Adherence to Non-Infused Biologic Medications Used to Treat Rheumatoid Arthritis (PDC-RA)

Description
The percentage of patients 18 years and older with rheumatoid arthritis (RA) who met the Proportion of Days Covered (PDC) threshold of 80% during the measurement period for biologic medications used to treat RA. A higher rate indicates better performance.

Intended Use
Performance measurement for health plans

Definitions

Biologic Medications Used to Treat Rheumatoid Arthritis
Each biologic medication included in the measure has an indication for use for RA. The biologic medications may also be used to treat other inflammatory conditions; however, this measure is intended to assess adherence only for those being treated for RA.

Non-Infused Biologic Medications Used to Treat RA
See Medication Table PDC-RA-A: Non-Infused Biologic Medications Used to Treat RA.

Infused Biologic Medications Used to Treat RA (Exclusion)
See Medication Table PDC-RA-B: Infused Biologic Medications Used to Treat RA (Exclusion).

Measurement Year
The calendar year (January 1 through December 31) when the measure is assessed.

Proportion of Days Covered (PDC)
The proportion of days in the measurement period “covered” by prescription claims for the same medication or another in its therapeutic category.

PDC Threshold
The level of PDC above which the medication has a reasonable likelihood of achieving most of the potential clinical benefit (80% for this measure).

Index Prescription Start Date (IPSD)
The earliest date of service for a non-infused biologic treating RA during the measurement year.

Treatment Period
The patient’s treatment period begins on the IPSD and extends through whichever comes first: the last day of the measurement year, death or disenrollment.
The IPSD should occur at least 91 days before the end of the enrollment period.

Prescription Claims
Only paid, non-reversed prescription claims are included in the data set to calculate the measure.

Rheumatoid Arthritis Diagnosis
Patients with a rheumatoid arthritis diagnosis during the measurement year.

• See the PQA ICD Code Value Set, Rheumatoid Arthritis.
A rheumatoid arthritis diagnosis is defined as having at least one claim with any of the listed RA diagnoses, including primary diagnosis or any other diagnosis fields during the measurement year.

**Eligible Population**

**Ages**
18 years and older as of the first day of the measurement year.

**Continuous Enrollment**
Subjects should be continuously enrolled during the treatment period.

**Allowable Gap for Medicaid**
To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (i.e., a member whose coverage lapses for 2 months [60 consecutive days] is not considered continuously enrolled.)

**Benefit**
Medical and Pharmacy.

**Event/Diagnosis**
- A rheumatoid arthritis diagnosis during the measurement year
- Two or more prescription claims for non-infused biologic medications used to treat RA (see Table PDC-RA-A) on two unique dates of service, for which the sum of the days supply is 56 days or greater during the treatment period.

Use the steps below to determine the eligible population.

**Step 1** Identify patients with a rheumatoid arthritis diagnosis during the measurement year.

**Step 2** Identify patients with two or more prescription claims for non-infused biologic medications used to treat RA (see Table PDC-RA-A) filled on two unique dates of service, for which the sum of the days supply is 56 days or greater during the treatment period.

**Step 3** Exclude patients with one or more claims for an infused biologic used to treat RA (see Table PDC-RA: B) during the treatment period.

**NOTE:** Use both pharmacy claims (NDCs) and medical claims (NDCs and HCPCS) to identify infused biologic medications. In addition to the PQA NDC list, see PDC RA HCPCS Exclusion List.

**Administrative Specification**

**Data Sources**
Prescription and medical claims data.

**Denominator**
The eligible population.

**Numerator**
The number of patients in the denominator that met the PDC threshold during the measurement year. Follow the steps below for each patient to determine whether the patient meets the PDC threshold.

**Step 1** Determine the patient’s treatment period, defined as IPSD to the end of the enrollment year, disenrollment, or death.

**Step 2** Within the treatment period, count the days the patient was covered by at least one drug in the class based on the prescription fill date and days of supply. If prescriptions for the same drug (generic ingredient) overlap, then adjust the prescription start date to be the day after the previous fill has ended.*
Step 3  Divide the number of covered days found in Step 2 by the number of days found in Step 1. Multiply this number by 100 to obtain the PDC (as a percentage) for each patient.

Step 4  Count the number of patients who had a PDC of 80% or greater and then divide by the total number of eligible patients.

*Adjustment of overlap should also occur when there is overlap of a single drug product to a combination product containing the target drug or when there is an overlap of a combination product to another combination product where there is overlap of at least the target drug. An example of SAS code for steps 1-3 is available from PQA upon request, and is also available at the URL: http://www2.sas.com/proceedings/forum2007/043-2007.pdf

Stratification  Commercial, Medicaid, Medicare (report each product line separately). For Medicare, report rates for low-income subsidy (LIS) and non-LIS populations separately.

Medication Tables

PDC-RA-A: Non-Infused Biologic Medications Used to Treat RA

<table>
<thead>
<tr>
<th>Tumor Necrosis Factor Alpha Blockers</th>
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</tr>
</thead>
<tbody>
<tr>
<td>• certolizumab pegol (SC)</td>
<td></td>
</tr>
<tr>
<td>• anakinra (SC)</td>
<td></td>
</tr>
<tr>
<td>• adalimumab (SC)</td>
<td></td>
</tr>
<tr>
<td>• golimumab (SC)</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Interleukin-1 Receptor Antagonist (IL-1Ra)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>• etanercept (SC)</td>
<td></td>
</tr>
<tr>
<td>• etanercept-szzs</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interleukin-6 Receptor Antagonist (IL-6Ra)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• abatacept (SC)</td>
<td></td>
</tr>
<tr>
<td>• tofacitinib (Oral)</td>
<td></td>
</tr>
</tbody>
</table>

Anti-TNF-alpha - Monoclonal Antibodies

| • adalimumab (SC)                          |  |
| • adalimumab-atto (SC)                     |  |
| • golimumab (SC)                           |  |

Soluble Tumor Necrosis Factor Receptor Agents

| • etanercept (SC)                          |  |
| • etanercept-szzs                         |  |

Selective Costimulation Modulators

| • abatacept (SC)                           |  |
| • tofacitinib (Oral)                       |  |

Janus Kinase (JAK) Inhibitors

| • rinfluiximab (IV)                        |  |

Rationale

Rheumatoid arthritis (RA) is a chronic and progressive inflammatory disease that can lead to premature mortality and reduce a person's health and quality of life. RA affects an estimated 1.3-1.5 million Americans, and while one study found that prevalence decreased from 1995 to 2005, another found an increase in overall prevalence from 2005 to 2007. Certain genetic traits, environmental causes, and lifestyle behaviors are thought to contribute to RA's etiology. RA is 2 to 3 times more likely in women...
than men\textsuperscript{1-3} and, it is estimated that morbidity, mortality, and disability due to RA are likely to increase in older adults.\textsuperscript{2}

RA is also a significant driver of costs for both treatment of the disease and its complications, causing a substantial impact on both direct healthcare costs and indirect costs associated with productivity loss, absenteeism, and disability.\textsuperscript{5-7} In 2015, it was estimated that the national indirect costs of RA-related absenteeism were $252 million annually.\textsuperscript{8} However, appropriate treatment can prevent loss of function and improve patients’ quality of life.\textsuperscript{9}

Most RA patients require continuous treatment to control flares and disease progression.\textsuperscript{4,10} Current evidence-based guidelines from the American College of Rheumatology recommend the use of self-injectable, biologic disease-modifying antirheumatic drugs (DMARDs) for both early symptomatic and well-established disease.\textsuperscript{9} Biologic DMARDs are frequently used in combination with synthetic DMARDs or corticosteroids to manage symptoms and control disease progression.\textsuperscript{1,9} Although biologic treatments are considerably more expensive than traditional oral treatments, for many patients they offer improved efficacy, reduced disability, and improved quality of life.\textsuperscript{1}

The full benefits of self-injectable biologic treatments can only be achieved when patients are adherent to their medication regimen; however, many patients have difficulty taking their medications as often as directed. Nonadherent populations have been shown to be at a higher risk of flare-up, and overall, they experience more frequent flares compared to those who were more adherent to therapy.\textsuperscript{11} Currently, non-adherence rates range from 20-70\%.\textsuperscript{12-13} Higher adherence levels for patients result in a reduction in health care expenditures and improvements in quality of life.\textsuperscript{6-7} Thus, improvements in RA medication adherence would be expected to moderate disease progression, reducing the utilization of medical services and the associated costs.\textsuperscript{1,6-7}

\textbf{References}


