Recent inpatient denial trends by service line
Three service lines to prioritize in 2020

Highlights

- Advisory Board's recent analysis of over 108,000 hospital inpatient encounters identifies common denial trends by service line. We anticipate that these insights will be useful to hospital finance leaders as they evaluate denials prevention strategies.

- While neonatology reports a high volume of denials, these claims are lower dollar value than other frequently denied service lines—general medicine, cardiac services, and general surgery. We recommend prioritizing your denials mitigation efforts toward the latter three service lines due to their reimbursement implications.

- Identify additional areas for improvement with our denials benchmarks. The Hospital Revenue Cycle Benchmark Generator has been updated with 2019 data. Hospitals can compare their performance against national benchmarks or against a cohort of facilities with similar characteristics.

Background

The majority of our provider membership continues to identify denials management and mitigation as a key revenue cycle priority. While data from our 2019 Hospital Revenue Cycle Benchmarking Survey indicated a drop in overall denial write-offs, today's providers report an unprecedented increase in claims denied on the basis of lack of medical necessity.

To shed light on the inpatient service lines most vulnerable to clinical denials, Advisory Board partnered with Optum 360. Our analysis reviewed 837/835 electronic remittance files from over 108,000 hospital inpatient encounters. We anticipate that these insights will help hospital finance leaders evaluate strategies to reduce denials.

Key insights

In general medicine, the most troublesome MS-DRGs are sepsis-related (MS-DRG 870-872). These claims are most commonly denied for lack of medical necessity, likely due to inconsistent payer care criteria.

Major denial pain points across cardiac services and general surgery stem from extracorporeal membrane oxygenation (ECMO) services, likely due to recent coding updates. Although CMS announced a reversal of these changes in 2020 IPPS Final Rule, these services will be under technical denial risk as providers learn to revert back to the previous coding method.

Neonatology reports unique representation of eligibility denials. While all other service lines report equal representation of denial types, 52% of the service line’s denials are eligibility-related, likely due to complexity in newborn coverage.
Two priorities for today’s leaders

Our analysis examined service line denials by two criteria: denial volume and denied charge value. In doing so, general medicine and cardiac services emerged as prominent opportunities for improvement. Both service lines report a disproportionately high volume of high-dollar denials and thus require the most attention.

Beyond these two service lines, general surgery and neonatology ranked in only one of the two criteria (denied charge value and denial volume, respectively). While the most efficient denials mitigation strategy will first tackle the high volume, high-dollar denials in general medicine and cardiac services, general surgery and neonatology warrant second-tier priority.

The following pages examine each identified service line at the MS-DRG level and discuss common pain points and mitigation strategies.

Advisory Board analysis of 837/835 files from 108 hospitals
- Inpatient full denials only
- Data collected between January and December 2018
- Excluded non-MS DRG claims

Service lines reporting high denial volume
1. General medicine
2. Neonatology
3. Cardiac services

Service lines reporting high denial charge value
1. General medicine
2. Cardiac services
3. General surgery

In general medicine, target sepsis

Within the general medicine service line, sepsis services represent the most troublesome claims. In total, these three DRGs represent 14% of the service line’s denial volume and 22% of general medicine’s denied charge value.

Not only are sepsis payments vital to hospital margins today, but Advisory Board expects the volume of these conditions to grow dramatically over the next decade. Our national modeling of inpatient volumes projects significant MS-DRG 871 and 872 growth, driven by numerous demographic and non-demographic factors. MS-DRG 871, in particular, has one of the highest growth projection rates in inpatient services through 2028.

Commonly denied general medicine MS-DRGs, 2018

<table>
<thead>
<tr>
<th>DRG Description</th>
<th>5-year growth</th>
<th>10-year growth</th>
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<tbody>
<tr>
<td>Septicemia or severe sepsis with MV &gt; 96 hours or peripheral extracorporeal membrane oxygenation (870)</td>
<td>3.4%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Septicemia or severe sepsis without MV &gt; 96 hours with MCC (871)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Septicemia or severe sepsis without MV &gt; 96 hours without MCC (872)</td>
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Projected MS-DRG volume growth, 2023-2028

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<tr>
<th>DRG</th>
<th>5-year growth</th>
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<tbody>
<tr>
<td>870</td>
<td>3.4%</td>
<td>9.5%</td>
</tr>
<tr>
<td>871</td>
<td>32.8%</td>
<td>49.1%</td>
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<tr>
<td>872</td>
<td>25.1%</td>
<td>36.5%</td>
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Source: Advisory Board’s General Inpatient Market Estimator; Revenue Cycle Advancement Center research and analysis.
Heightened inconsistency in sepsis care criteria is a significant contributor to today’s sepsis medical necessity denials. In particular, the variation between commercial and public payers challenges providers to prove the medical necessity of care according to two conflicting definitions: sepsis-2, which is favored by CMS, and sepsis-3, which is favored by the majority of commercial payers. The graphic below details the clinical differences in each definition.

If the documentation and coding does not align with the designated definition, the claim will be denied for lack of medical necessity. Hospitals must ensure treating physicians are aware of the payer-specific diagnostic criteria and encourage coordination between clinicians, CDI, and coding. Health Information Associates recommends several tactics to align sepsis billing protocol across stakeholders, including 1) instituting a CDI escalation policy to prioritize sepsis charts prior to finalizing the record, and 2) instructing the business office to ensure all denial appeal letters are written according to the corresponding payer definition.

In general surgery and cardiac services, target ECMO patients

Within both general surgery and cardiac services, ECMO services represent the most commonly denied claims. Unfortunately, denials for these services are particularly costly. In general surgery, MS-DRG 003 represents 2.9% of the service line’s denial volume and 19% of the denied charge value. In cardiac services, MS-DRG 291 represents 14.8% of the service line’s denial volume and 7.8% of the denied charge value.

Commonly denied general surgery and cardiac services MS-DRGs, 2018

<table>
<thead>
<tr>
<th>MS-DRG</th>
<th>Denial reason</th>
<th>MS-DRG</th>
<th>Denial reason</th>
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<tbody>
<tr>
<td>ECMO or Tracheostomy with MV &gt; 96 hours or pdx except face, mouth, and neck with major O.R. procedure (003)</td>
<td>Technical denial</td>
<td>Heart failure and shock with MCC or peripheral extracorporeal membrane oxygenation (ECMO) (291)</td>
<td>Medical necessity</td>
</tr>
</tbody>
</table>

ECMO denials reflect recent coding confusion

In 2018, cardiovascular and general surgery service lines were taken by surprise when CMS changed ECMO coding to link its cost and complexity to the cannulation method. Specifically, the 2019 IPPS Final Rule transitioned ECMO from a single ICD-10 code to multiple codes distinguished by mode of vascular cannulation (central or peripheral) and by indication (cardiac or respiratory).

The update generated criticism from hospitals and physician societies. Stakeholders took issue with the decision’s lack of transparency and maintained that the cost and complexity of care provided to ECMO patients is unrelated to the method of cannulation. In response, CMS announced the reversal of new code additions, reverting ECMO coding back to the initial method beginning in IPPS FY 2020.

Navigating the recent ECMO coding changes

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<th>‘19</th>
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<tr>
<td>IPPS FY 2018</td>
<td>All ECMO services reimbursed under MS-DRG 003</td>
<td>ECMO services performed using a peripheral cannulation method reimbursed under MS-DRGs 207, 215, 291, 296, or 870</td>
<td>All ECMO services revert reimbursement back to MS-DRG 003, regardless of mode of vascular cannulation</td>
</tr>
<tr>
<td>IPPS FY 2019</td>
<td>Central ECMO services reimbursed under MS-DRG 003</td>
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Given this whirlwind of change, many providers face increased ECMO denials for technical errors (such as coding errors). Our dataset reflected this pain point, with ECMO services dominating cardiac services and general surgery denials. Going forward, all ECMO coding will revert back to IPPS FY 2018 methodology. While this is a welcomed change many, the revision stands as a short-term headache. ECMO services remain under denial risk until hospitals re-educate coders on the original coding methodology. Special attention should be given to ensure consistent and accountable education for those coding ECMO services.

Drill down on neonatology eligibility denials

The final insight from our dataset illuminates the overrepresentation of eligibility denials in neonatology. While all other service lines report roughly equal representation of each denial reason, 52% of neonatology denials were eligibility-related.

Neonatology denials, by reason

- Medical necessity
- Other
- Technical/Demographic
- Authorization

52.1%
12.0%
29.8%
6%
0.1%

All service line denials, by reason

- Medical necessity
- Other
- Technical/Demographic
- Authorization

25.5%
0.1%
26.4%
19.9%
28.1%

Source: Revenue Cycle Advancement Center research and analysis.
Two DRGs dominate neonatology’s eligibility denials

On a more granular level, Normal Newborn, MS-DRG 795, contributes to 63% of neonatology’s eligibility denials. Commercial payers represent the large majority of these eligibility denials, as illustrated in the pie chart below. Neonate with Other Significant Problems, MS-DRG 794, represents 33% of neonatology’s eligibility denials, making it the second largest contributor.

<table>
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<th>Commonly denied neonatology MS-DRGs, 2018</th>
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<tr>
<td>Normal Newborn (795)</td>
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<tr>
<td>Neonate with Other Significant Problems (794)</td>
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Advisory Board recommends systems use financial counselors to support newborn insurance enrollment before patient discharge. In particular, if your system’s Neonatal Intensive Care Unit (NICU) contracts with a clinical provider group, the group may be out-of-network for the child, even if the parent’s obstetrician and hospital are in-network. Front-end financial counseling can help alleviate eligibility issues for both the system and patient.

Methodology

This analysis incorporates full inpatient denials data obtained from Optum 360. 108 hospitals and health systems are represented in the dataset, with Midwest facilities representing 58% of the denials, northeastern facilities representing 10%, southeastern 20%, and western facilities 12%. The overwhelming majority of the hospitals included are not-for-profit (90%), and 18% are academic medical centers (AMCs). All payers are represented in the dataset. Commercial payers represent 40% of the denials, Medicaid and Managed Medicaid 20%, Medicare 13%, and Medicare Advantage 27%.

In total, the dataset includes over 108,000 hospital inpatient encounters occurring between January and December 2018. We excluded non-MS-DRG claims and assigned service lines and sub-service lines based on CMS’s official MS-DRG grouper versions v. 30-37, available for download here. Denial categories were assigned based on the corresponding denial codes. The dataset may underrepresent medical necessity denials because many payers often notify the provider of impending medical necessity denials via phone, not through a 835 remittance file.

<table>
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<th>MS-DRG 795 eligibility denials, by payer</th>
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<tbody>
<tr>
<td>Medicaid 1.55%</td>
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<tr>
<td>Medicare 0.2%</td>
</tr>
<tr>
<td>Medicare Advantage 0.3%</td>
</tr>
<tr>
<td>Commerical 90.65%</td>
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Commonly denied neonatology MS-DRGs, 2018

Normal Newborn (795)
Neonate with Other Significant Problems (794)

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Two DRGs dominate neonatology’s eligibility denials

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Related resources

To explore these topics in more depth, access the following related resources:

Three-part webconference series: Denials Crash Course

Optimizing Your Physician Advisory Program