# Immunosuppressive Therapy for Myasthenic Crisis

## Measure Description

<table>
<thead>
<tr>
<th>Numerator Statement</th>
<th>Denominator Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of patients with myasthenic crisis that are given immunosuppressive therapies (PE or IVIG)</td>
<td>Percentage of patients admitted to inpatient facility with a diagnosis of myasthenic crisis.</td>
</tr>
</tbody>
</table>

## Measure Components

### Numerator
- Patients with myasthenic crisis that are given immunosuppressive therapies (PE or IVIG).

### Denominator
- Patients admitted to inpatient facility with a diagnosis of myasthenic crisis.

### Denominator Exceptions
- Patient has a previous history of severe systemic or anaphylactic response to IVIG.
- Patient is known to have anti-IgA antibodies with selective IgA deficiencies.
- Patient cannot tolerate central line placement.
- Patient is actively septic or hemodynamically unstable.
- Patient has an allergy to fresh frozen plasma or albumin.
- Patient has a heparin allergy that prevents receiving heparin as an anticoagulant during plasmapheresis.
- Patient with hypocalcemia.
- Patient refusal

## Supporting Guideline & Other References

Following evidence statements are quoted verbatim from the referenced clinical guidelines and clinical article surveys:
- “IVIg should be considered in the treatment of MG (Level B).” (1)
- “Because of the lack of randomized controlled studies with masked outcomes, there is insufficient evidence to support or refute the efficacy of plasmapheresis in the treatment of myasthenic crisis (Level U) or MG prethymectomy (1).”
- “Immunomodulatory treatment is considered standard of care for patients with [myasthenic crisis] MC. Specific immunotherapy consists in plasma exchange (PE), immunoadsorption (IA), and human IVIg. All of them have demonstrated similar efficacy, so they can be chosen by availability, adverse effects, costs, experience, and patients’ profile.” (2)
- “…there is not enough evidence of high quality to support one therapy over another during MC. If there is insufficient or no response to treatment, PE can be given after IVIg, and IVIg can be administered after PE.” (2)

## Measure Importance

Relationship to Desired Outcome
- Myasthenic crisis, where worsening of respiratory function due to neuromuscular weakness of the muscles of respiration often necessitates intubation, is a life-threatening condition that is a neurologic emergency. Myasthenic crisis can be difficult for physicians to recognize, especially in patients who do not carry a preexisting diagnosis of myasthenia gravis. Common triggers include recent surgery, systemic infection, and some specific medications. When myasthenic patients in crisis are given immunotherapy with either plasmapheresis or intravenous immunoglobulin, more rapid recovery is facilitated including weaning.
from mechanical ventilation, decreasing the likelihood of requiring tracheostomy, and regaining functional independence (3,4,5).

| Opportunity for Improvement | Myasthenic crisis should be treated with plasmapheresis or IVIg and not corticosteroids alone. |
| National Quality Strategy Domains | ☐ Patient and Family Engagement  
☐ Patient Safety  
☐ Care Coordination  
☐ Population/Public Health  
☐ Efficient Use of Healthcare Resources  
☒ Clinical Process/Effectiveness |
| Exception Justification | Exceptions for contraindications necessary to avoid harm to patients. |
| Harmonization with Existing Measures | Harmonization with existing measures was not applicable to this measure. |
| Measure Designation |  
| Measure Purpose | ☒ Quality improvement  
☒ Accountability |
| Type of Measure | ☒ Process  
☐ Outcome  
☐ Structure |
| Level of Measurement | ☒ Individual Provider  
☒ Practice  
☒ System |
| Care Setting | ☐ Outpatient  
☒ Inpatient  
☐ Emergency Departments and Urgent Care  
☐ Residential (i.e., nursing facility, domiciliary, home care) |
| Data Source | ☒ Electronic health record (EHR) data  
☐ Administrative Data/Claims  
☐ Chart Review  
☒ Registry |

References

### Technical Specifications: Electronic Health Record (EHR) Data

<table>
<thead>
<tr>
<th>Denominator (Eligible Population)</th>
<th>ICD-10 Code:</th>
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<tbody>
<tr>
<td></td>
<td>G70 Myasthenia gravis and other myoneural disorders</td>
</tr>
<tr>
<td></td>
<td>G70.0 Myasthenia gravis</td>
</tr>
<tr>
<td></td>
<td>G70.00 …… without (acute) exacerbation</td>
</tr>
<tr>
<td></td>
<td>G70.01 …… with (acute) exacerbation</td>
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</tbody>
</table>

AND

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<th>CPT E/M Service Code:</th>
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<tbody>
<tr>
<td>99201 Office or other outpatient visit for the evaluation and management of a new patient, which requires these 3 key components: A problem focused history; A problem focused examination; Straightforward medical decision making. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are self limited or minor. Typically, 10 minutes are spent face-to-face with the patient and/or family.</td>
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<tr>
<td>99202 Office or other outpatient visit for the evaluation and management of a new patient, which requires these 3 key components: An expanded problem focused history; An expanded problem focused examination; Straightforward medical decision making. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of low to moderate severity. Typically, 20 minutes are spent face-to-face with the patient and/or family.</td>
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<tr>
<td>99203 Office or other outpatient visit for the evaluation and management of a new patient, which requires these 3 key components: A detailed history; A detailed examination; Medical decision making of low complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate severity. Typically, 30 minutes are spent face-to-face with the patient and/or family.</td>
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<tr>
<td>99204 Office or other outpatient visit for the evaluation and management of a new patient, which requires these 3 key components: A comprehensive history; A comprehensive examination; Medical decision making of moderate complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate to</td>
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99205 Office or other outpatient visit for the evaluation and management of a new patient, which requires these 3 key components: A comprehensive history; A comprehensive examination; Medical decision making of high complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate to high severity. Typically, 45 minutes are spent face-to-face with the patient and/or family.

99211 Office or other outpatient visit for the evaluation and management of an established patient, that may not require the presence of a physician or other qualified health care professional. Usually, the presenting problem(s) are minimal. Typically, 5 minutes are spent performing or supervising these services.

99212 Office or other outpatient visit for the evaluation and management of an established patient, which requires at least 2 of these 3 key components: A problem focused history; A problem focused examination; Straightforward medical decision making. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are self limited or minor. Typically, 10 minutes are spent face-to-face with the patient and/or family.

99213 Office or other outpatient visit for the evaluation and management of an established patient, which requires at least 2 of these 3 key components: An expanded problem focused history; An expanded problem focused examination; Medical decision making of low complexity. Counseling and coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of low to moderate severity. Typically, 15 minutes are spent face-to-face with the patient and/or family.

99214 Office or other outpatient visit for the evaluation and management of an established patient, which requires at least 2 of these 3 key components: A detailed history; A detailed examination; Medical decision making of moderate complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate to high severity. Typically, 25 minutes are spent face-to-face with the patient and/or family.

99215 Office or other outpatient visit for the evaluation and management of an established patient, which requires at least 2 of these 3 key components: A comprehensive history; A comprehensive examination; Medical decision making of high complexity. Counseling and/or coordination of care with
other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate to high severity. Typically, 40 minutes are spent face-to-face with the patient and/or family.

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<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>99221</td>
<td>Initial hospital care, per day, for the evaluation and management of a patient, which requires these 3 key components: A detailed or comprehensive history; A detailed or comprehensive examination; and Medical decision making that is straightforward or of low complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the problem(s) requiring admission are of low severity. Typically, 30 minutes are spent at the bedside and on the patient's hospital floor or unit.</td>
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<tr>
<td>99222</td>
<td>Initial hospital care, per day, for the evaluation and management of a patient, which requires these 3 key components: A comprehensive history; A comprehensive examination; and Medical decision making of moderate complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the problem(s) requiring admission are of moderate severity. Typically, 50 minutes are spent at the bedside and on the patient's hospital floor or unit.</td>
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<tr>
<td>99223</td>
<td>Initial hospital care, per day, for the evaluation and management of a patient, which requires these 3 key components: A comprehensive history; A comprehensive examination; and Medical decision making of high complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the problem(s) requiring admission are of high severity. Typically, 70 minutes are spent at the bedside and on the patient's hospital floor or unit.</td>
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<tr>
<td>99231</td>
<td>Subsequent hospital care, per day, for the evaluation and management of a patient, which requires at least 2 of these 3 key components: A problem focused interval history; A problem focused examination; Medical decision making that is straightforward or of low complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the patient is stable, recovering or improving. Typically, 15 minutes are spent at the bedside and on the patient's hospital floor or unit.</td>
</tr>
<tr>
<td>99232</td>
<td>Subsequent hospital care, per day, for the evaluation and management of a patient, which requires at least 2 of these 3 key components: An expanded problem focused interval history; An expanded problem focused examination; Medical decision making of moderate complexity.</td>
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</table>
complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the patient is responding inadequately to therapy or has developed a minor complication. Typically, 25 minutes are spent at the bedside and on the patient's hospital floor or unit.

| 99233 | Subsequent hospital care, per day, for the evaluation and management of a patient, which requires at least 2 of these 3 key components: A detailed interval history; A detailed examination; Medical decision making of high complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the patient is unstable or has developed a significant complication or a significant new problem. Typically, 35 minutes are spent at the bedside and on the patient's hospital floor or unit. |