secondary hypertension	Ventricular Arrhythmias
Complication of Implanted device, graft	Hypotension / Syncope	Resp Failure following trauma / surgery	Viral Pneumonia
Complications from Central Line	Infective Arthritis	Respiratory Failure	Wound Dehiscence
Complications of anesthesia	Influenza with Pneumonia	Respiratory Insufficiency	Wound Infections
complications of medical care	Intestinal Obstruction	rhabdomyolysis	
complications of surgical procedures	IVC & other intra-abd venous thrombosis	Sepsis	
Complications of surgical procedures or medical care	Lung disease from opportunistic infections	Severe Sepsis	

Knee Arthroscopy (KNARTH)

The Knee Arthroscopy Episode evaluates services that are typical/routine for the expected care and services that are related to associated complications. Patients are defined as those with a primary procedure code of Knee Arthroscopy on an inpatient stay service or a trigger procedure code in any position on an outpatient facility/professional service, along with a qualifying diagnosis code.

Episode Length – KNARTH



Total Episode Cost = All expected services and complication costs associated during the entire period of KNARTH Episode

Duration Pre-Trigger Window	Duration Post-Trigger Window
30 Days	90 Days

Episode Triggers – KNARTH

Trigger Group Name	Code Type	Codes
ACL Repair Knee	CPT	29888
Arthroscopy Knee Meniscal Transplant / Graft	CPT	29866-29868
Knee Arthroscopy without ligament repair	CPT	29870-29884
Posterior Cruciate Ligament Repair Knee	CPT	29889

Trigger Diagnoses – ICD-10, CPT

ACL Repair Knee	Knee Arthroscopy without ligament repair	MS - knee jt - replacement	Other arthropathies, Right side
Anterior Cruciate Ligament Sprain	Knee deformities, Left	MS - mscl / lgrmnt / fscia - nos - nec / nos	Other Close Fracture Femur Left
Arthroscopy Knee Meniscal Transplant / Graft	Knee deformities, Right	MS - synvm / tndn / brsa - nos - bursitis	Other Close Fracture Femur Right
Aseptic Necrosis, Left	Knee deformities, Unspecified	MS - synvm / tndn / brsa - nos - ganglion / cyst	Other Close Fracture Femur Unsp
Aseptic Necrosis, Right	Knee derangements, Left	MS - synvm / tndn / brsa - nos - nec / nos	Other deformities, limb, other sites, Left
Aseptic Necrosis, Unspecified	Knee derangements, Right	MS - synvm / tndn / brsa - nos - rupture - synovium	Other deformities, limb, other sites, Right
Compl of joint prosthesis, orthopedic proced	Knee derangements, Unspecified	MS - synvm / tndn / brsa - nos - rupture - tendon	Other deformities, limb, other, Unspecified
Contracture lower leg joint	Malunion, Left side	MS - synvm / tndn / brsa - nos - synvtis/tensyn	Other osteopathic disorders, Left
Cruciate Ligament Sprain	Malunion, Right side	MS - uppr leg - tendon rupture - quadriceps	Other osteopathic disorders, Right
Deformities, Left lower limb	Malunion, Unspecified	Necrotising Fasciitis	Other osteopathic disorders, Unspecified
Deformities, lower limb	Meniscus Injurt of Knee, Unspecified	Neoplsm - benign neoplsm - bone / cartilage - nos	Patella Injuries and Disorders
Deformities, Right lower limb	Meniscus Injurt of Left Knee	Neoplsm - benign neoplsm - femur / fibula / tibia	Patella Injuries and Disorders, Left
diabetes mellitus with neurologic manifestations	Meniscus Injurt of Right Knee	Neoplsm - benign neoplsm - lower extremity	Patella Injuries and Disorders, Right
Diabetes, other manifestation	MS - bone - nos - chondrodystrophy	Nonunion, Left side	Pathologic, stress fracture Left Femur, Pelv
Dislocation of Knee, Left	MS - bone - nos - nec / nos	Nonunion, Right side	Pathologic, stress fracture Right Femur, Pelv
Dislocation of Knee, Right	MS - bone - nos - service - other	Nonunion, Unspecified	Pathologic, stress fracture Unsp Femur, Pelv
Dislocation of Knee, Unspecified	MS - face - acqrd defrmtly	NS - polyneuropathy - collagen vascular disease	Periprosthetic fracture
Disorders of the Knee	MS - joint - nos - effusion	NS polyneuropathy-collagen vascul disease, LT	Posterior Cruciate Ligament Repair Knee
Fistula, Effusion in Joint	MS - joint nos - difficulty walking	NS polyneuropathy-collagen vascul disease, RT	Posterior Cruciate Ligament Sprain
Gout and other crystal arthropathies	MS - joint nos - jnt derangmnt - loose body	Open wounds of extremities	Pyogenic Arthritis
Gout and other crystal arthropathies, Left	MS - joint nos - jnt derangmnt - other	Osteoarthritis	Rheumatoid Arthritis and Inflammatory Con, LT
Gout and other crystal arthropathies, Right	MS - joint nos - other arthropathy	Osteoarthritis, Knee, Bilateral	Rheumatoid Arthritis and Inflammatory Con, RT
Hemarthrosis: Bleeding into Joints	MS - knee - disloc - pathologic	Osteoarthritis, Knee, Unspecified	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease
Infective Arthritis	MS - knee - disloc - recurrent	Osteoarthritis, Left Knee	Rheumatoid Arthritis, Left
Infective Arthritis, Left	MS - knee - enthesopathy - nec / nos	Osteoarthritis, other joints	Rheumatoid Arthritis, Right
Infective Arthritis, Right	MS - knee - jnt derangmnt - nec / nos	Osteoarthritis, Right Knee	Rheumatoid Arthritis, Unspecified
Inflammatory Arthropathies, Left	MS - knee - other arthropathy	Osteoporosis, osetitis deformans	Sprains and Strains
Inflammatory Arthropathies, Right	MS - knee - pain	Osteoporosis, osetitis deformans, Left	Wasting of Muscles and Neuro Musc Dystro, LT
Inflammatory Arthropathies, Unspecified	MS - knee - stiffness	Osteoporosis, osetitis deformans, Right	Wasting of Muscles and Neuro Musc Dystro, RT
Injury to other ligaments, Knee, Left	MS - knee - synovium rupture	Osteoporosis, osetitis deformans, Unspecified	Wasting of Muscles and Neuro Muscular Dystrophy
Injury to other ligaments, Knee, Right	MS - knee - tendon rupture	Other arthropathies	
Injury to other ligaments, Knee, Unsp	MS - knee - tibial collateral ligament bursitis	Other arthropathies, Left side	

Relevant Procedures – CPT / HCPCS, ICD-10

ACL Repair Knee	E & M - nursing home	Lab - microbiology - c & s	Other care - chronic edema - compression stocking
Advance care planning	E & M - other	Lab - microbiology - microscopic exam	Other care - chronic edema - compressor
Alcohol / Drug Use Screening	E & M - prevention	Lab - microbiology - other	Other care - chronic edema - compressor - non - segmental
Ancillary Services	Excision of semilunar cartilage of knee	Lab - other clinical lab	Other care - chronic edema - compressor - segmental
Anesthesia	HbA1C	Lab - other hematology	Other care - chronic edema - exterior wrap
Aortic resection, replacement or anastomosis	Home Health / Hospice	Lab - pathology consultation	Other care - chronic edema - gauntlet
Arthroscopy	Home Health Services	Lab - specimen collection - blood - arterial - arterial puncture	Other care - chronic edema - glove
Arthroscopy Knee Meniscal Transplant / Graft	Hormone Therapy	Lab - specimen collection - blood - venous - venipuncture	Other care - chronic edema - sleeve
Bleeding Status	Imaging - ct - follow - up	Lab - specimen collection - blood - venous - venous port	Other care - chronic edema - surgical stockings
Blood Count	Imaging - ct - guidance	Lab - specimen collection - specimen handling	Other care - home care - emergency response system
Blood Gases, Pulse Oximetry	Imaging - ct - lower extremity	Lab - stat request	Other care - home care - home health aide
Blood transfusion	Imaging - ct - other	Lab - surgical pathology	Other care - home care - meals
Blood Type, Coomb's test	Imaging - mra - lower extremity	Lab - therapeutic drug assay	Other care - home care - nursing care
Bundled Payment / Medical Home	Imaging - mri - contrast agent	Lab - tissue typing	Other care - home care - nursing care - lprn
Cardiac Stress Test	Imaging - mri - guidance	Lab - transfusion medicine	Other care - home care - nursing care - np
Care Plan Oversight	Imaging - mri - other	Lab - urinalysis	Other care - home care - nursing care - rn
Case Management Services	Imaging - other imaging	Laboratory - Chemistry and Hematology	Other care - home care - other care
CHEMOTHERAPY	Imaging - other imaging - bone density	LEAD SCREENING	Other care - home care - other care - attendant care
CHLAMYDIA SCREENING	Imaging - other imaging - fluoroscopy	Lipid Level Monitoring	Other care - home care - other care - chore care
Chronic Care Management	Imaging - supplies - contrast agent - high osmolar	Low dose steroids	Other care - home care - other care - companion care
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - supplies - contrast agent - low osmolar	Markers for Inflammation	Other care - home care - other care - day care
Diagnostic physical therapy	Imaging - us - guide - biopsy	Medication Assisted Management (MAT)	Other care - home care - other care - homemaker
Division of joint capsule, ligament or cartilage	Imaging - us - guide - other	Medication Therapy Management Services	Other care - home care - other care - respite care
DME - bath / toilet aids	Imaging - us - other	Medications (Injections, infusions and other forms)	Other care - home care - physician supervision
DME - beds / accessories	Imaging - x-ray - knee - arthrogram	Metabolic Renal Hepatic Chemistry Panel	Other care - home care - rehabilitation - occupational therapy
DME - heat/cold application	Imaging - x-ray - lower leg	Microscopic examination (bacterial smear, culture, toxicology)	Other care - home care - rehabilitation - physical therapy
DME - mobility aids	Imaging - x-ray - other - bone survey	NewBorn Blood Tests	Other care - home care - social worker
DME - other	Imaging - x-ray - other - joint survey	Online Management	Other care - home care - specialized visit
DME - patient lifts	Insertion of catheter or spinal stimulator and injection into spinal canal	Opioid Administration / Dispensing (OTP)	Other care - home care - training
DME - repair / maintenance	Joint X-Rays	Orthotics - lower extremity	Other care - hospice
DME - restraints	Knee Arthroscopy without ligament repair	Orthotics - orthopedic shoes	Other care - long term care - assisted living
DME - safety equipment	Lab - blood gases	Orthotics - other	Other care - long term care - residential care
DME - traction	Lab - chemistry	Other - non - covered	Other care - nutrition - assessment
DME - trapeze / other orthopedic device	Lab - chemistry and toxicology tests	Other care - bladder / bowel care - catheter	Other care - nutrition - counseling - dietician
DME - whirlpool - equipment	Lab - hematology - blood count	Other care - bladder / bowel care - drainage bag	Other care - nutrition - education
DME - wound therapy	Lab - hematology - blood count - eosinophil count	Other care - bladder / bowel care - other supplies	Other care - nutrition - medical food
DME and supplies	Lab - hematology - coagulation	Other care - bladder / bowel care - other supplies - diaper / related	Other care - observation
Drug Delivery implantation	Lab - immunology	Other care - bladder / bowel care - other supplies - skin barrier	Other care - other
E & M - consultation	Lab - infectious agent antibody	Other care - chronic edema - appliance - limb compression	Other care - other - ancillary services
E & M - emergency care	Lab - infectious agent antigen	Other care - chronic edema - appliance - non - segmental	Other care - other - exercise classes
E & M - home visit	Lab - infectious agent dna	Other care - chronic edema - appliance - segmental	Other care - other - infection control
E & M - hospital	Lab - microbiology	Other care - chronic edema - complex therapy	Other care - other - interpretation

Relevant Procedures – CPT / HCPCS, ICD-10

Other care - other - lead assessment	Procedure - i&d - skin - drainage - post - op infection	Rx - administration - injection	Tests - neuro - other
Other care - other - lodging	Procedure - i&d - skin - drainage of abscess	Rx - antibiotics - aminoglycosides	Tests - neuro - sleep studies
Other care - other - meals	Procedure - i&d - skin - drainage of hematoma	Rx - antibiotics - anti-infectives, misc	Tests - pulmonary - exhaled air analysis
Other care - other - medical records	Procedure - injection - tendons / joints / etc.	Rx - antibiotics - cephalosporins	Tests - pulmonary - other
Other care - other - pvd - compressor	Procedure - injection of skin lesion	Rx - antibiotics - chloramphenicol / comb	Tests - pulmonary - peak flow
Other care - other - weight management	Procedure - microsurgery	Rx - antibiotics - macrolides	Tests - skin
Other care - pain management - pca / related	Procedure - neuro - other non - or rx	Rx - antibiotics - penicillins	Tests - vascular - arterial - extremity
Other care - prevention - smoking cessation	Procedure - neuro - other or rx	Rx - antibiotics - quinolones	Tests - vascular - venous
Other care - respiratory - equipment / supplies	Procedure - open excision - knee cartilage	Rx - antibiotics - sulfonamides / comb	Therapy - acupuncture
Other care - respiratory - equipment / supplies - nebulizer	Procedure - other dx on musculoskeletal system	Rx - antibiotics - tetracyclines	Therapy - activity therapy
Other care - respiratory - equipment / supplies - peak flow meter	Procedure - other non - or rx - other non - or skin procedures	Rx - antibiotics - misc	Therapy - allergy treatment
Other care - respiratory - equipment / supplies - spirometer	Procedure - other non - or rx on musculoskeletal system	Rx - b-lactam antibiotics	Therapy - behavior - partial hospitalization
Other care - respiratory - other	Procedure - other or rx on bone	Rx - blood derivatives	Therapy - biofeedback
Other care - wound care	Procedure - other or rx on joints	Rx - cardiovascular system - vasodilating agents, nec	Therapy - chiropractic / osteopathic manipulation
Other care - wound care - growth factor	Procedure - other or rx on musculoskeletal system	Rx - cardiovascular system - vasodilating rx	Therapy - habilitation
Other care - wound care - hyperbaric oxygen	Procedure - other rx on muscles and tendons	Rx - coagulation system - anticoagulants	Therapy - hyperbaric oxygen
Other diagnostic procedures (interview, evaluation, consultation)	Procedure - partial excision bone	Rx - coagulation system - antiheparin agnt	Therapy - neurostimulator - muscle training
Other diagnostic procedures on musculoskeletal system	Procedure - peripheral nerve - decompression - other	Rx - coagulation system - hemostatics	Therapy - neurostimulator - nausea / vomiting
Other Laboratory	Procedure - peripheral nerve repair / graft	Rx - diagnostic rx - roentgenography	Therapy - neurostimulator - tens - device
Other non-OR therapeutic procedures on musculoskeletal system	Procedure - related supplies - ablation - catheter	Rx - diuretics, loop diuretics	Therapy - osteogenesis stimulator
Other OR therapeutic procedures on joints	Procedure - related supplies - access catheter	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Therapy - other
Pathology	Procedure - related supplies - graft / repair	Rx - electrolytic, caloric, water - hydration - unspecified	Therapy - phlebotomy
Personal Care Services	Procedure - related supplies - implant	Rx - electrolytic, caloric, water - multi-mineral prep	Therapy - pt - exercises / activities
Physical Therapy / Rehab	Procedure - related supplies - other	Rx - electrolytic, caloric, water - potassium supp	Therapy - pt - modalities
Physician Services	Procedure - removal of pins or fixation	Rx - gi - antiemetics	Therapy - rehabilitation - related supplies / equipment - motion device
Physician Services - Inpatient	Procedure - sedation	Rx - gi - ppis	Therapy - transfusion - administration
Physician Services - Outpatient	Procedure - spinal canal - catheter	Rx - hematopoietic system - hematopoietic growth factors	Therapy - transfusion - blood
Posterior Cruciate Ligament Repair Knee	Procedure - spinal canal - injection into spinal canal	Rx - miscellaneous rx	Therapy - transfusion - granulocytes
Preventive Medicine, Care Coordination	Procedure - spinal canal - other	Rx - miscellaneous rx - enzymes	Therapy - transfusion - plasma
Procedure - anesthesia	Procedures and Reporting	Rx - muscle relaxants - muscle relax, skeletal central	Therapy - transfusion - platelets
Procedure - arthroscopy - knee - other	Prosthetic Implant	Rx - other	Thyroid Function Tests
Procedure - arthroscopy - other joints	Prosthetics - external power	Rx - pharmacy fee	Transitional Care Management
Procedure - block - nerve	Prosthetics - implant	Rx - serums, toxoids, vaccines - serums	Transportation - other transportation
Procedure - bone graft	Prosthetics - lower extremity	Rx - vitamins - multivit prep	Transportation - paramedic
Procedure - casting / splinting - application	Prosthetics - other	Screen for amino acid disorders	Ungrouped Codes
Procedure - casting / splinting - supplies	Prosthetics - repair	Supplies	Urine Protein
Procedure - central venous catheter - insertion	Prosthetics - trusses	Tests - cardiac - ecg - ecg - 12 lead	Vaccine for flu or Pneumonia
Procedure - debridement - wound / infection / burn - debridement	Psychiatry Services	Tests - cardiac - ecg - other	Wellness Assessment
Procedure - destruction - nerve	Psychological and psychiatric evaluation and therapy	Tests - cardiac stress tests - cardiac perfusion scan - rest / exercise	
Procedure - excision - skin - shave skin lesion	Risk Assessment	Tests - cardiac stress tests - cardiac stress tests - other	
Procedure - graft	Robotic Surgery	Tests - neuro - muscle testing	
Procedure - graft - skin - graft material	Rx - administration - infusion	Tests - neuro - ncv / emg	

Relevant Diagnoses – ICD-10

Anterior Cruciate Ligament Sprain	Knee deformities, Right	MS - mscl / lgmnt / fscia - nos - nec / nos	Other arthropathies, Right side
Aseptic Necrosis, Left	Knee deformities, Unspecified	MS - synvm / tndn / brsa - nos - bursitis	Other Close Fracture Femur Left
Aseptic Necrosis, Right	Knee derangements, Left	MS - synvm / tndn / brsa - nos - ganglion / cyst	Other Close Fracture Femur Right
Aseptic Necrosis, Unspecified	Knee derangements, Right	MS - synvm / tndn / brsa - nos - nec / nos	Other Close Fracture Femur Unsp
Compl of joint prosthesis, orthopedic proced	Knee derangements, Unspecified	MS - synvm / tndn / brsa - nos - rupture - synovium	Other deformities, limb, other sites, Left
Contracture lower leg joint	Malunion, Left side	MS - synvm / tndn / brsa - nos - rupture - tendon	Other deformities, limb, other sites, Right
Cruciate Ligament Sprain	Malunion, Right side	MS - synvm / tndn / brsa - nos - synvtis/tensyn	Other deformities, limb, other, Unspecified
Deformities, Left lower limb	Malunion, Unspecified	MS - uppr leg - tendon rupture - quadriceps	Other osteopathic disorders, Left
Deformities, lower limb	Meniscus Injurt of Knee, Unspecified	Necrotising Fasciitis	Other osteopathic disorders, Right
Deformities, Right lower limb	Meniscus Injurt of Left Knee	Neoplsn - benign neoplsn - bone / cartilage - nos	Other osteopathic disorders, Unspecified
diabetes mellitus with neurologic manifestations	Meniscus Injurt of Right Knee	Neoplsn - benign neoplsn - femur / fibula / tibia	Patella Injuries and Disorders
Diabetes, other manifestation	MS - bone - nos - chondrodystrophy	Neoplsn - benign neoplsn - lower extremity	Patella Injuries and Disorders, Left
Dislocation of Knee, Left	MS - bone - nos - nec / nos	Nonunion, Left side	Patella Injuries and Disorders, Right
Dislocation of Knee, Right	MS - bone - nos - service - other	Nonunion, Right side	Pathologic, stress fracture Left Femur, Pelv
Dislocation of Knee, Unspecified	MS - face - acqrd defrmt	Nonunion, Unspecified	Pathologic, stress fracture Right Femur, Pelv
Disorders of the Knee	MS - joint - nos - effusion	NS - polyneuropathy - collagen vascular disease	Pathologic, stress fracture Unsp Femur, Pelv
Fistula, Effusion in Joint	MS - joint nos - difficulty walking	NS polyneuropathy-collagen vascul disease, LT	Periprosthetic fracture
Gout and other crystal arthropathies	MS - joint nos - jnt derangmnt - loose body	NS polyneuropathy-collagen vascul disease, RT	Posterior Cruciate Ligament Sprain
Gout and other crystal arthropathies, Left	MS - joint nos - jnt derangmnt - other	Open wounds of extremities	Pyogenic Arthritis
Gout and other crystal arthropathies, Right	MS - joint nos - other arthropathy	Osteoarthritis	Rheumatoid Arthritis and Inflammatory Con, LT
Hemarthrosis: Bleeding into Joints	MS - knee - disloc - pathologic	Osteoarthritis, Knee, Bilateral	Rheumatoid Arthritis and Inflammatory Con, RT
Infective Arthritis	MS - knee - disloc - recurrent	Osteoarthritis, Knee, Unspecified	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease
Infective Arthritis, Left	MS - knee - enthesopathy - nec / nos	Osteoarthritis, Left Knee	Rheumatoid Arthritis, Left
Infective Arthritis, Right	MS - knee - jnt derangmnt - nec / nos	Osteoarthritis, other joints	Rheumatoid Arthritis, Right
Inflammatory Arthropathies, Left	MS - knee - other arthropathy	Osteoarthritis, Right Knee	Rheumatoid Arthritis, Unspecified
Inflammatory Arthropathies, Right	MS - knee - pain	Osteoporosis, ostetits deformans	Sprains and Strains
Inflammatory Arthropathies, Unspecified	MS - knee - stiffness	Osteoporosis, ostetits deformans, Left	Wasting of Muscles and Neuro Musc Dystro, LT
Injury to other ligaments, Knee, Left	MS - knee - synovium rupture	Osteoporosis, ostetits deformans, Right	Wasting of Muscles and Neuro Musc Dystro, RT
Injury to other ligaments, Knee, Right	MS - knee - tendon rupture	Osteoporosis, ostetits deformans, Unspecified	Wasting of Muscles and Neuro Muscular Dystrophy
Injury to other ligaments, Knee, Unsp	MS - knee - tibial collateral ligament bursitis	Other arthropathies	
Knee deformities, Left	MS - knee jt - replacement	Other arthropathies, Left side	

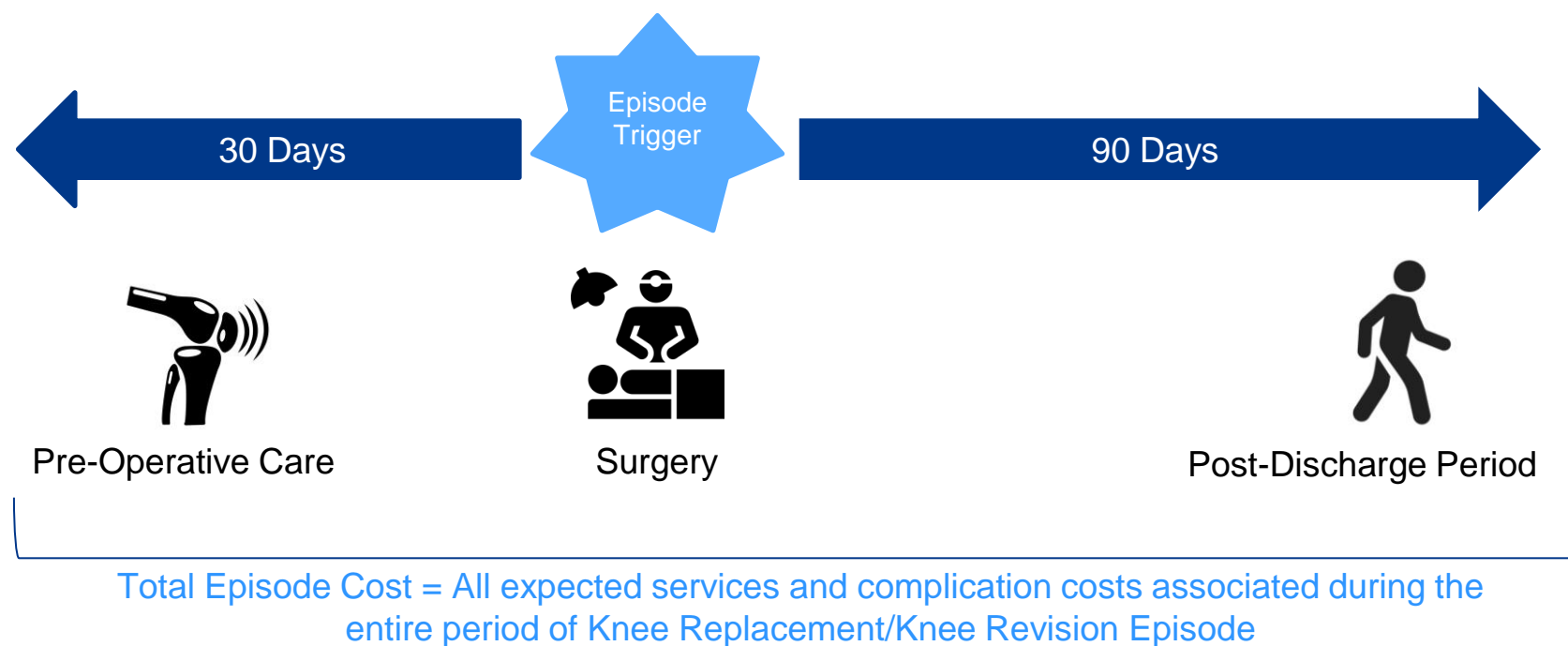
Complications – ICD-10

Accidental Falls	Dehydration	Lung disease from opportunistic infections	Shock / Cardiac Arrest
Acute CHF / pulm edema	Dermatitis, Urticaria	Malfunction / Complication of Heart Device	Shock during or following cardiac surgery
Acute cor pulmonale	Diabetes, poor control	Meningitis / Encephalitis	Shock during or post-procedure
Acute Kidney Failure	dic, coagulation, hemorrhagic disorders	MRSA Pneumonia	Skin - other
Acute Osteomyelitis	Disorders of the Knee	MRSA, Drug Resistant Infections	Skin and subcutaneous tissue infections
Adverse effects of drugs	empyema, lung abscess	Opportunistic Infections	STEMI
arterial thromboembolism	Esophageal Reflux and Other Esophagitis	Other bacterial infections	Subendocardial Infarct
Aspiration Pneumonia	Fluid Electrolyte Acid Base Problems	Other Bacterial Pneumonia	Thromboembolic Stroke
Bacteremia, SIRS, no organ dysfunction	Foreign body left during procedure	Other cerebral complications	Tracheostomy Complications
C-Difficile Infection	Gastroenteritis	Other lower respiratory disease	Transfusion, Infusion related complications
Cellulitis, Skin Infection	GI Bleed	other lung complications	Transient cerebral ischemia, TIA
Chronic and Unspecified Osteomyelitis	Gram Negative Pneumonia	Other lung problems	Urethral Stricture
Chronic Fungal and Other Pneumonias	HAC 02: Air Embolism	Other Phlebitis, Lymphangitis, varices	Urinary Complications
Chronic Skin Ulcer	HAC 04: Stage III and IV Pressure Ulcers	Other Staph Pneumonia	Urinary Frequency & other symptoms
Compl of joint prosthesis, orthopedic proced	HAC 09: Manifestations of Poor Glycemic Control	Periprosthetic fracture	Urinary Incontinence
Complication of genitourinary device	Hemorrhage	Phlebitis, Deep vein thrombosis (DVT)	Urinary Tract Infection
Complication of Implanted device, graft	Hemorrhagic Stroke	Pulmonary Embolism	Vascular Prosthetic Device/Graft Complication
Complication of nervous system device	Hepatorenal Syndrome	Pyoderma	Ventilator Associated Pnuemonia
Complications from Central Line	Hypertensive Urgency	Pyogenic Arthritis	Ventilator Dependence
Complications from chemotherapy	Hypotension / Syncope	Recent AMI	Viral Pneumonia
Complications of anesthesia	Infective Arthritis	Resp Failure following trauma / surgery	Wound Dehiscence
complications of medical care	Infective Arthritis, Left	Respiratory Failure	Wound Infections
complications of surgical procedures	Infective Arthritis, Right	Respiratory Insufficiency	
Complications of surgical procedures or medical care	Influenza with Pneumonia	rhabdomyolysis	
Debilitating Viral Pneumonia	Intestinal Obstruction	Sepsis	
Decubitus Ulcer	IVC & other intra-abd venous thrombosis	Severe Sepsis	

Knee Replacement & Knee Revision (KNRPL)

The Knee Replacement & Knee Revision Episode evaluates services that are typical/routine for the expected care and services that are related to associated complications. Patients are defined as those with a primary procedure code of Knee Replacement or Knee Revision on an inpatient stay service or a trigger procedure code in any position on an outpatient facility/professional service, along with a qualifying diagnosis code.

Episode Length – KNRPL



Duration Pre-Trigger Window	Duration Post-Trigger Window
30 Days	90 Days

Episode Triggers – KNRPL

Trigger Group Name	Code Type	Codes
Partial Knee Replacement (primary)	CPT	27446
Partial Knee Revision	CPT	27486
Total Knee Replacement (primary)	CPT	27447
Total Knee Revision	CPT	27487

Trigger Diagnoses – ICD-10, CPT

Aseptic Necrosis, Left	Knee deformities, Unspecified	MS - muscle - nos - muscle weakness	Other arthropathies
Aseptic Necrosis, Right	Knee derangements, Left	MS - muscle - nos - other ds	Other arthropathies, Left side
Aseptic Necrosis, Unspecified	Knee derangements, Right	MS - synvm / tndn / brsa - nos - bursitis	Other arthropathies, Right side
Compl of joint prosthesis, orthopedic proced	Knee derangements, Unspecified	MS - synvm / tndn / brsa - nos - ganglion / cyst	Other deformities, limb, other sites, Left
Contracture lower leg joint	Malunion, Left side	MS - synvm / tndn / brsa - nos - nec / nos	Other deformities, limb, other sites, Right
Deformities, Left lower limb	Malunion, Right side	MS - synvm / tndn / brsa - nos - rupture - synovium	Other deformities, limb, other, Unspecified
Deformities, lower limb	Malunion, Unspecified	MS - synvm / tndn / brsa - nos - rupture - tendon	Other osteopathic disorders, Left
Deformities, Right lower limb	MS - bone - nos - chondrodystrophy	MS - synvm / tndn / brsa - nos - synvtis/tensyn	Other osteopathic disorders, Right
diabetes mellitus with neurologic manifestations	MS - bone - nos - nec / nos	MS - uppr leg - tendon rupture - quadriceps	Other osteopathic disorders, Unspecified
Diabetes, other manifestation	MS - face - acqrd defrmtly	Neoplsn - benign neoplsn - bone / cartilage - nos	Partial Knee Replacement (primary)
Dislocation of Knee, Left	MS - joint - nos - effusion	Neoplsn - benign neoplsn - femur / fibula / tibia	Partial Knee Revision
Dislocation of Knee, Right	MS - joint nos - difficulty walking	Nonunion, Left side	Periprosthetic fracture
Dislocation of Knee, Unspecified	MS - joint nos - jnt derangmnt - loose body	Nonunion, Right side	Personal history of musculoskeletal disorders
Disorders of the Knee	MS - joint nos - jnt derangmnt - other	Nonunion, Unspecified	Rheumatoid Arthritis and Inflammatory Con, LT
Fistula, Effusion in Joint	MS - joint nos - other arthropathy	NS - polyneuropathy - collagen vascular disease	Rheumatoid Arthritis and Inflammatory Con, RT
Gout and other crystal arthropathies	MS - knee - disloc - pathologic	NS polyneuropathy-collagen vascul disease, LT	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease
Gout and other crystal arthropathies, Left	MS - knee - disloc - recurrent	NS polyneuropathy-collagen vascul disease, RT	Rheumatoid Arthritis, Left
Gout and other crystal arthropathies, Right	MS - knee - enthesopathy - nec / nos	Osteoarthritis	Rheumatoid Arthritis, Right
Hemarthrosis: Bleeding into Joints	MS - knee - jnt derangmnt - nec / nos	Osteoarthritis, Knee, Bilateral	Rheumatoid Arthritis, Unspecified
Infective Arthritis	MS - knee - other arthropathy	Osteoarthritis, Knee, Unspecified	Total Knee Replacement (primary)
Infective Arthritis, Left	MS - knee - pain	Osteoarthritis, Left Knee	Total Knee Revision
Infective Arthritis, Right	MS - knee - stiffness	Osteoarthritis, other joints	Wasting of Muscles and Neuro Musc Dystro, LT
Inflammatory Arthropathies, Left	MS - knee - synovium rupture	Osteoarthritis, Right Knee	Wasting of Muscles and Neuro Musc Dystro, RT
Inflammatory Arthropathies, Right	MS - knee - tendon rupture	Osteoporosis, ostetits deformans	Wasting of Muscles and Neuro Muscular Dystrophy
Inflammatory Arthropathies, Unspecified	MS - knee - tibial collateral ligament bursitis	Osteoporosis, ostetits deformans, Left	
Knee deformities, Left	MS - mscl / lgmnt / fscia - nos - nec / nos	Osteoporosis, ostetits deformans, Right	
Knee deformities, Right	MS - muscle - nos - muscle atrophy	Osteoporosis, ostetits deformans, Unspecified	

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	HbA1C	Lab - microbiology	Other care - chronic edema - compression stocking
Alcohol / Drug Use Screening	Home Health / Hospice	Lab - microbiology - c & s	Other care - chronic edema - compressor
Ancillary Services	Home Health Services	Lab - microbiology - microscopic exam	Other care - chronic edema - compressor - non - segmental
Anesthesia	Hormone Therapy	Lab - microbiology - other	Other care - chronic edema - compressor - segmental
Anti-TNF agents	Imaging - ct - cardiac	Lab - microscopic - koh prep	Other care - chronic edema - exterior wrap
Aortic resection, replacement or anastomosis	Imaging - ct - follow - up	Lab - other clinical lab	Other care - chronic edema - gauntlet
Arthroplasty knee	Imaging - ct - guidance	Lab - other hematology	Other care - chronic edema - glove
Bleeding Status	Imaging - ct - lower extremity	Lab - pathology consultation	Other care - chronic edema - sleeve
Blood Count	Imaging - ct - other	Lab - specimen collection - blood - arterial - arterial puncture	Other care - chronic edema - surgical stockings
Blood transfusion	Imaging - mra - lower extremity	Lab - specimen collection - blood - venous - venipuncture	Other care - home care - emergency response system
Blood Type, Coomb's test	Imaging - mra - pelvis	Lab - specimen collection - blood - venous - venous port	Other care - home care - home health aide
Bundled Payment / Medical Home	Imaging - mri - contrast agent	Lab - stat request	Other care - home care - meals
Cardiac Stress Test	Imaging - mri - guidance	Lab - surgical pathology	Other care - home care - nursing care
Care Plan Oversight	Imaging - mri - other	Lab - therapeutic drug assay	Other care - home care - nursing care - lpn
Case Management Services	Imaging - mri - pelvis	Lab - tissue typing	Other care - home care - nursing care - np
Case Management Services - Behavioral	Imaging - other imaging	Lab - transfusion medicine	Other care - home care - nursing care - rn
CHEMOTHERAPY	Imaging - other imaging - bone density	Lab - urinalysis	Other care - home care - other care
CHLAMYDIA SCREENING	Imaging - other imaging - fluoroscopy	LEAD SCREENING	Other care - home care - other care - attendant care
Chronic Care Management	Imaging - supplies - contrast agent - high osmolar	Lipid Level Monitoring	Other care - home care - other care - chore care
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - supplies - contrast agent - low osmolar	Low dose steroids	Other care - home care - other care - companion care
Diagnostic physical therapy	Imaging - us - guide - biopsy	Markers for Inflammation	Other care - home care - other care - day care
DME - bath / toilet aids	Imaging - us - guide - other	Medication Assisted Management (MAT)	Other care - home care - other care - homemaker
DME - beds / accessories	Imaging - us - other	Medication Therapy Management Services	Other care - home care - other care - respite care
DME - heat/cold application	Imaging - x-ray - knee - arthrogram	Medications (Injections, infusions and other forms)	Other care - home care - physician supervision
DME - mobility aids	Imaging - x-ray - lower leg	Metabolic Renal Hepatic Chemistry Panel	Other care - home care - rehabilitation - occupational therapy
DME - other	Imaging - x-ray - myelogram	Microscopic examination (bacterial smear, culture, toxicology)	Other care - home care - rehabilitation - physical therapy
DME - patient lifts	Imaging - x-ray - other - bone survey	Online Management	Other care - home care - social worker
DME - repair / maintenance	Imaging - x-ray - other - joint survey	Opioid Administration / Dispensing (OTP)	Other care - home care - specialized visit
DME - restraints	Imaging - x-ray - si joints - arthrogram	Orthotics - lower extremity	Other care - home care - training
DME - safety equipment	Imaging Abdomen	Orthotics - orthopedic shoes	Other care - hospice
DME - traction	Insertion of catheter or spinal stimulator and injection into spinal canal	Orthotics - other	Other care - long term care - assisted living
DME - trapeze / other orthopedic device	Joint X-Rays	Orthotics - spine	Other care - long term care - residential care
DME - whirlpool - equipment	Knee Arthroscopy without ligament repair	Orthotics - upper extremity	Other care - nutrition - assessment
DME - wound therapy	Lab - blood gases	Other - non - covered	Other care - nutrition - counseling - dietician
DME and supplies	Lab - chemistry	Other care - bladder / bowel care - catheter	Other care - nutrition - education
Drug Delivery implantation	Lab - chemistry and toxicology tests	Other care - bladder / bowel care - drainage bag	Other care - nutrition - medical food
E & M - consultation	Lab - hematology - blood count	Other care - bladder / bowel care - other supplies	Other care - observation
E & M - emergency care	Lab - hematology - blood count - eosinophil count	Other care - bladder / bowel care - other supplies - diaper / related	Other care - other
E & M - home visit	Lab - hematology - coagulation	Other care - bladder / bowel care - other supplies - skin barrier	Other care - other - ancillary services
E & M - hospital	Lab - immunology	Other care - chronic edema - appliance - limb compression	Other care - other - exercise classes
E & M - nursing home	Lab - infectious agent antibody	Other care - chronic edema - appliance - non - segmental	Other care - other - infection control
E & M - other	Lab - infectious agent antigen	Other care - chronic edema - appliance - segmental	Other care - other - interpretation
E & M - prevention	Lab - infectious agent dna	Other care - chronic edema - complex therapy	Other care - other - lodging

Relevant Procedures – CPT / HCPCS, ICD-10

Other care - other - meals	Procedure - i&d - skin - drainage of abscess	Robotic Surgery	Tests - neuro - muscle testing
Other care - other - medical records	Procedure - i&d - skin - drainage of hematoma	Rx - administration - infusion	Tests - neuro - ncv / emg
Other care - other - pvd - compressor	Procedure - injection - tendons / joints / etc.	Rx - administration - injection	Tests - neuro - other
Other care - other - weight management	Procedure - injection of skin lesion	Rx - antibiotics - aminoglycosides	Tests - neuro - sleep studies
Other care - pain management - pca / related	Procedure - microsurgery	Rx - antibiotics - anti-infectives, misc	Tests - pulmonary - exhaled air analysis
Other care - prevention - smoking cessation	Procedure - obesity procedure - restriction	Rx - antibiotics - cephalosporins	Tests - pulmonary - other
Other care - respiratory - equipment / supplies	Procedure - open excision - knee cartilage	Rx - antibiotics - chloramphenicol / comb	Tests - pulmonary - peak flow
Other care - respiratory - equipment / supplies - nebulizer	Procedure - other dx on musculoskeletal system	Rx - antibiotics - macrolides	Tests - skin
Other care - respiratory - equipment / supplies - peak flow meter	Procedure - other knee arthroplasty	Rx - antibiotics - penicillins	Tests - vascular - arterial - extremity
Other care - respiratory - equipment / supplies - spirometer	Procedure - other non - or rx - other non - or skin procedures	Rx - antibiotics - quinolones	Tests - vascular - venous
Other care - respiratory - other	Procedure - other non - or rx on musculoskeletal system	Rx - antibiotics - sulfonamides / comb	Therapy - acupuncture
Other care - respiratory - oxygen / oxygen concentrator	Procedure - other or rx - peripheral neurostimulator procedures	Rx - antibiotics - tetracyclines	Therapy - activity therapy
Other care - wound care	Procedure - other or rx on bone	Rx - antibiotics / antivirals / antifungals - infusion	Therapy - behavior - partial hospitalization
Other care - wound care - growth factor	Procedure - other or rx on joints	Rx - antibiotics, misc	Therapy - biofeedback
Other care - wound care - hyperbaric oxygen	Procedure - other or rx on musculoskeletal system	Rx - b-lactam antibiotics	Therapy - chiropractic / osteopathic manipulation
Other diagnostic procedures (interview, evaluation, consultation)	Procedure - other rx on muscles and tendons	Rx - blood derivatives	Therapy - habilitation
Other diagnostic radiology and related techniques	Procedure - partial excision bone	Rx - cardiovascular system - vasodilating agents, nec	Therapy - hyperbaric oxygen
Other Laboratory	Procedure - related supplies - access catheter	Rx - cardiovascular system - vasodilating rx	Therapy - neurostimulator - muscle training
Partial Knee Replacement (primary)	Procedure - related supplies - arthroplasty	Rx - coagulation system - anticoagulants	Therapy - neurostimulator - nausea / vomiting
Partial Knee Revision	Procedure - related supplies - graft / repair	Rx - coagulation system - antiheparin agnt	Therapy - neurostimulator - tens - device
Partial Knee Revision, Left	Procedure - related supplies - implant	Rx - coagulation system - hemostatics	Therapy - osteogenesis stimulator
Partial Knee Revision, Right	Procedure - related supplies - other	Rx - diagnostic rx - roentgenography	Therapy - other
Pathology	Procedure - removal of pins or fixation	Rx - diuretics, loop diuretics	Therapy - phlebotomy
Personal Care Services	Procedure - rx - fracture / dislocation - lower extremity	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Therapy - pt - exercises / activities
Physical Therapy / Rehab	Procedure - spinal canal - catheter	Rx - electrolytic, caloric, water - hydration - unspecified	Therapy - pt - modalities
Physician Services	Procedure - spinal canal - injection into spinal canal	Rx - electrolytic, caloric, water - multi-mineral prep	Therapy - rehabilitation - related supplies / equipment - motion device
Physician Services - Inpatient	Procedure - spinal canal - other	Rx - electrolytic, caloric, water - potassium supp	Therapy - transfusion - administration
Physician Services - Outpatient	Procedure - suture - skin - complex wound repair	Rx - gi - antiemetics	Therapy - transfusion - blood
Preventive Medicine, Care Coordination	Procedure - suture - skin - delayed wound closure	Rx - gi - ppis	Therapy - transfusion - plasma
Procedure - anesthesia	Procedure - vascular access - port / pump - insertion	Rx - hematopoietic system - hematopoietic growth factors	Therapy - transfusion - platelets
Procedure - arthrocentesis	Procedures and Reporting	Rx - miscellaneous rx	Thyroid Function Tests
Procedure - arthroscopy - knee - other	Prosthetic Implant	Rx - miscellaneous rx - enzymes	Total Knee Replacement (primary)
Procedure - arthroscopy - other joints	Prosthetics - external power	Rx - muscle relaxants - muscle relax, skeletal central	Total Knee Revision
Procedure - block - nerve	Prosthetics - implant	Rx - other	Transitional Care Management
Procedure - bone graft	Prosthetics - lower extremity	Rx - pharmacy fee	Transportation - other transportation
Procedure - casting / splinting - application	Prosthetics - other	Rx - serums, toxoids, vaccines - serums	Transportation - paramedic
Procedure - casting / splinting - supplies	Prosthetics - repair	Rx - vitamins - multivit prep	Ungrouped Codes
Procedure - central venous catheter - insertion	Prosthetics - trusses	Screen for amino acid disorders	Urine Protein
Procedure - debridement - wound / infection / burn - debridement	Prosthetics - upper extremity	Supplies	Vaccine for flu or Pneumonia
Procedure - destruction - nerve	Psychiatry Evaluations	Tests - cardiac - ecg - ecg - 12 lead	Wellness Assessment
Procedure - excision - skin - shave skin lesion	Psychiatry Services	Tests - cardiac - ecg - other	X-Ray Thoracolumbar Spine / Pelvis
Procedure - graft - skin - graft material	Psychological and psychiatric evaluation and therapy	Tests - cardiac stress tests - cardiac perfusion scan - rest / exercise	
Procedure - i&d - skin - drainage - post - op infection	Risk Assessment	Tests - cardiac stress tests - cardiac stress tests - other	

Relevant Diagnoses – ICD-10

Aseptic Necrosis, Left	Knee deformities, Right	MS - mscl / lgmnt / fscia - nos - nec / nos	Osteoporosis, osteitis deformans, Left
Aseptic Necrosis, Right	Knee deformities, Unspecified	MS - muscle - nos - muscle atrophy	Osteoporosis, osteitis deformans, Right
Aseptic Necrosis, Unspecified	Knee derangements, Left	MS - muscle - nos - muscle weakness	Osteoporosis, osteitis deformans, Unspecified
Compl of joint prosthesis, orthopedic proced	Knee derangements, Right	MS - muscle - nos - other ds	Other arthropathies
Contracture lower leg joint	Knee derangements, Unspecified	MS - synvm / tndn / brsa - nos - bursitis	Other arthropathies, Left side
Deformities, Left lower limb	Malunion, Left side	MS - synvm / tndn / brsa - nos - ganglion / cyst	Other arthropathies, Right side
Deformities, lower limb	Malunion, Right side	MS - synvm / tndn / brsa - nos - nec / nos	Other deformities, limb, other sites, Left
Deformities, Right lower limb	Malunion, Unspecified	MS - synvm / tndn / brsa - nos - rupture - synovium	Other deformities, limb, other sites, Right
diabetes mellitus with neurologic manifestations	MS - bone - nos - chondrodystrophy	MS - synvm / tndn / brsa - nos - rupture - tendon	Other deformities, limb, other, Unspecified
Diabetes, other manifestation	MS - bone - nos - nec / nos	MS - synvm / tndn / brsa - nos - synvtis/tensyn	Other osteopathic disorders, Left
Dislocation of Knee, Left	MS - face - acqrd defrmtly	MS - uppr leg - tendon rupture - quadriceps	Other osteopathic disorders, Right
Dislocation of Knee, Right	MS - joint - nos - effusion	Neoplsm - benign neoplsm - bone / cartilage - nos	Other osteopathic disorders, Unspecified
Dislocation of Knee, Unspecified	MS - joint nos - difficulty walking	Neoplsm - benign neoplsm - femur / fibula / tibia	Periprosthetic fracture
Disorders of the Knee	MS - joint nos - jnt derangmnt - loose body	Nonunion, Left side	Personal history of musculoskeletal disorders
Fistula, Effusion in Joint	MS - joint nos - jnt derangmnt - other	Nonunion, Right side	Rheumatoid Arthritis and Inflammatory Con, LT
Gout and other crystal arthropathies	MS - joint nos - other arthropathy	Nonunion, Unspecified	Rheumatoid Arthritis and Inflammatory Con, RT
Gout and other crystal arthropathies, Left	MS - knee - disloc - pathologic	NS - polyneuropathy - collagen vascular disease	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease
Gout and other crystal arthropathies, Right	MS - knee - disloc - recurrent	NS polyneuropathy-collagen vascul disease, LT	Rheumatoid Arthritis, Left
Hemarthrosis: Bleeding into Joints	MS - knee - enthesopathy - nec / nos	NS polyneuropathy-collagen vascul disease, RT	Rheumatoid Arthritis, Right
Infective Arthritis	MS - knee - jnt derangmnt - nec / nos	Osteoarthritis	Rheumatoid Arthritis, Unspecified
Infective Arthritis, Left	MS - knee - other arthropathy	Osteoarthritis, Knee, Bilateral	Wasting of Muscles and Neuro Musc Dystro, LT
Infective Arthritis, Right	MS - knee - pain	Osteoarthritis, Knee, Unspecified	Wasting of Muscles and Neuro Musc Dystro, RT
Inflammatory Arthropathies, Left	MS - knee - stiffness	Osteoarthritis, Left Knee	Wasting of Muscles and Neuro Muscular Dystrophy
Inflammatory Arthropathies, Right	MS - knee - synovium rupture	Osteoarthritis, other joints	
Inflammatory Arthropathies, Unspecified	MS - knee - tendon rupture	Osteoarthritis, Right Knee	
Knee deformities, Left	MS - knee - tibial collateral ligament bursitis	Osteoporosis, osteitis deformans	

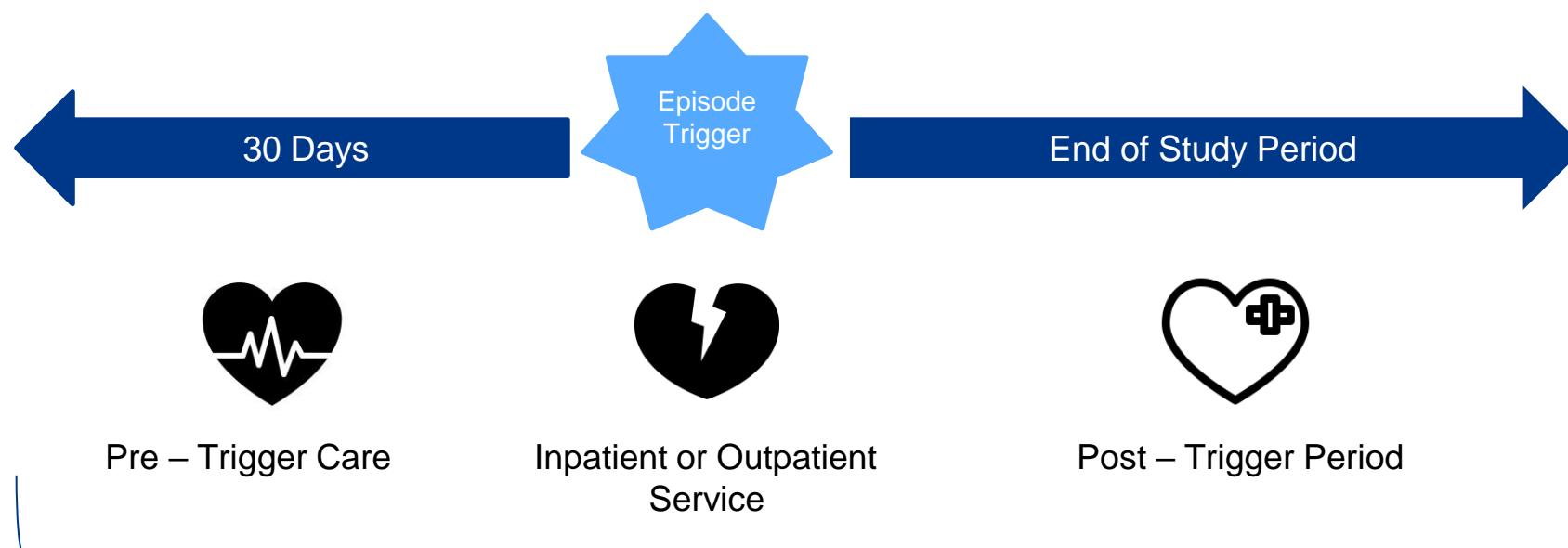
Complications – ICD-10

Accidental Falls	Debilitating Viral Pneumonia	Hypotension / Syncope	Respiratory Insufficiency
Acute CHF / pulm edema	Decubitus Ulcer	Influenza with Pneumonia	rhabdomyolysis
Acute cor pulmonale	Dehydration	Intestinal Obstruction	Sepsis
Acute Kidney Failure	Delirium, Encephalopathy	IVC & other intra-abd venous thrombosis	Severe Sepsis
Acute myocardial infarction	Dermatitis, Urticaria	Meningitis / Encephalitis	Shock / Cardiac Arrest
Acute Osteomyelitis	Diabetes, poor control	MRSA Pneumonia	Shock during or post-procedure
Adverse effects of drugs	dic, coagulation, hemorrhagic disorders	MRSA, Drug Resistant Infections	Skin - other
Altered mental status	Dislocation of Knee, Left	Opportunistic Infections	STEMI
arterial thromboembolism	Dislocation of Knee, Right	Orthostatic Hypotension / Dizziness	Subendocardial Infarct
Aspiration Pneumonia	Dislocation of Knee, Unspecified	Other bacterial infections	Thromboembolic Stroke
Bacteremia, SIRS, no organ dysfunction	Disorders of the Knee	Other Bacterial Pneumonia	Tracheostomy Complications
C-Difficile Infection	empyema, lung abscess	Other cerebral complications	Transfusion, Infusion related complications
Chronic and Unspecified Osteomyelitis	Fluid Electrolyte Acid Base Problems	Other lower respiratory disease	Transient cerebral ischemia, TIA
Chronic Fungal and Other Pneumonias	Foreign body left during procedure	other lung complications	Urethral Stricture
Chronic Skin Ulcer	Gastroenteritis	Other lung problems	Urinary Complications
Coma, persistent vegetative state	Gram Negative Pneumonia	Other Phlebitis, Lymphangitis, varices	Urinary Frequency & other symptoms
Compl of joint prosthesis, orthopedic proced	HAC 02: Air Embolism	Other Staph Pneumonia	Urinary Tract Infection
Complication of genitourinary device	HAC 04: Stage III and IV Pressure Ulcers	Periprosthetic fracture	Ventilator Associated Pnuemonia
Complication of Implanted device, graft	HAC 09: Manifestations of Poor Glycemic Control	Phlebitis, Deep vein thrombosis (DVT)	Ventilator Dependence
Complications from Central Line	Hemarthrosis: Bleeding into Joints	Pulmonary Embolism	Viral Pneumonia
Complications of anesthesia	Hemorrhage	Pyogenic Arthritis	Wound Dehiscence
complications of medical care	Hemorrhagic Stroke	Recent AMI	Wound Infections
complications of surgical procedures	Hepatorenal Syndrome	Resp Failure following trauma / surgery	
Complications of surgical procedures or medical care	Hypertensive Urgency	Respiratory Failure	

Low Back Pain (LBP)

Low Back Pain (LBP) is a chronic condition open from 30 days prior to the date of the trigger service until the end of the study period. The trigger service can be an inpatient service with a low back pain-specific principal diagnosis code or an outpatient or professional E&M service with a low back pain-specific diagnosis code in any position. The professional trigger also requires a confirming inpatient, outpatient or professional low back pain-related E&M service at least 30 days later. Services with diagnosis codes for signs and symptoms related to Low Back Pain such as lumbago or sciatica have been defined as typical care for Low Back Pain, and conditions such as electrolyte disturbances or GI bleed due to use of pain medicines without proper protection have been labeled as complications.

Episode Length – LBP



Total Episode Cost = All expected services and complication costs associated from index service until the end of the post-trigger window.

Duration Pre-Trigger Window	Duration Post-Trigger Window
30	End of Study Period

Episode Triggers – LBP

Trigger Group Name	Code Type	Codes
Backache	ICD10	M5405, M5406, M5407, M5408, M5409, M5489, M549, M62830
Inflammatory spondylopathies	ICD10	M4650, M4655, M4656, M4657, M4658, M4659, M4680, M4685, M4686, M4687, M4688, M4689, M4690, M4695, M4696, M4697, M4698, M4699
Low Back Pain, Radiculopathy	ICD10	M4646, M4647, M4720, M4726, M4727, M4728, M47816, M47817, M47818, M47819, M47896, M47897, M47898, M47899, M479, M5116, M5117, M5126, M5127, M5135, M5136, M5137, M5146, M5147, M5186, M5187, M519, M5415, M5416, M5417, M5430, M5431, M5432, M5440, M5441, M5442, M545
Low Back Pain, Radiculopathy, Myelopathy	ICD10	M4716, M4806, M48061, M48062, M4807, M5106
MS - head / neck - infection	ICD10	M5400
MS - joint nos - jnt derangmnt - other	ICD10	M532X9
MS - pelvis - sprn/strn	ICD10	S338XXA, S339XXA
MS - soft tissue - nos- symptoms / findings	ICD10	M5410, M5418
Other arthropathies	ICD10	M9903
Other Back Pain, Radiculopathy, Myelopathy	ICD10	M4710, M4800, M4808

Episode Triggers – LBP

Trigger Group Name	Code Type	Codes
Other bone infections	ICD10	A1801
Other Spine Problems	ICD10	M2578, M4300, M4305, M4306, M4307, M4308, M4309, M438X9, M4600, M4605, M4606, M4607, M4608, M4609, M4640, M4648, M4649, M4830, M4835, M4836, M4837, M4838, M488X6, M488X7, M488X8, M488X9, M489, M4980, M4985, M4986, M4987, M4988, M4989, M532X6, M532X7, M532X8, M533, M5380, M5385, M5386, M5387, M5388, M539, M9923, M9924, M9925, M9926, M9929, M9933, M9934, M9935, M9936, M9939, M9943, M9944, M9945, M9946, M9949, M9953, M9954, M9955, M9956, M9959, M9963, M9964, M9965, M9966, M9969, M9973, M9974, M9975, M9976, M9979
Post Laminectomy Syndrome	ICD10	M961
Sprain Lower Back	ICD10	S335XXA
Stiff Spine	ICD10	M4810, M4816, M4817, M4818, M4819, M4820, M4825, M4826, M4827

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	Imaging - ct - lumbar spine	Lab - surgical pathology	Other care - home care - other care - attendant care
Alcohol / Drug Use Screening	Imaging - ct - other	Lab - therapeutic drug assay	Other care - home care - other care - chore care
Ancillary Services	Imaging - ct - study	Laboratory - Chemistry and Hematology	Other care - home care - other care - companion care
Arthroscopy	Imaging - cta - chest	Lipid Level Monitoring	Other care - home care - other care - day care
Biologic Infusions	Imaging - cta - other	Low dose steroids	Other care - home care - other care - homemaker
Bleeding Status	Imaging - mra - pelvis	Magnetic resonance imaging	Other care - home care - other care - respite care
Blood Count	Imaging - mra - spinal canal	Medication Assisted Management (MAT)	Other care - home care - physician supervision
Bundled Payment / Medical Home	Imaging - mri - contrast agent	Medication Therapy Management Services	Other care - home care - rehabilitation - occupational therapy
Care Plan Oversight	Imaging - mri - guidance	Medications (Injections, infusions and other forms)	Other care - home care - rehabilitation - physical therapy
Case Management Services	Imaging - mri - lumbar spine	Metabolic Renal Hepatic Chemistry Panel	Other care - home care - rehabilitation - speech therapy
Case Management Services - Behavioral	Imaging - mri - other	Microscopic examination (bacterial smear, culture, toxicology)	Other care - home care - social worker
Case Management Services - Educational	Imaging - mri - pelvis	Myelogram	Other care - home care - specialized visit
Case Management Services - Oncology	Imaging - nuclear - bone scan	Online Management	Other care - home care - training
CHEMOTHERAPY	Imaging - nuclear - localization of inflammation	Opioid Administration / Dispensing (OTP)	Other care - hospice
Chronic Care Management	Imaging - nuclear - other musculoskeletal	Orthotics - lower extremity	Other care - long term care - assisted living
Coordinated Care Fees/Services	Imaging - other imaging	Orthotics - orthopedic shoes	Other care - long term care - residential care
Debridement of wound, infection or burn	Imaging - other imaging - bone density - dexa	Orthotics - other	Other care - nutrition - assessment
Decompression / Discectomy	Imaging - other imaging - epidurography	Orthotics - spine	Other care - nutrition - counseling - dietician
Depression Screening	Imaging - other imaging - fluoroscopy	Orthotics - upper extremity	Other care - nutrition - education
Diagnostic physical therapy	Imaging - other imaging - fluoroscopy - guidance	Other - non - covered	Other care - nutrition - medical food
DME - bath / toilet aids	Imaging - supplies - contrast agent - high osmolar	Other care - bladder / bowel care - catheter	Other care - nutrition - parenteral - all - inclusive
DME - beds / accessories	Imaging - supplies - contrast agent - low osmolar	Other care - bladder / bowel care - drainage bag	Other care - nutrition - parenteral - pump
DME - heat/cold application	Imaging - us - guide - biopsy	Other care - bladder / bowel care - other supplies	Other care - observation
DME - mobility aids	Imaging - us - guide - other	Other care - bladder / bowel care - other supplies - diaper / related	Other care - ostomy - supplies
DME - other	Imaging - us - other	Other care - bladder / bowel care - other supplies - skin barrier	Other care - other
DME - patient lifts	Imaging - x-ray - discography	Other care - child care - foster care	Other care - other - ancillary services
DME - repair / maintenance	Imaging - x-ray - myelogram	Other care - chronic edema - appliance - limb compression	Other care - other - back care
DME - restraints	Imaging - x-ray - si joints - arthrogram	Other care - chronic edema - appliance - non - segmental	Other care - other - exercise classes
DME - safety equipment	Imaging - x-ray - spine/pelvis - other	Other care - chronic edema - appliance - segmental	Other care - other - lead assessment
DME - traction	Imaging Abdomen	Other care - chronic edema - complex therapy	Other care - other - lodging
DME - trapeze / other orthopedic device	Incision and drainage, skin and subcutaneous tissue	Other care - chronic edema - compression stocking	Other care - other - meals
DME - whirlpool - equipment	Incision and excision of CNS	Other care - chronic edema - compressor	Other care - other - medical records
DME and supplies	Incision of pleura, thoracentesis, chest drainage	Other care - chronic edema - compressor - non - segmental	Other care - other - pvd - compressor
	Injections and aspirations of muscles, tendons, bursa, joints and soft tis		
Drug Delivery implantation	Insertion of catheter or spinal stimulator and injection into spinal canal	Other care - chronic edema - compressor - segmental	Other care - other - therapeutic riding
E & M - consultation	Insertion, revision, replacement, removal of cardiac pacemaker or cardiove	Other care - chronic edema - exterior wrap	Other care - other - weight management
E & M - emergency care	Lab - chemistry		
E & M - home visit	Lab - hematology - blood count	Other care - chronic edema - gauntlet	Other care - pain management - pca / related
E & M - hospital	Lab - hematology - coagulation	Other care - chronic edema - sleeve	Other care - prevention - smoking cessation
E & M - nursing home	Lab - infectious agent dna	Other care - chronic edema - surgical stockings	Other care - respiratory - equipment / supplies
E & M - other	Lab - panel - hepatitis panel	Other care - diabetes care - glucose monitoring - lancet	Other CT scan
E & M - prevention	Lab - pathology consultation	Other care - home care - emergency response system	Other diagnostic nervous system procedures
High Risk Behavior Screening	Lab - specimen collection - blood - arterial - arterial puncture	Other care - home care - home health aide	Other diagnostic procedures (interview, evaluation, consultation)
Home Health / Hospice	Lab - specimen collection - blood - venous - venipuncture	Other care - home care - meals	Other diagnostic procedures on musculoskeletal system
Hormone Therapy	Lab - specimen collection - blood - venous - venous port	Other care - home care - nursing care	Other diagnostic radiology and related techniques
Imaging - ct - abdomen - pelvis	Lab - specimen collection - specimen handling	Other care - home care - nursing care - lpn	Other diagnostic ultrasound
Imaging - ct - follow - up	Lab - stat request	Other care - home care - nursing care - np	Other gastrointestinal diagnostic procedures
Imaging - ct - guidance		Other care - home care - nursing care - rn	Other hernia repair
		Other care - home care - other care	Other Laboratory

Relevant Procedures – CPT / HCPCS, ICD-10

Other non-OR gastrointestinal therapeutic procedures	Procedure - graft	RADIATION THERAPY	Tests - neuro - sleep studies
Other non-OR or closed therapeutic nervous system procedures	Procedure - injection - tendons / joints / etc.	Radioisotope bone scan	Tests - pulmonary - peak flow
Other non-OR therapeutic procedures on musculoskeletal system	Procedure - injection of skin lesion	Removal From Hip Joint	Tests - skin
Other non-OR therapeutic procedures on respiratory system	Procedure - maintenance - cns / spinal pump / port	Risk Assessment	Tests - vascular - arterial - extremity
Other operations on ovary	Procedure - microsurgery	Robotic Assisted Procedure	Tests - vascular - venous
Other OR lower GI therapeutic procedures	Procedure - neuro - other non - or rx	Routine chest X-ray	Therapy - acupuncture
Other OR therapeutic nervous system procedures	Procedure - neuro - other or rx	Rx - administration - infusion	Therapy - activity therapy
Other OR therapeutic procedures on bone	Procedure - other dx on musculoskeletal system	Rx - administration - injection	Therapy - behavior - evaluation and therapy
Other OR therapeutic procedures on joints	Procedure - other non - or rx on musculoskeletal system	Rx - analg/antipy/nsaids - narcotics	Therapy - behavior - medication management
Other OR therapeutic procedures on musculoskeletal system	Procedure - other or rx - peripheral neurostimulator procedures	Rx - diagnostic rx - roentgenography	Therapy - behavior - other
Other OR therapeutic procedures on nose, mouth and pharynx	Procedure - other or rx on bone	Rx - diuretics, loop diuretics	Therapy - behavior - partial hospitalization
Other OR therapeutic procedures, female organs	Procedure - other or rx on joints	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Therapy - biofeedback
Other OR therapeutic procedures, male genital	Procedure - other rx on muscles and tendons	Rx - electrolytic, caloric, water - hydration - unspecified	Therapy - chiropractic / osteopathic manipulation
Other physical therapy and rehabilitation	Procedure - other spine - rx / dx - injection	Rx - electrolytic, caloric, water - multi-mineral prep	Therapy - habilitation
Other Spine Problems	Procedure - peripheral nerve - decompression - other	Rx - electrolytic, caloric, water - potassium supp	Therapy - hyperbaric oxygen
Other therapeutic ear procedures	Procedure - peripheral venous catheter	Rx - gi - antiemetics	Therapy - neurostimulator - muscle training
Other therapeutic procedures	Procedure - related supplies - ablation - catheter	Rx - gi - ppis	Therapy - neurostimulator - nausea / vomiting
Other therapeutic procedures on eyelids, conjunctiva, cornea	Procedure - related supplies - access catheter	Rx - hematopoietic system - hematopoietic growth factors	Therapy - neurostimulator - tens - device
Other therapeutic procedures on muscles and tendons	Procedure - related supplies - graft / repair	Rx - miscellaneous rx	Therapy - neurostimulator - tens - leads
Other therapeutic procedures, hemic and lymphatic system	Procedure - related supplies - other	Rx - miscellaneous rx - anesthetics, local	Therapy - neurostimulator - tens - supplies
Pathology	Procedure - removal of pins or fixation	Rx - miscellaneous rx - enzymes	Therapy - other
Peer Services	Procedure - sedation	Rx - muscle relaxants - muscle relax, skeletal central	Therapy - phlebotomy
Personal Care Services	Procedure - spinal canal - injection into spinal canal	Rx - other	Therapy - pt - exercises / activities
Physical Therapy / Rehab	Procedure - spinal canal - other	Rx - pharmacy fee	Therapy - pt - modalities
Physical therapy exercises, manipulation, and other procedures	Procedure - spinal neurostimulator	Rx - vitamins - multivit prep	Thyroid Function Tests
Physician Services	Procedure - vascular access - port / pump - insertion	Sexual Behavior Counseling	Total Knee Revision
Physician Services - Inpatient	Procedures and Reporting	Sinus Drainage Procedures	Toxicology Screening
Physician Services - Outpatient	Prophylactic vaccinations and inoculations	Smoking / Tobacco Cessation	Traction, splints, and other wound care
PQRI	Prosthetic Implant	Spinal Fusion	Transitional Care Management
Preventive Medicine, Care Coordination	Prosthetics - external power	Spinal Instrumentation / Stabilization	Transportation - other transportation
Procedure - anesthesia	Prosthetics - implant	Supplies	Transportation - paramedic
Procedure - block - nerve	Prosthetics - lower extremity	Suture of skin and subcutaneous tissue	Ungrouped Codes
Procedure - casting / splinting - application	Prosthetics - other	Tests - neuro - cognitive testing	Vaccine for flu or Pneumonia
Procedure - casting / splinting - supplies	Prosthetics - repair	Tests - neuro - evoked potentials	Wellness Assessment
Procedure - central venous catheter - insertion	Psychiatry Evaluations	Tests - neuro - muscle testing	X-Ray Thoracolumbar Spine / Pelvis
Procedure - destruction - nerve	Psychiatry Services	Tests - neuro - ncv / emg	
Procedure - excision - skin - shave skin lesion	Psychological and psychiatric evaluation and therapy	Tests - neuro - other	

Relevant Diagnoses – ICD-10

Aftercare	MS - head / neck - infection	MS - spine - scrn / ccyx - fx - w/o cord injury - open	Pain, unspecified
Anterior Cruciate Ligament Sprain	MS - head / neck - ossification of ligament	Neuromuscular Disorders from STDs	Periprosthetic fracture
Anxiety Disorders	MS - joint nos - arthropathy - nos	NS - acute pain - other	Post Laminectomy Syndrome
Backache	MS - joint nos - jnt derangmnt - other	NS - autonomic ns ds	Posterior Cruciate Ligament Sprain
BH - other ds	MS - muscle - nos - muscle weakness	NS - chronic pain - cancer	Preventive Screening
Compl of joint prosthesis, orthopedic proced	MS - muscle - nos - myalgia	NS - chronic pain - other	Prvn - admin exam / visit
Cruciate Ligament Sprain	MS - muscle - nos - spasm of muscle	NS - hereditary polyneuropathy	Prvn - encounter for lab test
Deformities, lower limb	MS - nos - aftercare	NS - idiopathic polyneuropathy	Prvn - encounter for x-ray
Hip / Pelvis deformities	MS - pelvis - sprn/strn	NS - polyneuropathy - other diseases	Prvn - routine exam - other
ID - other herpes zoster	MS - soft tissue - nos- nec / nos	Observation/Examination	Prvn - routine medical exam
Immune sys - screening for rheumatoid arthritis	MS - soft tissue - nos- symptoms / findings	Orthostatic Hypotension / Dizziness	Retroperitoneal Abscess
Inflammatory Arthropathies	MS - spine - anomaly	Other arthropathies	Spina Bifida
Inflammatory spondylopathies	MS - spine - ccyx - ds of ccyx	Other Back Pain, Radiculopathy, Myelopathy	Spinal cord injury
Inj - cauda equina	MS - spine - ccyx - hypermobility	Other bone infections	Sprain Lower Back
Injury to other ligaments, articular cartilage, Knee	MS - spine - deformity	Other injuries and conditions due to external	Sprains and Strains
Low Back Pain, Radiculopathy	MS - spine - fx - w/ cord injury - closed	Other injuries to spine	Stiff Spine
Low Back Pain, Radiculopathy, Myelopathy	MS - spine - fx - w/ cord injury - open	Other Spine Problems	Toxic Effects of Radiation
Major Neurological Deficit	MS - spine - fx - w/o cord injury - closed	Othr - fitting - other device	Ungrouped Codes
Meniscus Injury of Knee	MS - spine - fx - w/o cord injury - open	Othr - other	
Mild - Moderate Neurological Deficit	MS - spine - scrn / ccyx - fx - w/o cord injury - closed	Othr - rehabilitation	

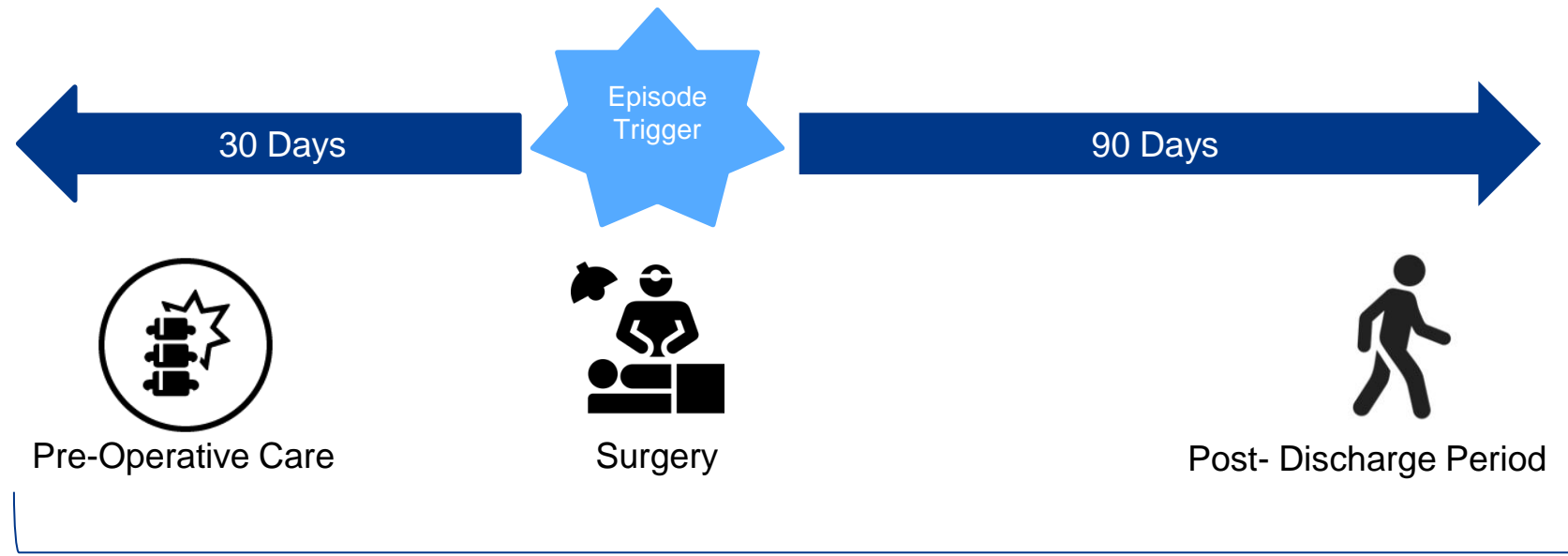
Complications – ICD-10

Accidental Falls	Complications of anesthesia	Fluid Electrolyte Acid Base Problems	Pulmonary Embolism
Acute Kidney Failure	complications of medical care	Gastroenteritis	Respiratory Failure
Adverse effects of drugs	complications of surgical procedures	HAC 04: Stage III and IV Pressure Ulcers	Urethral Stricture
Bladder Dysfunction, hemorrhage	Decubitus Ulcer	HAC: Catheter Associated UTIs	Urinary Frequency & other symptoms
Cellulitis, Skin Infection	Dehydration	HAC: Infection due to central venous catheter	Urinary Incontinence
Compl of joint prosthesis, orthopedic proced	Delirium, Encephalopathy	Hypotension / Syncope	Urinary Tract Infection
Complication of Implanted device, graft	Dermatitis, Urticaria	Intraspinal abscess	Wound Dehiscence
Complications from Central Line	Digestive system complications	Overdose, Poisonings	Wound Infections

Lumbar Laminectomy (LBRLAM)

The Lumbar Laminectomy Episode evaluates services that are typical/routine for the expected care and services that are related to associated complications. Patients are defined as those with a primary procedure code of Lumbar Laminectomy on an inpatient stay service or a procedure code in any position on an outpatient facility/professional service, along with a qualifying diagnosis code.

Episode Length – LBRLAM



Total Episode Cost = All expected services and complication costs associated during the entire period of LBRLAM Episode

Duration Pre-Trigger Window	Duration Post-Trigger Window
30 Days	90 Days

Episode Triggers – LBRLAM

Trigger Group Name	Code Type	Codes
Decompression / Discectomy	CPT HCPCS	63030, 63035, 63042, 63044, 63056, 63057, S2350-S2351
Laminectomy	CPT	63005, 63011, 63012, 63017, 63047

Trigger Diagnoses – ICD-10, CPT / HCPCS

Backache
Decompression / Discectomy
Inflammatory spondylopathies
Laminectomy
Low Back Pain, Radiculopathy
Low Back Pain, Radiculopathy, Myelopathy
Major Neurological Deficit
MS - pelvis - sprn/strn
Other arthropathies
Other Back Pain, Radiculopathy, Myelopathy
Other bone infections
Other injuries and conditions due to external
Other Spine Problems
Post Laminectomy Syndrome
Spina Bifida
Spondylosis; intervertebral disc disorders; other back problems
Sprain Lower Back
Sprains and Strains
Stiff Spine

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	E & M - nursing home	Lab - hematology - blood count - eosinophil count	Other care - bladder / bowel care - drainage bag
Alcohol / Drug Use Screening	E & M - other	Lab - hematology - coagulation	Other care - bladder / bowel care - other supplies
Ancillary Services	E & M - prevention	Lab - immunology	Other care - bladder / bowel care - other supplies - diaper / related
Anesthesia	Electrocardiogram - EKG monitoring	Lab - infectious agent dna	Other care - bladder / bowel care - other supplies - skin barrier
Aortic resection, replacement or anastomosis	HbA1C	Lab - microbiology	Other care - chronic edema - appliance - limb compression
Bleeding Status	Home Health / Hospice	Lab - microbiology - c & s	Other care - chronic edema - appliance - non - segmental
Blood Count	Home Health Services	Lab - microbiology - microscopic exam	Other care - chronic edema - appliance - segmental
Blood transfusion	Hormone Therapy	Lab - microscopic - koh prep	Other care - chronic edema - complex therapy
Blood Type, Coomb's test	Imaging - ct - follow - up	Lab - other hematology	Other care - chronic edema - compression stocking
Bundled Payment / Medical Home	Imaging - ct - lower extremity	Lab - pathology consultation	Other care - chronic edema - compressor
Cardiac Stress Test	Imaging - ct - other	Lab - specimen collection - blood - arterial - arterial puncture	Other care - chronic edema - compressor - non - segmental
Care Plan Oversight	Imaging - ct - study	Lab - specimen collection - blood - venous - venipuncture	Other care - chronic edema - compressor - segmental
Case Management Services	Imaging - mra - lower extremity	Lab - specimen collection - blood - venous - venous port	Other care - chronic edema - exterior wrap
Case Management Services - Behavioral	Imaging - mra - pelvis	Lab - specimen collection - specimen handling	Other care - chronic edema - gauntlet
CHEMOTHERAPY	Imaging - mri - contrast agent	Lab - stat request	Other care - chronic edema - sleeve
Chest X-Ray	Imaging - mri - lumbar spine	Lab - surgical pathology	Other care - chronic edema - surgical stockings
CHLAMYDIA SCREENING	Imaging - mri - other	Lab - therapeutic drug assay	Other care - home care - emergency response system
Chronic Care Management	Imaging - mri - pelvis	Lab - transfusion medicine	Other care - home care - home health aide
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - nuclear - bone scan	Lab - urinalysis	Other care - home care - meals
Decompression / Discectomy	Imaging - nuclear - localization of inflammation	Laboratory - Chemistry and Hematology	Other care - home care - nursing care
Diagnostic physical therapy	Imaging - nuclear - other	Laminectomy	Other care - home care - nursing care - lpn
DME - bath / toilet aids	Imaging - nuclear - other musculoskeletal	Laminectomy, excision intervertebral disc	Other care - home care - nursing care - np
DME - beds / accessories	Imaging - other imaging	LEAD SCREENING	Other care - home care - nursing care - rn
DME - heat/cold application	Imaging - other imaging - bone density - dxa	Lipid Level Monitoring	Other care - home care - other care
DME - mobility aids	Imaging - other imaging - fluoroscopy	Low dose steroids	Other care - home care - other care - attendant care
DME - other	Imaging - supplies - contrast agent - high osmolar	Lumbar Laminectomy	Other care - home care - other care - chore care
DME - patient lifts	Imaging - supplies - contrast agent - low osmolar	Markers for Inflammation	Other care - home care - other care - companion care
DME - repair / maintenance	Imaging - us - guide - other	Medication Assisted Management (MAT)	Other care - home care - other care - day care
DME - restraints	Imaging - us - other	Medication Therapy Management Services	Other care - home care - other care - homemaker
DME - safety equipment	Imaging - x-ray - chest - other	Medications (Injections, infusions and other forms)	Other care - home care - other care - respite care
DME - traction	Imaging - x-ray - discography	Metabolic Renal Hepatic Chemistry Panel	Other care - home care - physician supervision
DME - trapeze / other orthopedic device	Imaging - x-ray - myelogram	Microscopic examination (bacterial smear, culture, toxicology)	Other care - home care - rehabilitation - occupational therapy
DME - whirlpool - equipment	Imaging - x-ray - si joints - arthrogram	NewBorn Blood Tests	Other care - home care - rehabilitation - physical therapy
DME and supplies	Imaging Abdomen	Online Management	Other care - home care - rehabilitation - speech therapy
Drug Delivery implantation	Insertion of catheter or spinal stimulator and injection into spinal canal	Opioid Administration / Dispensing (OTP)	Other care - home care - social worker
E & M - consultation	Lab - blood gases	Orthotics - orthopedic shoes	Other care - home care - specialized visit
E & M - emergency care	Lab - chemistry	Orthotics - other	Other care - home care - training
E & M - home visit	Lab - chemistry and toxicology tests	Orthotics - spine	Other care - hospice
E & M - hospital	Lab - hematology - blood count	Other care - bladder / bowel care - catheter	Other care - long term care - assisted living

Relevant Procedures – CPT / HCPCS, ICD-10

Other care - long term care - residential care	Physician Services - Outpatient	Procedure - spinal canal - injection into spinal canal	Spinal fusion
Other care - nutrition - assessment	Preventive Medicine, Care Coordination	Procedure - spinal canal - other	Supplies
Other care - nutrition - counseling - dietician	Procedure - anesthesia	Procedure - suture - skin - complex wound repair	Tests - cardiac - ecg - ecg - 12 lead
Other care - nutrition - education	Procedure - block - nerve	Procedure - suture - skin - delayed wound closure	Tests - cardiac - ecg - other
Other care - nutrition - enteral	Procedure - casting / splinting - application	Procedure - transplant - bone marrow - harvest stem cells	Tests - cardiac stress tests - cardiac perfusion scan - rest / exercise
Other care - nutrition - medical food	Procedure - casting / splinting - supplies	Procedure - vascular access - port / pump - insertion	Tests - cardiac stress tests - cardiac stress tests - other
Other care - nutrition - parenteral - all - inclusive	Procedure - central venous catheter - insertion	Procedures and Reporting	Tests - neuro - muscle testing
Other care - nutrition - parenteral - pump	Procedure - debridement - wound / infection / burn - debridement	Prosthetics - external power	Tests - neuro - ncv / emg
Other care - observation	Procedure - destruction - nerve	Prosthetics - implant	Tests - neuro - other
Other care - other	Procedure - excision - skin - shave skin lesion	Psychiatry Evaluations	Tests - pulmonary - peak flow
Other care - other - ancillary services	Procedure - graft	Psychiatry Services	Tests - skin
Other care - other - back care	Procedure - graft - skin - graft material	Psychological and psychiatric evaluation and therapy	Tests - vascular - arterial - extremity
Other care - other - exercise classes	Procedure - i&d - skin - drainage - post - op infection	Risk Assessment	Tests - vascular - venous
Other care - other - infection control	Procedure - i&d - skin - drainage of abscess	Robotic Surgery	Therapy - acupuncture
Other care - other - lodging	Procedure - i&d - skin - drainage of hematoma	Rx - administration - infusion	Therapy - activity therapy
Other care - other - meals	Procedure - injection - tendons / joints / etc.	Rx - administration - injection	Therapy - biofeedback
Other care - other - medical records	Procedure - injection of skin lesion	Rx - analg/antipy/nsaids - narcotics	Therapy - chiropractic / osteopathic manipulation
Other care - other - pvd - compressor	Procedure - laminectomy / related	Rx - antibiotics - anti-infectives, misc	Therapy - habilitation
Other care - other - therapeutic riding	Procedure - microsurgery	Rx - antibiotics - cephalosporins	Therapy - hyperbaric oxygen
Other care - other - weight management	Procedure - neuro - other non - or rx	Rx - antibiotics / antivirals / antifungals - infusion	Therapy - neurostimulator - muscle training
Other care - pain management - pca / related	Procedure - obesity procedure - restriction	Rx - autonomic rx - parasympathomimetics	Therapy - neurostimulator - tens - device
Other care - prevention - smoking cessation	Procedure - other dx on musculoskeletal system	Rx - central nervous system - benzodiazepines	Therapy - osteogenesis stimulator
Other care - respiratory - equipment / supplies	Procedure - other non - or rx - chemodenervation of eccrine glands	Rx - coagulation system - anticoagulants	Therapy - other
Other care - wound care	Procedure - other non - or rx - other non - or skin procedures	Rx - coagulation system - hemostatics	Therapy - pt - exercises / activities
Other care - wound care - growth factor	Procedure - other non - or rx on musculoskeletal system	Rx - diagnostic rx - roentgenography	Therapy - pt - modalities
Other care - wound care - hyperbaric oxygen	Procedure - other or rx - other or skin procedures	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Therapy - rehabilitation - related supplies / equipment - motion device
Other diagnostic cardiovascular procedures	Procedure - other or rx on bone	Rx - electrolytic, caloric, water - hydration - unspecified	Thyroid Function Tests
Other diagnostic nervous system procedures	Procedure - other or rx on joints	Rx - electrolytic, caloric, water - multi-mineral prep	Transitional Care Management
Other diagnostic procedures (interview, evaluation, consultation)	Procedure - other rx on muscles and tendons	Rx - electrolytic, caloric, water - potassium supp	Transportation - other transportation
Other diagnostic radiology and related techniques	Procedure - other spine - rx / dx - injection	Rx - gi - antiemetics	Transportation - paramedic
Other Laboratory	Procedure - partial excision bone	Rx - hematopoietic system - hematopoietic growth factors	Ungrouped Codes
Other OR therapeutic procedures on musculoskeletal system	Procedure - related supplies - ablation - catheter	Rx - miscellaneous rx	Urine Protein
Other Spine Problems	Procedure - related supplies - access catheter	Rx - miscellaneous rx - enzymes	Vaccine for flu or Pneumonia
Other therapeutic procedures	Procedure - related supplies - graft / repair	Rx - muscle relaxants - muscle relax, skeletal central	Wellness Assessment
Pathology	Procedure - related supplies - implant	Rx - other	X-Ray Thoracolumbar Spine / Pelvis
Personal Care Services	Procedure - related supplies - other	Rx - pharmacy fee	
Physical Therapy / Rehab	Procedure - removal of pins or fixation	Rx - serums, toxoids, vaccines - serums	
Physician Services	Procedure - sedation	Rx - vitamins - multivit prep	
Physician Services - Inpatient	Procedure - spinal canal - catheter	Screen for amino acid disorders	

Relevant Diagnoses – ICD-10

Backache	Other injuries and conditions due to external
Inflammatory spondylopathies	Other Spine Problems
Low Back Pain, Radiculopathy	Post Laminectomy Syndrome
Low Back Pain, Radiculopathy, Myelopathy	Spina Bifida
Major Neurological Deficit	Spondylosis; intervertebral disc disorders; other back problems
MS - pelvis - sprn/strn	Sprain Lower Back
Other arthropathies	Sprains and Strains
Other Back Pain, Radiculopathy, Myelopathy	Stiff Spine
Other bone infections	

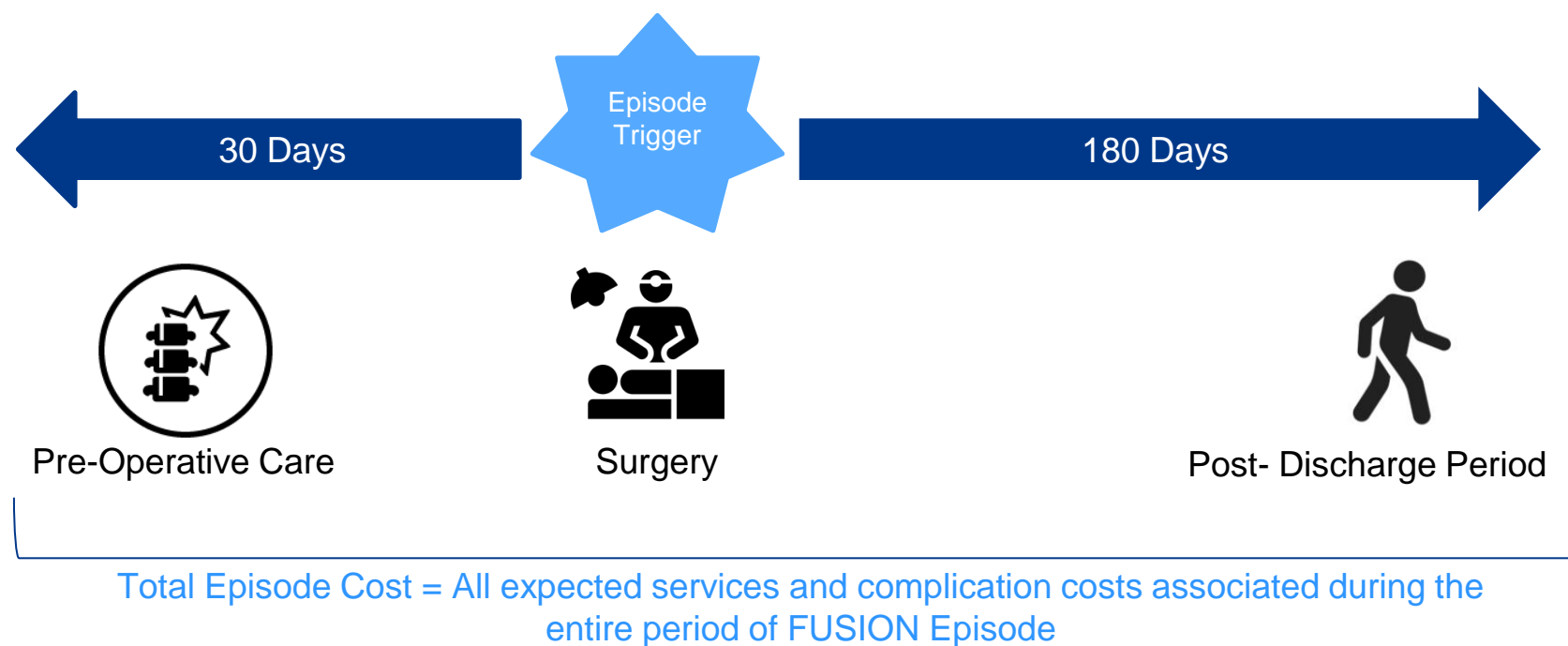
Complications – ICD-10

Accidental Falls	Decubitus Ulcer	MRSA Pneumonia	Sepsis
Acute CHF / pulm edema	Dehydration	MRSA, Drug Resistant Infections	Severe Sepsis
Acute cor pulmonale	Delirium, Encephalopathy	Opportunistic Infections	Shock / Cardiac Arrest
Acute esophagitis, acute gastritis, duodenitis	Dermatitis, Urticaria	Other bacterial infections	Shock during or following cardiac surgery
Acute Kidney Failure	Diabetes, poor control	Other Bacterial Pneumonia	Shock during or post-procedure
Acute Osteomyelitis	dic, coagulation, hemorrhagic disorders	Other bone infections	Sinus Node Dysfunction
Adverse effects of drugs	empyema, lung abscess	Other cardiac arrhythmias	Skin - other
Altered mental status	Esophageal Reflux and Other Esophagitis	Other cerebral complications	Skin and subcutaneous tissue infections
Anal and rectal conditions	Fluid Electrolyte Acid Base Problems	Other lower respiratory disease	STEMI
Aspiration Pneumonia	Foreign body left during procedure	other lung complications	Subendocardial Infarct
Atrial Flutter / Fibrillation	Gastroenteritis	Other lung problems	Suicide or Self-inflicted Injury
Bacteremia, SIRS, no organ dysfunction	GI Bleed	Other Mental Disorders	Supraventricular Tachyarrhythmias
Bladder Dysfunction, hemorrhage	Gram Negative Pneumonia	Other Phlebitis, Lymphangitis, varices	Thromboembolic Stroke
C-Difficile Infection	HAC 02: Air Embolism	Other Staph Pneumonia	Toxic Effects of Substances
Cellulitis, Skin Infection	HAC 04: Stage III and IV Pressure Ulcers	Overdose, Poisonings	Transfusion, Infusion related complications
Chronic and Unspecified Osteomyelitis	HAC 09: Manifestations of Poor Glycemic Control	Perforation, Peritonitis, Abd Abscess	Transient cerebral ischemia, TIA
Chronic Fungal and Other Pneumonias	Hemorrhage	Periprosthetic fracture	Urethral Stricture
Coma, persistent vegetative state	Hemorrhagic Stroke	Phlebitis, Deep vein thrombosis (DVT)	Urinary Complications
Compl of joint prosthesis, orthopedic proced	Hepatorenal Syndrome	Poisoning by Opiates	Urinary Frequency & other symptoms
Complication of genitourinary device	Hypertensive Urgency	Poisoning by Psychostimulants	Urinary Incontinence
Complication of Implanted device, graft	Hypotension / Syncope	Post Laminectomy Syndrome	Urinary Tract Infection
Complication of nervous system device	Infective Arthritis	Pulmonary Embolism	Vascular Insufficiency of intestine
Complications from Central Line	Influenza with Pneumonia	Pyoderma	Vascular Prosthetic Device/Graft Complication
Complications from chemotherapy	Intestinal Obstruction	Pyogenic Arthritis	Ventilator Associated Pnuemonia
Complications of anesthesia	Intraspinal abscess	Recent AMI	Ventilator Dependence
complications of medical care	IVC & other intra-abd venous thrombosis	Resp Failure following trauma / surgery	Ventricular Arrhythmias
complications of surgical procedures	Lung disease from opportunistic infections	Respiratory Failure	Viral Pneumonia
Complications of surgical procedures or medical care	Malfunction / Complication of Heart Device	Respiratory Insufficiency	Wound Dehiscence
Debilitating Viral Pneumonia	Meningitis / Encephalitis	Retroperitoneal Abscess	Wound Infections

Lumbar Spine Fusion (FUSION)

The Lumbar Spine Fusion Episode evaluates services that are typical/routine for the expected care and services that are related to associated complications. Patients are defined as those with a primary procedure code of Lumbar Spine Fusion on an inpatient stay service or a procedure code in any position on an outpatient facility/professional service, along with a qualifying diagnosis code.

Episode Length – FUSION



Duration Pre-Trigger Window	Duration Post-Trigger Window
30 Days	180 Days

Episode Triggers – FUSION

Trigger Group Name	Code Type	Codes
Spinal Fusion	CPT	22533, 22558, 22612, 22630, 22633, 22800

Trigger Diagnoses – ICD-10, CPT

Backache
Inflammatory spondylopathies
Low Back Pain, Radiculopathy
Low Back Pain, Radiculopathy, Myelopathy
Major Neurological Deficit
MS - pelvis - sprn/strn
Other arthropathies
Other Back Pain, Radiculopathy, Myelopathy
Other bone infections
Other Spine Problems
Post Laminectomy Syndrome
Spina Bifida
Spinal fusion
Spondylosis; intervertebral disc disorders; other back problems
Sprain Lower Back
Sprains and Strains
Stiff Spine

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	E & M - nursing home	Lab - hematology - blood count - eosinophil count	Other care - bladder / bowel care - other supplies
Alcohol / Drug Use Screening	E & M - other	Lab - hematology - coagulation	Other care - bladder / bowel care - other supplies - diaper / related
Ancillary Services	E & M - prevention	Lab - immunology	Other care - bladder / bowel care - other supplies - skin barrier
Anesthesia	Electrocardiogram - EKG monitoring	Lab - infectious agent dna	Other care - chronic edema - appliance - limb compression
Aortic resection, replacement or anastomosis	HbA1C	Lab - microbiology	Other care - chronic edema - appliance - non - segmental
Bleeding Status	Home Health / Hospice	Lab - microbiology - c & s	Other care - chronic edema - appliance - segmental
Blood Count	Home Health Services	Lab - microbiology - microscopic exam	Other care - chronic edema - complex therapy
Blood transfusion	Hormone Therapy	Lab - microscopic - koh prep	Other care - chronic edema - compression stocking
Blood Type, Coomb's test	Imaging - ct - follow - up	Lab - other hematology	Other care - chronic edema - compressor
Bone Graft / Insertion of Spacers, Devices	Imaging - ct - lower extremity	Lab - pathology consultation	Other care - chronic edema - compressor - non - segmental
Bundled Payment / Medical Home	Imaging - ct - other	Lab - specimen collection - blood - arterial - arterial puncture	Other care - chronic edema - compressor - segmental
Cardiac Stress Test	Imaging - ct - study	Lab - specimen collection - blood - venous - venipuncture	Other care - chronic edema - exterior wrap
Care Plan Oversight	Imaging - mra - lower extremity	Lab - specimen collection - blood - venous - venous port	Other care - chronic edema - gauntlet
Case Management Services	Imaging - mra - pelvis	Lab - specimen collection - specimen handling	Other care - chronic edema - glove
Case Management Services - Behavioral	Imaging - mri - contrast agent	Lab - stat request	Other care - chronic edema - sleeve
CHEMOTHERAPY	Imaging - mri - lumbar spine	Lab - surgical pathology	Other care - chronic edema - surgical stockings
Chest X-Ray	Imaging - mri - other	Lab - therapeutic drug assay	Other care - home care - emergency response system
CHLAMYDIA SCREENING	Imaging - mri - pelvis	Lab - transfusion medicine	Other care - home care - home health aide
Chronic Care Management	Imaging - nuclear - bone scan	Lab - urinalysis	Other care - home care - meals
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - nuclear - localization of inflammation	Laboratory - Chemistry and Hematology	Other care - home care - nursing care
Decompression / Discectomy	Imaging - nuclear - other	Laminectomy	Other care - home care - nursing care - lpn
Diagnostic physical therapy	Imaging - nuclear - other musculoskeletal	Laminectomy, excision intervertebral disc	Other care - home care - nursing care - np
DME - bath / toilet aids	Imaging - other imaging	LEAD SCREENING	Other care - home care - nursing care - rn
DME - beds / accessories	Imaging - other imaging - bone density - dexa	Lipid Level Monitoring	Other care - home care - other care
DME - heat/cold application	Imaging - other imaging - fluoroscopy	Low dose steroids	Other care - home care - other care - attendant care
DME - mobility aids	Imaging - supplies - contrast agent - high osmolar	Markers for Inflammation	Other care - home care - other care - chore care
DME - other	Imaging - supplies - contrast agent - low osmolar	Medication Assisted Management (MAT)	Other care - home care - other care - companion care
DME - patient lifts	Imaging - us - guide - other	Medication Therapy Management Services	Other care - home care - other care - day care
DME - repair / maintenance	Imaging - us - other	Medications (Injections, infusions and other forms)	Other care - home care - other care - homemaker
DME - safety equipment	Imaging - x-ray - chest - other	Metabolic Renal Hepatic Chemistry Panel	Other care - home care - other care - respite care
DME - traction	Imaging - x-ray - discography	Microscopic examination (bacterial smear, culture, toxicology)	Other care - home care - physician supervision
DME - trapeze / other orthopedic device	Imaging - x-ray - myelogram	NewBorn Blood Tests	Other care - home care - rehabilitation - occupational therapy
DME - whirlpool - equipment	Imaging - x-ray - si joints - arthrogram	Online Management	Other care - home care - rehabilitation - physical therapy
DME and supplies	Imaging Abdomen	Opioid Administration / Dispensing (OTP)	Other care - home care - rehabilitation - speech therapy
Drug Delivery implantation	Insertion of catheter or spinal stimulator and injection into spinal canal	Orthotics - orthopedic shoes	Other care - home care - social worker
E & M - consultation	Lab - blood gases	Orthotics - other	Other care - home care - specialized visit
E & M - emergency care	Lab - chemistry	Orthotics - spine	Other care - home care - training
E & M - home visit	Lab - chemistry and toxicology tests	Other care - bladder / bowel care - catheter	Other care - hospice
E & M - hospital	Lab - hematology - blood count	Other care - bladder / bowel care - drainage bag	Other care - long term care - assisted living

Relevant Procedures – CPT / HCPCS, ICD-10

Other care - long term care - residential care	Physician Services - Outpatient	Procedure - spinal canal - injection into spinal canal	Spinal fusion
Other care - nutrition - assessment	Preventive Medicine, Care Coordination	Procedure - spinal canal - other	Spinal Instrumentation / Stabilization
Other care - nutrition - counseling - dietician	Procedure - anesthesia	Procedure - suture - skin - complex wound repair	Supplies
Other care - nutrition - education	Procedure - block - nerve	Procedure - suture - skin - delayed wound closure	Tests - cardiac - ecg - ecg - 12 lead
Other care - nutrition - enteral	Procedure - casting / splinting - application	Procedure - transplant - bone marrow - harvest stem cells	Tests - cardiac - ecg - other
Other care - nutrition - medical food	Procedure - casting / splinting - supplies	Procedure - vascular access - port / pump - insertion	Tests - cardiac stress tests - cardiac perfusion scan - rest / exercise
Other care - nutrition - parenteral - all - inclusive	Procedure - central venous catheter - insertion	Procedures and Reporting	Tests - cardiac stress tests - cardiac stress tests - other
Other care - nutrition - parenteral - pump	Procedure - debridement - wound / infection / burn - debridement	Prosthetic Implant	Tests - neuro - muscle testing
Other care - observation	Procedure - destruction - nerve	Prosthetics - external power	Tests - neuro - ncv / emg
Other care - other	Procedure - excision - skin - shave skin lesion	Prosthetics - implant	Tests - neuro - other
Other care - other - ancillary services	Procedure - graft	Psychiatry Evaluations	Tests - pulmonary - peak flow
Other care - other - back care	Procedure - graft - skin - graft material	Psychiatry Services	Tests - skin
Other care - other - exercise classes	Procedure - i&d - skin - drainage - post - op infection	Psychological and psychiatric evaluation and therapy	Tests - vascular - arterial - extremity
Other care - other - infection control	Procedure - i&d - skin - drainage of abscess	Removal of Spinal Instrumentation Hardware	Tests - vascular - venous
Other care - other - lodging	Procedure - i&d - skin - drainage of hematoma	Risk Assessment	Therapy - acupuncture
Other care - other - meals	Procedure - injection - tendons / joints / etc.	Robotic Surgery	Therapy - activity therapy
Other care - other - medical records	Procedure - injection of skin lesion	Rx - administration - infusion	Therapy - biofeedback
Other care - other - pvd - compressor	Procedure - laminectomy / related	Rx - administration - injection	Therapy - chiropractic / osteopathic manipulation
Other care - other - therapeutic riding	Procedure - microsurgery	Rx - antibiotics - anti-infectives, misc	Therapy - habilitation
Other care - other - weight management	Procedure - neuro - other non - or rx	Rx - antibiotics - cephalosporins	Therapy - hyperbaric oxygen
Other care - pain management - pca / related	Procedure - obesity procedure - restriction	Rx - antibiotics / antivirals / antifungals - infusion	Therapy - neurostimulator - muscle training
Other care - prevention - smoking cessation	Procedure - other dx on musculoskeletal system	Rx - coagulation system - anticoagulants	Therapy - neurostimulator - tens - device
Other care - respiratory - equipment / supplies	Procedure - other non - or rx - chemodervation of eccrine glands	Rx - coagulation system - hemostatics	Therapy - osteogenesis stimulator
Other care - wound care	Procedure - other non - or rx - other non - or skin procedures	Rx - diagnostic rx - roentgenography	Therapy - other
Other care - wound care - growth factor	Procedure - other non - or rx on musculoskeletal system	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Therapy - pt - exercises / activities
Other care - wound care - hyperbaric oxygen	Procedure - other or rx - other or skin procedures	Rx - electrolytic, caloric, water - hydration - unspecified	Therapy - pt - modalities
Other diagnostic cardiovascular procedures	Procedure - other or rx on bone	Rx - electrolytic, caloric, water - multi-mineral prep	Therapy - rehabilitation - related supplies / equipment - motion device
Other diagnostic nervous system procedures	Procedure - other or rx on joints	Rx - electrolytic, caloric, water - potassium supp	Thyroid Function Tests
Other diagnostic procedures (interview, evaluation, consultation)	Procedure - other rx on muscles and tendons	Rx - gi - antiemetics	Transitional Care Management
Other diagnostic radiology and related techniques	Procedure - other spine - rx / dx - injection	Rx - hematopoietic system - hematopoietic growth factors	Transportation - other transportation
Other Laboratory	Procedure - partial excision bone	Rx - hematopoietic system - iron / related	Transportation - paramedic
Other OR therapeutic procedures on musculoskeletal system	Procedure - related supplies - ablation - catheter	Rx - miscellaneous rx	Ungrouped Codes
Other Spine Problems	Procedure - related supplies - access catheter	Rx - miscellaneous rx - enzymes	Urine Protein
Other therapeutic procedures	Procedure - related supplies - graft / repair	Rx - muscle relaxants - muscle relax, skeletal central	Vaccine for flu or Pneumonia
Pathology	Procedure - related supplies - implant	Rx - other	Wellness Assessment
Personal Care Services	Procedure - related supplies - other	Rx - pharmacy fee	X-Ray Thoracolumbar Spine / Pelvis
Physical Therapy / Rehab	Procedure - removal of pins or fixation	Rx - serums, toxoids, vaccines - serums	
Physician Services	Procedure - sedation	Rx - vitamins - multivit prep	
Physician Services - Inpatient	Procedure - spinal canal - catheter	Screen for amino acid disorders	

Relevant Diagnoses – ICD-10

Backache	Other bone infections
Inflammatory spondylopathies	Other Spine Problems
Low Back Pain, Radiculopathy	Post Laminectomy Syndrome
Low Back Pain, Radiculopathy, Myelopathy	Spina Bifida
Major Neurological Deficit	Spondylosis; intervertebral disc disorders; other back problems
MS - pelvis - sprn/strn	Sprain Lower Back
Other arthropathies	Sprains and Strains
Other Back Pain, Radiculopathy, Myelopathy	Stiff Spine

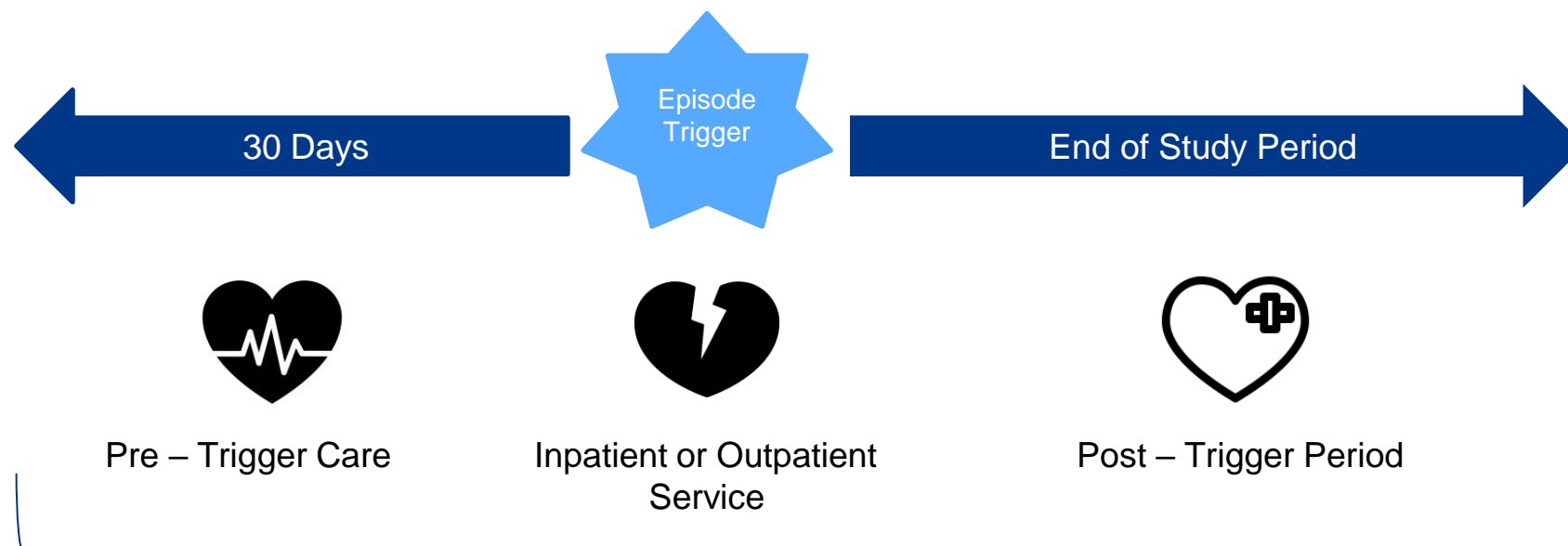
Complications – ICD-10

Accidental Falls	Dermatitis, Urticaria	Other bacterial infections	Shock / Cardiac Arrest
Acute cor pulmonale	Diabetes, poor control	Other Bacterial Pneumonia	Shock during or following cardiac surgery
Acute Kidney Failure	dic, coagulation, hemorrhagic disorders	Other bone infections	Shock during or post-procedure
Acute Osteomyelitis	empyema, lung abscess	Other cardiac arrhythmias	Sinus Node Dysfunction
Adverse effects of drugs	Esophageal Reflux and Other Esophagitis	Other cerebral complications	Skin - other
Altered mental status	Fluid Electrolyte Acid Base Problems	Other lower respiratory disease	Skin and subcutaneous tissue infections
Anal and rectal conditions	Foreign body left during procedure	other lung complications	STEMI
Aspiration Pneumonia	Gastroenteritis	Other lung problems	Subendocardial Infarct
Atrial Flutter / Fibrillation	GI Bleed	Other Mental Disorders	Suicide or Self-inflicted Injury
Bacteremia, SIRS, no organ dysfunction	Gram Negative Pneumonia	Other Phlebitis, Lymphangitis, varices	Supraventricular Tachyarrhythmias
Bladder Dysfunction, hemorrhage	HAC 02: Air Embolism	Other Staph Pneumonia	Thromboembolic Stroke
C-Difficile Infection	HAC 04: Stage III and IV Pressure Ulcers	Overdose, Poisonings	Toxic Effects of Substances
Cellulitis, Skin Infection	HAC 09: Manifestations of Poor Glycemic Control	Perforation, Peritonitis, Abd Abscess	Transfusion, Infusion related complications
Chronic and Unspecified Osteomyelitis	Hemorrhage	Phlebitis, Deep vein thrombosis (DVT)	Transient cerebral ischemia, TIA
Chronic Fungal and Other Pneumonias	Hemorrhagic Stroke	Poisoning by Opiates	Urethral Stricture
Coma, persistent vegetative state	Hepatorenal Syndrome	Poisoning by Psychostimulants	Urinary Complications
Compl of joint prosthesis, orthopedic proced	Hypertensive Urgency	Post Laminectomy Syndrome	Urinary Frequency & other symptoms
Complication of genitourinary device	Hypotension / Syncope	Pulmonary Embolism	Urinary Incontinence
Complication of Implanted device, graft	Infective Arthritis	Pyoderma	Urinary Tract Infection
Complications from Central Line	Influenza with Pneumonia	Pyogenic Arthritis	Vascular Insufficiency of intestine
Complications of anesthesia	Intestinal Obstruction	Recent AMI	Vascular Prosthetic Device/Graft Complication
complications of medical care	Intraspinal abscess	Renovascular and other secondary hypertension	Ventilator Associated Pnuemonia
complications of surgical procedures	IVC & other intra-abd venous thrombosis	Resp Failure following trauma / surgery	Ventilator Dependence
Complications of surgical procedures or medical care	Lung disease from opportunistic infections	Respiratory Failure	Ventricular Arrhythmias
Debilitating Viral Pneumonia	Meningitis / Encephalitis	Respiratory Insufficiency	Viral Pneumonia
Decubitus Ulcer	MRSA Pneumonia	Retroperitoneal Abscess	Wound Dehiscence
Dehydration	MRSA, Drug Resistant Infections	Sepsis	Wound Infections
Delirium, Encephalopathy	Opportunistic Infections	Severe Sepsis	

Osteoarthritis (OSTEOA)

Osteoarthritis (OSTEOA) is a chronic condition open from 30 days prior to the date of the trigger service until the end of the study period. The trigger service can be an inpatient service with an osteoarthritis-specific principal diagnosis code or an outpatient or professional E&M service with an osteoarthritis-specific diagnosis code in any position. The professional trigger also requires a confirming inpatient, outpatient or professional osteoarthritis-related E&M service at least 30 days later. Services with diagnosis codes for signs and symptoms related to Osteoarthritis such as joint derangement have been defined by physician consultants as typical care for Osteoarthritis, and conditions such as deep vein thrombosis or muscle weakness have been labeled as complications.

Episode Length – OSTEOA



Total Episode Cost = All expected services and complication costs associated from index service until the end of the post-trigger window.

Duration Pre-Trigger Window	Duration Post-Trigger Window
30	End of Study Period

Episode Triggers – OSTEOA

Trigger Group Name	Code Type	Codes
Osteoarthritis	ICD10	M19021, M19022, M19029, M19031, M19032, M19039, M19121, M19122, M19129, M19131, M19132, M19139, M19221, M19222, M19229, M19231, M19232, M19239, M1990
Osteoarthritis, ankle & foot	ICD10	M19071, M19072, M19079, M19171, M19172, M19179, M19271, M19272, M19279
Osteoarthritis, Hip	ICD10	M160, M1610, M1611, M1612, M162, M1630, M1631, M1632, M164, M1650, M1651, M1652, M166, M167, M169
Osteoarthritis, Knee	ICD10	M170, M1710, M1711, M1712, M172, M1730, M1731, M1732, M174, M175, M179
Osteoarthritis, other joints	ICD10	M150, M151, M152, M153, M154, M158, M159, M180, M1810, M1811, M1812, M182, M1830, M1831, M1832, M184, M1850, M1851, M1852, M189, M19041, M19042, M19049, M19141, M19142, M19149, M19241, M19242, M19249, M1991, M1992, M1993
Osteoarthritis, Shoulder	ICD10	M19011, M19012, M19019, M19111, M19112, M19119, M19211, M19212, M19219

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	Imaging - ct - lower extremity	Lab - immunology	Other care - home care - social worker
Alcohol / Drug Use Screening	Imaging - ct - lumbar spine	Lab - infectious agent dna	Other care - home care - specialized visit
Ancillary Services	Imaging - ct - other	Lab - panel - hepatitis panel	Other care - home care - training
Arthrocentesis	Imaging - ct - study	Lab - specimen collection - blood - venous - venipuncture	Other care - hospice
Biologic Infusions	Imaging - ct - thoracic spine	Lab - specimen collection - specimen handling	Other care - long term care - assisted living
Bleeding Status	Imaging - ct - upper extremity	Lab - surgical pathology	Other care - long term care - residential care
Blood Count	Imaging - mri - contrast agent	Lab - therapeutic drug assay	Other care - nutrition - assessment
Blood Type, Coomb's test	Imaging - mri - lower extremity	Lab - urinalysis	Other care - observation
Bone Graft / Insertion of Spacers, Devices	Imaging - mri - lumbar spine	Lipid Level Monitoring	Other care - other
Bunionectomy or repair of toe deformities	Imaging - mri - neck spine	Low dose steroids	Other care - other - ancillary services
Care Plan Oversight	Imaging - mri - other	Magnetic resonance imaging	Other care - other - back care
Case Management Services	Imaging - mri - pelvis	Markers for Inflammation	Other care - other - education
Case Management Services - Behavioral	Imaging - mri - thoracic spine	Medication Assisted Management (MAT)	Other care - other - exercise classes
Case Management Services - Oncology	Imaging - mri - upper extremity	Medication Therapy Management Services	Other care - other - lodging
CHEMOTHERAPY	Imaging - nuclear - bone scan	Medications (Injections, infusions and other forms)	Other care - other - meals
Chest X-Ray	Imaging - nuclear - bone scan - radiopharmaceutical	Metabolic Renal Hepatic Chemistry Panel	Other care - other - medical records
Chronic Care Management	Imaging - other imaging	Myelogram	Other care - other - therapeutic riding
Coordinated Care Fees/Services	Imaging - other imaging - bone density	Online Management	Other care - other - weight management
Decompression / Discectomy	Imaging - other imaging - bone density - dexta	Ophthalmologic and otologic diagnosis and treatment	Other care - pain management - pca / related
Depression Screening	Imaging - other imaging - fluoroscopy - guidance	Opioid Administration / Dispensing (OTP)	Other CT scan
Diagnostic physical therapy	Imaging - supplies - contrast agent - high osmolar	Orthotics - cervical	Other diagnostic procedures (interview, evaluation, consultation)
DME - bath / toilet aids	Imaging - supplies - contrast agent - low osmolar	Orthotics - lower extremity	Other diagnostic procedures on musculoskeletal system
DME - beds / accessories	Imaging - supplies - ultrasound related	Orthotics - orthopedic shoes	Other diagnostic radiology and related techniques
DME - heat/cold application	Imaging - us - extremity	Orthotics - other	Other diagnostic ultrasound
DME - mobility aids	Imaging - us - other	Orthotics - spine	Other Laboratory
DME - other	Imaging - us - spine	Orthotics - upper extremity	Other non-OR therapeutic procedures on musculoskeletal system
DME - patient lifts	Imaging - x-ray - ankle - arthrogram	Osteoarthritis	Other operations on ovary
DME - safety equipment	Imaging - x-ray - arthrogram - elbow	Other care - chronic edema - compression stocking	Other OR therapeutic procedures on nose, mouth and pharynx
DME - traction	Imaging - x-ray - discography	Other care - chronic edema - surgical stockings	Other OR therapeutic procedures, female organs
DME - trapeze / other orthopedic device	Imaging - x-ray - hip - arthrogram	Other care - diabetes care - glucose monitoring - lancet	Other OR therapeutic procedures, male genital
DME - whirlpool - equipment	Imaging - x-ray - jaw	Other care - home care - emergency response system	Other physical therapy and rehabilitation
DME and supplies	Imaging - x-ray - knee - arthrogram	Other care - home care - home health aide	Other therapeutic ear procedures
Drug Delivery implantation	Imaging - x-ray - lower leg	Other care - home care - meals	Other therapeutic procedures
E & M - consultation	Imaging - x-ray - other - bone survey	Other care - home care - nursing care	Other therapeutic procedures, hemic and lymphatic system
E & M - emergency care	Imaging - x-ray - other - joint survey	Other care - home care - nursing care - lpn	Partial excision bone
E & M - home visit	Imaging - x-ray - shoulder - arthrogram	Other care - home care - nursing care - np	Pathology
E & M - hospital	Imaging - x-ray - si joints - arthrogram	Other care - home care - nursing care - rn	Peer Services
E & M - nursing home	Imaging - x-ray - tmj	Other care - home care - other care	Physical Therapy / Rehab
E & M - other	Imaging - x-ray - tmj - arthrogram	Other care - home care - other care - attendant care	Physical therapy exercises, manipulation, and other procedures
E & M - prevention	Imaging Abdomen	Other care - home care - other care - chore care	Physician Services
High dose steroids	Incision of pleura, thoracentesis, chest drainage	Other care - home care - other care - companion care	Physician Services - Inpatient
High Risk Behavior Screening	Injections and aspirations of muscles, tendons, bursa, joints and soft tis	Other care - home care - other care - day care	Physician Services - Outpatient
Home Health / Hospice	Insertion, revision, replacement, removal of cardiac pacemaker or cardiove	Other care - home care - other care - homemaker	PQRI
Hormone Therapy	Joint X-Rays	Other care - home care - other care - respite care	Preventive Medicine, Care Coordination
Imaging - ct - abdomen - pelvis	Lab - chemistry	Other care - home care - physician supervision	Procedure - anesthesia
Imaging - ct - cervical spine	Lab - hematology - blood count	Other care - home care - rehabilitation - occupational therapy	Procedure - arthrocentesis
Imaging - ct - follow - up	Lab - hematology - coagulation	Other care - home care - rehabilitation - physical therapy	Procedure - arthroscopy - shoulder

Relevant Procedures – CPT / HCPCS, ICD-10

Procedure - block - nerve	Rx - analg/antipy/nsaids - narcotics	Spinal Fusion	Therapy - pt - exercises / activities
Procedure - casting / splinting - application	Rx - analg/antipy/nsaids - nsaids	Supplies	Therapy - pt - modalities
Procedure - casting / splinting - supplies	Rx - corticosteroids	Tests - neuro - cognitive testing	Therapy - rehabilitation
Procedure - destruction - nerve	Rx - electrolytic, caloric, water - hydration - unspecfied	Tests - neuro - muscle testing	Therapy - rehabilitation - other
Procedure - injection - tendons / joints / etc.	Rx - electrolytic, caloric, water - sodium chlor preps	Tests - neuro - ncv / emg	Therapy - rehabilitation - related supplies / equipment - motion device
Procedure - other spine - rx / dx - injection	Rx - gi - antiemetics	Tests - neuro - other	Thyroid Function Tests
Procedure - spinal canal - injection into spinal canal	Rx - gi - h2 antagonists	Tests - neuro - sleep studies	Total Hip Revision
Procedure - transplant - bone marrow - harvest stem cells	Rx - gi - ppis	Tests - vascular - arterial - extremity	Total Knee Revision
Procedures and Reporting	Rx - gi drug misc,nec	Therapy - acupuncture	Toxicology Screening
Prophylactic vaccinations and inoculations	Rx - hematopoietic system - hematopoietic growth factors	Therapy - activity therapy	Traction, splints, and other wound care
Prosthetics - external power	Rx - miscellaneous rx	Therapy - behavior - evaluation and therapy	Transitional Care Management
Prosthetics - implant	Rx - miscellaneous rx - enzymes	Therapy - behavior - medication management	Transportation - other transportation
Prosthetics - other	Rx - muscle relaxants - muscle relax, neuromusc block	Therapy - behavior - other	Transportation - paramedic
Psychiatry Evaluations	Rx - muscle relaxants - muscle relax, skeletal central	Therapy - biofeedback	Ungrouped Codes
Psychiatry Services	Rx - muscle relaxants - muscle relax, skeletal, misc	Therapy - chiropractic / osteopathic manipulation	Urine Protein
Psychological and psychiatric evaluation and therapy	Rx - other	Therapy - habilitation	Vaccine for flu or Pneumonia
RADIATION THERAPY	Rx - vitamins - multivit prep	Therapy - neurostimulator - other	Wellness Assessment
Radioisotope bone scan	Rx - vitamins - vitamin b / b complex	Therapy - neurostimulator - tens - device	X-Ray Cervical Spine
Risk Assessment	Rx - vitamins - vitamin d	Therapy - neurostimulator - tens - leads	X-Ray Shoulder Scapula Clavicle
Routine chest X-ray	Sexual Behavior Counseling	Therapy - neurostimulator - tens - supplies	X-Ray Thoracolumbar Spine / Pelvis
Rx - administration - infusion	Sinus Drainage Procedures	Therapy - other	
Rx - administration - injection	Smoking / Tobacco Cessation	Therapy - phlebotomy	

Relevant Diagnoses – ICD-10

Aftercare	MS - hnd / fngr - arthropathy - other arthropathy	MS - nos - personal hx	Other Shoulder Derangements
Anterior Cruciate Ligament Sprain	MS - hnd / fngr - articular cartilage disorder	MS - nos- symptoms / findings - nec / nos	Othr - aftercare
Anxiety Disorders	MS - hnd / fngr - jnt derangmnt - nos	MS - shldr jt replacement	Othr - fitting - other device
Arthropathy hip, pelvis, thigh	MS - hnd / fngr - jnt derangmnt - other	MS - soft tissue - nos- nec / nos	Othr - follow-up exam - nec
complications of medical care	MS - hnd / fngr - loose body	MS - soft tissue - nos- symptoms / findings	Othr - long-term use other medication
Cruciate Ligament Sprain	MS - hnd/fngr - effusion	MS - spine - crvcl - spondylosis	Othr - other
CV - abnl imaging study	MS - hnd/fngr - other sxs / findings	MS - spine - deformity	Othr - other aftercare
Deformities, lower limb	MS - hnd/fngr - pain	MS - toe - acqrd defrmt - nos	Othr - rehabilitation
Dislocation of Knee	MS - hnd/fngr - stiffness	MS - toe - acqrd defrmt - other	Pain, unspecified
Fistula, Effusion in Joint	MS - joint - nos - difficulty walking	MS - toe - bunion	Patella Injuries and Disorders
Hip / Pelvis deformities	MS - joint - nos - effusion	MS - toe - claw toe	Periprosthetic fracture
Immune sys - screening for rheumatoid arthritis	MS - joint - nos - other symptoms	MS - toe - hallux malleus	Persistent Cognitive and Gait Abnormalities
Inflammatory Arthropathies	MS - joint - nos - pain	MS - toe - hallux rigidus	Personal history of musculoskeletal disorders
Injury to nerves, shoulder region	MS - joint - nos - stiffness	MS - toe - hallux valgus	Phlebitis, Deep vein thrombosis (DVT)
Injury to other ligaments, articular cartilage, Knee	MS - joint nos - arthropathy - nos	MS - toe - hallux varus	Physical Activity
Knee deformities	MS - joint nos - difficulty walking	MS - toe - other hammer toe	Posterior Cruciate Ligament Sprain
Knee derangements	MS - joint nos - disorder - nos - nos	MS - trunk - disfigurement	Preventive Screening
Low Back Pain, Radiculopathy	MS - joint nos - jnt derangmnt - loose body	MS - trunk - mechanical / motor problems	Prvn - admin exam / visit
Malaise & Fatigue	MS - joint nos - jnt derangmnt - nos	NS - acute pain - other	Prvn - encounter for lab test
Meniscus Injury of Knee	MS - joint nos - jnt derangmnt - other	NS - chronic pain - other	Prvn - encounter for x-ray
MS - ankl / ft - acqrd defrmt - other	MS - joint nos - other arthropathy	Observation/Examination	Prvn - routine exam - other
MS - extremity - nos - other problems	MS - knee - difficulty walking	Open wounds of extremities	Prvn - routine medical exam
MS - extrmt - other sxs / findings	MS - knee - jnt derangmnt - nec / nos	Orthostatic Hypotension / Dizziness	Prvn - screening - other
MS - extrmt - swelling	MS - knee - other arthropathy	Osteoarthritis	Sprains and Strains
MS - fngr - acqrd defrmt - nec / nos	MS - knee - other sxs / findings	Osteoarthritis, ankle & foot	Sxs - chronic fatigue syndrome
MS - fngr -allet finger	MS - knee - pain	Osteoarthritis, Hip	Sxs - general symptoms / debility / morbidity - nec
MS - ft - anomaly - other deformity	MS - knee - stiffness	Osteoarthritis, Knee	Sxs - malaise / fatigue
MS - ft - anomaly - valgus	MS - knee jt - replacement	Osteoarthritis, other joints	Sxs - other general symptoms
MS - ft - anomaly - varus	MS - muscle - nos - muscle atrophy	Osteoarthritis, Shoulder	Sxs - symptoms -other
MS - head / neck - acquired deformity	MS - muscle - nos - muscle weakness	Other aftercare	Sxs - symptoms -other - other
MS - hip - protrusion of acetabulum	MS - muscle - nos - myalgia	Other arthropathies	Tobacco Use
MS - hip jt replacement	MS - nos - aftercare	Other deformities, limb, other sites	
MS - hnd / fngr - ankylosis	MS - nos - family hx	Other osteopathic disorders	

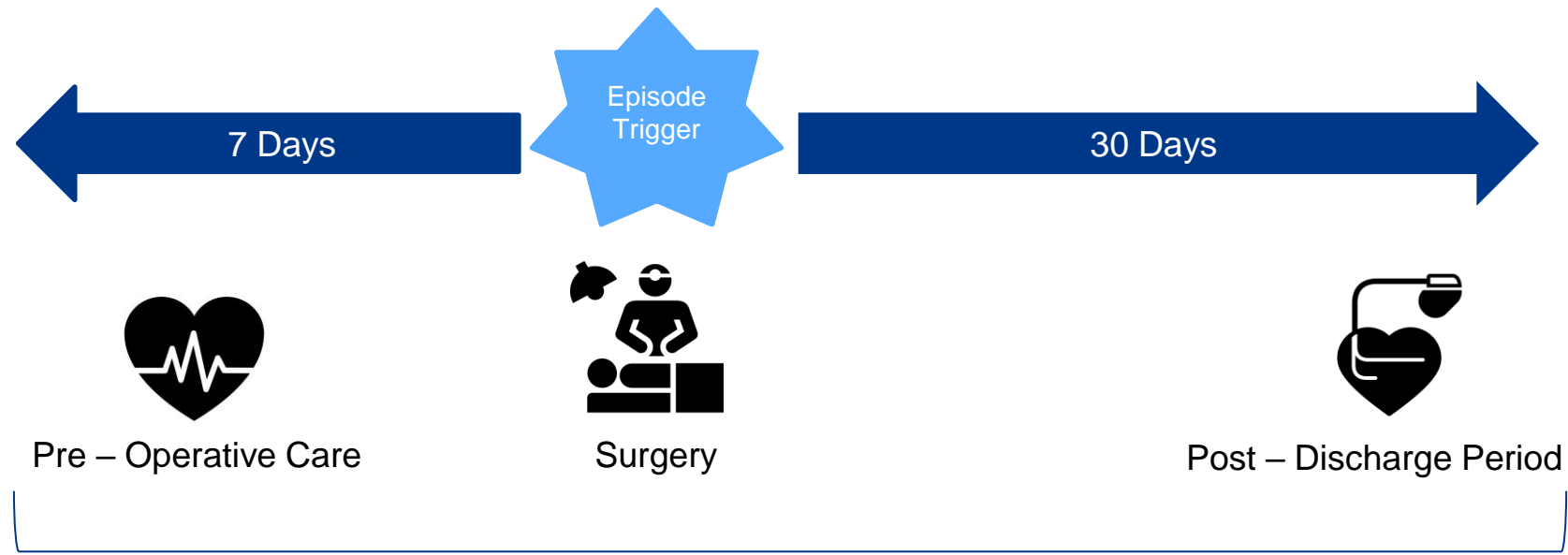
Complications – ICD-10

Accidental Falls	complications of surgical procedures	Hypotension / Syncope	Transfusion, Infusion related complications
Acute Kidney Failure	Decubitus Ulcer	Intraspinal abscess	Urethral Stricture
Adverse effects of drugs	Dehydration	Other Phlebitis, Lymphangitis, varices	Urinary Frequency & other symptoms
Cellulitis, Skin Infection	Fluid Electrolyte Acid Base Problems	Othr - aftercare	Urinary Tract Infection
Compl of joint prosthesis, orthopedic proced	Gastroenteritis	Overdose, Poisonings	Wound Infections
Complication of Implanted device, graft	HAC 02: Air Embolism	Phlebitis, Deep vein thrombosis (DVT)	
Complications from Central Line	HAC 04: Stage III and IV Pressure Ulcers	Pulmonary Embolism	
complications of medical care	HAC: Catheter Associated UTIs	Respiratory Failure	

Pacemaker/ Defibrillator (PCMDFR)

The Pacemaker/ Defibrillator Episode evaluates services that are typical/routine for the expected care, and services that are related to associated complications. Patients are defined as those with a primary procedure code of Pacemaker/ Defibrillator on an inpatient stay service or a trigger procedure code in any position on an outpatient facility/professional service, along with a qualifying diagnosis code.

Episode Length – PCMDFR



Total Episode Cost = All expected services and complication costs associated during the entire period of the Pacemaker/ Defibrillator episode.

Duration Pre-Trigger Window	Duration Post-Trigger Window
7 Days	30 Days

Episode Triggers – PCMDFR

Trigger Group Name	Code Type	Codes
Insertion of Defibrillator	CPT HCPCS	33240-33271 0319T, C1721-C1882, G0448
Insertion of Generator alone	CPT HCPCS	33212-33231 0321T
Insertion of Leads	CPT	33224-33225
Insertion of Pacemaker	CPT HCPCS	33206-33214, 71090, 0387T C178—C1786, C2619-C2621

Trigger Diagnoses – ICD-10, CPT / HCPCS

Acute CHF / pulm edema	Heart Valve Disorders	Previous CABG
Acute cor pulmonale	Highgrade Heart Block	Previous Heart Lung transplant
Acute myocardial infarction	History of Sudden Death	Previous heart valve replacement
Acute pericarditis	Hypertensive Heart Disease	Previous PCI
Artificial Heart, Assist Device	Hypertensive Heart Disease w Heart Failure	Recent AMI
Atrial Flutter / Fibrillation	Hypertensive Heart Disease w Heart Failure & CKD	Resp - abnormal chest sounds
Cardiomyopathy	Hypotension / Syncope	Resp - cyanosis
Cardiovascular Syphilis	Insertion of Defibrillator	Resp - hyperventillation
Chronic Heart Failure, Degeneration	Insertion of Generator alone	Resp - shortness of breath
Chronic, adhesive, constrictive pericarditis	Insertion of leads	Respiratory Insufficiency
Cngntl - CV - other circulatory - other	Insertion of Pacemaker	Shock / Cardiac Arrest
Congenital Heart Disease w Structural Defects	Malfunction / Complication of Heart Device	Sinus Node Dysfunction
Congestive heart failure; nonhypertensive	Marfan's Syndrome	STEMI
Coronary Artery Anomaly	Myocarditis	Subendocardial Infarct
CV - abnl cv test nec nos	Orthostatic Hypotension / Dizziness	Supraventricular Tachyarrhythmias
CV - abnl ecg	Other cardiac arrhythmias	Sxs - symptoms -other - other
CV - av block - 1st degree	Other Cardiovascular Disease	Tobacco Use
CV - cardiac murmurs	Other Gonococcal Infections	Transplanted Heart
CV - edema	Other Heart Blocks / Conduction Disorders	Transplanted Heart w Angina
CV - other CV ds	Other heart disease	Transplanted heart w compl, infection, reject
CV - other heart ds	Other lung problems	Tumor of the Heart
CV - prim pulm ht	Other pericarditis	Unstable angina
CV - right bundle branch block	Pacemaker, Defibrillator in place	Vascular Prosthetic Device/Graft Complication
CV - s/p tpa rx	Poisoning by Assault	Ventricular Arrhythmias
Heart Aneurysm and other Sequelae of AMI	Premature Beats	
Heart Failure unspecified as acute or chronic	Prev Heart lung trans w compl, infect, reject	

Relevant Procedures – ICD-10, CPT / HCPCS

Advance care planning	Imaging - angiography - aortogram	Lab - stat request	Other care - nutrition - education
Alcohol / Drug Use Screening	Imaging - arteriography - extremities	Lab - therapeutic drug assay	Other care - nutrition - enteral
Ancillary Services	Imaging - ct - cardiac	Lab - transfusion medicine	Other care - nutrition - parenteral - pump
Anesthesia	Imaging - ct - head / brain	Lab - tumor marker	Other care - observation
Aortic resection, replacement or anastomosis	Imaging - cta - coronary	Lab - urinalysis	Other care - other
Bleeding Status	Imaging - mri - other	Lipid Level Monitoring	Other care - other - ancillary services
Blood Count	Imaging - nuclear - lung scan	Low dose steroids	Other care - other - education
Blood Gases, Pulse Oximetry	Imaging - nuclear - radiopharmaceutical - radiopharmaceutical - other	Lung Function Tests	Other care - other - exercise classes
Blood transfusion	Imaging - other imaging	LVEF < 40% or LV systolic dysfunction	Other care - other - external defibrillator
Blood Type, Coomb's test	Imaging - other imaging - fluoroscopy	Magnetic resonance imaging	Other care - other - infection control
Bundled Payment / Medical Home	Imaging - other imaging - fluoroscopy - guidance	Markers for Inflammation	Other care - other - lead assessment
Cardiac cath & Angiogram	Imaging - pet - other	Medication Assisted Management (MAT)	Other care - other - pacemaker - monitor
Cardiac Stress Test	Imaging - supplies - contrast agent - high osmolar	Medication Therapy Management Services	Other care - other - pvd - compressor
Care Plan Oversight	Imaging - supplies - contrast agent - low osmolar	Medications (Injections, infusions and other forms)	Other care - other - weight management
Case Management Services	Imaging - supplies - ultrasound related	Metabolic Renal Hepatic Chemistry Panel	Other care - prevention - smoking cessation
Case Management Services - Behavioral	Imaging - therapeutic procedure - abscess drainage	Online Management	Other care - respiratory - equipment / supplies - apnea monitor
CHEMOTHERAPY	Imaging - therapeutic procedure - other therapeutic procedure	Opioid Administration / Dispensing (OTP)	Other care - respiratory - equipment / supplies - peak flow meter
Chest X-Ray	Imaging - us - guide - other	Other - non - covered	Other care - respiratory - other
Chronic Care Management	Imaging - us - intravascular	Other care - chronic edema - compression stocking	Other care - respiratory - rehabilitation
Coordinated Care Fees/Services	Imaging - us - other	Other care - chronic edema - surgical stockings	Other care - respiratory - ventilator management
Coronary Thrombolysis	Imaging - venography - extremities	Other care - home care - emergency response system	Other care - respiratory therapy
Diagnostic physical therapy	Imaging - venography - other	Other care - home care - home health aide	Other care - wound care
Diagnostic ultrasound of abdomen or retroperitoneum	Imaging - venography - vena cava	Other care - home care - meals	Other care - wound care - electromagnetic therapy
Diagnostic ultrasound of heart (echocardiogram)	Imaging Abdomen	Other care - home care - nursing care	Other care - wound care - growth factor
DME - safety equipment	Insertion of Defibrillator	Other care - home care - nursing care - lpn	Other care - wound care - hyperbaric oxygen
DME and supplies	Insertion of Generator alone	Other care - home care - nursing care - np	Other diagnostic cardiovascular procedures
Drug Delivery implantation	Insertion of leads	Other care - home care - nursing care - rn	Other diagnostic procedures (interview, evaluation, consultation)
E & M - consultation	Insertion of Pacemaker	Other care - home care - other care	Other diagnostic ultrasound
E & M - emergency care	Insertion, revision, replacement, removal of cardiac pacemaker or cardioverter/d	Other care - home care - other care - attendant care	Other Laboratory
E & M - home visit	Insertion; revision; replacement; removal of cardiac pacemaker or cardioverter/d	Other care - home care - other care - chore care	Other non-OR therapeutic cardiovascular procedures
E & M - hospital	Lab - chemistry	Other care - home care - other care - companion care	Other OR heart procedures
E & M - nursing home	Lab - hematology - blood count	Other care - home care - other care - day care	Pacemaker Defibrillator Check
E & M - other	Lab - hematology - blood count - eosinophil count	Other care - home care - other care - homemaker	Pathology
E & M - prevention	Lab - hematology - coagulation	Other care - home care - other care - respite care	Personal Care Services
Electrocardiogram - EKG monitoring	Lab - immunology	Other care - home care - physician supervision	Physical Therapy / Rehab
Electrographic cardiac monitoring	Lab - infectious agent dna	Other care - home care - social worker	Physician Services
Electrophysiology Studies, Cryoablation	Lab - other clinical lab	Other care - home care - specialized visit	Physician Services - Inpatient
Heart Echo / Ultrasound	Lab - other hematology	Other care - home care - training	Physician Services - Outpatient
Heart valve procedures	Lab - specimen collection - blood - arterial - arterial puncture	Other care - hospice	PQRI
High dose steroids	Lab - specimen collection - blood - venous - venipuncture	Other care - long term care - assisted living	Preventive Medicine, Care Coordination
Home Health / Hospice	Lab - specimen collection - blood - venous - venous port	Other care - long term care - residential care	Procedure - anesthesia
Home Health Services	Lab - specimen collection - specimen handling	Other care - nutrition - assessment	Procedure - artery - extremity - angioplasty - transluminal / percutaneous
Hormone Therapy	Lab - specimen collection - urine	Other care - nutrition - counseling - dietician	Procedure - artery - extremity - atherectomy - transluminal / percutaneous

Relevant Procedures – ICD-10, CPT / HCPCS

Procedure - artery - extremity - exploration	Psychiatry Evaluations	Rx - diuretics, loop diuretics	Tests - cardiac - radiopharmaceuticals
Procedure - artery - extremity - injection of thrombin	Psychiatry Services	Rx - diuretics, osmotic	Tests - cardiac - swan ganz
Procedure - artery - extremity - ligation	Psychological and psychiatric evaluation and therapy	Rx - diuretics, thiazides / related	Tests - cardiac stress tests - cardiac perfusion scan - rest / exercise
Procedure - artery - iliac - repair / graft - endovascular	Risk Assessment	Rx - electrolytic, caloric, water - calcium supplements	Tests - cardiac stress tests - cardiac stress tests - other
Procedure - artery - nos - thrombolysis	Robotic Surgery	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Tests - cardiovascular - other
Procedure - artery / vein - nos - closure / closure device	Rx - administration - infusion	Rx - electrolytic, caloric, water - hydration - unspecified	Tests - neuro - sleep studies
Procedure - artery / vein - nos - other	Rx - administration - injection	Rx - electrolytic, caloric, water - multi-mineral prep	Tests - other cardiac scans
Procedure - artery / vein - nos - thrombectomy catheter	Rx - allergy - antihistamines / comb	Rx - electrolytic, caloric, water - potassium supp	Tests - other cardiac scans - infarct scan
Procedure - cardiac - other	Rx - analg/antipy/nsaids - narcotics	Rx - electrolytic, caloric, water - replacement preparations, misc	Tests - pulmonary - other
Procedure - cardiac assist device - intra - aortic balloon	Rx - analg/antipy/nsaids - nsaids	Rx - electrolytic, caloric, water - sodium chlor preps	Tests - pulmonary - peak flow
Procedure - cardiac assist device - lvad	Rx - antibiotics - aminoglycosides	Rx - gi - antichol/antispasmodics	Tests - vascular - arterial - extremity
Procedure - cardioversion	Rx - antibiotics - anti-infectives, misc	Rx - gi - antiemetics	Tests - vascular - venous
Procedure - catheter - arterial - arterial line for monitoring	Rx - antibiotics - cephalosporins	Rx - gi - h2 antagonists	Therapy - behavior - partial hospitalization
Procedure - catheter - arterial - catheter in aorta	Rx - antibiotics - macrolides	Rx - gi - ppis	Therapy - cardiac rehab
Procedure - catheter - arterial - other	Rx - antibiotics - penicillins	Rx - hematopoietic system - hematopoietic growth factors	Therapy - habilitation
Procedure - catheter - venous - other - other	Rx - antibiotics - quinolones	Rx - miscellaneous rx	Therapy - neurostimulator - tens - leads
Procedure - catheter - venous - other - vena cava or selective branch catheter	Rx - antibiotics - sulfonamides / comb	Rx - miscellaneous rx - anesthetics, local	Therapy - neurostimulator - tens - supplies
Procedure - central venous catheter - fluoroscopy - guidance	Rx - antibiotics - tetracyclines	Rx - miscellaneous rx - enzymes	Therapy - other
Procedure - central venous catheter - insertion	Rx - antibiotics, misc	Rx - other	Therapy - phlebotomy
Procedure - central venous catheter - removal	Rx - autonomic rx - nicotine preps	Rx - pharmacy fee	Therapy - pt - exercises / activities
Procedure - central venous catheter - repair / maintenance	Rx - autonomic rx - parasympathomimetics	Rx - respiratory - beta agonists	Therapy - transfusion - administration
Procedure - central venous catheter - replacement	Rx - autonomic rx - sympathomimetic rx	Rx - respiratory - methylxanthines	Therapy - transfusion - blood
Procedure - chest tube / thoracentesis - insertion of chest tube	Rx - b-lactam antibiotics	Rx - respiratory - phenylephrine	Therapy - transfusion - granulocytes
Procedure - chest tube / thoracentesis - thoracentesis	Rx - blood derivatives	Rx - serums, toxoids, vaccines - serums	Therapy - transfusion - plasma
Procedure - extracorporeal circulation	Rx - cardiovascular system - antiarrhythmic rx	Rx - vitamins - multivit prep	Therapy - transfusion - platelets
Procedure - other non - or rx - other non - or skin procedures	Rx - cardiovascular system - beta blockers	Rx - vitamins - vitamin b / b complex	Thyroid Function Tests
Procedure - pacemaker / defibrillator - other - pacemaker / defibrillator proced	Rx - cardiovascular system - cardiac drugs	Rx - vitamins - vitamin d	Traction, splints, and other wound care
Procedure - pacemaker / defibrillator - transcutaneous pacing	Rx - cardiovascular system - cardiac glycosides	Shock / Cardiac Arrest	Transitional Care Management
Procedure - pacemaker / defibrillator - transesophageal pacing	Rx - cardiovascular system - hypotensive rx	Smoking / Tobacco Cessation	Transportation - other transportation
Procedure - pericardial procedures - pericardial window / pericardiectomy	Rx - cardiovascular system - natriuretic peptides	Subsequent Physician Services Inpatient	Transportation - paramedic
Procedure - pericardiocentesis	Rx - cardiovascular system - vasodilating rx	Supplies	Transvenous Pacemaker
Procedure - peripheral venous catheter	Rx - central nervous system - antidepressants	Tests - cardiac - analysis - pace / defib	Ungrouped Codes
Procedure - related supplies - access catheter	Rx - central nervous system - anxiolytic/sedative/hypnot nec	Tests - cardiac - doppler	Urine Protein
Procedure - related supplies - catheter	Rx - central nervous system - barbiturates	Tests - cardiac - ecg - ecg - 12 lead	Vaccine for flu or Pneumonia
Procedure - related supplies - implant	Rx - central nervous system - benzodiazepines	Tests - cardiac - ecg - other	Vitamin K administration
Procedure - related supplies - retrieval - device	Rx - central nervous system - tranq/antipsychotics	Tests - cardiac - ecg monitoring - event recorder	Wellness Assessment
Procedure - sedation	Rx - central nervous system - vascular 5ht1 agonists	Tests - cardiac - echo - contrast agent	
Procedure - vascular access - port / pump - insertion	Rx - coagulation system - anticoagulants	Tests - cardiac - echo - intracardiac	
Procedure - vein - nos - angioplasty	Rx - coagulation system - antiheparin agnt	Tests - cardiac - electrophysiology - other	
Procedure - vein - vena cava - filter	Rx - coagulation system - antiplatelet rx	Tests - cardiac - electrophysiology - supplies - other	
Procedures and Reporting	Rx - coagulation system - hemostatics	Tests - cardiac - electrophysiology - tilt table evaluation	
Prosthetics - implant	Rx - coagulation system - thrombolytic rx	Tests - cardiac - monitoring - chf	
Prosthetics - other	Rx - diuretics - diuretic, carb anhydrase inhib	Tests - cardiac - other	

Relevant Diagnoses – ICD-10

Acute CHF / pulm edema	Heart Failure unspecified as acute or chronic	Previous heart valve replacement
Acute cor pulmonale	Heart Valve Disorders	Previous PCI
Acute myocardial infarction	Highgrade Heart Block	Recent AMI
Acute pericarditis	History of Sudden Death	Resp - abnormal chest sounds
Artificial Heart, Assist Device	Hypertensive Heart Disease	Resp - cyanosis
Atrial Flutter / Fibrillation	Hypertensive Heart Disease w Heart Failure	Resp - hyperventilation
Cardiomyopathy	Hypertensive Heart Disease w Heart Failure & CKD	Resp - shortness of breath
Cardiovascular Syphilis	Hypotension / Syncope	Respiratory Insufficiency
Chronic Heart Failure, Degeneration	Malfunction / Complication of Heart Device	Shock / Cardiac Arrest
Chronic, adhesive, constrictive pericarditis	Marfan's Syndrome	Sinus Node Dysfunction
Cngntl - CV - other circulatory - other	Myocarditis	STEMI
Congenital Heart Disease w Structural Defects	Orthostatic Hypotension / Dizziness	Subendocardial Infarct
Congestive heart failure; nonhypertensive	Other cardiac arrhythmias	Supraventricular Tachyarrhythmias
Coronary Artery Anomaly	Other Cardiovascular Disease	Sxs - symptoms -other - other
CV - abnl cv test nec nos	Other Gonococcal Infections	Tobacco Use
CV - abnl ecg	Other Heart Blocks / Conduction Disorders	Transplanted Heart
CV - av block - 1st degree	Other heart disease	Transplanted Heart w Angina
CV - cardiac murmurs	Other lung problems	Transplanted heart w compl, infection, reject
CV - edema	Other pericarditis	Tumor of the Heart
CV - other CV ds	Pacemaker, Defibrillator in place	Unstable angina
CV - other heart ds	Poisoning by Assault	Vascular Prosthetic Device/Graft Complication
CV - prim pulm ht	Premature Beats	Ventricular Arrhythmias
CV - right bundle branch block	Prev Heart lung trans w compl, infect, reject	
CV - s/p tpa rx	Previous CABG	
Heart Aneurysm and other Sequelae of AMI	Previous Heart Lung transplant	

Complications – ICD-10

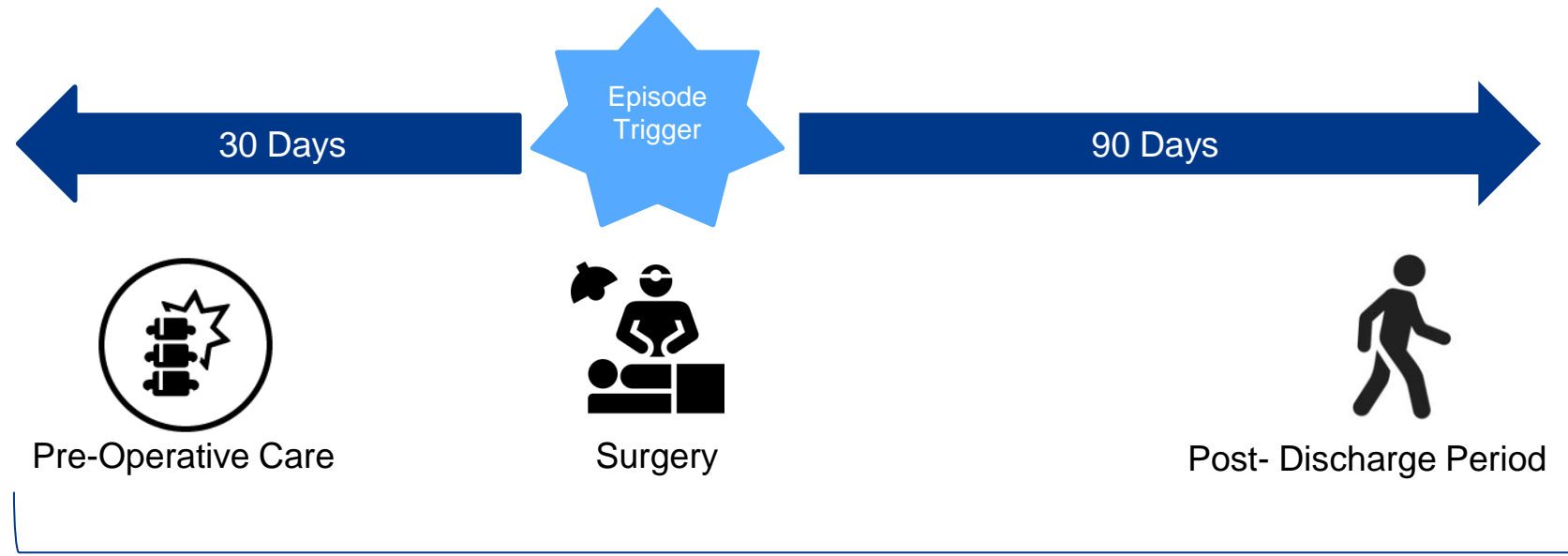
Accidental Falls	dic, coagulation, hemorrhagic disorders	Other Phlebitis, Lymphangitis, varices
Acute CHF / pulm edema	empyema, lung abscess	Other Staph Pneumonia
Acute cor pulmonale	Endocarditis	Othr - other
Acute esophagitis, acute gastritis, duodenitis	Fluid Electrolyte Acid Base Problems	Peripheral Angiopathy w Gangrene
Acute Kidney Failure	Foreign body left during procedure	Peripheral Embolism
Acute myocardial infarction	Gastroenteritis	Phlebitis, Deep vein thrombosis (DVT)
Adverse effects of drugs	GI Bleed	Pulmonary Embolism
Altered mental status	Gram Negative Pneumonia	Resp Failure following trauma / surgery
arterial thromboembolism	HAC 02: Air Embolism	Respiratory Failure
Aspiration Pneumonia	HAC 04: Stage III and IV Pressure Ulcers	Respiratory Insufficiency
Bacteremia, SIRS, no organ dysfunction	HAC 09: Manifestations of Poor Glycemic Control	rhabdomyolysis
C-Difficile Infection	Hemorrhage	Sepsis
Chronic Fungal and Other Pneumonias	Hemorrhagic Stroke	Severe Sepsis
Coma, persistent vegetative state	Hepatorenal Syndrome	Shock / Cardiac Arrest
Complication of genitourinary device	Hypertensive Urgency	Shock during or following cardiac surgery
Complication of Implanted device, graft	Hypotension / Syncope	Shock during or post-procedure
Complications after heart procedures	Influenza with Pneumonia	Skin - other
Complications from Central Line	Interstitial Emphysema	STEMI
Complications from chemotherapy	Malfunction / Complication of Heart Device	Thromboembolic Stroke
Complications of anesthesia	Meningitis / Encephalitis	Transfusion, Infusion related complications
complications of medical care	MRSA Pneumonia	Transient cerebral ischemia, TIA
complications of surgical procedures	MRSA, Drug Resistant Infections	Urethral Stricture
Complications of surgical procedures or medical care	Other bacterial infections	Urinary Frequency & other symptoms
Debilitating Viral Pneumonia	Other Bacterial Pneumonia	Urinary Tract Infection
Decubitus Ulcer	Other cerebral complications	Vascular Prosthetic Device/Graft Complication
Dehydration	Other lower respiratory disease	Ventilator Associated Pnuemonia
Delirium, Encephalopathy	other lung complications	Ventilator Dependence
Dermatitis, Urticaria	Other lung problems	Wound Dehiscence
Diabetes, poor control	Other Mental Disorders	Wound Infections

Prostatectomy (PRSCMY)

Services and costs associated with a procedure of Prostatectomy (PRSCMY) are grouped together to include the index stay during which the procedure was performed, a 30-day look back period to capture pre-operative diagnostic workup leading to the surgery and a 90-day post-discharge period to capture post-operative care. Patients are identified as those with a primary procedure code of Prostatectomy on an inpatient stay service or a Prostatectomy procedure code in any position on an outpatient facility/professional service, along with a qualifying diagnosis code.

As part of the Prostatectomy episode, we evaluate services that are 1) typical or routine and considered part of expected care for Prostatectomy; and 2) those that are related to complications associated with Prostatectomy.

Episode Length – PRSCMY



Total Episode Cost = All expected services and complication costs associated during the entire period of PRSCMY Episode

Duration Pre-Trigger Window	Duration Post-Trigger Window
30 Days	90 Days

Episode Triggers – PRSCMY

Trigger Group Name	Code Type	Codes
Cryoablation of Prostate	ICD10	0V500ZZ, 0V503ZZ, 0V504ZZ
Laparoscopic Prostatectomy	CPT ICD10	55866 0VT04ZZ, XV508A4
Open prostatectomy	ICD10	0VT00ZZ
Perineal Prostatectomy	CPT	55801, 55810, 55812, 55815
Retropubic Prostatectomy	CPT	55831, 55840, 55842, 55845
Suprapubic Prostatectomy	CPT	55821

Trigger Diagnoses – ICD-10, CPT

Neoplsm - abnrml findings - prostate
Neoplsm - malignant neoplsm - personal hx - prostate
Neoplsm - screening - prostate
Other disease of prostate
Othr - other
Prostate Cancer
Prostate Cancer, uncertain behavior
Prostate Cancer-in-situ
Prostatic Hypertrophy
Prostatic Hypertrophy w Obstruction

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	High dose steroids	Imaging - us - scrotum	Nephrotomy and nephrostomy
Alcohol / Drug Use Management	Home Health / Hospice	Imaging - us - transrectal	NewBorn Blood Tests
Alcohol / Drug Use Screening	Hormone Therapy	Imaging - x-ray - abdomen	Online Management
Ancillary Services	Imaging - ct - chest	Imaging - x-ray - male genital	Open prostatectomy
Bleeding Status	Imaging - ct - follow - up	Imaging - x-ray - other - joint survey	Opioid Administration / Dispensing (OTP)
		Imaging - x-ray - urinary tract - cystography / voiding cystourethrogram	
Blood Count	Imaging - ct - guidance	Imaging Abdomen	Other care - bladder / bowel care - catheter
Blood transfusion	Imaging - ct - head / brain	IMMUNOTHERAPY	Other care - bladder / bowel care - drainage bag
Blood Type, Coomb's test	Imaging - ct - other	Lab - cancer antigen - psa - screening	Other care - bladder / bowel care - other supplies
Bundled Payment / Medical Home	Imaging - mra - chest	Lab - chemistry	Other care - bladder / bowel care - other supplies - diaper / related
Cardiac Stress Test	Imaging - mri - brain	Lab - cytogenetics	Other care - bladder / bowel care - other supplies - skin barrier
Care Plan Oversight	Imaging - mri - chest	Lab - cytology	Other care - chronic edema - appliance - non - segmental
Case Management Services	Imaging - mri - contrast agent	Lab - cytology	Other care - chronic edema - appliance - segmental
Case Management Services - Behavioral	Imaging - mri - guidance	Lab - hematology - blood count	Other care - chronic edema - compressor - non - segmental
Case Management Services - Oncology	Imaging - mri - other	Lab - hematology - coagulation	Other care - chronic edema - compressor - segmental
CHEMOTHERAPY	Imaging - nuclear - bone scan	Lab - immunology	Other care - chronic edema - surgical stockings
Chest X-Ray	Imaging - nuclear - bone scan - radiopharmaceutical	Lab - infectious agent dna	Other care - diabetes care - glucose monitoring
CHLAMYDIA SCREENING	Imaging - nuclear - brain - radiopharmaceutical	Lab - microbiology	Other care - home care - emergency response system
Chronic Care Management	Imaging - nuclear - liver	Lab - microbiology - c & s	Other care - home care - home health aide
Computerized axial tomography (CT) scan head	Imaging - nuclear - localization of inflammation	Lab - microbiology - microscopic exam	Other care - home care - meals
Coordinated Care Fees/Services	Imaging - nuclear - lung scan	Lab - microbiology - other	Other care - home care - nursing care
Cryoablation of Prostate	Imaging - nuclear - lymphatics	Lab - other clinical lab	Other care - home care - nursing care - lpn
CT scan abdomen	Imaging - nuclear - other	Lab - panel - hepatitis panel	Other care - home care - nursing care - np
CT scan chest	Imaging - nuclear - other - automated data add - on	Lab - pathology consultation	Other care - home care - nursing care - rn
DME - bath / toilet aids	Imaging - nuclear - radiopharmaceutical - radiopharmaceutical - other	Lab - specimen collection - blood - arterial - arterial puncture	Other care - home care - other care
DME - beds / accessories	Imaging - nuclear - testes	Lab - specimen collection - blood - venous - venipuncture	Other care - home care - other care - respite care
DME - other	Imaging - nuclear - tumor localization	Lab - specimen collection - blood - venous - venous port	Other care - home care - physician supervision
DME - restraints	Imaging - nuclear - venous thrombosis - radiopharmaceutical	Lab - specimen collection - specimen handling	Other care - home care - rehabilitation - occupational therapy
DME - safety equipment	Imaging - nuclear - venous thrombosis - scan	Lab - specimen collection - urine	Other care - home care - rehabilitation - physical therapy
DME - whirlpool - equipment	Imaging - other imaging	Lab - surgical pathology	Other care - home care - social worker
DME - wound therapy	Imaging - other imaging - fluoroscopy	Lab - therapeutic drug assay	Other care - home care - specialized visit
DME and supplies	Imaging - other imaging - fluoroscopy - guidance	Lab - transfusion medicine	Other care - hospice
Drug Delivery implantation	Imaging - pet - other	Lab - urinalysis	Other care - long term care - assisted living
E & M - consultation	Imaging - pet - tumor imaging	Laparoscopic Prostatectomy	Other care - long term care - residential care
E & M - emergency care	Imaging - supplies - contrast agent - high osmolar	Lipid Level Monitoring	Other care - nutrition - assessment
E & M - home visit	Imaging - supplies - contrast agent - low osmolar	Low dose steroids	Other care - nutrition - education
E & M - hospital	Imaging - supplies - ultrasound related	Markers for Inflammation	Other care - nutrition - enteral
E & M - nursing home	Imaging - therapeutic procedure - abscess drainage	Medication Assisted Management (MAT)	Other care - nutrition - enteral - administration
E & M - other	Imaging - therapeutic procedure - other therapeutic procedure	Medication Therapy Management Services	Other care - nutrition - parenteral
E & M - prevention	Imaging - us - guide - biopsy	Medications (Injections, infusions and other forms)	Other care - nutrition - parenteral - all - inclusive
Electrocardiogram - EKG monitoring	Imaging - us - guide - other	Metabolic Renal Hepatic Chemistry Panel	Other care - nutrition - parenteral - pump
HbA1C	Imaging - us - other	Microscopic examination (bacterial smear, culture, toxicology)	Other care - observation

Relevant Procedures – CPT / HCPCS, ICD-10

Other care - ostomy - supplies	Procedure - central venous catheter - removal	Robotic Assisted Procedure	Rx - miscellaneous rx - enzymes
Other care - other	Procedure - central venous catheter - repair / maintenance	Robotic Surgery	Rx - other
Other care - other - ancillary services	Procedure - central venous catheter - replacement	Rx - administration - infusion	Rx - pharmacy fee
Other care - other - education	Procedure - cystoscopy - dx	Rx - administration - injection	Rx - reproductive system - androgens / comb
Other care - other - lodging	Procedure - cystoscopy - rx - other	Rx - allergy - antihistamines / comb	Rx - reproductive system - estrogens / comb
Other care - other - meals	Procedure - cystoscopy - w / stent insertion	Rx - analg/antipy/nsaids - narcotics	Rx - reproductive system - gonadotropin rel horm agnsts
Other care - other - medical records	Procedure - destruction - penile lesion	Rx - analg/antipy/nsaids - nsaids	Rx - reproductive system - gonadotropins
Other care - other - pvd - compressor	Procedure - excision of hydrocele	Rx - antibiotics - aminoglycosides	Rx - reproductive system - impotence rx
Other care - pain management - pca / related	Procedure - gu - other or rx	Rx - antibiotics - anti-infectives, misc	Rx - reproductive system - progestins
Other care - respiratory - equipment / supplies	Procedure - indwelling catheter	Rx - antibiotics - cephalosporins	Smoking / Tobacco Cessation
Other care - wound care	Procedure - lymphadenectomy	Rx - antibiotics - penicillins	Subsequent Physician Services Inpatient
Other CT scan	Procedure - orchiectomy	Rx - antibiotics - quinolones	Supplies
Other diagnostic cardiovascular procedures	Procedure - orchiopexy	Rx - antibiotics - sulfonamides / comb	Suprapubic Prostatectomy
Other diagnostic procedures (interview, evaluation, consultation)	Procedure - other dx - male genital	Rx - antibiotics - tetracyclines	Tests - cardiac - ecg - ecg - 12 lead
Other diagnostic radiology and related techniques	Procedure - other non - or rx - other non - or skin procedures	Rx - antibiotics / antivirals / antifungals - infusion	Tests - cardiac stress tests - cardiac stress tests - other
Other diagnostic ultrasound	Procedure - other non - or rx; male genital	Rx - antibiotics, misc	Tests - gu - post void residual / bladder capacity
Other Laboratory	Procedure - other or rx; male genital	Rx - antidiabetic rx - insulins	Tests - gu - urodynamics - voiding pressure
Other OR lower GI therapeutic procedures	Procedure - penile prosthesis - implant	Rx - antidiabetic rx, misc	Tests - neuro - cognitive testing
Other OR therapeutic procedures of urinary tract	Procedure - penile prosthesis - prosthesis	Rx - autonomic rx - sympathomimetic rx	Therapeutic radiology
Other OR therapeutic procedures, female organs	Procedure - penile prosthesis - revise / remove	Rx - b-lactam antibiotics	Therapy - behavior - other
Other radioisotope scan	Procedure - peripheral venous catheter	Rx - blood derivatives	Therapy - chemorx - administration - cns
Other therapeutic procedures	Procedure - related supplies - access catheter	Rx - cardiovascular system - vasodilating rx	Therapy - chemorx - administration - iv
Pathology	Procedure - related supplies - drainage	Rx - central nervous system - barbiturates	Therapy - chemorx - administration - other
Perineal Prostatectomy	Procedure - related supplies - implant	Rx - central nervous system - benzodiazepines	Therapy - dialysis - supplies
Personal Care Services	Procedure - sedation	Rx - coagulation system - anticoagulants	Therapy - nasogastric tube
Physical Therapy / Rehab	Procedure - vascular access - port / pump - insertion	Rx - coagulation system - antiplatelet rx	Therapy - neurostimulator - nausea / vomiting
Physician Services	Procedure - vascular access - port / pump - maintenance	Rx - corticosteroids	Therapy - transfusion - administration
Physician Services - Inpatient	Procedure - vascular access - port / pump - removal	Rx - diagnostic rx - roentgenography	Therapy - transfusion - blood
Physician Services - Outpatient	Procedure - vascular access - port / pump - revision	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Therapy - transfusion - granulocytes
PQRI	Procedure - vein - pelvis - other	Rx - electrolytic, caloric, water - hydration - unspecified	Therapy - transfusion - plasma
Preventive Medicine, Care Coordination	Procedures and Reporting	Rx - electrolytic, caloric, water - multi-mineral prep	Therapy - transfusion - platelets
Preventive Medicine, Counseling, Coordination	Prophylactic vaccinations and inoculations	Rx - electrolytic, caloric, water - potassium supp	Thyroid Function Tests
Procedure - anesthesia	Prostate Cancer, Low Risk	Rx - electrolytic, caloric, water - replacement preparations, misc	Transitional Care Management
Procedure - biopsy - liver - needle biopsy of liver	Prosthetics - other	Rx - electrolytic, caloric, water - sodium chlor preps	Transportation - other transportation
Procedure - biopsy - liver - wedge biopsy of liver	Psychiatry Evaluations	Rx - gi - antichol/antispasmodics	Transurethral resection of prostate (TURP)
Procedure - biopsy - prostate	Psychiatry Services	Rx - gi - antiemetics	TURP - thermotherapy
Procedure - block - nerve	Psychological and psychiatric evaluation and therapy	Rx - gi - h2 antagonists	Ungrouped Codes
Procedure - catheter - arterial - arterial line for monitoring	RADIATION THERAPY	Rx - gi - ppis	Ureteral catheterization
Procedure - catheter - arterial - other	RADIATION TREATMENTS	Rx - hematopoietic system - hematopoietic growth factors	Urine Protein
Procedure - central venous catheter - fluoroscopy - guidance	Retropubic Prostatectomy	Rx - miscellaneous rx	Vaccine for flu or Pneumonia
Procedure - central venous catheter - insertion	Risk Assessment	Rx - miscellaneous rx - anesthetics, local	Wellness Assessment

Relevant Diagnoses – ICD-10

Acute post-hemorrhagic anemia	GU - urethral discharge	Orthostatic Hypotension / Dizziness
Anxiety Disorders	GU - urinary tract - nec	Other disease of prostate
Atrial Flutter / Fibrillation	GU - urinary tract - nos	Othr - other
complications of surgical procedures	Hematuria	Prostate Cancer
CV - abnl imaging study	Nausea, vomiting	Prostate Cancer, uncertain behavior
Fever & Chills	Neoplsm - abnrmf findings - prostate	Prostate Cancer-in-situ
GU - abnrmf GU imaging	Neoplsm - ca in situ - prostate	Prostatic Hypertrophy
GU - abnrmf urinalysis	Neoplsm - malignant neoplsm - personal hx - prostate	Prostatic Hypertrophy w Obstruction
GU - cells and casts in urine	Neoplsm - neoplsm uncertn behvr - prostate	Prvn - routine medical exam
GU - hemoglobinuria	Neoplsm - screening - prostate	Urinary Frequency & other symptoms
GU - hx of uti	NS - acute pain - post op	Urinary Incontinence
GU - s / p cystostomy	Observation/Examination	Urinary Obstruction

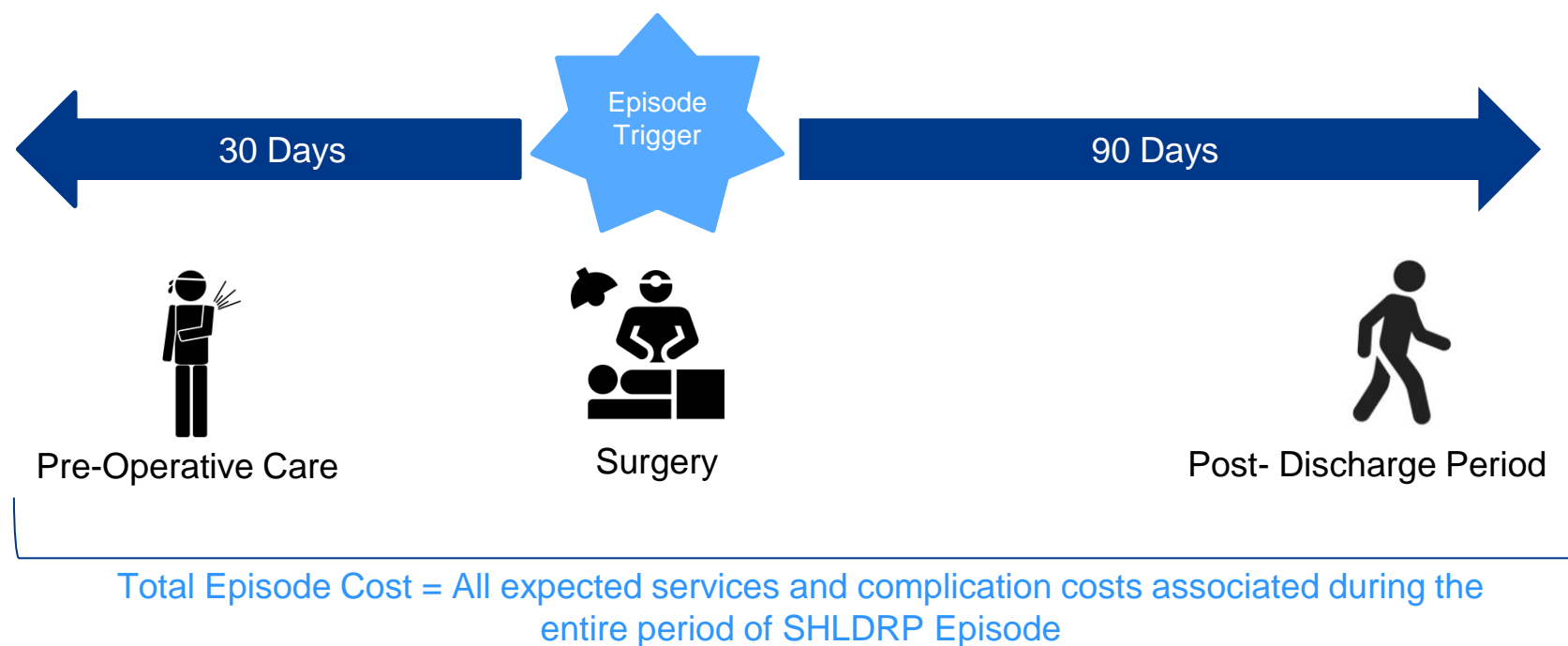
Complications – ICD-10

Accidental Falls	Dermatitis, Urticaria	IVC & other intra-abd venous thrombosis	Severe Sepsis
Acute CHF / pulm edema	Diabetes, poor control	Male infertility, impotence	Shock / Cardiac Arrest
Acute cor pulmonale	dic, coagulation, hemorrhagic disorders	MRSA Pneumonia	Shock during or following cardiac surgery
Acute Kidney Failure	Digestive system complications	MRSA, Drug Resistant Infections	Shock during or post-procedure
Adverse effects of drugs	Fluid Electrolyte Acid Base Problems	Opportunistic Infections	STEMI
Anal and rectal conditions	Foreign body left during procedure	Other bacterial infections	Subendocardial infarct
Aspiration Pneumonia	Gastroenteritis	Other Bacterial Pneumonia	Suicide or Self-inflicted Injury
Atrial Flutter / Fibrillation	GERD, Hiatal Hernia, Other Upper GI Disorders	Other cardiac arrhythmias	Thromboembolic Stroke
Bacteremia, SIRS, no organ dysfunction	GI Bleed	Other lung problems	Transfusion, Infusion related complications
Bladder Dysfunction, hemorrhage	Gram Negative Pneumonia	Other Phlebitis, Lymphangitis, varices	Transient cerebral ischemia, TIA
C-Difficile Infection	HAC 02: Air Embolism	Other Staph Pneumonia	Urethral Stricture
Chronic Fungal and Other Pneumonias	HAC 04: Stage III and IV Pressure Ulcers	Overdose, Poisonings	Urinary Complications
Complication of genitourinary device	HAC 09: Manifestations of Poor Glycemic Control	Phlebitis, Deep vein thrombosis (DVT)	Urinary Frequency & other symptoms
Complication of Implanted device, graft	HAC: Blood Incompatibility	Poisoning by Opiates	Urinary Tract Infection
Complications from Central Line	HAC: Catheter Associated UTIs	Poisoning by Psychostimulants	Urogenital fistula
Complications from chemotherapy	HAC: Foreign Body Retained After Surgery	Prostatitis, abscess, hemorrhage of prostate	Vascular Prosthetic Device/Graft Complication
Complications of anesthesia	HAC: Infection due to central venous catheter	Pulmonary Embolism	Ventilator Associated Pneumonia
complications of medical care	Hemorrhage	Recent AMI	Ventilator Dependence
complications of surgical procedures	Hemorrhagic Stroke	Resp Failure following trauma / surgery	Viral Pneumonia
Debilitating Viral Pneumonia	Hypertensive Urgency	Respiratory Failure	Wound Dehiscence
Decubitus Ulcer	Hypotension / Syncope	Respiratory Insufficiency	Wound Infections
Dehydration	Influenza with Pneumonia	Retroperitoneal Abscess	
Delirium, Encephalopathy	Intestinal Obstruction	Sepsis	

Shoulder Replacement (SHLDRP)

The Shoulder Replacement Episode evaluates services that are typical/routine for the expected care and services that are related to associated complications. Patients are defined as those with a primary procedure code of Shoulder Replacement on an inpatient stay service or a trigger procedure code in any position on an outpatient facility/professional service, along with a qualifying diagnosis code.

Episode Length – SHLDRP



Duration Pre-Trigger Window	Duration Post-Trigger Window
30 Days	90 Days

Episode Triggers – SHLDRP

Trigger Group Name	Code Type	Codes
Partial Shoulder Replacement	CPT	23470
Revision of Shoulder Replacement	CPT	23473- 23474
Total Shoulder Replacement	CPT	23472

Trigger Diagnoses – ICD-10, CPT

Aseptic Necrosis, Left	MS - extrmty - nonallo	Neoplsm - benign neoplsm - bone / cartilage - nos	Other osteopathic disorders, Left
Aseptic Necrosis, Right	MS - extrmty - other deformity	Neoplsm - benign neoplsm - humerus / radius / scapula / ulna	Other osteopathic disorders, Right
Aseptic Necrosis, Unspecified	MS - face - acqrd defrmty	Neoplsm - benign neoplsm - upper extremity	Other osteopathic disorders, Unspecified
diabetes mellitus with neurologic manifestations	MS - joint - nos - effusion	Nonunion, Left side	Other Shoulder Derangements, Left
Diabetes, other manifestation	MS - joint nos - discloc - recurrent	Nonunion, Right side	Other Shoulder Derangements, Right
Fistula, Effusion in Joint	MS - joint nos - jnt derangmnt - loose body	Nonunion, Unspecified	Other Shoulder Derangements, Unspecified
Gout and other crystal arthropathies	MS - joint nos - jnt derangmnt - other	NS - polyneuropathy - collagen vascular disease	Partial Shoulder Replacement
Gout and other crystal arthropathies, Left	MS - joint nos - other arthropathy	NS polyneuropathy-collagen vascul disease, LT	Revision of Shoulder Replacement
Gout and other crystal arthropathies, Right	MS - mscl / lgmnt / fscia - nos - nec / nos	NS polyneuropathy-collagen vascul disease, RT	Rheumatoid Arthritis and Inflammatory Con, LT
Hemarthrosis: Bleeding into Joints	MS - muscle - nos - muscle atrophy	Osteoarthritis	Rheumatoid Arthritis and Inflammatory Con, RT
Infective Arthritis	MS - muscle - nos - other ds	Osteoarthritis, other joints	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease
Infective Arthritis, Left	MS - shldr jt replacement	Osteoarthritis, Shoulder	Rheumatoid Arthritis, Left
Infective Arthritis, Right	MS - synvm / tndn / brsa - nos - bursitis	Osteoporosis, ostetits deformans, Left	Rheumatoid Arthritis, Right
Inflammatory Arthropathies, Left	MS - synvm / tndn / brsa - nos - ganglion / cyst	Osteoporosis, ostetits deformans, Right	Rheumatoid Arthritis, Unspecified
Inflammatory Arthropathies, Right	MS - synvm / tndn / brsa - nos - nec / nos	Osteoporosis, ostetits deformans, Unspecified	Rotator Cuff Strain, Tear and tendonitis Unsp
Inflammatory Arthropathies, Unspecified	MS - synvm / tndn / brsa - nos - rupture - synovium	Other arthropathies	Rotator Cuff Strain, Tear and tendonitis, LT
Malunion, Left side	MS - synvm / tndn / brsa - nos - rupture - tendon	Other arthropathies, Left side	Rotator Cuff Strain, Tear and tendonitis, RT
Malunion, Right side	MS - synvm / tndn / brsa - nos - synvtis/tensyn	Other arthropathies, Right side	Total Shoulder Replacement
Malunion, Unspecified	MS - uppr arm - fx - humerus - pathologic	Other deformities, limb, other sites, Left	Wasting of Muscles and Neuro Musc Dystro, LT
MS - bone - nos - chondrodystrophy	MS - uppr extrm - nos - ostchndrpthy	Other deformities, limb, other sites, Right	Wasting of Muscles and Neuro Musc Dystro, RT
MS - bone - nos - nec / nos	MS - uppr extrm - other deformity	Other deformities, limb, other, Unspecified	Wasting of Muscles and Neuro Muscular Dystrophy

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	E & M - nursing home	Lab - microbiology - microscopic exam	Other care - home care - home health aide
Alcohol / Drug Use Screening	E & M - other	Lab - other hematology	Other care - home care - meals
Ancillary Services	E & M - prevention	Lab - pathology consultation	Other care - home care - nursing care
Anesthesia	Electrocardiogram - EKG monitoring	Lab - specimen collection - blood - arterial - arterial puncture	Other care - home care - nursing care - lpn
Aortic resection, replacement or anastomosis	HbA1C	Lab - specimen collection - blood - venous - venipuncture	Other care - home care - nursing care - np
Bleeding Status	Home Health / Hospice	Lab - specimen collection - blood - venous - venous port	Other care - home care - nursing care - rn
Blood Count	Home Health Services	Lab - stat request	Other care - home care - other care
Blood Gases, Pulse Oximetry	Hormone Therapy	Lab - surgical pathology	Other care - home care - other care - attendant care
Blood transfusion	Imaging - ct - follow - up	Lab - therapeutic drug assay	Other care - home care - other care - chore care
Blood Type, Coomb's test	Imaging - ct - guidance	Lab - transfusion medicine	Other care - home care - other care - companion care
Bundled Payment / Medical Home	Imaging - ct - other	Lab - urinalysis	Other care - home care - other care - day care
Cardiac Stress Test	Imaging - ct - upper extremity	Laboratory - Chemistry and Hematology	Other care - home care - other care - respite care
Care Plan Oversight	Imaging - mra - upper extremity	LEAD SCREENING	Other care - home care - physician supervision
Case Management Services	Imaging - mri - contrast agent	Lipid Level Monitoring	Other care - home care - rehabilitation - occupational therapy
Case Management Services - Behavioral	Imaging - mri - guidance	Low dose steroids	Other care - home care - rehabilitation - physical therapy
CHEMOTHERAPY	Imaging - mri - other	Markers for Inflammation	Other care - home care - social worker
CHLAMYDIA SCREENING	Imaging - mri - upper extremity	Medication Assisted Management (MAT)	Other care - home care - specialized visit
Chronic Care Management	Imaging - other imaging	Medication Therapy Management Services	Other care - home care - training
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Imaging - other imaging - bone density	Medications (Injections, infusions and other forms)	Other care - hospice
Diagnostic physical therapy	Imaging - other imaging - fluoroscopy	Metabolic Renal Hepatic Chemistry Panel	Other care - long term care - assisted living
DME - bath / toilet aids	Imaging - supplies - contrast agent - high osmolar	Microscopic examination (bacterial smear, culture, toxicology)	Other care - long term care - residential care
DME - beds / accessories	Imaging - supplies - contrast agent - low osmolar	Online Management	Other care - nutrition - assessment
DME - heat/cold application	Imaging - us - guide - biopsy	Opioid Administration / Dispensing (OTP)	Other care - nutrition - counseling - dietician
DME - mobility aids	Imaging - us - guide - other	Orthotics - other	Other care - nutrition - education
DME - other	Imaging - us - other	Orthotics - upper extremity	Other care - nutrition - medical food
DME - patient lifts	Imaging - x-ray - other - joint survey	Other - non - covered	Other care - nutrition - parenteral - all - inclusive
DME - safety equipment	Imaging - x-ray - shoulder - arthrogram	Other care - bladder / bowel care - other supplies - skin barrier	Other care - nutrition - parenteral - pump
DME - traction	Imaging Abdomen	Other care - chronic edema - appliance - limb compression	Other care - observation
DME - trapeze / other orthopedic device	IMMUNOTHERAPY	Other care - chronic edema - appliance - segmental	Other care - other
DME - wound therapy	Lab - chemistry	Other care - chronic edema - compressor	Other care - other - ancillary services
DME and supplies	Lab - hematology - blood count	Other care - chronic edema - compressor - non - segmental	Other care - other - exercise classes
Drug Delivery implantation	Lab - hematology - coagulation	Other care - chronic edema - compressor - segmental	Other care - other - infection control
E & M - consultation	Lab - immunology	Other care - chronic edema - exterior wrap	Other care - other - lodging
E & M - emergency care	Lab - infectious agent dna	Other care - chronic edema - gauntlet	Other care - other - meals
E & M - home visit	Lab - microbiology	Other care - chronic edema - glove	Other care - other - medical records
E & M - hospital	Lab - microbiology - c & s	Other care - chronic edema - sleeve	Other care - other - pvd - compressor

Relevant Procedures – CPT / HCPCS, ICD-10

Other care - pain management - pca / related	Procedure - indwelling catheter	Prosthetics - repair	Tests - cardiac - ecg - ecg - 12 lead
Other care - respiratory - equipment / supplies	Procedure - injection - tendons / joints / etc.	Prosthetics - upper extremity	Tests - cardiac stress tests - cardiac perfusion scan - rest / exercise
Other care - respiratory - equipment / supplies - peak flow meter	Procedure - injection of skin lesion	Psychiatry Evaluations	Tests - cardiac stress tests - cardiac stress tests - other
Other care - respiratory - equipment / supplies - spirometer	Procedure - microsurgery	Psychological and psychiatric evaluation and therapy	Tests - neuro - ncv / emg
Other care - respiratory - other	Procedure - neuro - other non - or rx	Revision of Shoulder Joint	Tests - neuro - other
Other care - wound care	Procedure - neuro - other or rx	Revision of Shoulder Replacement	Tests - pulmonary - peak flow
Other care - wound care - growth factor	Procedure - obesity procedure - restriction	Risk Assessment	Tests - vascular - arterial - extremity
Other care - wound care - hyperbaric oxygen	Procedure - other dx on musculoskeletal system	Robotic Surgery	Tests - vascular - venous
Other diagnostic cardiovascular procedures	Procedure - other fracture / dislocation - rx	Rx - administration - infusion	Therapy - acupuncture
Other diagnostic procedures (interview, evaluation, consultation)	Procedure - other non - or rx - chemodenervation of eccrine glands	Rx - administration - injection	Therapy - behavior - partial hospitalization
Other Laboratory	Procedure - other non - or rx - other non - or skin procedures	Rx - analg/antipy/nsaids - narcotics	Therapy - biofeedback
Partial Shoulder Replacement	Procedure - other non - or rx on musculoskeletal system	Rx - analg/antipy/nsaids - nsaids	Therapy - chiropractic / osteopathic manipulation
Pathology	Procedure - other or rx - peripheral neurostimulator procedures	Rx - antibiotics - anti-infectives, misc	Therapy - dialysis - supplies
Personal Care Services	Procedure - other or rx on bone	Rx - antibiotics - cephalosporins	Therapy - habilitation
Physical Therapy / Rehab	Procedure - other or rx on joints	Rx - antibiotics / antivirals / antifungals - infusion	Therapy - hyperbaric oxygen
Physician Services	Procedure - other or rx on musculoskeletal system	Rx - blood derivatives	Therapy - neurostimulator - muscle training
Physician Services - Inpatient	Procedure - other rx on muscles and tendons	Rx - coagulation system - anticoagulants	Therapy - neurostimulator - nausea / vomiting
Physician Services - Outpatient	Procedure - partial excision bone	Rx - coagulation system - antiheparin agnt	Therapy - neurostimulator - tens - device
Preventive Medicine, Care Coordination	Procedure - peripheral venous catheter	Rx - coagulation system - hemostatics	Therapy - osteogenesis stimulator
Procedure - anesthesia	Procedure - related supplies - ablation - catheter	Rx - diagnostic rx - roentgenography	Therapy - other
Procedure - arthroscopy - other joints	Procedure - related supplies - access catheter	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Therapy - phlebotomy
Procedure - block - nerve	Procedure - related supplies - arthroplasty	Rx - electrolytic, caloric, water - hydration - unspecified	Therapy - pt - exercises / activities
Procedure - bone graft	Procedure - related supplies - graft / repair	Rx - electrolytic, caloric, water - multi-mineral prep	Therapy - pt - modalities
Procedure - casting / splinting - application	Procedure - related supplies - implant	Rx - electrolytic, caloric, water - potassium supp	Therapy - rehabilitation - related supplies / equipment - motion device
Procedure - casting / splinting - supplies	Procedure - related supplies - other	Rx - gi - antiemetics	Therapy - transfusion - administration
Procedure - catheter - arterial - arterial line for monitoring	Procedure - removal of pins or fixation	Rx - gi - ppis	Therapy - transfusion - blood
Procedure - central venous catheter - insertion	Procedure - sedation	Rx - hematopoietic system - hematopoietic growth factors	Therapy - transfusion - plasma
Procedure - central venous catheter - removal	Procedure - spinal canal - catheter	Rx - miscellaneous rx	Therapy - transfusion - platelets
Procedure - debridement - wound / infection / burn - debridement	Procedure - suture - skin - delayed wound closure	Rx - miscellaneous rx - enzymes	Total Shoulder Replacement
Procedure - destruction - nerve	Procedure - suture - skin - repair of superficial wound	Rx - muscle relaxants - muscle relax, skeletal central	Transportation - other transportation
Procedure - excision - skin - shave skin lesion	Procedure - vascular access - port / pump - insertion	Rx - other	Transportation - paramedic
Procedure - graft	Procedures and Reporting	Rx - pharmacy fee	Ungrouped Codes
Procedure - graft - skin - graft material	Prosthetic Implant	Rx - serums, toxoids, vaccines - serums	Urine Protein
Procedure - i&d - skin - drainage - post - op infection	Prosthetics - external power	Rx - vitamins - multivit prep	Vaccine for flu or Pneumonia
Procedure - i&d - skin - drainage of abscess	Prosthetics - implant	Screen for amino acid disorders	Wellness Assessment
Procedure - i&d - skin - drainage of hematoma	Prosthetics - other	Supplies	X-Ray Shoulder Scapula Clavicle

Relevant Diagnoses – ICD-10

Aseptic Necrosis, Left	MS - extrmty - nonallo	Neoplsm - benign neoplsm - bone / cartilage - nos	Other osteopathic disorders, Left
Aseptic Necrosis, Right	MS - extrmty - other deformity	Neoplsm - benign neoplsm - humerus / radius / scapula / ulna	Other osteopathic disorders, Right
Aseptic Necrosis, Unspecified	MS - face - acqrd defrmty	Neoplsm - benign neoplsm - upper extremity	Other osteopathic disorders, Unspecified
diabetes mellitus with neurologic manifestations	MS - joint - nos - effusion	Nonunion, Left side	Other Shoulder Derangements, Left
Diabetes, other manifestation	MS - joint nos - discloc - recurrent	Nonunion, Right side	Other Shoulder Derangements, Right
Fistula, Effusion in Joint	MS - joint nos - jnt derangmnt - loose body	Nonunion, Unspecified	Other Shoulder Derangements, Unspecified
Gout and other crystal arthropathies	MS - joint nos - jnt derangmnt - other	NS - polyneuropathy - collagen vascular disease	Rheumatoid Arthritis and Inflammatory Con, LT
Gout and other crystal arthropathies, Left	MS - joint nos - other arthropathy	NS polyneuropathy-collagen vascul disease, LT	Rheumatoid Arthritis and Inflammatory Con, RT
Gout and other crystal arthropathies, Right	MS - mscl / lgmnt / fscia - nos - nec / nos	NS polyneuropathy-collagen vascul disease, RT	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease
Hemarthrosis: Bleeding into Joints	MS - muscle - nos - muscle atrophy	Osteoarthritis	Rheumatoid Arthritis, Left
Infective Arthritis	MS - muscle - nos - other ds	Osteoarthritis, other joints	Rheumatoid Arthritis, Right
Infective Arthritis, Left	MS - shldr jt replacement	Osteoporosis, ostetits deformans, Left	Rheumatoid Arthritis, Unspecified
Infective Arthritis, Right	MS - synvm / tndn / brsa - nos - bursitis	Osteoporosis, ostetits deformans, Right	Rotator Cuff Strain, Tear and tendonitis Unsp
Inflammatory Arthropathies, Left	MS - synvm / tndn / brsa - nos - ganglion / cyst	Osteoporosis, ostetits deformans, Unspecified	Rotator Cuff Strain, Tear and tendonitis, LT
Inflammatory Arthropathies, Right	MS - synvm / tndn / brsa - nos - nec / nos	Other arthropathies	Rotator Cuff Strain, Tear and tendonitis, RT
Inflammatory Arthropathies, Unspecified	MS - synvm / tndn / brsa - nos - rupture - synovium	Other arthropathies, Left side	Wasting of Muscles and Neuro Musc Dystro, LT
Malunion, Left side	MS - synvm / tndn / brsa - nos - rupture - tendon	Other arthropathies, Right side	Wasting of Muscles and Neuro Musc Dystro, RT
Malunion, Right side	MS - synvm / tndn / brsa - nos - synvtis/tensyn	Other deformities, limb, other sites, Left	Wasting of Muscles and Neuro Muscular Dystrophy
Malunion, Unspecified	MS - uppr arm - fx - humerus - pathologic	Other deformities, limb, other sites, Right	
MS - bone - nos - chondrodystrophy	MS - uppr extrm - nos - ostchndrpthy	Other deformities, limb, other, Unspecified	
MS - bone - nos - nec / nos	MS - uppr extrm - other deformity		

Complications – ICD-10

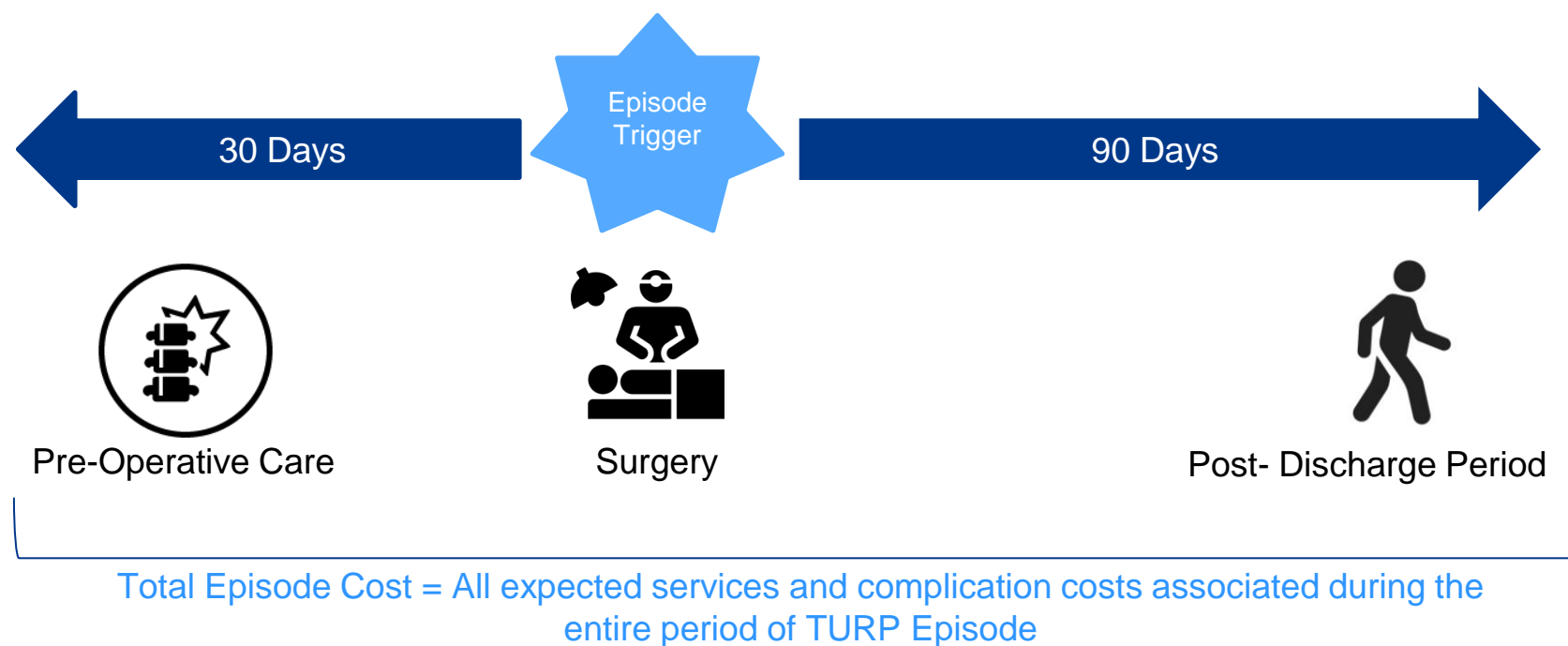
Accidental Falls	Complications of surgical procedures or medical care	Intestinal Obstruction	Respiratory Failure
Acute CHF / pulm edema	Decubitus Ulcer	Meningitis / Encephalitis	Respiratory Insufficiency
Acute cor pulmonale	Dehydration	MRSA Pneumonia	rhabdomyolysis
Acute esophagitis, acute gastritis, duodenitis	Delirium, Encephalopathy	MRSA, Drug Resistant Infections	Sepsis
Acute Kidney Failure	Dermatitis, Urticaria	Other bacterial infections	Severe Sepsis
Acute Osteomyelitis	Diabetes, poor control	Other Bacterial Pneumonia	Shock / Cardiac Arrest
Adverse effects of drugs	dic, coagulation, hemorrhagic disorders	Other cardiac arrhythmias	Shock during or post-procedure
Altered mental status	empyema, lung abscess	Other injuries and conditions due to external	Skin - other
arterial thromboembolism	Esophageal Reflux and Other Esophagitis	Other lower respiratory disease	Skin and subcutaneous tissue infections
Aspiration Pneumonia	Fluid Electrolyte Acid Base Problems	other lung complications	STEMI
Atrial Flutter / Fibrillation	Foreign body left during procedure	Other lung problems	Subendocardial Infarct
Bacteremia, SIRS, no organ dysfunction	Frostbite Chillblains	Other Phlebitis, Lymphangitis, varices	Supraventricular Tachyarrhythmias
Cellulitis, Skin Infection	GI Bleed	Other Staph Pneumonia	Thromboembolic Stroke
Chronic and Unspecified Osteomyelitis	Gram Negative Pneumonia	Overdose, Poisonings	Transfusion, Infusion related complications
Chronic Fungal and Other Pneumonias	HAC 02: Air Embolism	Periprosthetic fracture	Urethral Stricture
Chronic Skin Ulcer	HAC 04: Stage III and IV Pressure Ulcers	Phlebitis, Deep vein thrombosis (DVT)	Urinary Frequency & other symptoms
Compl of joint prosthesis, orthopedic proced	HAC 09: Manifestations of Poor Glycemic Control	Poisoning by Cannabis	Urinary Incontinence
Complication of genitourinary device	Hemorrhage	Poisoning by Opiates	Urinary Tract Infection
Complication of Implanted device, graft	Hemorrhagic Stroke	Poisoning by Psychostimulants	Ventilator Associated Pnuemonia
Complication of nervous system device	Hepatorenal Syndrome	Pulmonary Embolism	Ventilator Dependence
Complications from Central Line	Hypertensive Urgency	Pyoderma	Ventricular Arrhythmias
Complications of anesthesia	Hypotension / Syncope	Pyogenic Arthritis	Wound Dehiscence
complications of medical care	Influenza with Pneumonia	Recent AMI	Wound Infections
complications of surgical procedures	Injury to nerves, shoulder region	Resp Failure following trauma / surgery	

Transurethral Resection Prostate (TURP)

Services and costs associated with a procedure of Transurethral Resection Prostate (TURP) are grouped together to include the index stay during which the procedure was performed, a 30-day look back period to capture pre-operative diagnostic workup leading to the surgery and a 90-day post-discharge period. Patients are identified as those with a primary procedure code of TURP on an inpatient stay service or a trigger procedure code in any position on an outpatient facility/professional service, along with a qualifying diagnosis code.

As part of the TURP episode, we evaluate services that are 1) typical or routine and considered part of expected care for TURP; and 2) those that are related to complications associated with TURP.

Episode Length – TURP



Duration Pre-Trigger Window	Duration Post-Trigger Window
30 Days	90 Days

Episode Triggers – TURP

Trigger Group Name	Code Type	Codes
Cryosurgical Ablation of Prostate	CPT	55873
Laparoscopic Prostatectomy	ICD10	XV508A4
Laser Surgery of Prostate	CPT	52647, 52648, 52649
Transurethral resection of prostate (TURP)	ICD10	0V507ZZ, 0V508ZZ, 0VT07ZZ, 0VT08ZZ
TURP	CPT	52601, 52612, 52614, 52620, 52630
TURP - thermotherapy	CPT	53850, 53852, 53853

Trigger Diagnoses – ICD-10, CPT

GU - abnrml GU imaging	Hematuria	Nocturia	Prostatic Hypertrophy w Obstruction
GU - abnrml urinalysis	ID - tuberculosis	Orchitis / Epididymitis	Prostatitis, abscess, hemorrhage of prostate
GU - bladder neck obstruction	Neoplsm - abnrml findings - prostate	Other disease of prostate	Stress Incontinence
GU - hx of uti	Neoplsm - benign neoplsm - prostate	Othr - other	Urinary Frequency & other symptoms
GU - hydronephrosis / hydroureter	Neoplsm - benign neoplsm - urinary tract nos	Polyuria	Urinary Incontinence
GU - stone - upper urinary tract	Neoplsm - malignant neoplsm - personal hx - prostate	Prostate Cancer, uncertain behavior	Urinary Obstruction
GU - urethral discharge	Neoplsm - malignant neoplsm - personal hx - urinary tract nos	Prostate Cancer-in-situ	Urinary Retention
GU - urinary symptoms - nec	Neoplsm - screening - prostate	Prostatic Hypertrophy	Urinary Tract Infection
GU - abnrml GU imaging	Hematuria	Nocturia	Prostatic Hypertrophy w Obstruction

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	Imaging - mri - other	Lab - therapeutic drug assay	Other care - hospice
Alcohol / Drug Use Screening	Imaging - nuclear - bone scan - radiopharmaceutical	Lab - transfusion medicine	Other care - long term care - assisted living
Ancillary Services	Imaging - nuclear - brain - radiopharmaceutical	Lab - urinalysis	Other care - long term care - residential care
Bleeding Status	Imaging - nuclear - lymphatics	Laparoscopic Prostatectomy	Other care - nutrition - education
Blood Count	Imaging - nuclear - other	Laser Surgery of Prostate	Other care - nutrition - enteral
Blood transfusion	Imaging - nuclear - testes	Lipid Level Monitoring	Other care - other
Blood Type, Coomb's test	Imaging - nuclear - venous thrombosis - radiopharmaceutical	Markers for Inflammation	Other care - other - ancillary services
Bundled Payment / Medical Home	Imaging - nuclear - venous thrombosis - scan	Medication Assisted Management (MAT)	Other care - other - lodging
Cardiac Stress Test	Imaging - other imaging	Medication Therapy Management Services	Other care - other - meals
Care Plan Oversight	Imaging - supplies - contrast agent - low osmolar	Medications (Injections, infusions and other forms)	Other care - other - medical records
Case Management Services	Imaging - supplies - ultrasound related	Metabolic Renal Hepatic Chemistry Panel	Other care - other - pvd - compressor
Case Management Services - Behavioral	Imaging - us - guide - biopsy	Microscopic examination (bacterial smear, culture, toxicology)	Other care - pain management - pca / related
CHEMOTHERAPY	Imaging - us - guide - other	Nephrotomy and nephrostomy	Other care - wound care
Chest X-Ray	Imaging - us - other	NewBorn Blood Tests	Other CT scan
CHLAMYDIA SCREENING	Imaging - us - scrotum	Online Management	Other diagnostic cardiovascular procedures
Chronic Care Management	Imaging - us - transrectal	Ophthalmologic and otologic diagnosis and treatment	Other diagnostic procedures (interview, evaluation, consultation)
Cryosurgical Ablation of Prostate	Imaging - x-ray - abdomen	Opioid Administration / Dispensing (OTP)	Other diagnostic radiology and related techniques
CT scan abdomen	Imaging - x-ray - male genital	Other care - bladder / bowel care - catheter	Other diagnostic ultrasound
CT scan chest	Imaging - x-ray - other - joint survey	Other care - bladder / bowel care - drainage bag	Other Laboratory
	Imaging - x-ray - urinary tract - cystography / voiding cystourethrogram		
DME - bath / toilet aids	Imaging - x-ray - urinary tract - other	Other care - bladder / bowel care - other supplies	Other OR lower GI therapeutic procedures
DME - beds / accessories	Imaging Abdomen	Other care - bladder / bowel care - other supplies - diaper / related	Other OR therapeutic procedures, female organs
DME - other	Lab - cancer antigen - psa - screening	Other care - bladder / bowel care - other supplies - skin barrier	Other radioisotope scan
DME - restraints	Lab - chemistry	Other care - chronic edema - appliance - non - segmental	Other therapeutic procedures
DME - safety equipment	Lab - cytogenetics	Other care - chronic edema - appliance - segmental	Personal Care Services
DME - whirlpool - equipment	Lab - hematology - blood count	Other care - chronic edema - compressor - non - segmental	Physical Therapy / Rehab
DME - wound therapy	Lab - hematology - coagulation	Other care - chronic edema - compressor - segmental	Physician Services
DME and supplies	Lab - immunology	Other care - chronic edema - surgical stockings	Physician Services - Inpatient
Drug Delivery implantation	Lab - infectious agent dna	Other care - home care - emergency response system	Physician Services - Outpatient
E & M - consultation	Lab - microbiology	Other care - home care - home health aide	Preventive Medicine, Care Coordination
E & M - emergency care	Lab - microbiology - c & s	Other care - home care - meals	Preventive Medicine, Counseling, Coordination
E & M - home visit	Lab - microbiology - microscopic exam	Other care - home care - nursing care	Procedure - anesthesia
E & M - hospital	Lab - other clinical lab	Other care - home care - nursing care - lpn	Procedure - biopsy - prostate
E & M - nursing home	Lab - panel - hepatitis panel	Other care - home care - nursing care - np	Procedure - block - nerve
E & M - other	Lab - pathology consultation	Other care - home care - nursing care - rn	Procedure - catheter - arterial - arterial line for monitoring
E & M - prevention	Lab - specimen collection - blood - arterial - arterial puncture	Other care - home care - other care	Procedure - central venous catheter - insertion
Electrocardiogram - EKG monitoring	Lab - specimen collection - blood - venous - venipuncture	Other care - home care - other care - respite care	Procedure - cystoscopy - dx
HbA1C	Lab - specimen collection - blood - venous - venous port	Other care - home care - physician supervision	Procedure - cystoscopy - dx - cystoscopy w / biopsy
Home Health / Hospice	Lab - specimen collection - specimen handling	Other care - home care - rehabilitation - occupational therapy	Procedure - cystoscopy - dx - cystoureteroscopy w / pyeloscopy
Hormone Therapy	Lab - specimen collection - urine	Other care - home care - rehabilitation - physical therapy	Procedure - cystoscopy - rx - other
Imaging - ct - guidance	Lab - surgical pathology	Other care - home care - social worker	Procedure - cystoscopy - w / destruction
Imaging - ct - other		Other care - home care - specialized visit	Procedure - gu - other or rx

Relevant Procedures – CPT / HCPCS, ICD-10

Procedure - indwelling catheter	Rx - antibiotics - aminoglycosides	Rx - electrolytic, caloric, water - multi-mineral prep	Tests - gu - post void residual / bladder capacity
Procedure - other or rx; male genital	Rx - antibiotics - anti-infectives, misc	Rx - electrolytic, caloric, water - potassium supp	Tests - gu - urodynamics - voiding pressure
Procedure - penile prosthesis - implant	Rx - antibiotics - cephalosporins	Rx - electrolytic, caloric, water - replacement preparations, misc	Tests - neuro - cognitive testing
Procedure - penile prosthesis - prosthesis	Rx - antibiotics - penicillins	Rx - electrolytic, caloric, water - sodium chlor preps	Therapeutic radiology
Procedure - related supplies - access catheter	Rx - antibiotics - quinolones	Rx - gi - antichol/antispasmodics	Therapy - dialysis - supplies
Procedure - related supplies - implant	Rx - antibiotics - sulfonamides / comb	Rx - gi - antiemetics	Therapy - nasogastric tube
Procedure - sedation	Rx - antibiotics - tetracyclines	Rx - gi - h2 antagonists	Therapy - transfusion - blood
Procedures and Reporting	Rx - antibiotics / antivirals / antifungals - infusion	Rx - gi - ppis	Therapy - transfusion - plasma
Prophylactic vaccinations and inoculations	Rx - antibiotics, misc	Rx - gu - other - bph rx	Therapy - transfusion - platelets
Prostate Cancer, Low Risk	Rx - antidiabetic rx - insulins	Rx - hematopoietic system - hematopoietic growth factors	Thyroid Function Tests
Psychiatry Evaluations	Rx - antidiabetic rx, misc	Rx - miscellaneous rx	Transitional Care Management
Psychiatry Services	Rx - autonomic rx - sympathomimetic rx	Rx - miscellaneous rx - anesthetics, local	Transportation - other transportation
Psychological and psychiatric evaluation and therapy	Rx - b-lactam antibiotics	Rx - miscellaneous rx - enzymes	Transurethral resection of prostate (TURP)
Risk Assessment	Rx - blood derivatives	Rx - other	TURP
Robotic Assisted Procedure	Rx - central nervous system - barbiturates	Rx - pharmacy fee	TURP - thermotherapy
Robotic Surgery	Rx - central nervous system - benzodiazepines	Rx - reproductive system - impotence rx	Ungrouped Codes
Rx - administration - infusion	Rx - coagulation system - anticoagulants	Smoking / Tobacco Cessation	Ureteral catheterization
Rx - administration - injection	Rx - coagulation system - antiplatelet rx	Subsequent Physician Services Inpatient	Urine Protein
Rx - allergy - antihistamines / comb	Rx - diagnostic rx - roentgenography	Supplies	Vaccine for flu or Pneumonia
Rx - analg/antipy/nsaids - narcotics	Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Tests - cardiac - ecg - ecg - 12 lead	Wellness Assessment
Rx - analg/antipy/nsaids - nsaids	Rx - electrolytic, caloric, water - hydration - unspecified	Tests - cardiac stress tests - cardiac stress tests - other	

Relevant Diagnoses – ICD-10

Anxiety Disorders	GU - urinary symptoms - nec	Neoplsm - neoplsm uncertn behvr - prostate	Prostatic Hypertrophy w Obstruction
Atrial Flutter / Fibrillation	GU - urinary tract - nec	Neoplsm - screening - prostate	Prostatitis, abscess, hemorrhage of prostate
complications of surgical procedures	GU - urinary tract - nos	Nocturia	Prvn - pre-op exam
CV - abnl imaging study	Hematuria	NS - acute pain - post op	Prvn - routine medical exam
Endo - other	ID - tuberculosis	Observation/Examination	Prvn - screening - other
Fever & Chills	Intestinal Obstruction	Orchitis / Epididymitis	Sexual Dysfunction
GU - abnrm GU imaging	Nausea, vomiting	Orthostatic Hypotension / Dizziness	Stress Incontinence
GU - abnrm GU urinalysis	Neoplsm - abnrm findings - prostate	Other disease of prostate	Sxs - abnormal findings - lab or exam
GU - bladder neck obstruction	Neoplsm - benign neoplsm - prostate	Othr - other	Urinary Frequency & other symptoms
GU - cells and casts in urine	Neoplsm - benign neoplsm - urethra	Polyuria	Urinary Incontinence
GU - hx of uti	Neoplsm - benign neoplsm - urinary tract nos	Preventive Screening	Urinary Obstruction
GU - hydronephrosis / hydroureter	Neoplsm - ca in situ - prostate	Prostate Cancer	Urinary Retention
GU - renal failure effects - nec	Neoplsm - ca in situ - urinary tract nos	Prostate Cancer, uncertain behavior	Urinary Tract Infection
GU - stone - upper urinary tract	Neoplsm - malignant neoplsm - personal hx - prostate	Prostate Cancer-in-situ	
GU - urethral discharge	Neoplsm - malignant neoplsm - personal hx - urinary tract nos	Prostatic Hypertrophy	

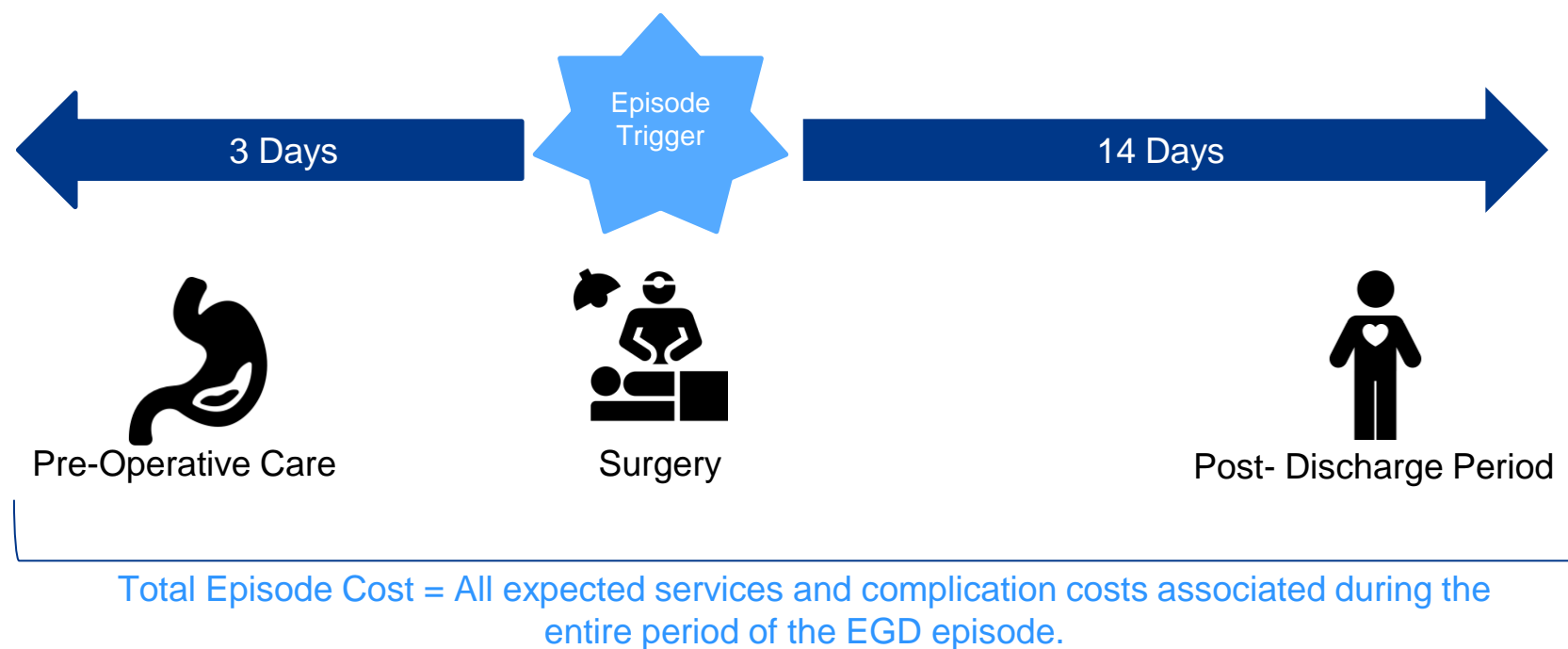
Complications – ICD-10

Accidental Falls	Dermatitis, Urticaria	Influenza with Pneumonia	Sepsis
Acute cor pulmonale	Diabetes, poor control	Intestinal Obstruction	Severe Sepsis
Acute Kidney Failure	dic, coagulation, hemorrhagic disorders	Male infertility, impotence	Shock / Cardiac Arrest
Adverse effects of drugs	Digestive system complications	MRSA Pneumonia	Shock during or following cardiac surgery
Anal and rectal conditions	Esophageal Reflux and Other Esophagitis	MRSA, Drug Resistant Infections	Shock during or post-procedure
Aspiration Pneumonia	Fistula GI tract	Opportunistic Infections	STEMI
Atrial Flutter / Fibrillation	Fluid Electrolyte Acid Base Problems	Other bacterial infections	Subendocardial infarct
Bacteremia, SIRS, no organ dysfunction	Foreign body left during procedure	Other Bacterial Pneumonia	Suicide or Self-inflicted Injury
Bladder Dysfunction, hemorrhage	Gastroenteritis	Other lung problems	Thromboembolic Stroke
C-Difficile Infection	GERD, Hiatal Hernia, Other Upper GI Disorders	Other Phlebitis, Lymphangitis, varices	Transfusion, Infusion related complications
Chronic Fungal and Other Pneumonias	Gram Negative Pneumonia	Other Staph Pneumonia	Transient cerebral ischemia, TIA
Complication of genitourinary device	HAC 02: Air Embolism	Overdose, Poisonings	Urethral Stricture
Complication of Implanted device, graft	HAC 04: Stage III and IV Pressure Ulcers	Phlebitis, Deep vein thrombosis (DVT)	Urinary Complications
Complications from Central Line	HAC 09: Manifestations of Poor Glycemic Control	Poisoning by Opiates	Urinary Tract Infection
Complications from chemotherapy	HAC: Blood Incompatibility	Poisoning by Psychostimulants	Urogenital fistula
Complications of anesthesia	HAC: Catheter Associated UTIs	Prostatitis, abscess, hemorrhage of prostate	Vascular Prosthetic Device/Graft Complication
complications of medical care	HAC: Foreign Body Retained After Surgery	Pulmonary Embolism	Ventilator Associated Pnuemonia
complications of surgical procedures	HAC: Infection due to central venous catheter	Recent AMI	Ventilator Dependence
Debilitating Viral Pneumonia	Hemorrhage	Resp Failure following trauma / surgery	Viral Pneumonia
Decubitus Ulcer	Hemorrhagic Stroke	Respiratory Failure	Wound Dehiscence
Dehydration	Hypertensive Urgency	Respiratory Insufficiency	Wound Infections
Delirium, Encephalopathy	Hypotension / Syncope	Retroperitoneal Abscess	

Upper GI Endoscopy (EGD)

The EGD Episode evaluates services that are typical/routine for the expected care and services that are related to associated complications. Patients are identified as those with a procedure code of endoscopy in any position on an outpatient facility/professional service, along with a qualifying diagnosis code. Upper GI Endoscopy is associated to Gall Bladder Surgery as typical when it occurs up to 30 days prior to the procedural episodes.

Episode Length – EGD



Duration Pre-Trigger Window	Duration Post-Trigger Window
3 Days	14 Days

Episode Triggers – EGD

Trigger Group Name	Code Type	Codes
Barrett's ablation	CPT	43228, 43257
EGD w biopsy	CPT	43238-43242
EGD w Dilation	CPT	43233-43248
Esophagoscopy w additional procedures	CPT	43201-43229
Esophagoscopy w Dilatation	CPT	43213-43249
Esophagoscopy w treatment of varices	CPT	43204-43244
Flexible Esophagoscopy	CPT	43200-43232
Flexible Esophagoscopy w biopsy	CPT	43202
Upper GI endoscopy	CPT	43234-43252
Upper GI endoscopy w additional procedures	CPT	43236-43270

Trigger Diagnoses – ICD-10, CPT

Abdominal Hernia w/out Gangrene/Obstruction	Congenital GI Problems in NB	Gastroparesis	Neoplasm - benign neoplasm - small intestine
Abdominal mass	Crohn's Disease w Fistula	GERD, Hiatal Hernia, Other Upper GI Disorders	Neoplasm - benign neoplasm - stomach
Abdominal pain	diabetes mellitus with neurologic manifestations	GI - abnormal abdominal imaging study	Neuroendocrine, Myeloproliferative Cancers
Abdominal tenderness	Diaphragmatic Hernia	GI - abnormal bowel sounds	Nonspecific Gastroenteritis
Abnormal weight loss	Digestive congenital anomalies	GI - abnormal gi imaging study	Observation/Examination
Achalasia, Esophageal Spasm, Stricture, Dysphagia	Digestive system complications	GI - diarrhea	Opportunistic Infections
Acute esophagitis, acute gastritis, duodenitis	Disseminated Metastatic Cancer	GI - esophagitis	Other abn of GB, pancreas, liver
Acute Gastroduodenal Ulcer	Diverticulitis, colitis	GI - flatulence / gas pain	Other bacterial infections
Acute Gastroduodenal Ulcer w Perforation / Obstruction	Diverticulosis, Meckel's diverticulum, Angiodysplasia	GI - personal hx of GI disease	Other disorders of stomach and duodenum
Acute Peptic Ulcer with Bleed	Dyspepsia	GI - symptoms - nec / nos	Other Esophageal conditions
Alcoholic Gastritis	Dysphagia	GI - visible peristalsis	Other somatoform disorders
Allergic, Dietetic, Eosinophilic Gastroenteritis	EGD w biopsy	GI Bleed	Parasitic Infections: Amebiasis, Giardiasis
Angiodysplasia of intestine	EGD w Dilation	GI inflammation from chemotherapy	Perforation, Peritonitis, Abd Abscess
Aspiration Pneumonia	empyema, lung abscess	Heartburn	Personal history of cancer
Barrett's ablation	Esophageal Complications	Hx of colon polyps, family Hx of colon cancer	Personal history of GI cancer
Barrett's Esophagus	Esophageal Reflux and Other Esophagitis	Intestinal infection	Post GI Surgery Syndromes
Cancer in situ, Esophagus	Esophageal Varices	Intestinal Malabsorption, Celiac Disease	Previous bowel surgery, ostomy status
Cancer in situ, Stomach	Esophagoscopy w additional procedures	Intestinal Obstruction	Secondary malignancies, Unspecified
Cancer of esophagus	Esophagoscopy w Dilatation	Iron deficiency and other anemias	Sxs - symptoms -other
Cancer of other GI organs; peritoneum	Esophagoscopy w treatment of varices	Irritable Bowel and other functional GI disorder	Thyroid Cancer
Cancer of stomach	Fistula GI tract	Marginal Ulcer	Toxic Effects of Radiation
Cancer small bowel	Flexible Esophagoscopy	Marginal Ulcer w hmg / obstr / perf	Toxic Gastroenteritis
Cancer; other and unspecified primary	Flexible Esophagoscopy w biopsy	Metastatic Cancer and Acute Leukemia	Ulceration of Intestine
Chronic Peptic Ulcer with Bleed	Gastroduodenal Ulcer	Nausea, vomiting	Upper GI endoscopy
Complicated Hiatal Hernia	Gastroduodenal Ulcer w Perforation / Obstruction	Neoplasms of unspecified nature or uncertain behavior	Upper GI endoscopy w additional procedures
complications of surgical procedures	Gastroenteritis	Neoplasm - benign neoplasm - esophagus	Vascular Insufficiency of intestine

Relevant Procedures – CPT / HCPCS, ICD-10

Advance care planning	DME - safety equipment	Imaging - nuclear - hepatobiliary ductal scan - radiopharmaceutical	Lab - hematology - blood count
Alcohol / Drug Use Management	DME - whirlpool - equipment	Imaging - nuclear - kidney - radiopharmaceutical	Lab - hematology - blood count - eosinophil count
Alcohol / Drug Use Screening	DME and supplies	Imaging - nuclear - localization of inflammation	Lab - hematology - coagulation
Ancillary Services	Drug Delivery implantation	Imaging - nuclear - lung scan	Lab - immunology
Anesthesia	E & M - consultation	Imaging - nuclear - lymphoma - radiolabeled antibody	Lab - infectious agent antibody
Aortic resection, replacement or anastomosis	E & M - emergency care	Imaging - nuclear - other	Lab - infectious agent antigen
Azathioprine / Mercaptopurine	E & M - home visit	Imaging - nuclear - other - automated data add - on	Lab - infectious agent dna
Barrett's ablation	E & M - hospital	Imaging - nuclear - other gi	Lab - microbiology
Bleeding Status	E & M - nursing home	Imaging - nuclear - radiopharmaceutical - radiopharmaceutical - other	Lab - microbiology - c & s
Blood Count	E & M - other	Imaging - nuclear - thyroid - radiopharmaceutical	Lab - microbiology - microscopic exam
Blood Gases, Pulse Oximetry	E & M - prevention	Imaging - nuclear - tumor localization	Lab - microbiology - other
Blood transfusion	EGD w biopsy	Imaging - nuclear - venous thrombosis - radiopharmaceutical	Lab - microbiology - viral culture
Blood Type, Coomb's test	EGD w Dilation	Imaging - other imaging	Lab - microscopic - koh prep
Bundled Payment / Medical Home	Esophageal Motility and Diagnostic Workup	Imaging - other imaging - fluoroscopy	Lab - microscopic - wet mount
Care Plan Oversight	Esophagoscopy w additional procedures	Imaging - other imaging - fluoroscopy - guidance	Lab - other clinical lab
Case Management Services	Esophagoscopy w Dilatation	Imaging - pet - other	Lab - other hematology
Case Management Services - Educational	Esophagoscopy w treatment of varices	Imaging - supplies - contrast agent - high osmolar	Lab - pathology consultation
CHEMOTHERAPY	Flexible Esophagoscopy	Imaging - supplies - contrast agent - low osmolar	Lab - specimen collection - blood - venous - venipuncture
Chest X-Ray	Flexible Esophagoscopy w biopsy	Imaging - supplies - ultrasound related	Lab - specimen collection - specimen handling
CHLAMYDIA SCREENING	HbA1C	Imaging - us - guide - biopsy	Lab - specimen collection - urine
Chronic Care Management	Hepatitis B vaccine	Imaging - us - guide - other	Lab - stat request
Colonoscopy and biopsy	High dose steroids	Imaging - us - other	Lab - surgical pathology
Colonoscopy/Sigmoidoscopy ColorectalCa Screen	Home Health / Hospice	Imaging - x-ray - other - joint survey	Lab - therapeutic drug assay
Coordinated Care Fees/Services	Home Health Services	Imaging - x-ray - upper gi - duodenogram	Lab - transfusion medicine
Counseling Services	Hormone Therapy	Imaging - x-ray - upper gi - esophagus - contrast	Lab - tumor marker
Cyclosporin	HPV VACCINE	Imaging - x-ray - upper gi - other	Lab - urinalysis
Diagnostic physical therapy	Imaging - ct - follow - up	Imaging - x-ray - upper gi - small bowel - contrast	Laboratory - Chemistry and Hematology
Diagnostic ultrasound of abdomen or retroperitoneum	Imaging - ct - guidance	Imaging Abdomen	LEAD SCREENING
DME - bath / toilet aids	Imaging - ct - other	Lab - blood gases	Lipid Level Monitoring
DME - beds / accessories	Imaging - cta - chest	Lab - chemistry	Low dose steroids
DME - heat/cold application	Imaging - cta - other	Lab - chemistry and toxicology tests	Lung Function Tests
DME - mobility aids	Imaging - mra - chest	Lab - cytogenetics	Markers for Inflammation
DME - other	Imaging - mri - contrast agent	Lab - cytology	Medication Assisted Management (MAT)
DME - patient lifts	Imaging - mri - guidance	Lab - endocrine	Medication Therapy Management Services
DME - rehabilitation	Imaging - mri - other	Lab - genetic testing - brugada syndrome	Medications (Injections, infusions and other forms)
DME - repair / maintenance	Imaging - nuclear - csf - radiopharmaceutical	Lab - genetic testing - cardiac ion channel syndrome	Metabolic Renal Hepatic Chemistry Panel
DME - restraints	Imaging - nuclear - gi blood loss	Lab - gi - fat absorption	NewBorn Blood Tests

Relevant Procedures – CPT / HCPCS, ICD-10

Online Management	Other care - long term care - assisted living	Other care - respiratory therapy	Procedure - related supplies - retrieval - device
Opioid Administration / Dispensing (OTP)	Other care - long term care - residential care	Other care - special needs children	Procedure - sedation
Other - non - covered	Other care - newborn - jaundice - phototherapy	Other diagnostic procedures (interview, evaluation, consultation)	Procedure - spinal canal - catheter
Other bowel diagnostic procedures	Other care - nutrition - assessment	Other gastrointestinal diagnostic procedures	Procedure - thyroid ablation - radionucleotide
Other care - bladder / bowel care - catheter	Other care - nutrition - counseling - dietician	Other Laboratory	Procedure - ugi endoscopy - other
Other care - bladder / bowel care - drainage bag	Other care - nutrition - education	Other non-OR upper GI therapeutic procedures	Procedure - ugi endoscopy - small bowel endoscopy
Other care - bladder / bowel care - other supplies	Other care - nutrition - enteral	Other OR upper GI therapeutic procedures	Procedure - vascular - related supplies - occlusion catheter
Other care - bladder / bowel care - other supplies - diaper / related	Other care - nutrition - enteral - administration	Peer Services	Procedure - vascular access - port / pump - insertion
Other care - bladder / bowel care - other supplies - skin barrier	Other care - nutrition - enteral - formula	Personal Care Services	Procedures and Reporting
Other care - child care - specialized	Other care - nutrition - enteral - pump	Physical Therapy / Rehab	Prophylactic vaccinations and inoculations
Other care - chronic edema - appliance - segmental	Other care - nutrition - enteral - tubing	Physician Services	Prosthetics - other
Other care - chronic edema - surgical stockings	Other care - nutrition - medical food	Physician Services - Inpatient	Psychiatry Evaluations
Other care - diabetes care - glucose monitoring	Other care - nutrition - parenteral	Physician Services - Outpatient	Psychiatry Services
Other care - diabetes care - glucose monitoring - lancet	Other care - nutrition - parenteral - all - inclusive	PQRI	Psychological and psychiatric evaluation and therapy
Other care - diabetes care - glucose monitoring - other supplies	Other care - nutrition - parenteral - nutrition solution	Preventive Medicine, Care Coordination	Routine Immunizations
Other care - home care - emergency response system	Other care - nutrition - parenteral - pump	Procedure - anesthesia	Rx - administration - infusion
Other care - home care - home health aide	Other care - observation	Procedure - central venous catheter - insertion	Rx - administration - injection
Other care - home care - meals	Other care - other	Procedure - dilation - esophagus	Rx - allergy - antihistamines / comb
Other care - home care - nursing care	Other care - other - ancillary services	Procedure - esophageal / gastric intubation	Rx - analg/antipy/nsaids - narcotics
Other care - home care - nursing care - lpn	Other care - other - education	Procedure - gastrostomy	Rx - analg/antipy/nsaids - nsaids
Other care - home care - nursing care - np	Other care - other - exercise classes	Procedure - graft - skin - graft material	Rx - antibiotics - aminoglycosides
Other care - home care - nursing care - rn	Other care - other - infection control	Procedure - injection / ligation - esophageal varices	Rx - antibiotics - anti-infectives, misc
Other care - home care - other care	Other care - other - irrigation	Procedure - nasopharyngoscopy - dx	Rx - antibiotics - cephalosporins
Other care - home care - other care - attendant care	Other care - other - lead assessment	Procedure - obesity procedure - restriction	Rx - antibiotics - chloramphenicol / comb
Other care - home care - other care - chore care	Other care - other - lightbox	Procedure - other lower gi procedures - other bowel dx	Rx - antibiotics - macrolides
Other care - home care - other care - companion care	Other care - other - lodging	Procedure - other lower gi procedures - other non - or rx	Rx - antibiotics - penicillins
Other care - home care - other care - day care	Other care - other - meals	Procedure - other procedures - esophagus	Rx - antibiotics - quinolones
Other care - home care - other care - homemaker	Other care - other - medical records	Procedure - peripheral nerve repair / graft - graft / guide	Rx - antibiotics - sulfonamides / comb
Other care - home care - other care - respite care	Other care - other - weight management	Procedure - related supplies - ablation - catheter	Rx - antibiotics - tetracyclines
Other care - home care - physician supervision	Other care - pain management - pca / related	Procedure - related supplies - access catheter	Rx - antibiotics / antivirals / antifungals - infusion
Other care - home care - rehabilitation - occupational therapy	Other care - prevention - smoking cessation	Procedure - related supplies - catheter	Rx - antibiotics, misc
Other care - home care - rehabilitation - physical therapy	Other care - respiratory - equipment / supplies	Procedure - related supplies - drainage	Rx - antidiabetic rx - insulins
Other care - home care - rehabilitation - speech therapy	Other care - respiratory - equipment / supplies - apnea monitor	Procedure - related supplies - graft - tendon repair	Rx - antidiabetic rx, misc
Other care - home care - social worker	Other care - respiratory - equipment / supplies - nebulizer	Procedure - related supplies - graft / repair	Rx - antifungals
Other care - home care - specialized visit	Other care - respiratory - equipment / supplies - peak flow meter	Procedure - related supplies - implant	Rx - antivirals
Other care - home care - training	Other care - respiratory - equipment / supplies - spirometer	Procedure - related supplies - other	Rx - autonomic rx - nicotine preps
Other care - hospice	Other care - respiratory - oxygen / oxygen concentrator	Procedure - related supplies - resection - morcellator	Rx - autonomic rx - parasympathomimetics

Relevant Procedures – CPT / HCPCS, ICD-10

Rx - autonomic rx - sympathomimetic rx	Rx - electrolytic, caloric, water - caloric rx, amino acid prep	Rx - vitamins - multivit prep	Therapy - other
Rx - b-lactam antibiotics	Rx - electrolytic, caloric, water - hydration - unspecified	Rx - vitamins - vitamin b / b complex	Therapy - phlebotomy
Rx - blood derivatives	Rx - electrolytic, caloric, water - multi-mineral prep	Rx - vitamins - vitamin d	Therapy - rehabilitation - other
Rx - cardiovascular system - antiarrhythmic rx	Rx - electrolytic, caloric, water - potassium supp	Screen for amino acid disorders	Therapy - transfusion - blood
Rx - cardiovascular system - beta blockers	Rx - electrolytic, caloric, water - replacement preparations, misc	Smoking / Tobacco Cessation	Therapy - transfusion - granulocytes
Rx - cardiovascular system - cardiac drugs	Rx - electrolytic, caloric, water - sodium chlor preps	Supplies	Therapy - transfusion - plasma
Rx - cardiovascular system - cardiac glycosides	Rx - endocrine - other - parathyroid hormones	Tests - cardiac - ecg - ecg - 12 lead	Therapy - transfusion - platelets
Rx - cardiovascular system - hypotensive rx	Rx - gi - antichol/antispasmodics	Tests - cardiac - echo - contrast agent	Therapy - ultraviolet light therapy
Rx - cardiovascular system - natriuretic peptides	Rx - gi - antiemetics	Tests - cardiac - radiopharmaceuticals	Therapy - vaccination - chicken pox
Rx - cardiovascular system - vasodilating agents, nec	Rx - gi - h2 antagonists	Tests - ent - swallowing evaluation	Therapy - vaccination - dtp / related
Rx - cardiovascular system - vasodilating rx	Rx - gi - ppis	Tests - gi - duodenal motility study	Therapy - vaccination - hepatitis a vaccine
Rx - central nervous system - amphetamines	Rx - gi drug misc,nec	Tests - gi - esophageal balloon distension test	Therapy - vaccination - hepatitis b
Rx - central nervous system - anticonvulsants	Rx - gu - other - bladder rx	Tests - gi - gastric motility study	Therapy - vaccination - hib vaccine
Rx - central nervous system - antidepressants	Rx - hematopoietic system - hematopoietic growth factors	Tests - gi - other dx	Therapy - vaccination - mmr / related
Rx - central nervous system - anxiolytic/sedative/hypnot nec	Rx - hematopoietic system - iron / related	Tests - neuro - sleep studies	Therapy - vaccination - other vaccine
Rx - central nervous system - barbiturates	Rx - hematopoietic system - other	Tests - pulmonary - peak flow	Therapy - vaccination - poliovirus vaccine
Rx - central nervous system - benzodiazepines	Rx - immune system - gold compounds	Therapy - acupuncture	Therapy - vaccination - vaccine administration
Rx - central nervous system - non-amphetamine stimulants	Rx - immune system - immunosuppressants	Therapy - activity therapy	Thyroid Function Tests
Rx - central nervous system - parkinson's rx	Rx - immune system - interferons	Therapy - behavior - evaluation and therapy	Transportation - other transportation
Rx - central nervous system - symnpatholytic rx	Rx - miscellaneous rx	Therapy - behavior - other	Transportation - paramedic
Rx - central nervous system - tranq/antipsychotics	Rx - miscellaneous rx - anesthetics, local	Therapy - behavior - partial hospitalization	Ungrouped Codes
Rx - coagulation system - anticoagulants	Rx - miscellaneous rx - enzymes	Therapy - dialysis - supplies	Upper gastrointestinal endoscopy, biopsy
Rx - coagulation system - antiheparin agnt	Rx - miscellaneous rx - heavy metal antagonists	Therapy - habilitation	Upper gastrointestinal endoscopy; biopsy
Rx - coagulation system - antiplatelet rx	Rx - muscle relaxants - muscle relax, neuromusc block	Therapy - hyperbaric oxygen	Upper GI endoscopy
Rx - coagulation system - hemostatics	Rx - muscle relaxants - muscle relax, skeletal central	Therapy - neurostimulator - nausea / vomiting	Upper GI endoscopy w additional procedures
Rx - coagulation system - thrombolytic rx	Rx - muscle relaxants - muscle relax, skeletal, misc	Therapy - neurostimulator - other	Urine Protein
Rx - diagnostic rx - gastric function	Rx - other	Therapy - neurostimulator - tens - device	Vaccine for flu or Pneumonia
Rx - diagnostic rx - roentgenography	Rx - other anti-infectives - antimalarials	Therapy - neurostimulator - tens - leads	Vitamin K administration
Rx - diagnostic rx - thyroid function	Rx - pharmacy fee	Therapy - neurostimulator - tens - supplies	Wellness Assessment
Rx - diagnostic rx, misc	Rx - respiratory - beta agonists		
Rx - diuretics - diuretic, carb anhydrase inhib	Rx - respiratory - methylxanthines		
Rx - diuretics, loop diuretics	Rx - respiratory - mucolytics/cold comb		
Rx - diuretics, osmotic	Rx - respiratory - phenylephrine		
Rx - diuretics, thiazides / related	Rx - serums, toxoids, vaccines - serums		
Rx - eent - topical - eye/ear/nose/throat misc	Rx - serums, toxoids, vaccines - toxins		
Rx - electrolytic, caloric, water - calcium supplements	Rx - skin / mucous membrane - antiinflam s/mm agnts / comb nec		
Rx - electrolytic, caloric, water - caloric rx dextrose / rel	Rx - skin / mucous membrane - s/mm miscellaneous		

Relevant Diagnoses – ICD-10

Abdominal Hernia w/out Gangrene/Obstruction	Diverticulitis, colitis	Irritable Bowel and other functional GI disor
Abdominal mass	Diverticulosis, Meckel's diverticulum, Angiodyspasia	Marginal Ulcer
Abdominal pain	Dyspepsia	Marginal Ulcer w hmg / obstr / perf
Abdominal tenderness	Dysphagia	Metastatic Cancer and Acute Leukemia
Abnormal weight loss	empyema, lung abscess	Nausea, vomiting
Achalasia, Esophageal Spasm, Stricture, Dysphagia	Esophageal Complications	Neoplasms of unspecified nature or uncertain behavior
Acute esophagitis, acute gastritis, duodenitis	Esophageal Reflux and Other Esophagitis	Neoplsm - benign neoplsm - esophagus
Acute Gastroduodenal Ulcer	Esophageal Varices	Neoplsm - benign neoplsm - small intestine
Acute Gastroduodenal Ulcer w Perforation / Obstruction	Fistula GI tract	Neoplsm - benign neoplsm - stomach
Acute Peptic Ulcer with Bleed	Gastroduodenal Ulcer	Neuroendocrine, Myeloproliferative Cancers
Alcoholic Gastritis	Gastroduodenal Ulcer w Perforation / Obstruction	Nonspecific Gastroenteritis
Allergic, Dietetic, Eosinophilic Gastroenteritis	Gastroenteritis	Observation/Examination
Angiodysplasia of intestine	Gastroparesis	Opportunistic Infections
Aspiration Pneumonia	GERD, Hiatal Hernia, Other Upper GI Disorders	Other abn of GB, pancreas, liver
Barrett's Esophagus	GI - abnormal abdominal imaging study	Other bacterial infections
Cancer in situ, Esophagus	GI - abnormal bowel sounds	Other disorders of stomach and duodenum
Cancer in situ, Stomach	GI - abnormal gi imaging study	Other Esophageal conditions
Cancer of esophagus	GI - diarrhea	Other somatoform disorders
Cancer of other GI organs; peritoneum	GI - esophagitis	Parasitic Infections: Amebiasis, Giardiasis
Cancer of stomach	GI - flatulence / gas pain	Perforation, Peritonitis, Abd Abscess
Cancer small bowel	GI - personal hx of GI disease	Personal history of cancer
Cancer; other and unspecified primary	GI - symptoms - nec / nos	Personal history of GI cancer
Chronic Peptic Ulcer with Bleed	GI - visible peristalsis	Post GI Surgery Syndromes
Complicated Hiatal Hernia	GI Bleed	Previous bowel surgery, ostomy status
complications of surgical procedures	GI inflammation from chemotherapy	Secondary malignancies, Unspecified
Congenital GI Problems in NB	Heartburn	Sxs - symptoms -other
Crohn's Disease w Fistula	Hx of colon polyps, family Hx of colon cancer	Thyroid Cancer
diabetes mellitus with neurologic manifestations	Intestinal infection	Toxic Effects of Radiation
Diaphragmatic Hernia	Intestinal Malabsorption, Celiac Disease	Toxic Gastroenteritis
Digestive congenital anomalies	Intestinal Obstruction	Ulceration of Intestine
Digestive system complications	Iron deficiency and other anemias	Vascular Insufficiency of intestine
Disseminated Metastatic Cancer		

Complications – ICD-10

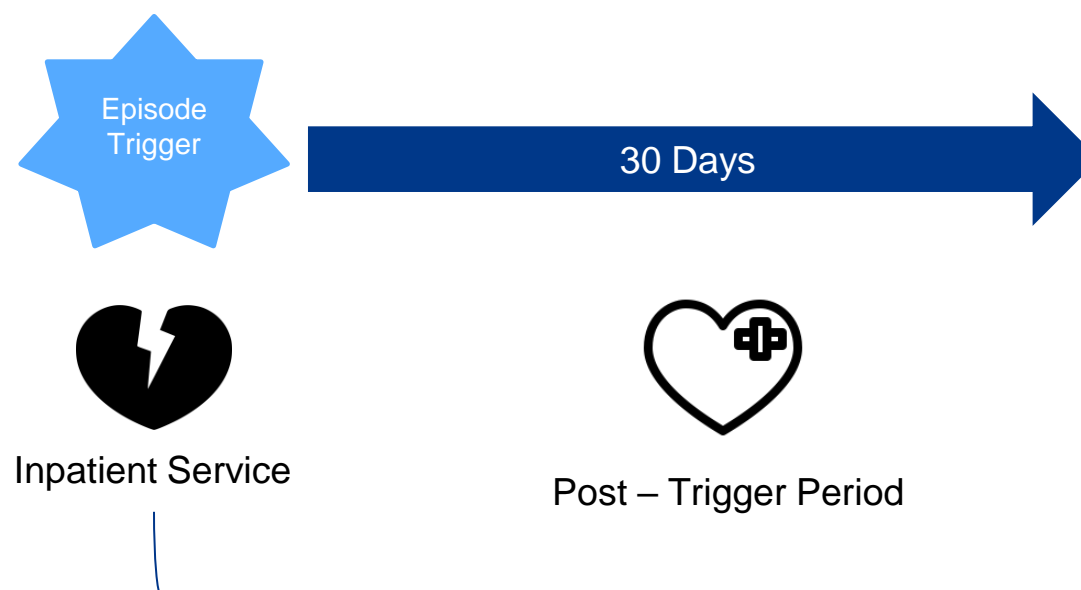
Acute Kidney Failure	Gram Negative Pneumonia	Recent AMI
Adverse effects of drugs	HAC 02: Air Embolism	Resp Failure following trauma / surgery
Aspiration Pneumonia	Hemoperitoneum	Respiratory Failure
Bacteremia, SIRS, no organ dysfunction	Hemorrhage	Respiratory Insufficiency
C-Difficile Infection	Hemorrhagic Stroke	Retroperitoneal Abscess
Chronic Fungal and Other Pneumonias	Hypotension / Syncope	Sepsis
Complications from Central Line	Influenza with Pneumonia	Severe Sepsis
Complications of anesthesia	Intestinal Obstruction	Shock / Cardiac Arrest
Complications of colostomy, enterostomy	Meningitis / Encephalitis	Shock during or following cardiac surgery
complications of medical care	MRSA Pneumonia	Shock during or post-procedure
complications of surgical procedures	MRSA, Drug Resistant Infections	Sinus Node Dysfunction
Complications of surgical procedures or medical care	Opportunistic Infections	STEMI
Debilitating Viral Pneumonia	Other bacterial infections	Subendocardial Infarct
Dehydration	Other Bacterial Pneumonia	Supraventricular Tachyarrhythmias
Dermatitis, Urticaria	Other cardiac arrhythmias	Thromboembolic Stroke
dic, coagulation, hemorrhagic disorders	Other lower respiratory disease	Transient cerebral ischemia, TIA
Digestive system complications	other lung complications	Urethral Stricture
empyema, lung abscess	Other lung problems	Urinary Tract Infection
Esophageal Complications	Other Phlebitis, Lymphangitis, varices	Ventilator Associated Pnuemonia
Fluid Electrolyte Acid Base Problems	Other Staph Pneumonia	Ventilator Dependence
Foreign body left during procedure	Perforation, Peritonitis, Abd Abscess	Ventricular Arrhythmias
Gastroenteritis	Phlebitis, Deep vein thrombosis (DVT)	Viral Pneumonia
		Wound Dehiscence
		Wound Infections

Urinary Tract Infection (UTI)

This is a complication episode. For a complication episode to trigger, it needs the trigger diagnosis code to be present in the principal position of an inpatient claim. The episode window for a complication episode is equal to the length of an inpatient stay with a zero day look back and a 30-day look forward period. It includes services related to the inpatient stay as well as all relevant associated professional, laboratory, radiology and ancillary claims during the inpatient time window.

Complication episodes are opened only after all other episodes have been constructed. Only then can a stay, which is not assigned to any other episode and has a trigger code in the principal position, open a complication episode.

Episode Length – UTI



Total Episode Cost = All expected services and complication costs associated from index service until the end of the post-trigger window.

Duration Pre-Trigger Window	Duration Post-Trigger Window
0	30

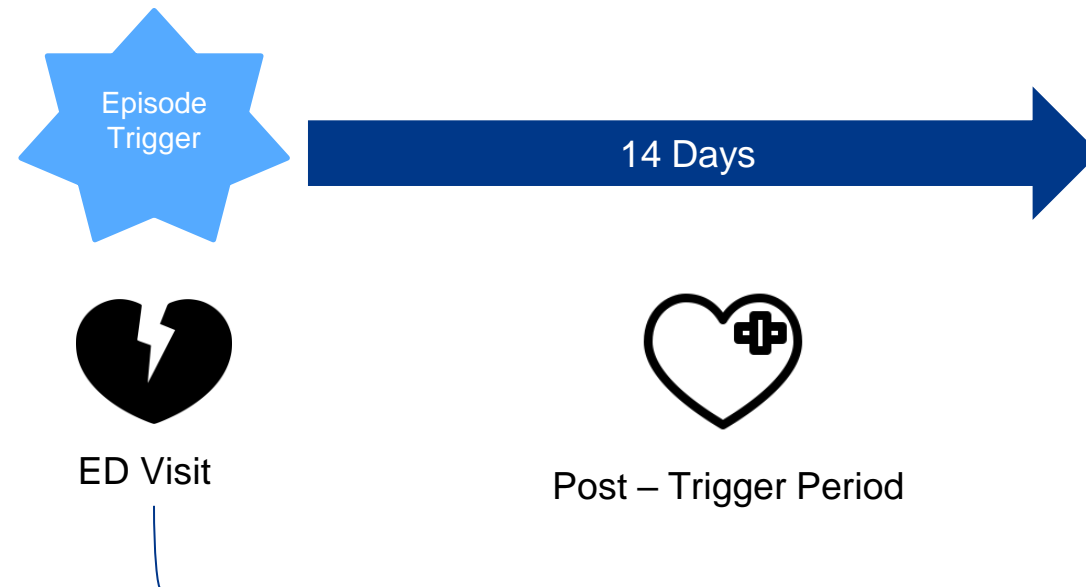
Episode Triggers – UTI

Trigger Group Name	Code Type	Codes
Other Sexually Transmitted Diseases	ICD10	A5601
Urinary Frequency & other symptoms	ICD10	R300
Urinary Tract Infection	ICD10	N10, N110, N111, N118, N119, N12, N136, N151, N159, N16, N2884, N2885, N2886, N3000, N3001, N3010, N3011, N3020, N3021, N3030, N3031, N3080, N3081, N3090, N3091, N340, N341, N342, N343, N37, N390, R309

Emergency Department Episodes (ED Episodes)

Emergency Department Episodes are episodes triggered by an ED visit with one of the triggering diagnosis. The episode window for an emergency department episode is equal to the length of the ED stay with a zero day look back and a 14-day look forward period. It includes payments associated with all claims incurred during the post trigger window.

Episode Length – Emergency Department Episodes



Total Episode Cost = All costs associated from index service until the end of the post-trigger window.

Duration Pre-Trigger Window	Duration Post-Trigger Window
0	14

Episode Triggers – Emergency Department Episodes

Trigger Group Name	Code Type	Codes
Abdominal Pain & Gastrointestinal Symptoms	ICD10	K310, K316, K3184, K3189, K319, R1010, R1011, R1012, R1013, R102, R1030, R1031, R1032, R1033, R10811, R10812, R10813, R10814, R10815, R10816, R10817, R10819, R1084, R109, R110, R1110, R1111, R1115, R112, R140, R197, R198
Asthma/COPD	ICD10	J410, J411, J418, J42, J430, J431, J432, J438, J439, J440, J441, J449, J4520, J4521, J4522, J4530, J4531, J4532, J4540, J4541, J4542, J4550, J4551, J4552, J4590, J45901, J45902, J45909, J45990, J45991, J45998, R062
Atrial Fibrillation	ICD10	I471, I479, I480, I481, I4811, I4819, I482, I4820, I4821, I483, I484, I4891, I4892, I491, I492, I493, I4940, I4949, I498, I499
Chest Pain	ICD10	B3323, I300, I301, I308, I309, I310, I311, I318, I319, I517, I5189, I519, R071, R072, R0781, R0782, R0789, R079, R091

Episode Triggers – Emergency Department Episodes

Trigger Group Name	Code Type	Codes
Deep Vein Thrombosis	ICD10	I8000, I8001, I8002, I8003, I80202, I80203, I80209, I80221, I80222, I80231, I80232, I80251, I80252, I80291, I80292, I80293, I80299, I803, I808, I809, I82401, I82402, I82403, I82409, I82411, I82412, I82413, I82419, I82421, I82422, I82423, I82429, I82431, I82432, I82433, I82439, I82441, I82442, I82443, I82449, I82451, I82452, I82453, I82459, I82461, I82462, I82463, I82469, I82491, I82492, I82493, I82499, I824Y1, I824Y2, I824Y3, I824Y9, I824Z1, I824Z2, I824Z3, I824Z9, I82501, I82502, I82503, I82509, I82511, I82512, I82513, I82519, I82521, I82522, I82523, I82529, I82531, I82532, I82533, I82539, I82541, I82542, I82543, I82549, I82551, I82552, I82553, I82559, I82561, I82562, I82563, I82569, I82591, I82592, I82593, I82599, I825Y1, I825Y2, I825Y3, I825Y9, I825Z1, I825Z2, I825Z3, I825Z9, I82601, I82602, I82603, I82609, I82611, I82612, I82613, I82619, I82621, I82622, I82623, I82629, I82701, I82702, I82703, I82709, I82711, I82712, I82713, I82719, I82721, I82722, I82723, I82729, I82811, I82812, I82813, I82819, I82890, I82891, I8290, I8291, I82A11, I82A12, I82A13, I82A19, I82A21, I82A22, I82A23, I82A29, I82B11, I82B12, I82B13, I82B21, I82B22, I82B23, I82B29, I82C12, I82C13, I82C19, I82C21, I82C22, I82C23, I82C29

Episode Triggers – Emergency Department Episodes

Trigger Group Name	Code Type	Codes
Dehydration & Electrolyte Derangements	ICD10	E860, E861, E869, E876, E878
Diverticulitis	ICD10	K5710, K5712, K5730, K5732, K5750, K5752, K5790, K5792
Fever, Fatigue or Weakness	ICD10	R42, R5083, R5084, R509, R531, R5381, R5382, R5383
Hyperglycemia	ICD10	E0865, E0965, R7309, R739, R81
Hypertension	ICD10	I119, I150, I151, I152, I158, I159
Nephrolithiasis	ICD10	N200, N201, N202, N209, N210, N211, N218, N219
Pneumonia	ICD10	A310, B961, J1000, J1008, J1100, J1108, J121, J122, J123, J1281, J1289, J129, J13, J151, J15212, J155, J156, J157, J158, J159, J160, J168, J180, J181, J182, J188, J189, J470, J471, J479, J9811
Shortness of Breath	ICD10	R0600, R0602, R0609, R0682, R0689, R069

Episode Triggers – Emergency Department Episodes

Trigger Group Name	Code Type	Codes
Skin & Soft Tissue Infection	ICD10	A311, A46, H05011, K122, L0100, L0101, L0102, L0103, L0109, L011, L0201, L0202, L0203, L0211, L0212, L0213, L02211, L02212, L02213, L02214, L02215, L02216, L02219, L02221, L02222, L02223, L02224, L02229, L02231, L02232, L02233, L02234, L0231, L0232, L0233, L02411, L02412, L02413, L02414, L02415, L02416, L02419, L02421, L02422, L02423, L02424, L02425, L02426, L02429, L02431, L02432, L02433, L02434, L02435, L02436, L02439, L02511, L02512, L02519, L02521, L02522, L02531, L02532, L02611, L02612, L02619, L02621, L02622, L02811, L02818, L02821, L02828, L02831, L0291, L0292, L0293, L03011, L03012, L03019, L03021, L03022, L03031, L03032, L03039, L03041, L03042, L03111, L03112, L03113, L03114, L03115, L03116, L03119, L03121, L03122, L03123, L03124, L03125, L03126, L03129, L03211, L03212, L03213, L03221, L03222, L03311, L03312, L03313, L03314, L03315, L03316, L03317, L03319, L03321, L03323, L03324, L03329, L03811, L03818, L03891, L03898, L0390, L0391, L040, L041, L042, L043, L048, L049, L0501, L0502, L0591, L0592, L080, L081, L0881, L0882, L0889, L089, L303, N4822, N610, N611
Syncope	ICD10	G9001, R55, T671XXA
Urinary Tract Infection	ICD10	B3741, B3749, N10, N110, N111, N118, N119, N12, N136, N151, N3000, N3001, N3010, N3011, N3020, N3021, N3030, N3031, N3040, N3041, N3080, N3081, N3090, N3091, N340, N341, N342, N343, N390