

Overview of the low back pain episode of care

State of Ohio

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1. CLINICAL OVERVIEW AND RATIONALE FOR DEVELOPMENT OF THE LOW BACK PAIN EPISODE

1.1 Rationale for development of the low back pain episode of care

Low back pain (LBP) is a very common condition that is a significant burden for patients and health systems at large. Globally, back pain causes more disability than any other condition and is one of the most common conditions that patients seek medical care for in western countries. In the United States, LBP incidence has grown from 3.9 percent in 1992 to 10.2 percent in 2006, and continues to grow with the aging population.¹ The economic impact of LBP in the U.S. translates to over \$100 billion per year in total costs (including direct medical costs and indirect loss of productivity costs).² In Ohio, there were 321,364 LBP episodes among Medicaid beneficiaries in 2015, which accounts for approximately \$124 million in spend and a median cost of \$195 per LBP episode.³

Evidence-based clinical guidelines recommended by the United States Preventive Services Task Force (USPSTF) and the American College of Physicians (ACP) outline several best practices for clinicians to improve quality of care and outcomes for patients. For example, clinicians should not routinely obtain imaging and testing for patients with nonspecific low back pain, but should do so when patients have severe neurologic deficiencies or underlying conditions present.⁴ Further, magnetic resonance imaging or CT scans should be given to patients with persistent low back pain and signs of radiculopathy or spinal stenosis only if they are surgery or steroid

¹ Freburger et al. The Rising Prevalence of Chronic Low Back Pain. Arch Intern Med. 2009.

² Crow WT et. al. Estimating cost of care for patients with acute low back pain: a retrospective review of patient records. J Am Osteopath Assoc. 2009 Apr;109(4):229-33.

³ Analysis of Ohio Medicaid claims data for dates between October 1, 2014 and September 30, 2015, Total episodes

⁴ Chou et al. Diagnosis and Treatment of Low Back Pain: A Joint Clinical Practice Guideline from the American College of Physicians and the American Pain Society. Ann Intern Med. 2007.

injection candidates. Due to substantial risks, opioids should only be an option for back pain patients when they have severe, disabling pain not controlled with NSAIDs or acetaminophen.

Even though evidence generally does not support CT scans, MRIs, and X-rays, 21 percent of episodes among Ohio Medicaid beneficiaries have these procedures.⁵ Additionally, while the evidence does not support the general use of opioids for the treatment of low back pain,⁶ Ohio Medicaid beneficiaries receive an opioid prescription in more than 50 percent of all low back pain episodes.

Despite the guidelines above, treatment practices during the periods of an acute LBP exacerbation may vary widely from one provider to another. Unique patient needs will necessitate variation in treatment practice; however, practice variation due to reasons not related to the patient may lead to sub-optimal patient outcomes, higher than necessary costs, or both.

Implementing the LBP episode of care is intended to improve patient outcomes through reducing variation in care across providers. As part of a concerted effort aimed at improving overall care for Ohio Medicaid patients, the LBP episode is being deployed together with a suite of other episodes (including episodes for non-traumatic headache, upper respiratory infection, urinary tract infection, asthma, and chronic obstructive pulmonary disease). Alongside these and other episodes of care and patient centered medical homes, the LBP episode will contribute to a model of care delivery that benefits patients through improved care quality and clinical outcomes with attention to overall cost of care.

1.2 Clinical overview and typical patient journey for a low back pain

Low back pain is a common and disabling disorder.⁷ As depicted in The LBP episode will be complemented by a patient-centered medical home (PCMH) in Ohio to cover a broad spectrum of care delivery for Medicaid beneficiaries who have low back pain. PCMHs will focus on chronic pain management and other patient comorbidities before and after the episode and will handle patient referrals to neurologists and other specialists as appropriate. To complement PCMHs, the LBP episode will focus on improving outcomes directly related to the 30-day window after the LBP diagnosis.

⁵ Analysis of Ohio Medicaid claims data for dates between October 1, 2014 and September 30, 2015.

⁶ Friedman BW, et al. Naproxen with cyclobenzaprine, oxycodone/acetaminophen, or placebo for treating acute low back pain: a randomized clinical trial. *JAMA*. 2015; 314(15):1572.

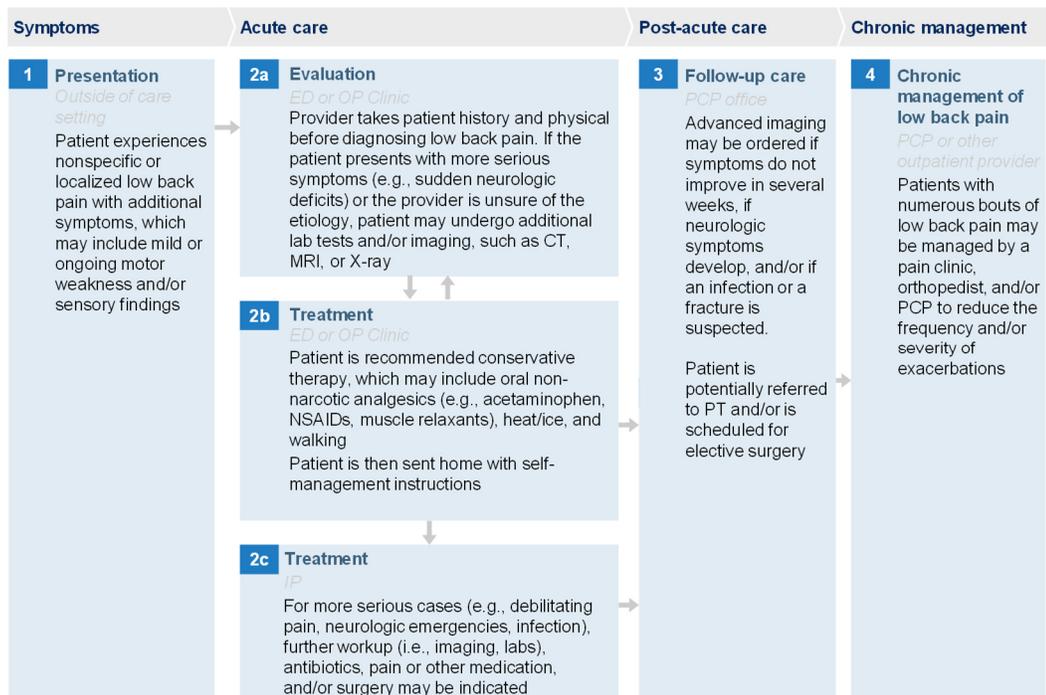
⁷ National Institute of Neurological Disorders and Stroke. Low Back Pain Fact Sheet. 2016. Accessed 6/10/16 at www.ninds.nih.gov/disorders/backpain/detail_backpain.htm.

Exhibit 1, a low back pain episode is triggered when a physician in the emergency department, observation room, urgent care center, or office settings diagnoses a patient with low back pain as their primary reason for the visit. During the initial visit, the clinician takes a patient history and patient undergoes evaluation and management of the low back pain. Most patients are prescribed conservative therapy, which may include oral non-narcotic analgesics (e.g., acetaminophen, NSAIDs, muscle relaxants) and education (e.g., exercise instructions.) If the patient has serious symptoms (e.g., sudden neurologic deficits) or the physician is unsure of the etiology, the patient may undergo additional lab tests or imaging (e.g., CT scans, MRIs, X-rays) or be referred to other providers.

If symptoms do not improve after several weeks, or if other concerning symptoms arise (e.g. new neurologic symptoms, signs of infection, or signs of fracture), post-acute care for low back pain may include imaging, additional therapies, and/or referral to specialists such as pain medicine physicians and orthopedists.

The LBP episode will be complemented by a patient-centered medical home (PCMH) in Ohio to cover a broad spectrum of care delivery for Medicaid beneficiaries who have low back pain. PCMHs will focus on chronic pain management and other patient comorbidities before and after the episode and will handle patient referrals to neurologists and other specialists as appropriate. To complement PCMHs, the LBP episode will focus on improving outcomes directly related to the 30-day window after the LBP diagnosis.

EXHIBIT 1 - LOW BACK PAIN PATIENT JOURNEY

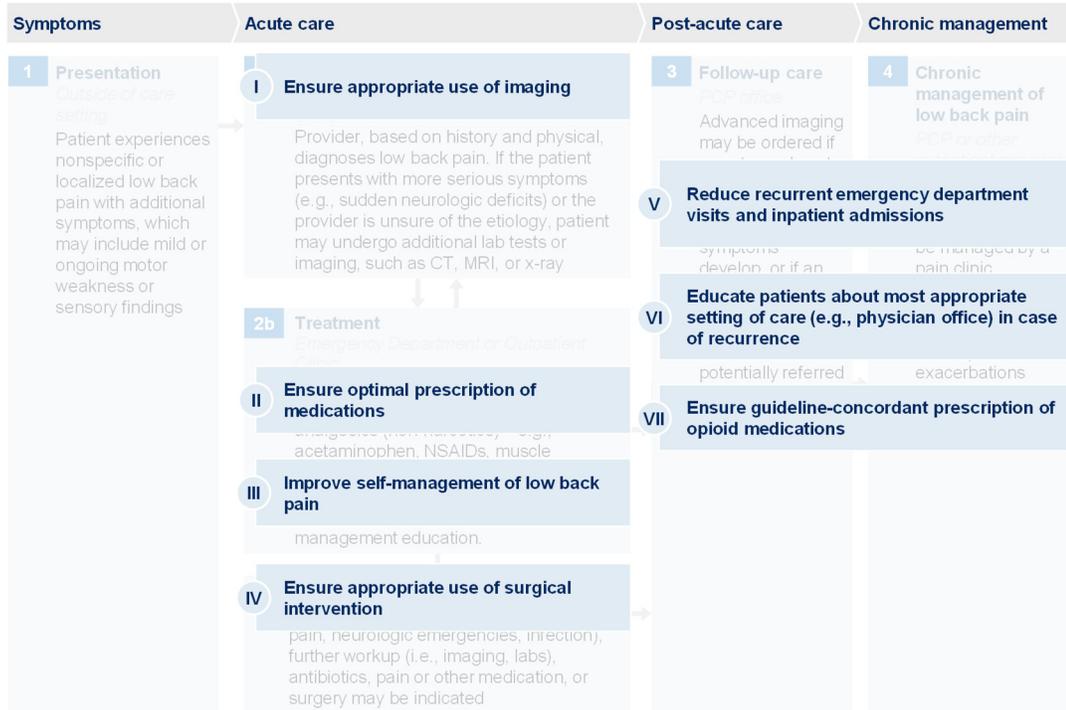


1.3 Potential sources of value within the low back pain patient journey

Within the low back pain episode of care, providers have several opportunities to improve quality of care and reduce unnecessary spend associated with the episode (see Exhibit 2). For example, providers may choose to avoid potentially unnecessary imaging procedures such as CT scans and MRIs, thereby limiting radiation exposure and the need for additional procedures due to incidental findings. Last year in Ohio, 29 percent of episodes among Medicaid beneficiaries started in the emergency department.⁸ Providing high quality, evidence-based treatment (e.g., only giving nonpharmacologic therapy when patients don't improve with self-care) and follow-up care reduces the chance of repeat episodes and treatment in high cost facilities such as emergency departments. In addition, providers can reduce the use of prescription opioids, which may be associated with other complications such as addiction and overdose and which contribute to higher episode spend. Providers can reduce the number of potentially avoidable surgical interventions to treat low back pain. Finally, clinicians can encourage appropriate lifestyle management through exercise, diet, and smoking cessation consultations. In general, these practices can improve care quality and outcomes by reducing the likelihood of complications and post-procedure admissions, as well as reduce the overall spend for a LBP episode.

⁸ Analysis of Ohio Medicaid claims data for dates between October 1, 2014 and September 30, 2015.

EXHIBIT 2 - LOW BACK PAIN SOURCES OF VALUE



2. OVERVIEW OF THE LOW BACK PAIN EPISODE DESIGN

2.1 Episode Trigger

The low back pain episode is triggered by an emergency department, observation room, urgent care center, or office visit in which low back pain symptoms (e.g., nonspecific or localized low back pain, mild or ongoing motor weakness, or sensory findings) are the primary diagnoses. The diagnosis codes that trigger an episode include ICD-9 codes for back pain, back sprain, radiculopathy, disc degeneration, disc displacement, stenosis, and spondylosis (see Table 1 in appendix for the complete list of trigger diagnosis codes).

2.2 Principal Accountable Provider

The principal accountable provider (PAP) is the person or entity best positioned to influence the patient journey and the clinical decisions made throughout the course of the episode at any site of care. For the low back pain episode the PAP is the physician entity diagnosing the low back pain which triggered the episode. If the

episode is triggered in an ED setting, the PAP is the physician at the ED diagnosing the low back pain that triggered the episode.

2.3 Episode Duration

The low back pain episode begins with the first diagnosis of low back pain (called the “trigger window”). This window usually lasts for one day. However, if during this window a hospitalization occurs, it will be extended to include the whole admission. The episode ends 30 days after the trigger window. The 30-day post-trigger window is split into two “post-trigger windows”: a three-day post-trigger window followed by a second 27-day post-trigger window. The 30-day post-trigger window was an adequate time to capture readmissions, complications, follow-up care, and other relevant included claims. The rationale for the split post-trigger window relates to which services are included and is described in greater detail in section 2.4.

2.4 Included Services

The episode model is designed to address spend for care and services directly related to the diagnosis, treatment, and immediate recovery phase of the patient journey. Each period of the patient journey, or episode “window,” has a distinct claim inclusion logic derived from two major criteria: 1) that the type of included care and services must correspond to that window of the patient journey and 2) that the included care and services are understood to be directly or indirectly influenced by the PAP during that window.

The low back pain episode is comprised of three distinct windows, for the purpose of spend inclusions: a trigger window and two post-trigger windows. During the trigger window all relevant spend is included (including imaging, surgical, medical and drug spend). During the first post-trigger window (one through three days following the initial low back pain diagnosis) immediate complications (e.g. surgical complications, allergic reactions, nausea and vomiting, renal failure, constipation, fever, and muscle or joint pain), along with the recurrence of low back pain symptoms (including any associated ED visits or hospitalizations) and related follow-up care (e.g., CT scans, MRIs and select medications, physical therapy and follow-up appointments) are included, but no surgery spend is included. Finally, during the second post-trigger window (four to 30 days following the diagnosis) only the recurrence of low back pain symptoms (including any associated ED visits or hospitalizations) and related follow-up care are included (e.g., CT scans, MRIs, select medications, physical therapy, and follow-up appointments). Spend related to low back pain surgery is not included in either of the post-trigger windows due to the

inability to distinguish in claims data between previously planned low back pain surgeries and surgeries initiated under the direction of the PAP.

Throughout the episode window spend for transportation and vaccinations are excluded. Vaccination spend is excluded to prevent doctors from withholding procedures deemed beneficial for patients and transportation spend is excluded since there is variability in transportation costs among patients that falls outside the purview of the PAP.

The total episode spend is calculated by adding up the spend amounts on all of the individual claims that were included in each of the episode windows. To make episodes starting in the ED more comparable with those that do not start in the ED, the facility spend for ED episodes is excluded from the total episode spend.

2.5 Episode Exclusions and Risk Factors

To ensure that episodes are comparable across patient panels, select risk factors and exclusions are applied before assessing PAP performance. Risk factors are applied to episodes to make spend more comparable across different patient severities, while episode exclusions are applied when a clinical factor deems the patient too severe (and too high spend) for risk adjustment to be possible.

In the context of episode design, risk factors are attributes (e.g., age) or underlying clinical conditions (e.g., arthritis, cervical spine disease) that are likely to impact a patient's course of care and the spend associated with a given episode. Risk factors are selected via a standardized and iterative risk-adjustment process which gives due consideration to clinical relevance, statistical significance, and other contextual factors.⁹ Based on the selected risk factors, each episode is assigned a risk score. The total episode spend and the risk score are used to arrive at an adjusted episode spend, which is the spend by which providers are compared to each other. The final list of risk factors is detailed in Table 2 of the Appendix. Other risk factors were inputted into the model because they were clinically relevant to the LBP episode but did not come out of the model as statistically significant.¹⁰

⁹ For a detailed description of the principles and process of risk adjustment for the episode-based payment model see the document, "Supporting documentation on episode risk adjustment." A current version of this document is available here:
<http://medicaid.ohio.gov/Portals/0/Providers/PaymentInnovation/Episode-Risk-Adjustment.pdf>

¹⁰ Some of these factors include osteoporosis, bacterial infections, diabetes, and hepatitis

By contrast, an episode is excluded from a patient panel when the patient has clinical factors that suggest a distinct patient journey (e.g., trauma) and/or which drive significant increases in spend relative to the average patient (e.g., select cancers, HIV and cauda equina). In addition, there are several “business-related” exclusions. These exclusions are factors relating to reimbursement policy (e.g., whether a patient sought care out of state), the completeness of spend data for that patient (e.g., third party liability or dual eligibility), and other topics relating to episode design and implementation (e.g. overlapping episodes) during the comparison period. Episodes that have no exclusions are known as “valid” episodes and are the episodes that are used for provider comparisons. In contrast, episodes with one or more exclusions are “invalid” episodes.

For the low back pain episode, both clinical and business exclusions apply. Several of the business and clinical exclusions are standard across most episodes while others relate to the specific scope of the episode design. As the episode is intended to capture low back pain without concerning symptoms for more complicated underlying diseases, the episode-specific clinical exclusions are claims with procedures or diagnoses indicating: (1) trauma, (2) concerning symptoms (e.g., cancer, saddle anesthesia, leg weakness, bladder / bowel dysfunction), or (3) chronic conditions that may warrant different care pathways (e.g., multiple sclerosis, paralysis). In addition, children under the age of 18 are excluded because etiologies for back pain differ in this age group relative to other age groups. A more detailed list of business and clinical exclusions (including non-episode-specific clinical exclusions), is in Table 3 of the Appendix.

2.6 Quality Metrics

To ensure the episode model incentivizes quality care, the LBP episode has select quality metrics. Quality metrics are calculated for each PAP meeting the minimum threshold for valid episodes. The LBP episode has seven quality metrics. Three are linked to performance assessment, meaning that performance thresholds on these must be met in order for episodes to be eligible for positive incentive. The specific threshold amount will be determined during the informational reporting period. Four quality metric is for informational purposes only.

The metrics tied to positive incentive payments are the 30-day follow-up, the low back imaging rate, and average difference in morphine equivalent dose (MED) per day between the pre-trigger opioid window and the post-trigger opioid window. The informational metrics are the new opioid prescription fill rate, steroid injection rate, average MED per day during the pre-trigger opioid window, the average MED per day during the post-trigger opioid window. A complete list of quality metrics is provided in Table 4 of the Appendix.

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4. APPENDIX: SUPPORTING INFORMATION AND ANALYSES

Table 1 – Low back pain episode triggers

| Trigger group name | Trigger codes (ICD-9 Dx) | Description |
|--------------------|--------------------------|---|
| Disc degeneration | 72251 | Degeneration of thoracic or thoracolumbar intervertebral disc |
| | 72252 | Degeneration of lumbar or lumbosacral intervertebral disc |
| | 7226 | Degeneration of intervertebral disc site unspecified |
| | 72210 | Displacement of lumbar intervertebral disc without myelopathy |
| | 72211 | Displacement of thoracic intervertebral disc without myelopathy |
| | 7222 | Displacement of intervertebral disc site unspecified without myelopathy |
| Low back pain | 7241 | Pain in thoracic spine |
| | 7242 | Lumbago |
| | 7245 | Backache unspecified |
| | 7248 | Other symptoms referable to back |
| | 7249 | Other unspecified back disorders |
| Radiculopathy | 7243 | Sciatica |
| | 7244 | Thoracic or lumbosacral neuritis or radiculitis unspecified |
| Spondylosis | 7212 | Thoracic spondylosis without myelopathy |
| | 7213 | Lumbosacral spondylosis without myelopathy |
| | 72141 | Spondylosis with myelopathy thoracic region |
| | 72142 | Spondylosis with myelopathy lumbar region |
| | 7215 | Kissing spine |
| | 7218 | Other allied disorders of spine |
| | 72190 | Spondylosis of unspecified site without myelopathy |
| | 72191 | Spondylosis of unspecified site with myelopathy |
| Sprain | 8460 | Lumbosacral (joint) (ligament) sprain |
| | 8461 | Sacroiliac (ligament) sprain |
| | 8462 | Sacrospinatus (ligament) sprain |
| | 8463 | Sacrotuberous (ligament) sprain |
| | 8468 | Other specified sites of sacroiliac region sprain |
| | 8469 | Unspecified site of sacroiliac region sprain |
| | 8471 | Sprain thoracic region |

| Trigger group name | Trigger codes (ICD-9 Dx) | Description |
|--------------------|--------------------------|--|
| | 8472 | Sprain lumbar region |
| Sprain | 8473 | Sprain of sacrum |
| | 8479 | Sprain of unspecified site of back |
| Stenosis | 72400 | Spinal stenosis of unspecified region |
| | 72401 | Spinal stenosis of thoracic region |
| | 72402 | Spinal stenosis of lumbar region without neurogenic claudication |
| | 72403 | Spinal stenosis of lumbar region with neurogenic claudication |
| | 72409 | Spinal stenosis of other region |

Table 2 – Low back pain episode risk factors

| Risk factor | Description | Time frame |
|--|--|--|
| Age 19 to 29 | Patient's age | During the trigger start date |
| Age 30 to 39 | Patient's age | During the trigger start date |
| Age 40 to 49 | Patient's age | During the trigger start date |
| Anxiety | Patient diagnosed with anxiety | During the episode window or during the 365 days before the episode window |
| Arthritis | Patient diagnosed with arthritis | During the episode window or during the 365 days before the episode window |
| Bipolar | Patient diagnosed with bipolar disorders | During the episode window or during the 365 days before the episode window |
| Bone disease and musculoskeletal deformities | Patient diagnosed with bone disease and musculoskeletal deformities | During the episode window or during the 365 days before the episode window |
| Cervical disorders | Patient diagnosed with cervical disorders | During the episode window or during the 365 days before the episode window |
| Chronic pain | Patient diagnosed with chronic pain | During the episode window or during the 365 days before the episode window |
| Depression | Patient diagnosed with depression | During the episode window or during the 365 days before the episode window |
| Epilepsy | Patient diagnosed with gait | During the episode window or during the 365 days before the episode window |
| Hereditary and degenerative NSC | Patient diagnosed with hereditary and degenerative nervous system conditions | During the episode window or during the 365 days before the episode window |
| Hypertension | Patient diagnosed with hypertension | During the episode window or during the 365 days before the episode window |
| Nutritional deficiency | Patient diagnosed with nutritional deficiency | During the episode window or during the 365 days before the episode window |
| Nervous system disorders | Patient diagnosed with nervous system disorders | During the episode window or during the 365 days before the episode window |
| Non-traumatic joint disorders | Patient diagnosed with a non-traumatic joint disorders | During the episode window or during the 365 days before the episode window |

| | | |
|------------------------|---|--|
| Obesity | Patient diagnosed with obesity | During the episode window or during the 365 days before the episode window |
| Osteoporosis | Patient diagnosed with osteoporosis | During the episode window or during the 365 days before the episode window |
| Scoliosis | Patient diagnosed with scoliosis | During the episode window or during the 365 days before the episode window |
| Substance use | Patient diagnosed with substance use | During the episode window or during the 365 days before the episode window |
| Syncope and presyncope | Patient diagnosed with syncope and presyncope | During the 90 days before the episode window |
| Thyroid disorders | Patient diagnosed with | During the episode window or during the 365 days before the episode window |

Table 3 – Low back pain episode exclusions

| Exclusion type | Episode exclusion | Description | Relevant time period |
|---------------------|---|--|---------------------------|
| Business Exclusions | Concurrent scope | Patient has a valve procedure or percutaneous coronary intervention | During the trigger window |
| | Dual | Patient had dual coverage by Medicare and Medicaid | During the episode window |
| | FQHC/RHC | PAP is classified as a federally qualified health center (FQHC) or a rural health clinic (RHC) | During the episode window |
| | Incomplete episode | Non-risk-adjusted episode spend is less than the incomplete episode threshold | During the episode window |
| | Inconsistent enrollment | Patient has gaps in full Medicaid coverage | During the episode window |
| | Long hospitalization | Hospitalization is longer than (>) 30 days | During the episode window |
| | Long-term care | Patient has one or more long-term care claim detail lines | During the episode window |
| | Missing APR-DRG | A DRG-paid inpatient claim is missing the APR-DRG and severity of illness | During the episode window |
| | Multiple payers | Patient changes enrollment between FFS and an MCP or between MCPs | During the episode window |
| | PAP out of state | The principle accountable provider operates out of state | During the episode window |
| No PAP | An episode's billing provider number is not available | During the episode window | |

| Exclusion type | Episode exclusion | Description | Relevant time period |
|------------------------------|--------------------------------|--|--|
| Business Exclusions | Third-party liability | Third-party liability charges are present on any claim or claim detail line, or the patient has relevant third-party coverage at any time | During the episode window |
| Standard Clinical Exclusions | Cancer diagnoses and treatment | Patient is diagnosed with or received treatment for active cancer | During the episode or up to 90 days before the start of the episode |
| | Coma | Patient is diagnosed with coma | During the episode or up to 365 days before the start of the episode |
| | Cystic fibrosis | Patient is diagnosed with cystic fibrosis | During the episode or up to 365 days before the start of the episode |
| | Death | Patient had a discharge status of "expired" on any inpatient or outpatient claim during the episode window or has a date of death before the end of the episode window | During the episode window |
| | End stage renal disease | Patient has diagnosis or procedure for end stage renal disease | During the episode or up to 365 days before the start of the episode |
| | HIV | Patient is diagnosed with HIV | During the episode or up to 365 days before the start of the episode |
| | Left against medical advice | Patient has a discharge status of "left against medical advice or discontinued care" | During the episode window |
| | Multiple other comorbidities | Patient has too many risk factors to reliably risk adjust the episode spend | During the episode window |
| | Multiple sclerosis | Patient is diagnosed with multiple sclerosis | During the episode window or during the 365 days |

| Exclusion type | Episode exclusion | Description | Relevant time period |
|-------------------------------------|---|--|--|
| Standard clinical exclusion | Paralysis | Patient has diagnosis of paralysis | During the episode or up to 365 days before the start of the episode |
| | Transplant | Patient has an organ transplant | During the episode or up to 365 days before the start of the episode |
| Episode-specific clinical exclusion | Age | Patient is younger than eighteen (<18) or older than sixty-four (>64) years of age | During the episode window |
| | Aortic dissection | Patient has a diagnosis of aortic dissection | During the episode window and 365 days before the episode window |
| | Appendicitis and other appendiceal conditions | Patient diagnosed with appendicitis and other appendiceal conditions | During the episode window and 90 days before the episode window |
| | Back or neck trauma | Patient has a diagnosis of back or neck trauma | During the episode window and 365 days before the episode window |
| | Cerebral or cerebrovascular disease | Patient has a diagnosis of cerebral or cerebrovascular disease | During the episode window and 365 days before the episode window |
| | Congenital spinal cord disorder | Patient has a diagnosis of congenital spinal cord disorder | During the episode window and 365 days before the episode window |
| | High outlier | Risk-adjusted episode spend is greater than the high outlier threshold | During the episode window |
| | Immunocompromised patient | Patient has a diagnosis of immunocompromised patient | During the episode window and 365 days before the episode window |
| | Infections | Patient has a diagnosis of infections | During the episode window and 30 days before the episode window |
| | Low outlier | Non-risk adjusted episode spend is lower than the low outlier threshold | During the episode window |

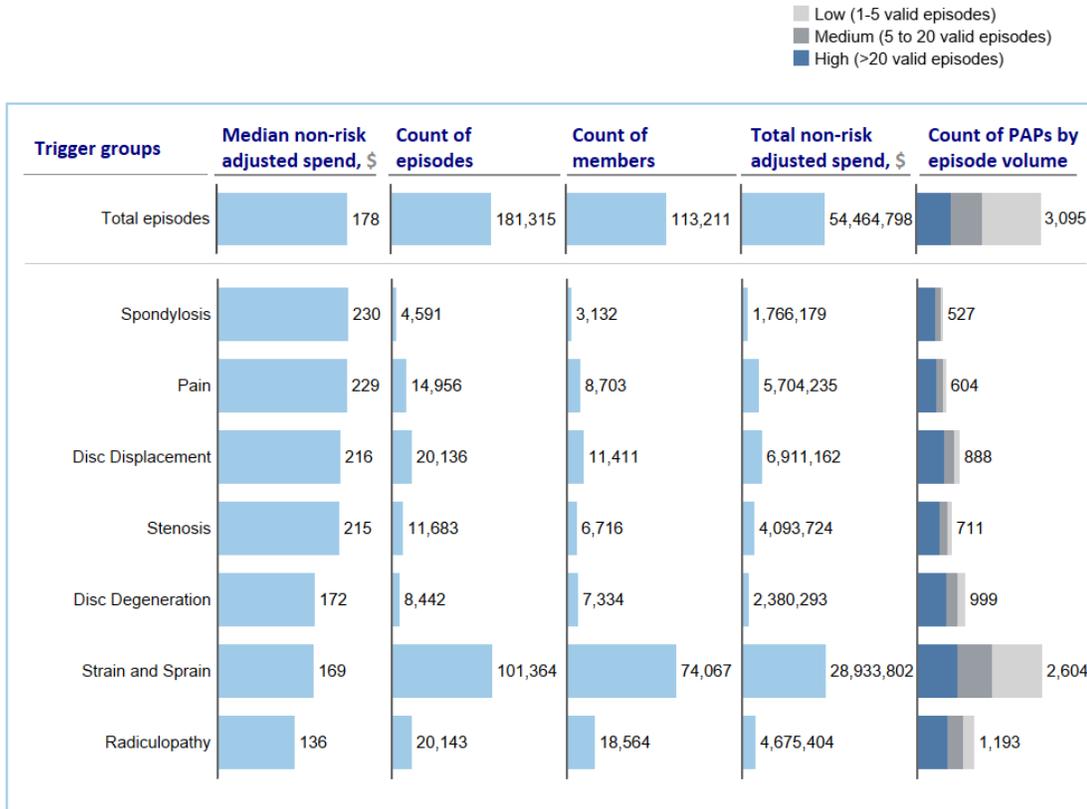
| Exclusion type | Episode exclusion | Description | Relevant time period |
|----------------|-----------------------------------|--|--|
| | Neoplasm | Patient has a diagnosis of neoplasm | During the episode window and 365 days before the episode window |
| | Neurologic signs and symptoms | Patient has a diagnosis of neurologic signs and symptoms | During the episode window |
| | Pregnancy and delivery | Patient has a diagnosis of pregnancy and delivery | During the episode window and 90 days before the episode window |
| | Pancreatic disorders not diabetes | Patient has a diagnosis of pancreatic disorders not diabetes | During the episode window and 365 days before the episode window |
| | Sickle cell | Patient has a diagnosis of sickle cell | During the episode window and 365 days before the episode window |
| | Systemic steroid therapy | Patient has a diagnosis of systemic steroid therapy | During the episode window and 365 days before the episode window |

Table 4 – Low back pain episode quality metrics (PAP level)

| Metric type | Field name | Description | Relevant time period |
|----------------------------|--|--|---|
| Tied to incentive payments | 30-day follow-up rate | Number of episodes with a follow-up visit within the 30 days divided by the total number of valid episodes (tied to positive incentive payments) | 30 days after the trigger |
| | Low back imaging rate (all types) | Number of episodes with low back imaging procedures (MRIs, CT scans, or X-rays) during the episode divided by the total number of valid episodes (tied to positive incentive payments) | During the episode |
| | Difference between average MED/day in the pre-trigger opioid window and the post-trigger opioid window ¹¹ | Difference between average MED/day in the pre-trigger opioid window and the post-trigger opioid window | During the pre-trigger opioid window and post-trigger opioid window |
| Informational | New opioid prescription (fill) rate | Number of valid episodes with a new opioid prescription divided by the total number of valid episodes (tied to positive incentive payments) | 90 days before the trigger for old prescriptions and during the episode for new prescriptions |
| | Steroid injection rate | Number of episodes with a steroid injection procedure during the episode divided by the total number of valid episodes | During the episode |
| | Average MED/day during the pre-trigger opioid window | Average MED per day during the pre-trigger opioid window among patients with an opioid prescription | During the pre-trigger opioid window |
| | Average MED/day during the post-trigger opioid window | Average MED per day during the post-trigger opioid window among patients with an opioid prescription | During the post-trigger opioid window |

¹¹ The pre-trigger opioid window and post-trigger opioid window are specific time periods that are defined in the detailed business requirements

EXHIBIT 3 – LOW BACK PAIN EPISODE TRIGGER GROUPS¹

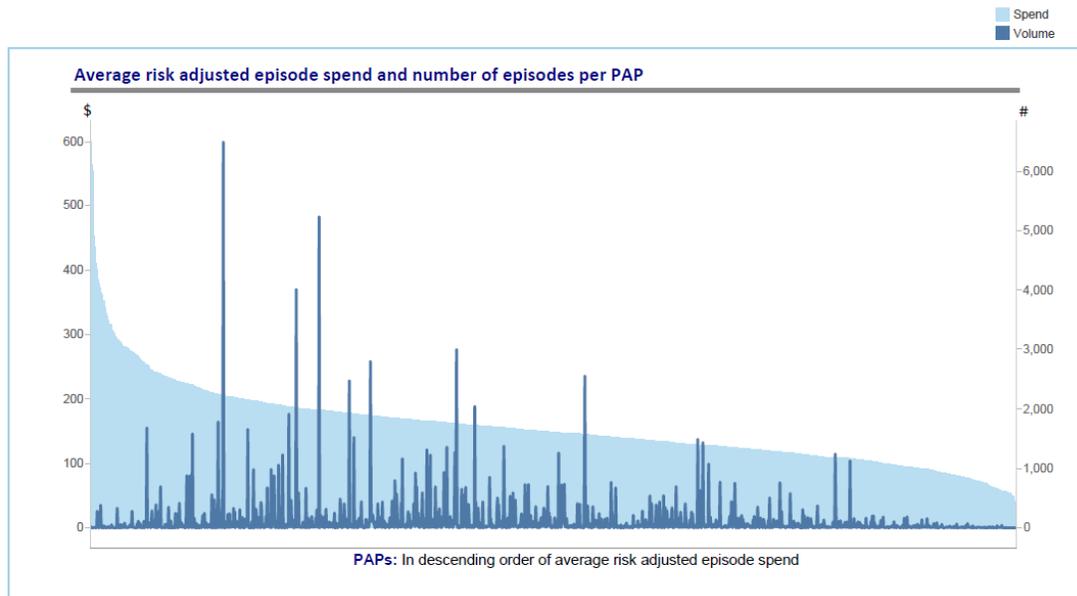


1. For valid episodes (181,315 episodes) across 3,095 PAPs; valid episodes do not include episodes with business (e.g., third-party liability, dual eligibility) or clinical exclusions (e.g., spinal cord disorder); count of PAPs includes valid PAPs (e.g. >= 5 valid episodes) and invalid PAPs (e.g. < 5 valid episodes)

2. Low volume is defined as PAPs with less than five valid episodes, Medium volume as PAPs with five to 20 valid episodes and High volume as PAPs with more than 20 valid episodes

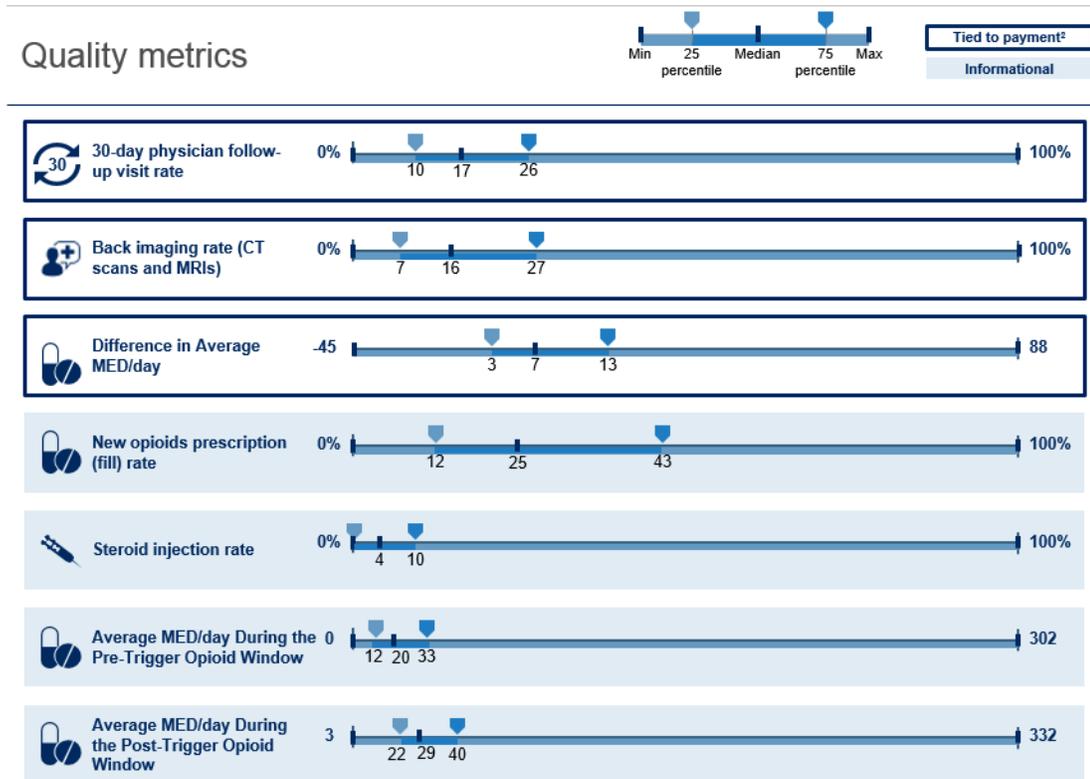
SOURCE: OH claims data, episodes ending between 10/1/2014 and 9/30/2015

EXHIBIT 4 - DISTRIBUTION OF RISK-ADJUSTED AVERAGE EPISODE SPEND AND COUNT BY PAP¹



1. For valid episodes (178,725) across valid PAPs (1,624); valid episodes do not include episodes with business (e.g., third-party liability, dual eligibility) or clinical exclusions (e.g., spinal cord disorder); valid PAPs are physicians with five or more episodes.
SOURCE: OH claims data, episodes ending between 10/1/2014 and 9/30/2015

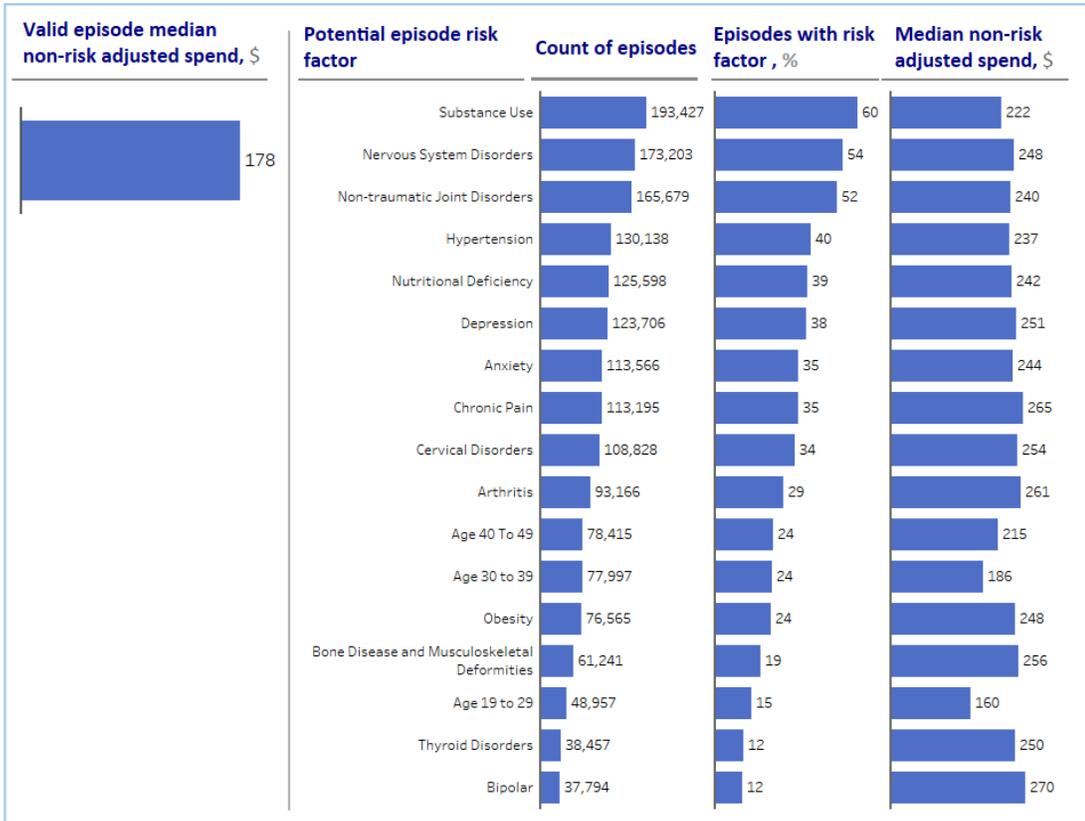
EXHIBIT 5 - PAP PERFORMANCE ON EPISODE QUALITY METRICS¹



1. For valid episodes (178,725) across valid PAPs (1,624); valid episodes do not include episodes with business (e.g., third-party liability, dual eligibility) or clinical exclusions (e.g., spinal cord disorder); valid PAPs are physicians with five or more episodes
2. Metric is tied to positive incentive payments

SOURCE: OH claims data, episodes ending between 10/1/2014 and 9/30/2015

EXHIBIT 6 - EPISODE COUNT AND SPEND BY RISK FACTORS^{1,2}

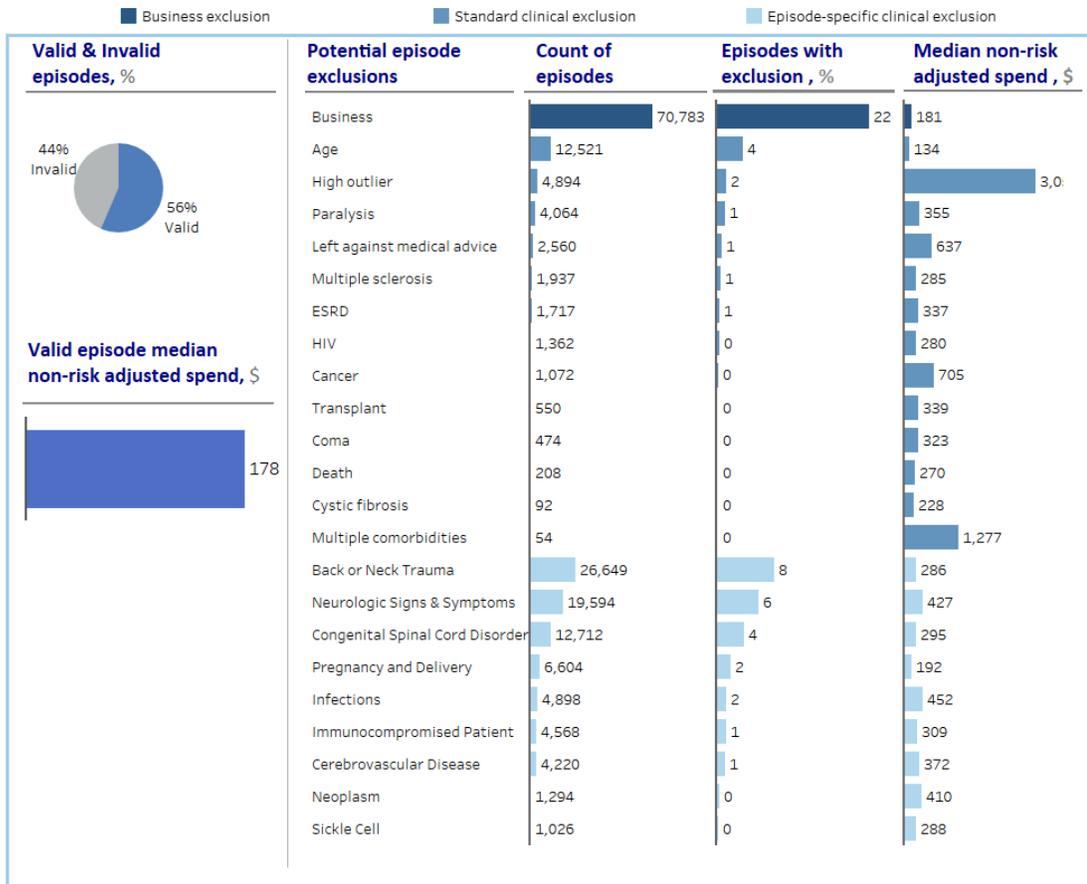


1. For episodes with these risk factors, episodes can have multiple risk factors

2. Showing a selection of risk factors

SOURCE: OH claims data, episodes ending between 10/1/2014 and 9/30/2015

EXHIBIT 7 - EPISODE COUNT AND SPEND BY EXCLUSIONS¹



1. For episodes with these exclusions; episodes can have multiple exclusions
 2. Age exclusion excludes patients younger than eighteen or older than sixty-four
 SOURCE: OH claims data, episodes ending between 10/1/2014 and 9/30/2015