

## **Major Complicationg Co-morbidities (MCC), Complicating Co-Mobidities (CC) and Hospital Acquired Complication (HAC) Worksheet**

Dear Colleagues,

The ASTS Reimbursement Committee is happy to provide you with this handy worksheet for capturing transplant-related surgery MCC, CC, and HAC. The worksheet provides a comprehensive list of diagnosis related to transplantation and was reduced from a list of more than 3,400 MCC and CC. Your hospital coder should be able to provide you with the entire list, most of which do not apply to our field.

The importance of properly capturing and documenting these can have a significant impact not only on hospital reimbursement but also calculated expected outcomes as estimated by agencies such as University Hospital Consortium (UHC). For example, a liver transplant without major complicating co-morbidity (MCC) has a DRG relative weight of 4.8453 (MSDRG 006) whereas a liver transplant with MCC has a significantly higher relative weight of 10.1771 (MSDRG 005). Many times patients present with diagnosis that warrants a higher level of coding but documentation is insufficient for hospital coders to justify that level. The coders often depend only on physician documentation for proper coding. Therefore we believe this worksheet will help you to understand and easily document which diagnosis is appropriate. This is not unique only to liver transplantation but affects all level of care.

The worksheet is designed to be printed on a single sheet of paper (front and back) and to delineate a diagnosis as “present on admission” (POA) or “hospital acquired complication” (HAC). These can be helpful when preparing admission notes, dictating discharge summaries, etc., and will help ensure that your program is not credited for a pre-existing condition that may be considered unfavorable by certain agencies (e.g., UHC).

We hope that you find this handy guide easy to use and helpful. Please discuss with your professional and hospital coding specialists to clarify proper documentation rules and regulations.

Respectfully Submitted,

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Chairman, ASTS Reimbursement Committee

**Department of Transplantation - MCC/CC list**

Comorbid Condition		
ID related	POA	HAC
<b>Acute and subacute bacterial endocarditis</b>		
<b>Acute endocarditis, unspecified</b>		
Bacteremia		
Bacterial enteritis, unspecified		
Candidiasis of mouth		
Cellulitis and abscess of unspecified sites		
Cryptococcal meningitis		
Infection due to central venous catheter		
Infectious colitis, enteritis and gastroenteritis		
Infectious diarrhea		
Intestinal infection due to C-diff		
<b>Meningitis and encephalitis and myelitis coma</b>		
Methicillin resistant Staphylococcus aureus septicemia		
Methicillin susceptible Staphylococcus aureus septicemia		
Other and unspecified mycoses		
Other Septicemia due to gram negative organisms		
Other Staphylococcal septicemia		
Pneumococcal septicemia		
Pyelonephritis		
Renal and perinephric abscess		
<b>Septic shock</b>		
<b>Septicemia</b>		
Staphylococcal septicemia, unspecified		
<b>Tuberculosis infection</b>		
Unspecified meningitis		
UTI, site not specified		

Diabetes	POA	HAC
Secondary diabetes mellitus with hyperosmolarity, uncontrolled		
<b>Diabetes with ketoacidosis, type I, uncontrolled</b>		
<b>Diabetes with hyperosmolarity, type I, not stated as uncontrolled</b>		

Kidney Related	POA	HAC
Acidosis		
<b>Acute renal failure</b>		
Chronic renal failure		
CKD		
<b>Complications of transplanted kidney</b>		
Disorders of urea cycle metabolism		
<b>End stage renal disease</b>		
Extravasation of urine and urinary leak		
<b>Glomerulonephritis</b>		
HRS		
Hydronephrosis		
<b>Hyperosmolarity and/or hyponatremia</b>		
<b>Hyposmolarity and/or hyponatremia</b>		
Kidney replaced by transplant		
Polycystic kidney, unspecified type		
<b>Renal failure due to ATN</b>		

Vascular related	POA	HAC
<b>Aneurysm and dissection of any arteries</b>		
<b>Atherosclerosis of peripheral and central arteries and bypass graft</b>		
Mechanical complication of other vascular device, implant and graft		
<b>PVD (Raynaud's, arterial spasm, peripheral angiopathy, arterial embolism, arterial stricture)</b>		

Psychiatry related	POA	HAC
Delirium due to conditions classified elsewhere		
Drug induced delirium		
Drug induced psychotic disorder with delusions		
Drug induced psychotic disorder with hallucinations		
Hallucinations		
Persistent vegetative state		

Cormorbid Condition		
Hepatitis	POA	HAC
Acute hepatitis C with hepatic coma		
Chronic viral hepatitis B with hepatic coma with hepatitis delta		
Chronic viral hepatitis B with hepatic coma without hepatitis delta		
Other specified viral hepatitis with hepatic coma		
Unspecified viral hepatitis C with hepatic coma		
Unspecified viral hepatitis with hepatic coma		
Viral hepatitis A with hepatic coma		
Viral hepatitis B with hepatic coma, acute or unspecified with Hepatitis Delta		
Viral hepatitis B with hepatic coma, acute or unspecified without mention of Hepatitis Delta		

Liver related	POA	HAC
<b>Abscess of liver</b>		
<b>Acute and subacute hepatic necrosis</b>		
<b>Acute hepatic failure</b>		
<b>Budd-chiari syndrome</b>		
<b>Complications of transplanted liver</b>		
<b>Encephalopathy (toxic, metabolic, unspecified)</b>		
<b>Hepatic coma</b>		
<b>Hepatic infarction</b>		
<b>Hepatorenal syndrome</b>		
<b>Malignant ascites</b>		
Malignant neoplasm of liver, not specified as primary or secondary		
Malignant neoplasm of liver, primary		
<b>Portal vein thrombosis</b>		
<b>Primary liver cancer</b>		
<b>Portal hypertension</b>		

Nutrition related	POA	HAC
<b>Body Mass Index 30 and over, adult</b>		
Body Mass Index less than 19, adult		
Cachexia		
Kwashiorkor ascites		
<b>Severe protein calorie malnutrition</b>		
Protein calorie malnutrition		

Cardiac related	POA	HAC
<b>Acute combined systolic and diastolic heart failure</b>		
<b>Myocarditis</b>		
<b>CHF</b>		
<b>Cardiac arrest</b>		
<b>Ventricular fibrillation, ventricular flutter</b>		

Pulmonary related	POA	HAC
<b>Abscess of lung</b>		
Acute and chronic respiratory failure		
<b>Acute edema of lung, unspecified</b>		
<b>Airway obstruction</b>		
Alkalosis		
<b>Empyema and bacterial pleural effusions</b>		
Iatrogenic pneumothorax		
<b>Mediastinitis</b>		
<b>Pulmonary embolism (acute and chronic)</b>		
<b>Pulmonary insufficiency following trauma and surgery</b>		
Transfusion related acute lung injury		
Primary pulmonary hypertension		
<b>Pulmonary Circulation Disease</b>		
Ventilator associated pneumonia		

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**Department of Transplantation - MCC/CC list**

Comorbid Condition		
<b>Pneumonia</b>	POA	HAC
Bacterial pneumonia, unspecified		
Bronchopneumonia, organism unspecified		
Methicillin resistant pneumonia due to staphylococcus aureus		
Methicillin susceptible pneumonia due to staphylococcus aureus		
Other staphylococcus pneumonia		
Pneumonia due to anaerobes		
Pneumonia due to e.coli		
Pneumonia due to other gram negative bacteria		
Pneumonia due to other specified bacteria		
Pneumonia due to other streptococcus		
Pneumonia due to staphylococcus, unspecified		
Pneumonia in cytomegalic inclusion disease		
Pneumonia in other infectious diseases classified elsewhere		
Pneumonia, organism unspecified		
<b>GI related</b>	POA	HAC
<b>Acute duodenal ulcer with hemorrhage, without mention of obstruction</b>		
<b>Acute gastric ulcer with hemorrhage, without mention of obstruction</b>		
<b>Acute gastritis with hemorrhage</b>		
Ulcer of esophagus with bleeding		
Dieulafoy lesion (hemorrhagic) of intestine		
<b>Duodenitis with hemorrhage</b>		
<b>Hemoperitoneum (nontraumatic)</b>		
Hemoptysis		
Hemorrhage of gastrointestinal tract, unspecified		
<b>Perforation of intestine</b>		
Peritoneal abscess		
<b>Peritonitis (acute) generalized</b>		
<b>SBP</b>		
<b>Hematologic/Oncologic-miscellaneous</b>	POA	HAC
Anemia of CKD		
Autoimmune hemolytic anemia		
Carcinoid syndrome		
Pancytopenia		
Primary hypercoaguable state		
Secondary neuroendocrine tumor, liver		
<b>Fluid/Electrolyte disorders</b>	POA	HAC
<b>Hyponatremia/hypernatremia</b>		
<b>Hypokalemia/hyperkalemia</b>		
Dehydration		
<b>Fluid overload (ascites/edema)</b>		
<b>Summary of MCC/CC</b>	POA	HAC

Comorbid Condition		
<b>Surgical</b>	POA	HAC
Disruption of wound, unspecified		
Incisional hernia with obstruction		
Umbilical hernia with obstruction		
<b>Hemoperitoneum</b>		
<b>Perforation of GB</b>		
<b>Embolism and thrombosis of vena cava</b>		
<b>Dissecting arteries - major</b>		
<b>Biliary</b>	POA	HAC
Acute pancreatitis		
Calculus of gallbladder and bile duct with acute and chronic cholecystitis with obstruction		
Cholangitis		
Fistula of bile duct (leak)		
Malignant neoplasm of intrahepatic bile ducts		
Necrotizing fasciitis		
<b>Obstruction of bile duct</b>		
Perforation of bile duct		
Perforation of gallbladder		
<b>Pressure ulcer, stage III</b>		
<b>Pressure ulcer, stage IV</b>		
<b>Neurological</b>	POA	HAC
Cerebral degenerative disease		
<b>Intracerebral hemorrhage</b>		
<b>Subarachnoid hemorrhage</b>		
<b>Subdural hemorrhage</b>		
<b>Other neurological disorder</b>		
<b>Miscellaneous</b>	POA	HAC
<b>Shock</b>		
Pancreas replaced by transplant		
<b>Transfer from acute care setting</b>		
<b>Coagulopathy</b>	POA	HAC
<b>Thrombocytopenia</b>		
<b>Congenital clotting factor deficiency</b>		
<b>Von Willebrand's</b>		
<b>HIT antibody positive</b>		
<b>Unspecified coagulation defects (INR &gt;1.5 off Coumadin)</b>		
<b>Summary of MCC/CC</b>	POA	HAC