Preoperative Inpatient Admissions

Overview
This Coverage Policy addresses inpatient admission the day prior to a planned elective procedure.

Coverage Policy
Inpatient admission the day prior to elective surgery is considered medically necessary when an individual’s primary or secondary diagnosis requires an inpatient level of care for stabilization or preparation necessary for the planned procedure.

General Background
In general, patients who undergo elective procedures requiring inpatient care are admitted to the hospital on the day of surgery. This has become a standard of care over the past decade. Preoperative evaluations, preparation and testing are usually performed prior to surgery on an outpatient basis. Clinical issues that are identified through the preoperative evaluation process may require further work-up and management. This screening may also identify unusual circumstances that may necessitate admission to the hospital prior to the surgical procedure.
The preoperative evaluation includes an assessment of risk that may impact the operative outcome. The assessment includes history and physical and various screening tests. The decision regarding which tests to perform depends on factors including: patient's age, type of procedure, and the disease or condition of the patient. The testing may include electrocardiogram (ECG), chest radiograph, urinalysis, coagulation studies, creatinine, glucose, electrolytes, hematocrit, and hemoglobin.

While certain procedures carry a higher risk; the necessity of admission on the day prior to surgery is often dependent on concurrent disease or medical condition, and is based on case-specific factors. The plan of care, the services that will be rendered, age of patient, comorbid diagnosis and medical condition, and the surgical procedure that is planned must all be considered.

Hospital Admission Prior to Day of Surgery

**Anticoagulation:** Patients who receive anticoagulation therapy may require reversal of the anticoagulant effect before surgery. Bridging anticoagulation involves the administration of a short-acting anticoagulant, generally a low molecular weight (LMW) heparin, during the interruption of a longer-acting agent, such as warfarin (Lip, 2018). The intent is to minimize the risk for perioperative thromboembolism. Factors to be considered include: type of surgical procedure, type of anesthesia, patient-specific risk factors, and the anticoagulation agent being used (Pass and Simpson, 2004). Bridging is not often required for individuals receiving the newer anticoagulants that include direct thrombin inhibitor or factor Xa inhibitor, due to the shorter half-lives of these agents (Lip, 2018). Unfractionated heparin or low molecular-weight heparin (LMWH) may be used as a bridge from discontinuation of warfarin to surgery. In patients taking warfarin, the drug is typically held for several days preoperatively to allow the International Normalized Ratio (INR) to fall to a range of 1.5 or less. Patients with an increased risk for recurrent events in the perioperative period (e.g., mechanical heart valves, atrial fibrillation, or recent history of venous thromboembolism or acute arterial embolism) may require hospitalization for administration of intravenous unfractionated heparin during this period (Kearon, 1997). Low molecular–weight heparin may be considered in patients with a lower risk (Douketis, et al., 2012). LMWH can be provided on an outpatient basis and should be held for at least 12 hours before surgery (Pass and Simpson, 2004).

**Bowel Preparation:** Preparation for colon surgery usually includes purging the colon of feces and administration of antibiotics. Several methods of bowel preparation regimens and antibiotic combinations are currently in use (Neumayer and Vargo, 2008). The bowel preparation is usually performed in the home environment; however, there may be rare cases (e.g., very young age of patient, debilitated patient or risk of fluid electrolyte imbalance) when this should be performed on an inpatient or observation basis.

**Diabetes Mellitus:** Preoperative assessment may include fasting and postprandial glucose and hemoglobin A1c levels. For some diabetic patients, there may be circumstances where intravenous insulin administration may be the best option to maintain glycemic control. The following principles generally apply to diabetic patients undergoing surgery (Neumayer and Vargo, 2008):

- Substitute shorter-acting insulin for longer-acting insulin.
- Provide reduced doses of insulin on morning of surgery.
- Once a diabetic who is receiving nothing by mouth is given insulin, provide glucose in intravenous fluids.
- In type 2 diabetic patients, long-acting sulfonylurea drugs such as chlorpropamide should be stopped and shorter-acting agents should be substituted.
- Metformin should be stopped due to the slight risk of perioperative drug-induced lactic acidosis.

**Perioperative Drug Management:** Most medications used in the treatment of chronic disease should be continued in the perioperative period. Patients are usually advised to take medications with a sip of water the morning of surgery. There are circumstances where the medication may require intravenous administration preoperatively. This may occur in a patient who is unstable prior to surgery or is unable to take oral medications the day prior to surgery. Examples may include, but are not limited to, the following:

- **Anticonvulsant:** Patients with seizure disorder may require anticonvulsants administered intravenously.
- **Steroids:** Patients may require intravenous administration of steroids.
- **Parkinson’s disease:** Patients undergoing surgery for insertion of a neurostimulator may require inpatient level of care for discontinuance of medication.
Antiarrythmic drug therapy: Patients undergoing electrophysiological studies may require inpatient level of care for monitoring while these medications are discontinued.

Procedure Performed Prior to Surgery: There may be circumstances when an invasive procedure is preformed the day prior to major surgery. In some of these situations, the patient may be required to be kept after the invasive procedure without oral intake and oral medications until surgery the next day. In these situations, inpatient admission the day prior to surgery may be necessary. Examples of these invasive procedures include, but are not limited to, the following:
- embolization of tumor or vascular malformation
- arteriography in patient with renal failure
- cardiac catheterization

Preoperative Magnetic Resonance Imaging (MRI) with Fiducials: At times, a MRI with placement of fiducials, a set of markers, is completed before a planned craniotomy to assist in confirmation of anatomic identity during surgery. It may be difficult to perform this on the same day as surgery, and therefore an admission the day prior to surgery may be needed.

Renal Failure: The patient with end-stage renal disease on hemodialysis may require close attention in the perioperative time period. They may require close observation of fluid and electrolytes balance, as well as intravenous administration of fluid and sodium bicarbonate. Dialysis may also be required prior to surgery to optimize the fluid and potassium level. Blood transfusion may be required before surgery due to low hematocrit.

Unstable Cardiac Status: Patients scheduled for open-heart procedure are generally admitted the day of surgery. They may be admitted the day prior to the surgical procedure in the presence of an unstable cardiac condition including, but not limited to, one of the following conditions:
- unstable angina
- congestive heart failure
- severe hypertension
- significant ventricular arrhythmia

Centers for Medicare & Medicaid Services (CMS)
- National Coverage Determinations (NCDs): no NCD found
- Local Coverage Determinations (LCDs): no LCD found

Use Outside of the US
No relevant information

Coding/Billing Information

Note: 1) This list of codes may not be all-inclusive.
    2) Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

<table>
<thead>
<tr>
<th>Revenue Codes*</th>
<th>Description</th>
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<tbody>
<tr>
<td>0121</td>
<td>Room &amp; Board - SP 2 Bd, Med/Surg/Gyn</td>
</tr>
<tr>
<td>0131</td>
<td>Room &amp; Board - SP 3 - 4 Bd, Med/Surg/Gyn</td>
</tr>
<tr>
<td>0151</td>
<td>Room &amp; Board – Ward, Med/Surg/Gyn</td>
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</tbody>
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