**Supplemental Tables**

Supplemental Table 1: Grouping of diagnosis codes into diagnostic categories.

Diagnoses are ICD.10 codes unless otherwise specified (STAR indicates a VPS-assigned diagnosis code).

Supplemental Table 2: Results of multivariable analysis.

a Incalculable due to insufficient numbers

**Significant with p < 0.05**

Supplemental Table 3: Results of stratified analysis of nonsurvivors who received mechanical ventilation versus nonsurvivors who did not receive mechanical ventilation.

**Significant with p < 0.05**

Supplemental Table 1:

**Hemoptysis/**

**Pulmonary hemorrhage**

Hemoptysis\_ICD9

Hemoptysis

Hemoptysis/Pulmonary Hemorrhage\_STAR

Hemorrhage from other sites in respiratory passages

Intraoperative hemorrhage and hematoma of a respiratory system organ or structure complicating a respiratory system procedure

Nb pulmonary hemorrhage\_ICD9

Postprocedural hemorrhage and hematoma of a respiratory system organ or structure following a respiratory system procedure

**Pneumothorax**

Spont pneumothorax nec\_ICD9

Pneumothorax\_STAR

Spont tens pneumothorax\_ICD9

Pneumothorax, unspecified

Primary spontaneous pneumothorax

Iatrogenic pneumothorax\_ICD9

Other pneumothorax

Postprocedural pneumothorax

Spontaneous tension pneumothorax

Traum pneumothorax-close\_ICD9

Pneumothorax/Hemothorax, Traumatic\_STAR

Traumatic pneumothorax, initial encounter

**Bronchiectasis**

Bronchiectasis w ac exac\_ICD9

Bronchiectas w/o ac exac\_ICD9

Bronchiectasis, uncomplicated

Bronchiectasis\_STAR

Bronchiectasis with (acute) exacerbation

Congen bronchiectasis\_ICD9

Bronchiectasis\_ICD9

**Pleural effusion**

Pleural effusion NOS\_ICD9

Pleural Effusion\_STAR

Pleural effusion, not elsewhere classified

Pleural effusion in other conditions classified elsewhere

Pleural effus nec not tb\_ICD9

**Asthma**

Asthma nos\_ICD9

Asthma Without Status Asthmaticus\_STAR

Unspecified asthma, uncomplicated

Asthma w status asthmat\_ICD9

Unspecified asthma with (acute) exacerbation

asthma with acute exacerbation\_STAR

Moderate persistent asthma, uncomplicated

Extrinsic asthma nos\_ICD9

Other asthma

Chronic obst asthma nos\_ICD9

Mild intermittent asthma, uncomplicated

Asthma nos w (ac) exac\_ICD9

Asthma With Status Asthmaticus\_STAR

Moderate persistent asthma with (acute) exacerbation

Ext asthma w status asth\_ICD9

Mild persistent asthma, uncomplicated

Severe persistent asthma with (acute) exacerbation

Severe persistent asthma, uncomplicated

Unspecified asthma with status asthmaticus

Int asthma w status asth\_ICD9

Moderate persistent asthma with status asthmaticus

Severe persistent asthma with status asthmaticus

**Chronic airway obstruction**

Chr Airway Obstruct Nec\_ICD9

Chronic obstructive pulmonary disease, unspecified

Obs chr bronc w(ac) exac\_ICD9

Obstruction, chronic airway NEC\_STAR

Chronic obstructive pulmonary disease with (acute) exacerbation

Obs Chr Bronc W Ac Bronc\_STAR

**Tracheostomy/Chronic vent dependence**

Tracheostomy status\_ICD9

H/O Respirator Dependence V, H/o Chronic Mechanical Ventilation\_STAR

Respirator depend status\_ICD9

Tracheostomy status

Atten to tracheostomy\_ICD9

H/O Tracheostomy V\_STAR

Dependence on respirator [ventilator] status

Other tracheostomy complication

Respirator Depend Status\_STAR

**Lung transplant**

Lung transplant status\_ICD9

Compl lung transplant\_ICD9

Lung transplant status

H/O Lung Transplant V\_STAR

Lung transplant rejection

Complication of lung transplant including rejection or graft failure\_STAR

Unspecified complication of lung transplant

H/O Heart & Lung Transplant V\_STAR

**Other Respiratory Diagnoses**

Cystic fibros w pul man\_ICD9

Acute respiratry failure\_ICD9

Cystic fibrosis with pulmonary manifestations

Hypoxemia\_ICD9

Resp abnormality NEC\_ICD9

Dyspnea/Tachypnea, Respiratory Distress/Insufficiency, Respiratory Distress\_STAR

Respiratory abnorm nos\_ICD9

Acute & chronc resp fail\_ICD9

Chronic respiratory fail\_ICD9

Acute respiratory failure, unspecified whether with hypoxia or hypercapnia

Other pulmonary insuff\_ICD9

Pulmonary Insufficiency/Shock Lung, Adult Respiratory Distress Syndrome (ARDS) , Acute Hypoxic Respiratory Failure (AHRF) , Acute Lung Injury (ALI) \_STAR

Hypoxemia

Other lung disease nec\_ICD9

Acute respiratory failure with hypoxia

Pulmonary collapse\_ICD9

Respiratory arrest\_ICD9

Unspecified abnormalities of breathing

Other abnormalities of breathing

Acute respiratory distress syndrome

Dyspnea, unspecified

Shortness of breath\_ICD9

Acute and chronic respiratory failure with hypoxia

Respiratory Failure/Arrest\_STAR

Tachypnea\_ICD9

Dependence on supplemental oxygen

Depend-supplement oxygen\_ICD9

Chronic respiratory failure, unspecified whether with hypoxia or hypercapnia

Depend-Supplement Oxygen\_STAR

Interstitial emphysema\_ICD9

Asphyxia (Not Birth or Trauma)/Hypoxemia/Hypoxic\_STAR

Acute and chronic respiratory failure, unspecified whether with hypoxia or hypercapnia

Chronic bronchitis nec\_ICD9

Unspecified chronic bronchitis

Resp system disease nec\_ICD9

Trachea & bronch dis nec\_ICD9

Acute Pulmonary Edema/Lung, Noncardiogenic\_STAR

Cough\_ICD9

Other diseases of lower respiratory\_STAR

Other disorders of lung

Pulmonary Collapse/Atelectasis\_STAR

Larynx/Trachea/Bronchus Anomalies, Tracheal/Laryngeal/Broncheal Stenosis/Web, Tracheomalacia/Laryngomalacia/Bronchomalacia, Atresia/Stenosis/Cleft/Cyst Of Airways\_STAR

Atelectasis

Acute bronchitis\_ICD9

Bronchitis NOS\_ICD9

Acute respiratory failure with hypercapnia

Painful respiration\_ICD9

Wheezing\_ICD9

Abn findings-lung field\_ICD9

Acute bronchospasm

Other diseases of the upper respiratory\_STAR

Tachypnea, not elsewhere classified

Acute postprocedural respiratory failure

Chronic bronchitis nos\_ICD9

Cyanosis\_ICD9

Other nonspecific abnormal finding of lung field

Other specified diseases of upper respiratory tract

Respiratory anomaly nec\_ICD9

Cough

Emphysematous bleb\_ICD9

Abnormal results of pulmonary function studies

Asphyxia(Not Birth or Trauma)/Hypoxemia/Hypoxic\_ICD9

Bronchitis\_STAR

Chronic respiratory failure with hypoxia

Other specified respiratory disorders

Respiratory Distress Syn\_ICD9

Shortness of breath

Acute pulmonary insufficiency following thoracic surgery

Alveol pneumonopathy nos\_ICD9

Bronchitis, not specified as acute or chronic

cough\_STAR

Emphysema, unspecified

Interstitial emphysema

Interstitial Emphysema (PIE) /Pneumomediastinu, Subcutaneous Emphysema\_STAR

Mixed simple and mucopurulent chronic bronchitis

Perinatal chr resp dis\_ICD9

Postinflam Pulm Fibrosis\_ICD9

Respiratory System Diseases, Misc NEC\_STAR

Trachea/bronchus dis nec\_ICD9

Upper resp dis nec/nos\_ICD9

Wheezing\_STAR

Abn pulmonary func study\_ICD9

Abn pulmonary func study\_STAR

Chest pain on breathing

Emphysema (subcutaneous) resulting from a procedure, subsequent encounter

Mucopurulent chronic bronchitis

Other pulmonary collapse

Resp sys/chest symp nec\_ICD9

Respiratory Complication, NEC\_STAR

Respiratory disorder, unspecified

Respiratory failure, unspecified, unspecified whether with hypoxia or hypercapnia

Unspecified chronic respiratory disease originating in the perinatal period

Abnormal sputum\_ICD9

Acute and chronic respiratory failure with hypercapnia

Acute bronchospasm\_ICD9

Acute bronchospasm\_STAR

Acute pulmonary insufficiency following nonthoracic surgery

Congenital cystic lung\_ICD9

Cyanosis

Emphysema/Emphysematous Bleb\_STAR

Gangrene and necrosis of lung

Lung involv in oth dis\_ICD9

Other chronic respiratory diseases originating in the perinatal period

Perinatal Apnea/Cyanosis\_STAR

Pleurisy w/o effus or tb\_ICD9

Respiratory failure, unspecified with hypoxia

Wheezing

**Pancreatic disease**

Pancreatic disease nec\_ICD9

Other specified diseases of pancreas

Other disorders of Pancreatic Secretion\_STAR

Pancreatic disorder nec\_ICD9

Pseudocyst, cyst and Pancreatic diseases NOS (Excludes Pancreatic secretion disorders)\_STAR

Pancreatic disorder nos\_ICD9

Disease of pancreas, unspecified

Other chronic pancreatitis

Pancreatic disease nos\_ICD9

Acute pancreatitis\_ICD9

Pancreatitis, Acute\_STAR

Chronic pancreatitis\_ICD9

Other specified disorders of pancreatic internal secretion

Pancreatic steatorrhea\_ICD9

Pancreas anomalies\_ICD9

Pancreatic steatorrhea

Trnspl status-pancreas\_ICD9

Chronic pancreatitis\_STAR

Compl pancreas transplnt\_ICD9

Other acute pancreatitis

Pancreas transplant status

Trnspl status-pancreas\_STAR

**Gastroesophageal reflux disease**

Esophageal reflux\_ICD9

Gastro-esophageal reflux disease without esophagitis

Gastroesophageal Reflux (GER) and noninfectious esophagitis\_STAR

Gastroesophageal Reflux (GE Reflux)\_STAR

Reflux esophagitis\_ICD9

Esophagitis, unspecified\_ICD9

Gastro-esophageal reflux disease with esophagitis

Other esophagitis\_ICD9

Acute esophagitis\_ICD9

Heartburn\_ICD9

**Intestinal malabsorption/Obstruction/Ileus**

Constipation, unspecified

Cystic fibrosis w ileus\_ICD9

Intest postop nonabsorb\_ICD9

Intestinal obstruct nos\_ICD9

Intest malabsorption nos\_ICD9

Intestinal obstruct nec\_ICD9

Gastroparesis\_ICD9

Constipation nos\_ICD9

Constipation\_ICD9

Other intestinal malabsorption

Intestinal/Bowel Obstruction/ileus NEC\_STAR

Other intestinal obstruction

Neurogenic bowel/Constipation/intestine disorder NOS\_STAR

Intestinal Malabsorption\_STAR

Paralytic ileus\_ICD9

Constipation nec\_ICD9

Intest malabsorption nec\_ICD9

Cystic fibrosis w ileus\_STAR

Ileus, unspecified

Meconium ileus in cystic fibrosis

Intestinal malabsorption, unspecified

Slow transt constipation\_ICD9

Unspecified intestinal obstruction

Gastroparesis

Malabsorption due to intolerance, not elsewhere classified

Meconium obstruction\_ICD9

Paralytic ileus

Other constipation

**Hepatobiliary disease**

Cirrhosis of liver nos\_ICD9

Chronic liver disease including cirrhosis\_STAR

Chronic liver dis nec\_ICD9

Biliary cirrhosis\_ICD9

Liver disorders nec\_ICD9

Liver disorder nos\_ICD9

Acute Necrosis Of Liver\_ICD9

Unspecified cirrhosis of liver

Biliary atresia\_ICD9

Elev transaminase/ldh\_ICD9

Necrosis Of Liver, Acute/Hepatic Failure\_STAR

Hepatomegaly\_ICD9

Hepatomegaly\_STAR

Liver disease, unspecified

Other specified diseases of liver

Acute cholecystitis\_ICD9

Cholangitis\_ICD9

liver disorders NOS\_STAR

Other cirrhosis of liver

Jaundice nos\_ICD9

Hepatic failure, unspecified without coma

Oth sequela, chr liv dis\_ICD9

Hepatic Coma\_STAR

Biliary & liver anom nec\_ICD9

Cholelithiasis nos\_ICD9

Chronic hepatic failure without coma

Dis of biliary tract nec\_ICD9

Hepatic coma\_ICD9

Hepatomegaly with splenomegaly, not elsewhere classified

Hepatorenal syndrome\_ICD9

Obstruction of bile duct

Cholecystitis nos\_ICD9

Cong cystic liver dis\_ICD9

Gallbladder/bile duct disorders\_STAR

Jaundice/Icterus/Hyperbilirubinemia (Excludes neonatal forms)\_STAR

Nonspecific elevation of levels of transaminase and lactic acid dehydrogenase [LDH]

Acute and subacute hepatic failure without coma

Biliary cirrhosis, unspecified

Cholangitis\_STAR

Dis bilirubin excretion\_ICD9

Dis of gallbladder nec\_ICD9

Hepatorenal syndrome

Obstruction of bile duct\_ICD9

Cholangitis

Cholelith w ac cholecyst\_ICD9

Chronic liver dis nos\_ICD9

Calculus of gallbladder and bile duct without cholecystitis with obstruction

Calculus of gallbladder with acute cholecystitis without obstruction

Calculus of gallbladder without cholecystitis without obstruction

Cholelith w cholecys nec\_ICD9

Chronic Hepatitis\_STAR

Gall&bil cal w/ac w/o ob\_ICD9

Hepatic failure, unspecified with coma

Hepatic fibrosis

Hepatitis nos\_ICD9

Hepatitis NOS, non-viral\_STAR

Hepatomegaly, not elsewhere classified

Hepatopulmonary syndrome

Hepatorenal Syndrome\_STAR

Atresia of bile ducts

Biliary Atresia\_STAR

**Portal hypertension**

Portal hypertension\_ICD9

Portal hypertension

Esoph varice oth dis nos\_ICD9

Portal Hypertension\_STAR

Esophageal Varices\_STAR

Esoph varices w/o bleed\_ICD9

Esophageal varices without bleeding

Secondary esophageal varices without bleeding

**Gastrointestinal bleeding**

Esophag varices w bleed\_ICD9

Esophageal varices with bleeding

Secondary esophageal varices with bleeding

GI hemorrhage NOS\_ICD9

Blood in stool\_ICD9

Gastrointestinal Hemorrhage/GI Bleed including melena and hematemesis\_STAR

Hematemesis\_ICD9

Gastrointestinal hemorrhage, unspecified

Hematemesis

Melena

Acute gastritis with bleeding

Chr stomach ulc w hem\_ICD9

Gstr/ddnts nos w hmrhg\_ICD9

Hemorrhage of anus and rectum

Acute gastritis w hmrhg\_ICD9

**Splenomegaly**

Splenomegaly\_ICD9

Splenomegaly, not elsewhere classified

Hypersplenism\_ICD9

Hepatomegaly with splenomegaly, not elsewhere classified

Hypersplenism

Splenomegaly\_STAR

**Gastrostomy/ Enterostomy**

H/O Gastrostomy V\_STAR

Gastrostomy status\_ICD9

Gastrostomy status

Other artificial openings of gastrointestinal tract status

Enterostomy status nec\_ICD9

Ileostomy status\_ICD9

Atten to gastrostomy\_ICD9

Gastrostomy comp nos\_ICD9

H/O Ileostomy V\_STAR

Atten to colostomy\_ICD9

Atten to ileostomy\_STAR

Encounter for attention to gastrostomy

Ileostomy status

Atten to enterostomy nec\_ICD9

Atten to ileostomy\_ICD9

Gastrostomy comp - mech\_ICD9

Gastrostomy comp nec\_ICD9

Colostomy/Enterostomy Complication or Malfunction\_STAR

Encounter for attention to ileostomy

Gastrostomy complication, unspecified

Gastrostomy infection\_ICD9

Gastrostomy malfunction

Gastrostomy Removal/Replacement V\_STAR

Other complications of gastrostomy

**Liver transplant**

Liver transplant status\_ICD9

Liver transplant status

Compl liver transplant\_ICD9

H/O Liver Transplant V\_STAR

Liver transplant rejection

**Other Gastrointestinal Diagnoses**

Cystic fibrosis w gi man\_ICD9

Cystic fibrosis with other intestinal manifestations

Abdmnal pain unspcf site\_ICD9

Diarrhea\_ICD9

Nausea/Vomiting/Emesis\_STAR

Vomiting alone\_ICD9

Ascites\_STAR

Ascites nec\_ICD9

Intestinal disorders nec\_ICD9

Nausea with vomiting\_ICD9

Other specified diseases of intestine

Ascites\_ICD9

Diarrhea\_STAR

Flatul/eructat/gas pain\_ICD9

Generalized abdominal pain

Perforation of intestine (nontraumatic)

Perforation Of Intestine/Bowel\_STAR

Diarrhea, unspecified

Abdominal Pain\_STAR

Perforation of intestine\_ICD9

Stomach function dis nec\_ICD9

Intestinal Disorders NEC\_STAR

Nausea with vomiting, unspecified

Prsnl hst ot spf dgst ds\_ICD9

Disease of spleen, unspecified

Functional dyspepsia

Intestinal anomaly nec\_ICD9

Other diseases of stomach and duodenum

Unspecified abdominal pain

Abdominal distension (gaseous)

Disorders of the spleen\_STAR

Esophageal Diseases NEC, Esophageal Ulcer/Stricture\_STAR

Gastroduodenitis, unspecified, without bleeding

Vomiting, unspecified

Abdmnal pain generalized\_ICD9

Other diseases of spleen

Abdmnal pain lft up quad\_ICD9

Abdomen/pelvis symp nec\_ICD9

Digestive System Disorders, Perinatal NEC\_STAR

Gastric disorder NEC\_STAR

Gastrointestinal Complication, NEC\_STAR

Intestinal fistula\_ICD9

Intestinal Perforation, Perinatal, Meconium Peritonitis\_STAR

Nausea alone\_ICD9

Abdmnal pain periumbilic\_ICD9

Abdmnal pain rt lwr quad\_ICD9

Disease of intestine, unspecified

Epigastric pain

Gastroduodenal dis nec\_ICD9

Intestinal bypass status\_ICD9

Intestinal disorder nos\_ICD9

Nausea

Other specified disorders of peritoneum

Other specified perinatal digestive system disorders

Persistent vomiting\_ICD9

**Bacterial infection**

Methicillin resistant Staphylococcus aureus in conditions classified elsewhere and of unspecified site\_ICD9

Pseudomonas infect nos\_ICD9

Pneumonia, Bacterial\_STAR

Carrier or suspected carrier of methicillin resistant Staphylococcus aureus\_ICD9

Pneumonia due to methicillin resistant Staphylococcus aureus\_ICD9

Pseudomonas (aeruginosa) (mallei) (pseudomallei) as the cause of diseases classified elsewhere

Pseudomonas Infection\_STAR

Oth gram negatv bacteria\_ICD9

Staphylococcus aureus\_ICD9

Staph Aureus infection (Same code as MSSA)\_ICD9

Methicillin Resistant Staphylococcus Aureus (MRSA) - unspecified\_STAR

Carrier or suspected carrier of Methicillin resistant Staphylococcus aureus

Bacteremia\_ICD9

Staph aureus pneumonia\_ICD9

Clostridium Difficile Infection, Pseudomembranous Colitis\_ICD9

Methicillin resistant Staphylococcus aureus infection as the cause of diseases classified elsewhere

Enterococcus group d\_ICD9

Mycobacteria Infection, Other\_STAR

Oth specf bacteria\_ICD9

Staphylococcus Aureus Infection (MSSA Infection)\_STAR

Bacterial pneumonia nos\_ICD9

Carrier of other specified bacterial diseases

Personal history of Methicillin resistant Staphylococcus aureus infection

Pneumonia due to Pseudomonas

Pneumonia due to Methicillin Resistant Staphylococcus Aureus (MRSA)\_STAR

Other specified bacterial agents as the cause of diseases classified elsewhere

Bacteremia

Methicillin resistant Staphylococcus aureus infection, unspecified site

Methicillin susceptible Staphylococcus aureus infection as the cause of diseases classified elsewhere

Bacteria dis carrier nec\_ICD9

Pneumo oth grm-neg bact\_ICD9

H/O Methicillin Resistant Staphyloccus Aureus (MRSA)\_STAR

Mycobacterial dis nos\_ICD9

Pulmonary mycobacteria\_ICD9

Klebsiella infect nos\_ICD9

Pneumonia oth spcf bact\_ICD9

Clostridium Difficile Infection, Pseudomembranous Colitis\_STAR

E. coli infect nos\_ICD9

Other bacterial infections of unspecified site

Methicillin resistant Staphylococcus aureus septicemia\_ICD9

Staphylococcal Infection\_STAR

Carrier/suspected carrier of Methicillin Resistant Staphylococcus Aureus (MRSA)\_STAR

Enterocolitis due to Clostridium difficile

H. influenzae infect nos\_ICD9

Mycobacterial dis nec\_ICD9

Pneumonia due to Methicillin resistant Staphylococcus aureus

Other gram negative bacteria, including serratia\_STAR

Methicillin susceptible Staphylococcus aureus infection, unspecified site

Escherichia Coli Infection\_STAR

Klebsiella pneumoniae [K. pneumoniae] as the cause of diseases classified elsewhere

Mycobacteria infection, other\_ICD9

Staph aureus septicemia\_ICD9

Staphylcocc septicem nos\_ICD9

Staphylococcal pneu nos\_ICD9

Staphylococcus Aureus Septicemia (MSSA Septicemia)\_STAR

Unspecified bacterial pneumonia

Bacterial Infection, Other\_STAR

Pneu mycplsm pneumoniae\_ICD9

Pneumonia due to other specified bacteria

VRE/VRSA/VISA\_STAR

Cellulitis of other sites

Cellulitis, site nec\_ICD9

Gram-neg septicemia nos\_ICD9

H.influenzae pneumonia\_ICD9

K. pneumoniae pneumonia\_ICD9

Klebsiella Infection, Friedlanders Bacillus Infection\_STAR

Mycobacterial infection, unspecified

Pneumonia due to Methicillin susceptible Staphylococcus aureus

Pneumonia due to Mycoplasma pneumoniae

Pneumonia e coli\_ICD9

Cellulitis of leg\_ICD9

Enterococcus as the cause of diseases classified elsewhere

Enterococcus group d\_STAR

Gram-neg septicemia nec\_ICD9

Hemophilus Influenzae Infection\_STAR

Necrotizing fasciitis\_ICD9

Orbital cellulitis\_ICD9

Pneumonia due to other aerobic Gram-negative bacteria

Pseudomonas septicemia\_ICD9

Pulmonary mycobacterial infection

Staph Aureus Septicemia (Same code as MSSA Septicemia)\_ICD9

Streptococcal Infection, NEC\_STAR

Streptococcus, group A, as the cause of diseases classified elsewhere

Urinary Tract Infection (UTI), Bacteriuria/pyuria\_STAR

Urinary tract infection, site not specified

Uti site not specified\_ICD9

Bact pleur/effus not tb\_ICD9

Bacteremia, Unspecified\_STAR

Bacteria dis carrier nec\_STAR

Bacterial infection nos\_ICD9

Cellulitis nos\_ICD9

Cellulitis of trunk, unspecified

Cellulitis/Abscess\_STAR

E coli septicemia\_ICD9

E coli septicemia\_STAR

Endocarditis, Acute/Subacute, Bacterial Endocarditis (SBE)(ABE)\_STAR

Equatorial staphyloma\_ICD9

Mycoplasma Infection\_STAR

Other staphylococcus\_ICD9

Other streptococcus\_ICD9

Otitis media nos\_ICD9

Otitis Media (OM) and tube disorders\_STAR

Otitis media, unspecified, bilateral

Otitis media, unspecified, unspecified ear

Pneumonia due to Escherichia coli

Pneumonia due to staphylococcus, unspecified

Pneumonia due to Streptococcus pneumoniae

Prsnl hst tuberculosis\_ICD9

Pulmonary nocardiosis

Rheumatic Fever, Acute (ARF)\_STAR

Sepsis due to Escherichia coli [E. coli]

Sepsis due to unspecified staphylococcus

Staphylococcus unspcfied\_ICD9

Streptococcal infection, unspecified site

Streptococcal pharyngitis

Streptococcal pneumn nos\_ICD9

Unspecified nonsuppurative otitis media, bilateral

Bacterial infection, unspecified

Carrier or suspected carrier of Methicillin susceptible Staphylococcus aureus

Cellulitis, unspecified

Gram-negative sepsis, unspecified

H. influenae septicemia\_ICD9

Hemophilus influenzae [H. influenzae] as the cause of diseases classified elsewhere

Other Gram-negative sepsis

Other staphylococcus as the cause of diseases classified elsewhere

Other streptococcal sepsis

Pneumococcal Pneumonia\_ICD9

Pneumonia due to Klebsiella pneumoniae

Pneumonia due to other staphylococcus

Pneumonia due to other streptococci

Resistance to multiple antimycobacterial drugs

Rheum Fev W/O Hrt Involv\_ICD9

Sepsis due to Methicillin resistant Staphylococcus aureus

Sepsis due to Pseudomonas

Sepsis due to streptococcus, group A

Spontaneous bacterial peritonitis

Staph pneumonia nec\_ICD9

Streptococcal septicemia\_ICD9

Streptococcus group a\_STAR

Streptococcus group b\_ICD9

Streptococcus group b\_STAR

**Viral infection**

Rhinovirus infect nos\_ICD9

Other viral infections\_STAR

Other viral agents as the cause of diseases classified elsewhere

Flu w resp manifest nec\_ICD9

Ac bronchiolitis D/T RSV\_ICD9

Oth specf viral infectn\_ICD9

Pneumonia, Viral\_STAR

Influenza with pneumonia\_ICD9

Acute bronchiolitis due to respiratory syncytial virus

Other viral infections of unspecified site

Oth spec dis viruses\_ICD9

Enterovirus infection, unspecified

Influenza Virus Infection\_STAR

Parinfluenza viral pneum\_ICD9

Resprtry syncytial virus\_ICD9

Cytomegaloviral disease\_ICD9

Infectious mononucleosis, unspecified without complication

Intes infec rotavirus\_ICD9

Viral Infection, Other NEC\_STAR

Viral infection, unspecified

Adenovirus infect nos\_ICD9

Coronavirus infection, unspecified

Respiratory Syncytial Virus Pneumonia (RSV), RSV Infection/Pneumonitis\_STAR

Respiratory syncytial virus as the cause of diseases classified elsewhere

Acute bronchiolitis due to human metapneumovirus

Herpes simplex nos\_ICD9

Parainfluenza virus pneumonia

Viral enteritis nos\_ICD9

Adenoviral pneumonia\_ICD9

Adenovirus as the cause of diseases classified elsewhere

Enteroviral disease including Meningitis\_STAR

Hepatitis c carrier\_STAR

Human herpesvirus 6 infc\_ICD9

Infection due to identified novel H1N1 influenza virus\_ICD9

Influenza due to other identified influenza virus with other respiratory manifestations

Resp syncyt viral pneum\_ICD9

Varicella complicat nec\_ICD9

Viral infection nos\_ICD9

Viral pneumonia nec\_ICD9

Viral pneumonia nos\_ICD9

Viral pneumonia, unspecified

Acute bronchitis due to rhinovirus

Adenoviral pneumonia

Chronic hepatitis, unspecified

H1N1 influenza virus (Swine Flu)\_STAR

Influenza due to identified novel influenza A virus with other respiratory manifestations

Influenza due to unidentified influenza virus with other respiratory manifestations

Other specified viral diseases

Other viral intes infec\_ICD9

Pneumonia due to SARS-associated coronavirus

Respiratory syncytial virus pneumonia

Adenovirus infection, unspecified

Cong cytomegalovirus inf\_ICD9

Cytomegaloviral disease, unspecified

Epstein-Barr Virus Infection (EBV), Infectious Mononucleosis\_STAR

Gammaherpesviral mononucleosis without complication

Herpetic gingivostomat\_ICD9

Human Immuno Virus Dis\_ICD9

Infectious Mononucleosis\_ICD9

Oth Enteroviral Cns Dis\_ICD9

Sars assoc coronavirus\_ICD9

Varicella uncomplicated\_ICD9

Viral encephalitis nec\_ICD9

Viral meningitis nec\_ICD9

Viral warts nos\_ICD9

Viremia nos\_ICD9

**Fungal infection**

Alrgc brncpul asprglosis\_ICD9

Aspergillosis\_ICD9

Allergic Bronchopulmonary Aspergillosis\_STAR

Candidiasis of lung\_ICD9

Mycoses, Other NEC, Fungal Infection, Other\_STAR

Candida Infection, NEC\_STAR

Mycoses nec & nos\_ICD9

Candidiasis site nos\_ICD9

Allergic bronchopulmonary aspergillosis

Candidiasis, unspecified

Aspergillosis, unspecified

Aspergillus Infection\_STAR

Pneum in aspergillosis\_ICD9

Candidias urogenital nec\_ICD9

Thrush\_ICD9

Funct dis intestine nec\_ICD9

Unspecified mycosis

Other sites of candidiasis

Pneumocystosis\_ICD9

Candidal sepsis

Candidiasis site nec\_ICD9

Candidal esophagitis\_ICD9

Candidal vulvovaginitis\_ICD9

Disseminated candidiasis\_ICD9

Invasive pulmonary aspergillosis

Other forms of aspergillosis

Pulmonary candidiasis

Candidal stomatitis

Histoplasmosis, unspecified

Opportunistic Mycoses\_ICD9

Pneum in oth sys mycoses\_ICD9

Pneumocystis Carinii Pneumonia (PCP)\_STAR

**Other Infection Diagnoses**

Pneumonia, organism NOS\_ICD9

Pseudomonal pneumonia\_ICD9

Chronic sinusitis nos\_ICD9

Fever\_ICD9

Pneumonia, unspecified organism

Sepsis\_ICD9

Septic shock\_ICD9

Personal history of methicillin resistant Staphylococcus aureus\_ICD9

Chronic sinusitis, unspecified

Prsnl hx recur pneumonia\_ICD9

Pyrexia or Fever\_STAR

Infect d/t cent ven cath\_ICD9

Sinusitis\_STAR

Bronchopneumonia Org Nos\_ICD9

Sepsis, unspecified organism

Severe sepsis with septic shock

Acu brnchlts d/t oth org\_ICD9

Septic Shock\_STAR

Ac tracheitis no obstruc\_ICD9

Pneumonia, Other\_STAR

Acute uri nos\_ICD9

Chronic sinusitis nec\_ICD9

Severe sepsis\_ICD9

Fever, unspecified

sepsis with or without shock\_STAR

Septicemia NOS\_ICD9

Infc mcrg drgrst mult\_ICD9

Bronchopneumonia, unspecified organism

Pneumonia due to other specified infectious organisms

Acute bronchiolitis due to other specified organisms

Acute bronchiolitis, unspecified

Acute sinusitis, unspecified

Acute upper respiratory infection, unspecified

Bronchitis/Bronchiolitis\_STAR

Inf mcr rst ot drg nt ml\_ICD9

Infc mcrg drgrst mult\_STAR

Acute sinusitis nos\_ICD9

Unspecified infection due to central venous catheter, initial encounter

Empyema with fistula\_ICD9

Acute tracheitis without obstruction

Bronchiectasis with acute lower respiratory infection

Abscess of lung\_ICD9

Ac tracheitis w obstruct\_ICD9

Cellulitis of arm\_ICD9

Chr maxillary sinusitis\_ICD9

Empyema w/o fistula\_ICD9

Empyema\_STAR

Infc mcrg drgrst nt mult\_ICD9

Infect D/T vasc device\_ICD9

Peritoneal abscess

Pneumon oth spec orgnsm\_ICD9

Prsnl hst oth nfct parst\_ICD9

Septicemia nec\_STAR

Upper Respiratory Infection (URI)\_STAR

Acute recurrent sinusitis, unspecified

Bloodstream infection due to central venous catheter, initial encounter

Chr ethmoidal sinusitis\_ICD9

Chronic pansinusitis

Infection Associated w/ Central Venous Catheter (CVL or CVC) (includes CLABSI and CLAMBI)\_STAR

Osteomyelit nos-oth site\_ICD9

Abscess Of Lung\_STAR

Abscess of liver\_ICD9

Ac frontal sinusitis\_ICD9

Acute maxillary sinusitis, unspecified

Anal & Rectal Abscess\_ICD9

Chronic maxillary sinusitis

CNS abscess nos\_STAR

Gastroenteritis/Colitis, Infectious, Diarrhea, Infectious\_STAR

Gastrostomy infection

Inf mcrg rstn oth drg ml\_ICD9

Infect fol infus/inj/vac\_ICD9

Infectious complication of internal device nec\_ICD9

Intestinal abscess\_ICD9

Local skin infection nos\_ICD9

Mastoiditis and mastoid disorders\_STAR

Osteomyelitis nos-unspec\_ICD9

Personal history of other infectious and parasitic diseases

Personal history of pneumonia (recurrent)

Prsnl Hx Recur Pneumonia\_STAR

Psoas muscle abscess\_ICD9

Ac maxillary sinusitis\_ICD9

Acute bronchitis due to other specified organisms

Acute otitis externa nec\_ICD9

Acute Pharyngitis\_ICD9

Acute recurrent maxillary sinusitis

Chronic ethmoidal sinusitis

Congenital pneumonia\_ICD9

Infection following a procedure, initial encounter

Infectious enteritis nos\_ICD9

Infectious gastroenteritis and colitis, unspecified

Myocarditis nos\_ICD9

Myocarditis\_STAR

Myocarditis, unspecified

Other acute osteomyelitis, other site

Other acute sinusitis\_ICD9

Other chronic sinusitis

Other infectious disease

Pharyngitis/Tonsillitis\_STAR

Pneumonia in diseases classified elsewhere

Postop infection NEC\_ICD9

Purulent endophthalm nos\_ICD9

Pyothorax with fistula

Resistance to unspecified antimicrobial drugs

Respiratory bronchiolitis interstitial lung disease

Retroperiton abscess nec\_ICD9

Septic arterial embolism, excludes septic pulmonary embolism\_STAR

Tracheitis\_STAR

**Malnutrition**

Protein-cal malnutr nos\_ICD9

Failure to thrive-child\_ICD9

Failure to thrive (child)

Underweight\_ICD9

Malnutrition/Kwashiorkor/Marasmus, Protein-calorie Malnutrition\_STAR

Failure To Thrive (FTT)\_STAR

Unspecified protein-calorie malnutrition

Underweight, Failure to Thrive (FTT)\_STAR

Unspecified severe protein-calorie malnutrition

Abnormal loss of weight\_ICD9

Malnutrition mod degree\_ICD9

Malnutrition mild degree\_ICD9

Nutritional deficiency, unspecified

Mild protein-calorie malnutrition

Moderate protein-calorie malnutrition

Nutritional Marasmus\_ICD9

Oth Severe Malnutrition\_ICD9

Failure to thrive-adult\_ICD9

Nutrition Symptoms / Changes in weight/ appetite\_STAR

Adult failure to thrive

Underweight

Cachexia\_ICD9

cachexia\_STAR

Bmi,pediatric <5%\_ICD9

Nutrition deficiency nos\_ICD9

Nutritional Deficiencies, Vitamins, Beriberi/pellagra/scurvy/Vit K defic.\_STAR

Abnormal weight loss

Failure to thrive in newborn

Nutritional marasmus

Other eating disorders

Bmi less than 19,adult\_ICD9

Body mass index (BMI) pediatric, less than 5th percentile for age

Nutrition deficiency nec\_ICD9

Abnormal weight gain

Anorexia\_ICD9

Cachexia

Neonatal/Perinatal Feeding Problems\_STAR

**Diabetes**

Diabetes mellitus nos\_ICD9

Diabetes Mellitus NOS\_STAR

Type 1 DM without complication, not uncontrolled\_ICD9

Diabetes mellitus due to underlying condition without complications

Dmii wo cmp nt st uncntr\_ICD9

Type 1 diabetes mellitus without complications

Long-term use of insulin\_ICD9

Impaired oral glucse tol\_ICD9

Other specified diabetes mellitus with other specified complication

Type 2 diabetes mellitus without complications

Diabetes insipidus\_ICD9

Dmi wo cmp uncntrld\_ICD9

Type 2 DM with complications (Not DKA or non-Ketotic hyperosmolarity)\_STAR

Type 1 DM with DKA\_STAR

Insulin pump status\_ICD9

Dmii oth nt st uncntrld\_ICD9

Dmi unspf uncntrld\_ICD9

Impaired glucose tolerance (oral)

Type 1 DM with complications (Not DKA or non-Ketotic hyperosmolarity)\_STAR

Dmii hprsm nt st uncntrl\_ICD9

Dmii keto nt st uncntrld\_ICD9

Dmii neuro nt st uncntrl\_ICD9

Long-Term Use Of Insulin\_STAR

Type 1 diabetes mellitus with ketoacidosis without coma

Type 1 DM not uncontrolled\_STAR

Diabetes mellitus due to underlying condition with other specified complication

Dmi keto nt st uncntrld\_ICD9

Dmii wo cmp uncntrld\_ICD9

Neuropathy in diabetes\_ICD9

Type 2 DM, not uncontrolled\_STAR

Diabetes mellitus due to underlying condition with hyperglycemia

Dmi oth nt st uncntrld\_ICD9

Other specified diabetes mellitus with hyperglycemia

Other specified diabetes mellitus with ketoacidosis without coma

Type 1 diabetes mellitus with diabetic chronic kidney disease

Dmi ketoacd uncontrold\_ICD9

Dmi unspf nt st uncntrld\_ICD9

Dmii o cm nt st uncntrld\_ICD9

Dmii renl nt st uncntrld\_ICD9

Dmii unspf nt st uncntrl\_ICD9

Other specified diabetes mellitus without complications

Type 1 diabetes mellitus with hyperglycemia

Type 1 diabetes mellitus with hypoglycemia without coma

Type 2 DM with DKA\_STAR

Type 2 DM with non-ketotic hyperosomolarity\_STAR

**Psychiatric comorbidities**

Depressive Disorder Nec\_ICD9

Anxiety state nos\_ICD9

Affective Psychoses\_STAR

Attention-deficit hyperactivity disorder, unspecified type

Conduct disorder, unspecified

Anxiety disorder, unspecified

Major depressive disorder, single episode, unspecified

Attn deficit w hyperact\_ICD9

Dysthymic disorder

Neurotic Disorders\_STAR

Hyperkinetic syndromes including ADHD\_STAR

Nonpsychotic mental disorder, unspecified

Adjustmnt dis w depressn\_ICD9

Major depressive disorder, recurrent, moderate

Other specified mental disorders due to known physiological condition

Unspecified mood [affective] disorder

Adjust dis w anxiety/dep\_ICD9

Psychic Factor W Oth Dis\_ICD9

Anxiety disorder oth dis\_ICD9

Dysthymic disorder\_ICD9

Generalized anxiety dis\_ICD9

Adjustment disorder with depressed mood

React psychosis nec/nos\_ICD9

Suicide Attempt/Risk\_STAR

Adjustment disorder with mixed anxiety and depressed mood

Adjustment disorder with mixed disturbance of emotions and conduct

Mental/behavior prob nos\_ICD9

Generalized anxiety disorder

Bipolar disorder nos\_ICD9

Psychosis nos\_ICD9

Screening for depression\_ICD9

Adjustment disorder with other symptoms

Anorexia Nervosa, Bulimia or other eating disorder\_STAR

Attn defic nonhyperact\_ICD9

Delirium and transient menta disorders \_STAR

Delirium due to known physiological condition

Depress psychosis-unspec\_ICD9

Hallucinations\_ICD9

Oppositional defiant disorder

Personality change due to known physiological condition

Unspecified disorder of psychological development

Adj dis-emotion/conduct\_ICD9

Behavioral problems nec\_STAR

Opposition defiant disor\_ICD9

Paranoid state, simple\_ICD9

Adjustment dis w anxiety\_ICD9

Adjustment disorder with anxiety

Adjustment disorder with disturbance of conduct

Anxiety disorder due to known physiological condition

Bipolor i current nos\_ICD9

Borderline personality disorder

Borderline personality\_ICD9

Delirium d/t other cond\_ICD9

Episodic mood disord nos\_ICD9

Hallucinations, unspecified

Obsessive-compulsive disorder

Other recurrent depressive disorders

Other specified anxiety disorders

Other specified behavioral and emotional disorders with onset usually occurring in childhood and adolescence

Personal history of self-harm

Posttraumatic stress dis\_ICD9

Psychological and behavioral factors associated with disorders or diseases classified elsewhere

Social phobia, unspecified

Suicidal Ideation\_STAR

Visual hallucinations

**Cardiovascular comorbidities**

Hypertension nos\_ICD9

Hypotension nos\_ICD9

Hx-major cardiovasc surg\_ICD9

Chr pulmon heart dis nec\_ICD9

Hypoplastic left heart syndrome

Essential (primary) hypertension

Cardiac arrest\_ICD9

Pre-excitation syndrome

Shock nos\_ICD9

Heart failure, unspecified

Ostium secundum type ASD\_ICD9

Prim pulm hypertension\_ICD9

Pulmonary Hypertension, Secondary\_STAR

Hypotension, unspecified

Heart failure nos\_ICD9

Hypertension NEC\_STAR

Shock w/o trauma NEC\_ICD9

Tachycardia nos\_ICD9

Other secondary pulmonary hypertension

Ventricular sept defect\_ICD9

Secondary hypertension, unspecified

Hypertension, Secondary\_STAR

Cardiac Arrest\_STAR

Cardiac dysrhythmias nec\_ICD9

Atrial septal defect

Bradycardia, unspecified

Cardiac arrest, cause unspecified

Chf nos\_ICD9

Hypotension W/O Shock\_STAR

Patent Ductus Arteriosus (PDA)\_STAR

Shock, unspecified

Ventricular shunt status\_ICD9

Other secondary hypertension

Tachycardia, Unspecified, Tachycardia / Palpitation\_STAR

Cardiac Dysrhythmia/Arrhythmia\_STAR

Hypovolemic Shock/Dehydration\_STAR

Parox atrial tachycardia\_ICD9

Premature beats nec\_ICD9

Tachycardia, unspecified

Unspecified systolic (congestive) heart failure

Anomalies of aortic arch\_ICD9

Cong pulmon valve stenos\_ICD9

Ventricular septal defect

Aortic valve abnormality, incl regurgitation, atresia, combination abnormalities, other\_STAR

Atrial Septal Defect (ASD)\_STAR

Heart disease nos\_ICD9

Patent ductus arteriosus\_ICD9

Pericardial disease nos\_ICD9

Supraventricular tachycardia

Anomalous av excitation\_ICD9

Atrial fibrillation\_ICD9

Cardiac dysrhythmia nos\_ICD9

Cardiomegaly\_ICD9

Coarctation of aorta\_ICD9

Compl transpos great ves\_ICD9

Cong tricusp atres/sten\_ICD9

Heart and cardiovascular disease NEC\_STAR

Hypertension, Essential\_STAR

Patent ductus arteriosus

Pulmonary artery anomaly\_ICD9

Cardiac murmurs nec\_ICD9

Cardiogenic shock\_ICD9

Chr pulmon heart dis nos\_ICD9

Heart Failure, Congestive Heart Failure (CHF)\_STAR

Hypertension secondary to other renal disorders

Hypoplas left heart synd\_ICD9

Hypovolemic shock

Ill-defined hrt dis nec\_ICD9

Other nonrheumatic tricuspid valve disorders

Parox ventric tachycard\_ICD9

Pericardial Effusion\_STAR

Pulmon circulat dis nec\_ICD9

Pulmon circulat dis nos\_ICD9

Pulmonary insufficiency and pulmonary stenosis\_STAR

Second hypertension nec\_ICD9

Shock, NEC\_STAR

Tricuspid valve disease\_ICD9

Tricuspid Valve Insufficiency/Regurgitation\_STAR

Unspecified injury of unspecified pulmonary blood vessels, initial encounter

Ventricular premature depolarization

Acute diastolic (congestive) heart failure

Acute pericarditis nec\_ICD9

Arterial dissection, not aortic, not coronaries\_STAR

Atrial flutter\_ICD9

Benign hypertension\_ICD9

Chr ischemic hrt dis nec\_ICD9

Circulatory disease nos\_ICD9

Conduction Disorders Of Heart, Interference/Atrioventricular Dissociation\_STAR

Cong pulmon valv atresia\_ICD9

H/O Congenital Heart Disease (CHD), Corrected\_STAR

Hypertension as complication of medical or surgical care\_STAR

Hypoplastic ventricle\_STAR

Iatrogenc hypotnsion nec\_ICD9

Interrupt of aortic arch\_ICD9

Malposition of heart\_ICD9

Mitral valve disorder\_ICD9

Neonatal Bradycardia\_STAR

Nonrheumatic pulmonary valve stenosis

Palpitations\_ICD9

Primary pulmonary hypertension

Pulmonary Artery Anomalies/Hypoplasia, Pulmonary Sling, Pulmonary AV fistula\_STAR

Sinoatrial/Sinus Node Dysfunction, Sick Sinus Syndrome, Wandering Atrial Pacemaker\_STAR

Supraventricular Tachycardia (SVT), Paroxysmal Atrial Tachycardia (PAT)\_STAR

Ventricular Septal Defect (VSD)\_STAR

Ventricular tachycardia

Ac ischemic hrt dis nec\_ICD9

Ac Syst/Diastol Hrt Fail\_STAR

Acute pericarditis nos\_ICD9

Aortic arch hypoplasia\_STAR

Atresia of aorta

Atrial premature depolarization

Atrioventricular block, first degree

Cardiac arrest due to underlying cardiac condition

Cardiac tamponade\_ICD9

Cardiogenic Shock\_STAR

Cardiomegaly

Cardiomyopathy\_STAR

Cardiovas sys symp nec\_ICD9

Comp-oth cardiac device\_ICD9

Cong aorta valv insuffic\_ICD9

Congenital mitral stenosis

Contusion of heart without hemopericardium, initial encounter

Cor Pulmonale\_STAR

Correct transpos grt ves\_ICD9

Ebstein's Anomaly\_STAR

Elevated blood-pressure reading, without diagnosis of hypertension

Endocard cushion defects, other\_ICD9

H/O Cardiac Pacemaker In Situ V\_STAR

Hypertension, Secondary, Benign\_STAR

Heart transplant status

Iatrogen cv infarc/hmrhg\_ICD9

Kyphoscoliotic heart dis\_ICD9

Long QT syndrome

Malignant hypertension\_ICD9

MAPCA(s) (major aortopulmonary collateral[s]) (without PA-VSD)\_STAR

Mitral valve abnormality, other\_STAR

Nonrheum tricusp val dis\_ICD9

Orthostatic hypotension\_ICD9

Other hypotension

Other shock

Parox tachycardia nos\_ICD9

Part anom pulm ven conn\_ICD9

Pericardial disease, other (including pneumopericardium)\_STAR

Pericarditis\_STAR

Postprocedural cardiac arrest following cardiac surgery

Postprocedural heart failure following cardiac surgery

Postprocedural hypertension

Postprocedural hypotension

Pulmonary atresia, VSD (Including TOF, PA)\_STAR

Pulmonary Circulatory Disease\_STAR

Pulmonary Hypertension, Primary\_STAR

Pulmonary valve disorder\_ICD9

Rt bundle branch block\_ICD9

Tetralogy Of Fallot (ToF)\_STAR

Tricuspid valve regurgitation and stenosis\_STAR

Unspecified atrial flutter

Unspecified combined systolic (congestive) and diastolic (congestive) heart failure

Ventricular fibrillation

Ventricular Premature Contractions (VPC)\_STAR

Ventricular Tachycardia\_STAR

Wolff-Parkinson-White Syndrome (WPW)\_STAR

**Renal comorbidities**

Acute renal failure nos\_ICD9

Acute kidney failure, unspecified

Acute Renal Failure (ARF), Acute Tubular Necrosis (ATN) \_STAR

Disorder of kidney and ureter, unspecified

Other disorders resulting from impaired renal tubular function

Renal & ureteral dis nos\_ICD9

Calculus of kidney\_ICD9

Chronic kidney dis nos\_ICD9

Chronic kidney disease, unspecified

Impaired renal funct nos\_ICD9

Ac renal failure nec\_ICD9

Renal & ureteral dis nec\_ICD9

Chronic Renal Failure, Uremia/end-stage Renal Disease (ESRD) \_STAR

Oliguria & anuria\_ICD9

Renal failure NOS\_ICD9

Hydronephrosis\_ICD9

Urinary calculus nos\_ICD9

Renal failure, chronic\_ICD9

Calculus of kidney

Calculus of ureter\_ICD9

Disorder resulting from impaired renal tubular function, unspecified

End stage renal disease

Kidney anomaly nec\_ICD9

Kidney transplant status\_ICD9

Proteinuria\_ICD9

Anuria and oliguria

Chr kidney dis stage iii\_ICD9

Dialysis encounter, nec\_ICD9

Impaired renal funct nos\_STAR

Kidney/Ureter Disorders NEC, Vesicoureteral Reflux\_STAR

Kidney/Ureter/Renal Calculus, Nephrolithiasis/kidney Stone\_STAR

Other acute kidney failure

Chr membranous nephritis\_ICD9

End stage renal disease\_ICD9

Polycystic kidney nos\_ICD9

Renal dialysis encounter\_ICD9

Hy Kid Nos W Cr Kid I-Iv\_ICD9

Kidney/Renal Infections, Pyelonephritis/renal/perinephric Abscess\_STAR

Nephritis nec\_ICD9

Renal dialysis status\_ICD9

Unspecified kidney failure

Ac pyelonephritis nos\_ICD9

Acute kidney failure with tubular necrosis

Calculus of ureter

Chro kidney dis stage ii\_ICD9

Chronic kidney disease, stage 2 (mild)

Compl kidney transplant\_ICD9

Congen obst urtroplv jnc\_ICD9

Cystic Kidney Disease, Polycystic Kidney Disease/sponge Kidney\_STAR

Dependence on renal dialysis

H/O Renal Dialysis Status V\_STAR

Kidney injury nos-closed\_ICD9

Kidney laceration-closed\_ICD9

Membranoprolif nephrosis\_ICD9

Nephritis nos\_ICD9

Nephritis/Nephropathy, Glomerulonephritis/glomerulitis\_STAR

Other obstructive defects of renal pelvis and ureter

Postpartum acute kidney failure

Proteinuria\_STAR

Renal agenesis, unilateral

Renal Agenesis/Dysgenesis, Hypoplastic Kidney\_STAR

Renal dysplasia

Renovasc hypertension\_ICD9

Unspecified hydronephrosis

Uric acid nephrolithias\_ICD9

Vesicoureteral-reflux, unspecified

Supplemental Table 2:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Demographic/Clinical Characteristic or Diagnosis** | **Survivors, n (%)** | **Nonsurvivors, n (%)** | **Multivariate OR (95% CI)** | **P value** |
| **Age at admission** | < 2yr | 355 (13.1) | 16 (8.3) | 0.71 (0.40-1.27) | 0.249 |
| 2yr - 5yr | 199 (7.4) | 11 (5.7) | 1.10 (0.55-2.21) | 0.789 |
| 6yr - 12yr | 570 (21.1) | 37 (19.3) | 0.85 (0.55-1.31) | 0.464 |
| 13yr - 18yr | 1047 (38.8) | 80 (41.7) | Reference |   |
| > 18yr | 530 (19.6) | 48 (25.0) | 1.05 (0.69-1.61) | 0.809 |
| **Readmission** | No | 1488 (55.1) | 93 (48.4) | Reference |   |
| Yes | 1213 (44.9) | 99 (51.6) | 0.81 (0.57-1.14) | 0.230 |
| **Patient origin** | General Care Unit | 936 (34.7) | 71 (37.0) | Reference |   |
| Emergency Department | 860 (31.8) | 58 (30.2) | 0.83 (0.57-1.21) | 0.327 |
| Intermediate Care Unit | 101 (3.7) | 27 (14.1) | 2.64 (1.47-4.74) | **0.001** |
| OR/Procedure Suite/PACU | 575 (21.3) | 12 (6.3) | 0.26 (0.14-0.48) | **<0.001** |
| Other ICU | 87 (3.2) | 19 (9.9) | 2.02 (1.11-3.68) | **0.021** |
| Other | 142 (5.3) | 5 (2.6) | 0.48 (0.18-1.23) | 0.124 |
| **BMI at admission** | <18.5 | 546 (20.2) | 50 (26.0) | 2.47 (1.27-4.78) | **0.007** |
| 18.5-24.9 | 340 (12.6) | 16 (8.3) | Reference |   |
| 25.0-29.9 | 33 (1.2) | 0 (0.0) | NAa | NAa |
| >29.9 | 10 (0.4) | 0 (0.0) | NAa | NAa |
| **Diagnoses** | Hemoptysis/Pulmonary hemorrhage | 159 (5.9) | 25 (13.0) | 2.40 (1.39-4.12) | **0.002** |
| Pneumothorax | 174 (6.4) | 25 (13.0) | 1.61 (0.96-2.71) | 0.072 |
| Pleural effusion | 128 (4.7) | 14 (7.3) | 0.60 (0.32-1.14) | 0.119 |
| Chronic airway obstruction | 25 (0.9) | 7 (3.6) | 2.20 (0.64-7.49) | 0.209 |
| Hepatobiliary disease | 275 (10.2) | 42 (21.9) | 2.00 (1.21-3.31) | **0.007** |
| Gastrointestinal bleeding | 59 (2.2) | 13 (6.8) | 1.51 (0.74-3.08) | 0.257 |
| Portal hypertension | 106 (3.9) | 13 (6.8) | 0.80 (0.35-1.85) | 0.599 |
| Splenomegaly | 41 (1.5) | 7 (3.6) | 1.81 (0.63-5.18) | 0.272 |
| Bacterial infection | 948 (35.1) | 98 (51.0) | 1.25 (0.89-1.76) | 0.206 |
| Fungal infection | 298 (11.0) | 34 (17.7) | 1.05 (0.67-1.65) | 0.836 |
| Malnutrition | 534 (19.8) | 57 (29.7) | 1.25 (0.86-1.82) | 0.241 |
| Cardiovascular comorbidities | 511 (18.9) | 91 (47.4) | 2.91 (2.05-4.13) | **<0.001** |
| Renal comorbidities | 293 (10.8) | 56 (29.2) | 2.07 (1.36-3.15) | **<0.001** |

Supplemental Table 3:

|  |  |  |  |
| --- | --- | --- | --- |
| **Demographic/Clinical Characteristic or Diagnosis** | **Mechanically Ventilated** | **No Mechanical Ventilation** |  |
| **Nonsurvivors, n** | **%** | **Nonsurvivors, n** | **%** | **P value** |
| **Sex** | Female | 84 | 57.5 | 21 | 55.3 | 0.912 |
| Male | 62 | 42.5 | 17 | 44.7 |
| **Race/Ethnicity** | White | 98 | 67.1 | 26 | 68.4 | 0.200 |
| Hispanic or Latino | 11 | 7.5 | 6 | 15.8 |
| Black/African American | 10 | 6.8 | 0 | 0.0 |
| Asian/Indian/Pacific Islander | 2 | 1.4 | 0 | 0.0 |
| American Indian/Alaska Native | 0 | 0.0 | 0 | 0.0 |
| Other/mixed | 4 | 2.7 | 0 | 0.0 |
| **Age** | < 2yr | 16 | 11.0 | 0 | 0.0 | 0.200 |
| 2yr - 5yr | 9 | 6.2 | 2 | 5.3 |
| 6yr - 12yr | 27 | 18.5 | 8 | 21.1 |
| 13yr - 18yr | 59 | 40.4 | 17 | 44.7 |
| > 18yr | 35 | 24.0 | 11 | 28.9 |
| **Readmission** | No | 66 | 45.2 | 21 | 55.3 | 0.300 |
| Yes | 80 | 54.8 | 17 | 44.7 |
| **Patient origin** | General Care Unit | 48 | 32.9 | 18 | 47.4 | **0.020** |
| Emergency Department | 44 | 30.1 | 13 | 34.2 |
| Intermediate Care Unit | 19 | 13.0 | 7 | 18.4 |
| OR/Procedure Suite/PACU | 12 | 8.2 | 0 | 0.0 |
| Other ICU | 19 | 13.0 | 0 | 0.0 |
| Other | 4 | 2.7 | 0 | 0.0 |
| **BMI, median (IQR)** | 17.0 | (15.2-18.0) | 17.7 | (14.7-20.2) | 0.600 |
| **BMI Group** | <18.5 | 40 | 27.4 | 10 | 26.3 | 0.300 |
| 18.5-24.9 | 10 | 6.8 | 5 | 13.2 |
| 25.0-29.9 | 0 | 0.0 | 0 | 0.0 |
| >29.9 | 0 | 0.0 | 0 | 0.0 |
| **PRISM-3 Score, median (IQR)** | 11 | (5-16) | 5 | (4-9) | **<0.001** |
| **PRISM-3 POD, median (IQR)** | 4.39 | (1.64-15.0) | 1.75 | (1.02-3.25) | **0.002** |
| **Any respiratory diagnosis** | 135 | 92.5 | 37 | 97.4 | 0.100 |
|  | Hemoptysis/Pulmonary hemorrhage | 22 | 15.1 | 3 | 7.9 |
| Pneumothorax | 23 | 15.8 | 2 | 5.3 |
| Bronchiectasis | 18 | 12.3 | 7 | 18.4 |
| Pleural effusion | 14 | 9.6 | 0 | 0.0 |
| Asthma | 11 | 7.5 | 4 | 10.5 |
| Chronic airway obstruction | 5 | 3.4 | 2 | 5.3 |
| Tracheostomy/Chronic vent dependence | 7 | 4.8 | 0 | 0.0 |
| Lung transplant | 24 | 16.4 | 3 | 7.9 |
| **Any gastrointestinal diagnosis** | 108 | 74.0 | 22 | 57.9 | 0.900 |
|  | Pancreatic disease | 48 | 32.9 | 14 | 36.8 |
| Gastroesophageal reflux disease | 31 | 21.2 | 5 | 13.2 |
| Intestinal malabsorption/Obstruction/Ileus | 20 | 13.7 | 2 | 5.3 |
| Hepatobiliary disease | 36 | 24.7 | 6 | 15.8 |
| Portal hypertension | 10 | 6.8 | 3 | 7.9 |
| Gastrointestinal bleeding | 11 | 7.5 | 2 | 5.3 |
| Splenomegaly | 6 | 4.1 | 1 | 2.6 |
| Gastrostomy/Enterostomy | 30 | 20.5 | 9 | 23.7 |
| Liver transplant | 4 | 2.7 | 1 | 2.6 |
| **Any infection** | 118 | 80.8 | 28 | 73.7 | 0.500 |
|  | Bacterial infection | 79 | 54.1 | 17 | 44.7 |
| Viral infection | 24 | 16.4 | 2 | 5.3 |
| Fungal infection | 28 | 19.2 | 5 | 13.2 |
| **Malnutrition** | 40 | 27.4 | 14 | 36.8 | 0.300 |
| **Diabetes** | 44 | 30.1 | 17 | 44.7 | 0.100 |
| **Psychiatric comorbidities** | 32 | 21.9 | 6 | 15.8 | 0.500 |
| **Cardiovascular comorbidities** | 79 | 54.1 | 9 | 23.7 | **<0.001** |
| **Renal comorbidities** | 52 | 35.6 | 4 | 10.5 | **0.003** |
| **Chest Tube Insertion** | Yes | 24 | 16.4 | 0 | 0.0 | **0.004** |
| No | 72 | 49.3 | 23 | 60.5 |   |
| **Bronchoscopy** | Yes | 32 | 21.9 | 0 | 0.0 | **<0.001** |
| No | 72 | 49.3 | 25 | 65.8 |   |
| **Renal Replacement Therapy** | Yes | 24 | 16.4 | 1 | 2.6 | **0.009** |
| No | 78 | 53.4 | 30 | 78.9 |   |
| **ECLS** | Yes | 19 | 13.0 | 0 | 0.0 | **0.010** |
| No | 127 | 87.0 | 38 | 100.0 |   |