This educational series is designed by the National Marrow Donor Program (NMDP) Payor Policy team, in conjunction with the American Society for Blood and Marrow Transplantation (ASBMT) to provide transplant centers with key information on HCT coding, billing and reimbursement.

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• Connects you to expert resources and other transplant centers
• Answers questions on coding and reimbursement
• Pursues national initiatives on behalf of the NMDP network

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HCT for Medicare Patients

Understanding what diagnoses the Centers for Medicare & Medicaid Services (CMS) cover for its beneficiaries needing hematopoietic cell transplant (HCT) is critical. As the number of transplants provided to Medicare beneficiaries continues to increase, your center will need to be able to efficiently and effectively research a patient’s medical indication and appropriately advise on their coverage benefits and potential out-of-pocket payments.

Coverage overview

Medicare’s National Coverage Determination (NCD) for HCT describes the specific indications Medicare does and does not cover. It is also important to note that Medicare coverage for HCT differs by transplant type (autologous vs. allogeneic), so be sure to check the relevant coverage list. See Figure 2 and 3 (page 2 and 3) for a table of covered and non-covered indications.

Indications not listed in the NCD

When CMS has not listed a particular indication on the NCD (i.e. is “silent” on that indication), local contractors make the determination about coverage. If there is not a local coverage determination (LCD) available, contact your Medicare contractor to discuss possible coverage. See figure 4 (page 4) for a step-by-step guide to determining coverage.

It is important to note that contractors are not required to issue any kind of predetermination. You can still provide HCT to the Medicare beneficiary for these indications; however, there is no guarantee of reimbursement from Medicare. If Medicare does not pay for the procedure, the hospital and the beneficiary will be liable for the total cost.

Some centers keep track of the “silent” indications for which they have successfully received reimbursement even though no official authorization was received beforehand. This can act as a potential guide for coverage of future transplants. Although it is not a guarantee of coverage.

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## Coverage of Allogeneic HCT

### Applicable procedure codes:
- ICD-9-CM 41.02, 41.03, 41.05, 41.06, and 41.08
- CPT 38240

#### Figure 2. Chart of current Medicare covered and non-covered indications in narrative form and by ICD-9-CM diagnosis code. As noted, all other indications for HCT that are not specifically listed as being either covered or non-covered nationally are at the discretion of your local Medicare contractor.

<table>
<thead>
<tr>
<th>DIAGNOSIS/CONDITION AND CRITERIA¹</th>
<th>ICD-9-CM DIAGNOSIS CODE(S)²,³</th>
</tr>
</thead>
<tbody>
<tr>
<td>For the treatment of leukemia, leukemia in remission, or aplastic anemia when it is reasonable and necessary</td>
<td>Leukemia, leukemia in remission (ICD-9-CM codes 204.00–208.91) Aplastic anemia (ICD-9-CM codes 284.0–284.9)</td>
</tr>
<tr>
<td>For the treatment of severe combined immunodeficiency disease (SCID) and for the treatment of Wiskott-Aldrich syndrome</td>
<td>Severe combined immunodeficiency disease (SCID) (ICD-9-CM code 279.2) Wiskott-Aldrich syndrome (ICD-9-CM code 279.12)</td>
</tr>
<tr>
<td>For the treatment of Myelodysplastic Syndromes (MDS) pursuant to Coverage with Evidence Development (CED) in the context of a Medicare-approved, prospective clinical study. (See page 5 for further details)</td>
<td>Claims Processing Manual section 90.3.1(C)4 does not specify ICD-9-CM codes; however, ICD-9-CM codes for MDS conditions are: Low grade myelodysplastic syndrome lesions (238.72); High grade myelodysplastic syndrome lesions (238.73); Myelodysplastic syndrome with 5q deletion (238.74); and Myelodysplastic syndrome, unspecified (238.75)</td>
</tr>
</tbody>
</table>

### Not Covered
- Allogeneic stem cell transplantation is not covered as treatment for multiple myeloma
- Multiple myeloma (ICD-9-CM codes 203.00 and 203.01)

### Donor search and procurement costs

Donor search and procurement costs are considered to be a covered benefit if the patient’s diagnosis is on Medicare’s list of covered diagnosis for allogeneic HCT. Remember that Medicare does not provide separate reimbursement for search and procurement costs. Instead, CMS builds these costs into the transplant MS-DRG or APC procedure calculations and considers reimbursement to be included in the payment for transplant services.

**Because of how CMS calculates future payment rates, it is critical for hospitals to report all of their costs of donor search and procurement using revenue code 0819, per the Medicare billing manual.** Separate payment is not provided if the transplant is cancelled, even if search and procurement costs have already been incurred. These costs should be reported in the hospital’s Medicare cost report for later reconciliation.

### Non-myeloablative allogeneic transplants

Medicare does not differentiate coverage based on the type of preparatory regimen utilized. If an allogeneic HCT is covered for a particular diagnosis, then a transplant center can determine the conditioning regimen best suited for the individual patient and it will be reimbursed by Medicare.
## Coverage of Autologous HCT

### Applicable procedure codes:
- ICD–9–CM 41.01, 41.04, 41.07, 41.09
- CPT 38241

**Figure 3.** Chart of current Medicare covered and non-covered indications in narrative form and by ICD-9-CM diagnosis code. As noted, all other indications for HCT that are not specifically listed as being either covered or non-covered nationally are at the discretion of your local Medicare contractor.

<table>
<thead>
<tr>
<th>DIAGNOSIS/CONDITION AND CRITERIA</th>
<th>ICD-9-CM DIAGNOSIS CODE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COVERED</strong></td>
<td></td>
</tr>
<tr>
<td>Patients with acute leukemia in remission who have a high probability of relapse and who have no human leukocyte antigen (HLA)-matched donor</td>
<td>Lymphoid (ICD-9-CM code 204.01); Myeloid (ICD-9-CM code 205.01); Monocytic (ICD-9-CM code 206.01); Acute erythema and erythroleukemia (ICD-9-CM code 207.01); and unspecified cell type (ICD-9-CM code 208.01)</td>
</tr>
<tr>
<td>Recurrent or refractory neuroblastoma</td>
<td>Claims Processing Manual section 90.3.1(C)4 does not specify ICD-9-CM codes; however, see ICD-9-CM index (Volume 1) entry: Neoplasm by site, malignant</td>
</tr>
<tr>
<td>Advanced Hodgkin disease patients who have failed conventional therapy and have no HLA-matched donor.</td>
<td>Advanced Hodgkin disease (ICD-9-CM codes 201.00–201.98)</td>
</tr>
<tr>
<td>Durie-Salmon Stage II or III patients that fit the following requirements: Newly diagnosed or responsive multiple myeloma. This includes those patients with previously untreated disease, those with at least a partial response to prior chemotherapy (defined as a 50% decrease either in measurable paraprotein [serum and/or urine] or in bone marrow infiltration, sustained for at least 1 month), and those in responsive relapse; and adequate cardiac, renal, pulmonary, and hepatic function</td>
<td>Durie-Salmon Stage II or III newly diagnosed or responsive multiple myeloma (ICD-9-CM codes 203.00 and 238.6)*</td>
</tr>
<tr>
<td>When recognized clinical risk factors are employed to select patients for transplantation, high-dose melphalan (HDM), together with AuSCT, is reasonable and necessary for Medicare beneficiaries of any age group with primary amyloid light-chain (AL) amyloidosis who meet the following criteria: Amyloid deposition in 2 or fewer organs; and cardiac left ventricular ejection fraction (EF) of 45% or greater</td>
<td>Claims Processing Manual section 90.3.2(B); does not specify ICD-9-CM codes; however, ICD-9-CM codes for this condition are 277.30–277.39</td>
</tr>
<tr>
<td><strong>NOT COVERED</strong></td>
<td></td>
</tr>
<tr>
<td>Acute leukemia not in remission</td>
<td>Acute leukemia not in remission (ICD-9-CM codes 204.00, 205.00, 206.00, 207.00 and 208.00)</td>
</tr>
<tr>
<td>Chronic granulocytic leukemia</td>
<td>Chronic granulocytic leukemia (ICD-9-CM codes 205.10 and 205.11)</td>
</tr>
<tr>
<td>Solid tumors (other than neuroblastoma)</td>
<td>Solid tumors, other than neuroblastoma (ICD-9-CM codes 140.0–199.1)</td>
</tr>
<tr>
<td>Tandem transplantation (multiple rounds of AuSCT) for patients with multiple myeloma</td>
<td>Tandem transplantation for patients with multiple myeloma (ICD-9-CM codes 203.00 and 238.6)*</td>
</tr>
<tr>
<td>Non-primary (AL) amyloidosis</td>
<td>Non-primary (AL) amyloidosis (ICD-9-CM code 277.3). The Claims Processing Manual section 90.3.2 (C) specifies code 277.3; however, the 5th digit is required for proper reporting. See codes 277.30–277.39</td>
</tr>
</tbody>
</table>

*According to communication from CMS: Multiple myeloma would be reported with code 203.00 ("Multiple myeloma, without mention of having achieved remission"). Code 238.6 ("Neoplasm of uncertain behavior of plasma cells") would be reported for such conditions as: solitary myeloma or plasmacytoma.
Steps for Accessing HCT Coverage

Figure 4. Flow-chart of current Medicare covered and non-covered indications.

Is the Medicare patient's HCT diagnosis included in CMS’ National Coverage Determination (NCD)?

**YES**
- The diagnosis is specifically listed as covered
  - Reimbursement is allowed, if all coding and billing conditions are met

**NO**
- The diagnosis is specifically listed as NOT covered
  - Reimbursement is not allowed
- CMS is silent on the diagnosis
  - Contact your FI/MAC to assess potential coverage
  - Depending on FI/MAC feedback hospital decides whether to proceed
    - If proceeding, provide beneficiary with ABN, notify them of assuming financial responsibility
    - The diagnosis is specifically listed as covered
      - Reimbursement is allowed, if all coding and billing conditions are met
    - The diagnosis is specifically listed as NOT covered
      - Reimbursement is not allowed
On August 4, 2010, Medicare announced that it will cover services provided for the treatment of Myelodysplastic Syndromes (MDS) in the context of a Medicare-approved, prospective clinical study, called Coverage with Evidence Development (CED). This means that HCT coverage is restricted to MDS patients who are enrolled in an approved clinical study. The Center for International Blood and Marrow Transplant Research (CIBMTR) has the only approved clinical study for MDS at this time. More information on participating in the study or billing for these transplants is available on the CIBMTR website[5].

The CED memo specifies a number of MDS subtypes that are covered, but does not specifically list out the relevant ICD-9-CM diagnosis codes to which these subtypes correspond. Below is a chart showing the covered sub-types from the CED memo and the potential corresponding ICD-9-CM diagnosis codes. Hospital coding staff should independently verify the correct codes to be used for individual cases.

### MDS SUBTYPES

<table>
<thead>
<tr>
<th>MDS Subtype</th>
<th>ICD-9-CM Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refractory cytopenia with unilineage dysplasia (RCUD)</td>
<td>238.72</td>
</tr>
<tr>
<td>Refractory anemia with ring sideroblasts (RARS)</td>
<td>238.72</td>
</tr>
<tr>
<td>Refractory cytopenia with multilineage dysplasia (RCMD)</td>
<td>238.72</td>
</tr>
<tr>
<td>Refractory anemia with excess blasts-1 (RAEB-1)</td>
<td>238.72</td>
</tr>
<tr>
<td>Refractory anemia with excess blasts-2 (RAEB-2)</td>
<td>238.73</td>
</tr>
<tr>
<td>Myelodysplastic syndrome, unclassified (MDS-U)</td>
<td>238.75</td>
</tr>
<tr>
<td>MDS associated with isolated del(5q)</td>
<td>238.74</td>
</tr>
<tr>
<td>Chronic myelomonocytic leukemia-1 (CMML-1)</td>
<td>205.1x* (205.10, 205.11, 205.12)</td>
</tr>
<tr>
<td>CMML-2</td>
<td>205.1x (205.10, 205.11, 205.12)</td>
</tr>
<tr>
<td>Atypical chronic myeloid leukemia (CML)</td>
<td>205.1x (205.10, 205.11, 205.12)</td>
</tr>
<tr>
<td>Juvenile myelomonocytic leukemia (JMML)</td>
<td>205.8x (205.80, 205.81, 205.82)</td>
</tr>
<tr>
<td>MDS/MPN, unclassifiable (‘Overlap syndrome’)</td>
<td>238.79</td>
</tr>
</tbody>
</table>

* x0 = without mention of having achieved remission; x1 = in remission; x2 = in relapse.
Documentation for Coverage

Despite the fact that Medicare is fairly clear about what it does and does not cover, hospitals can experience claim denials stemming from a variety of issues, including some related to medical record documentation issues.

Provide a clear and accurate diagnosis

The transplant physician’s documentation of the patient’s clinical condition in the patient’s medical record must be clear enough for a coding professional to translate the narrative text into an ICD-9-CM diagnosis code. Coding professionals are required to code using documentation provided in the medical record; they are not allowed to make assumptions about the physician’s intentions. As a result, a procedure edit can be triggered by the specific ICD-9-CM diagnosis code reported, resulting in a claims denial. For example, the physician may not provide clear and sufficient documentation to enable the coder to correctly report the covered diagnosis code (see the case study below). Coders may also misunderstand the details of the physician documentation and report a diagnosis code that is not covered. Or, the physician’s documentation and diagnosis code submitted by the coder may both be correct, but the patient’s diagnosis may not be covered by Medicare for HCT. Finally, in the case of MDS, the claim may be missing the required clinical trial number.

Understand the Medicare Coding Editor system

Accurately coding the patient’s diagnosis is critical since claims are processed through the Medicare Code Editor (MCE), an automated system that filters inpatient hospital claims based on the procedure and diagnosis codes submitted. Transplant claims with a non-covered diagnosis will not pass Medicare’s MCE edits for medical necessity, resulting in a claim denial and no transplant MS-DRG payment.

Claims submitted with diagnoses on which Medicare is silent do not automatically result in a denial, as coverage is at the discretion of the local contractor. At present, the Medicare Outpatient Code Editor (OCE) does not appear to include non-covered transplant diagnosis-to-procedure code edits; however, outpatient claims submitted with non-covered diagnoses, or diagnoses on which Medicare is silent, may be denied by your local contractors.

Increase dialogue between clinicians, coders and financial staff

Improving internal practices — including creating programs to improve clinical documentation and increase communication across departments — is an important way to exchange knowledge and potentially minimize avoidable coverage errors. An effective process improvement exercise is to have your clinicians and coding / billing personnel meet and discuss HCT issues, taking time to discuss concerns regarding clinical questions, documentation, coding, and billing issues. Physicians will benefit from understanding how their documentation impacts coding and reimbursement. Coding and billing staff will benefit from understanding the clinical conditions treated with HCT and current documentation practices. Use a case study to highlight how physician documentation translates into the billing of diagnoses and codes. Bringing your financial staff and transplant physicians together can be unwieldy at first, but it may ultimately foster more accurate coding and billing — and fewer claims denials.

CASE STUDY: IMPACT OF DOCUMENTATION ON COVERAGE FOR AUTOLOGOUS HCT FOR ACUTE LEUKEMIA

The NCD for autologous HCT specifies that a patient with acute leukemia must be in remission to receive coverage for autologous HCT. “Acute leukemia in remission” is classified by the 5th digit of the ICD-9-CM’s diagnosis code. The 5th digit choices are: 0 – without mention of having achieved remission; 1 – in remission; and 2 – in relapse. The physician must clearly document the patient’s status in order for the coder to assign a 5th digit of 1 for acute leukemia in remission. Because coding staff are not allowed to make assumptions about the physician’s intent, when there is unclear documentation of the patient’s status, coding rules require the coder to assign a 5th digit of 0, resulting in a non-covered diagnosis code. It is important to note that codes for leukemia “in relapse” are not included in either the coverage or non-coverage guidance. Thus, coverage for acute leukemia in relapse is up to your local Medicare contractor. This example illustrates how missing just one word in the medical record documentation can turn a covered case into a non-covered case and, hence, a denial when the claim is submitted, resulting in non-payment. Therefore, physician education focused on the importance of complete documentation is critical. Small gaps or omissions in documentation can impact the diagnosis codes reported, which can dramatically impact coverage for the patient.
Q What coverage rules apply when a patient travels to our center from out-of-state to receive their HCT?

A It is very common for patients to travel out-of-state to receive HCT services, and Medicare’s NCD applies equally to all Medicare beneficiaries across all states. If the patient is receiving HCT for a diagnosis that is not specifically covered in the NCD, however, you will need to contact your local Medicare contractor to assess coverage. Your Medicare contractor’s rules apply even though the patient has come from out-of-state.

Q How do we appeal a Medicare claim denial that we believe occurred in error?

A Begin with your local Medicare contractor. If an appeal to the contractor does not yield a satisfactory resolution, you can contact your regional Medicare office or go directly to the national office. Be ready to clearly explain why you believe the claim was incorrectly processed and to provide official documentation that supports your rationale.

Q Does Medicare allow coverage for a second or third transplant for a patient who may have relapsed?

A There is nothing in the NCD that precludes Medicare paying for subsequent transplants for patients who relapse after HCT. In these cases, Medicare will allow and pay for subsequent transplants as it does for the first, as long as the patient has a covered diagnosis and the medical necessity for the procedure is documented in the patient’s record.

Q Does Medicare cover cord blood transplants?

A Medicare’s HCT coverage rules are not dependent on cell source. If Medicare covers a certain diagnosis, then it is covered regardless of whether the cells come from a bone marrow harvest procedure, PBSC, or from cord blood. The reimbursement rate does not change based on the cell source utilized.

Q When does our center need to issue a notice of non-coverage?

A If the HCT service to be provided is for a clinical indication that is non-covered by Medicare or is non-covered by your local Medicare contractor, then it is appropriate to issue a Hospital-Issued Notice of Non-coverage (HINN) to your inpatients or an Advanced Beneficiary Notice (ABNs) to your outpatients. This is the appropriate way to inform patients that Medicare will not cover the costs associated with the transplant service and that the patient will be responsible for these costs. Issuing these notices for diagnoses for which there is no national or local determination is at the discretion of the transplant center and its financial policies.

Q Does Medicare cover tandem transplants?

A The common definition of tandem transplants is a planned series of two sequential HCTs. At this time, Medicare does not cover tandem autologous transplants for multiple myeloma. Medicare is silent on all other types of tandem transplants.

Ask the Expert

Gary Goldstein is Business Manager for the Stanford Blood & Marrow Transplant Program. A member of the NMDP Board of Directors, Gary has been a featured speaker at national and international transplant conferences. He also donated bone marrow to a patient in need through the NMDP’s Be The Match Registry.
Medicare's NCD on HCT coverage for autologous and allogeneic transplants was last reviewed and updated August 2010. Coverage guidance is described in detail in the Medicare National Coverage Determinations Manual. In addition, Medicare's Claims Processing Manual, Chapter 3, Inpatient Hospital Billing provides a specific listing of all covered ICD-9-CM diagnosis codes for autologous and allogeneic HCT.

2. Medicare Claims Processing Manual, Publication 100-04. Chapter 3 - Inpatient Hospital Billing, Section 90.3 - Stem Cell Transplantation, Rev. 2242, 06-17-11. Available at: https://www.cms.gov/manuals/downloads/clm104c03.pdf
3. Medicare Claims Processing Manual, Publication 100-04. Chapter 4 - Part B Hospital (Including Inpatient Hospital Part B and OPPS), Section 231 - Billing and Payment for Blood, Blood Products, and Stem Cells and Related Services Under the Hospital Outpatient Prospective Payment System (OPPS), Rev. 2242, 06-17-11. Available at: https://www.cms.gov/manuals/downloads/clm104c04.pdf
5. Center for International Blood and Marrow Transplant Research (CIBMTR), CED for HCT MDS Medicare Study: http://www.cibmtr.org/Studies/ClinicalTrials/HCT-MDS/Pages/index.aspx

Questions?
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The National Marrow Donor Program (NMDP) is the global leader in providing a cure to patients with life-threatening blood and marrow cancers such as leukemia and lymphoma, as well as other diseases. The nonprofit organization manages the world’s largest registry of potential marrow donors and cord blood units, connects patients to their donor match for a life-saving marrow or umbilical cord blood transplant, educates health care professionals and conducts research so more lives can be saved.

The NMDP also operates Be The Match®, which provides patient support and enlists the community to join the Be The Match Registry®, contribute financially and volunteer. Learn more at BeTheMatchClinical.org.