Overview of the oppositional defiant disorder episode of care

State of Ohio

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1. CLINICAL OVERVIEW AND RATIONALE FOR DEVELOPMENT OF THE OPPOSITIONAL DEFIANT DISORDER (ODD) EPISODE

1.1 Rationale for development of the ODD episode of care

Oppositional defiant disorder (hereinafter referred to as ODD) is a pattern of disobedient, hostile, and defiant behavior toward authority figures.[1] It is a common child- and adolescent-onset disorder associated with substantial risk of secondary mood, anxiety, impulse-control, and substance use disorders.[2] There is a range of estimates for how many children and adolescents have ODD. Evidence suggests that between 1 and 16 percent of children and adolescents have ODD. [3] Some studies have shown that 20% of school-aged children are affected.[4] One study estimated that $1.7 to $2.3 million can be saved from successful intervention for each high-risk youth by avoiding a lifetime of negative impacts from disruptive and/or delinquent behavior.[5] Between October 2014 and September 2015 among Ohio Medicaid beneficiaries, there were over 11,000 ODD episodes for patients aged 4 -20. These episodes represented over $27 million in spend.[6]

The American Academy of Child and Adolescent Psychiatry (AACAP) published the Practice Parameter for the Assessment and Treatment of Children and Adolescents with ODD. The guideline suggested that while treatment decisions are typically based on a number of different things, the main factors are the child's age, the severity of the behaviors, and whether the child has a coexisting mental health

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[1] Oppositional defiant disorder: MedlinePlus Medical Encyclopedia. (n.d.). Retrieved November 23, 2016, from https://medlineplus.gov/ency/article/001537.htm

[2] Nock, M. K. (2007). Lifetime prevalence, correlates, and persistence of oppositional defiant disorder: Results from the National Comorbidity Survey Replication. Journal of Child Psychology and Psychiatry, 48(7), 703-713.

[3] Oppositional Defiant Disorder: A Guide for Families is adapted from the American Academy of Child and Adolescent Psychiatry's Practice Parameter for the Assessment and Treatment of Children and Adolescents with Oppositional Defiant Disorder. (2009).

[4] Ibid.

[5] Cohen, M. A., & Piquero, A. R. (n.d.). New Evidence on the Monetary Value of Saving a High Risk Youth. SSRN Electronic Journal.

[6] Ohio Medicaid claims data for episodes ending between October 1, 2014 and September 30, 2015

condition. The Ohio Minds Matter initiative issued the ODD diagnosis and treatment guide which recommends the usage of the American Psychiatric Association's Diagnostic and Statistical Manual, Fifth edition (DSM-5) criteria when making a diagnosis of ODD. The guide also suggests evidence-based psychosocial therapies (e.g., parent management training, social skill training, cognitive behavioral therapy), as well as other age-appropriate therapies recommended by The National Alliance on Mental Illness (NAMI). In terms of the use of medication, the Ohio Minds Matter guide on ODD calls out that prescribers should practice caution when prescribing medication for aggression, as well as other symptoms related to ODD and conduct disorders.

Despite these guidelines, among Ohio Medicaid beneficiaries, approximately 23% of non-comorbid ODD episodes were treated with medication, and 20% of first-time ODD episodes (i.e., episodes for patients that had not received an ODD diagnosis in the past) did not include assessments or testing. The evaluation and treatment of ODD also seemed to vary from one provider to another: more than 7 times variation in average episode spend was seen across providers with 50 or more episodes.[7]

Implementing the ODD episode of care will incentivize evidence-based, guideline concordant care through an outcomes-based payment model. As part of a concerted effort aimed at improving overall care for behavioral health conditions among Ohio Medicaid patients, the ODD episode is being deployed together with the attention deficit and hyperactivity disorder (ADHD) episode. Alongside ADHD, other episodes of care, and Ohio's Comprehensive Primary Care (CPC) program, the ODD episode will contribute to a model of care delivery that benefits patients through improved care quality and clinical outcomes, and a lower overall cost of care.

1.2   Clinical overview and typical patient journey for ODD

Children with ODD display an ongoing pattern of uncooperative, defiant, and hostile behavior toward authority figures that seriously interferes with the child's day to day functioning. The symptoms may be more noticeable in certain settings (e.g., home, school). The cause of ODD may be a combination of biological, psychological, and social factors.[8]
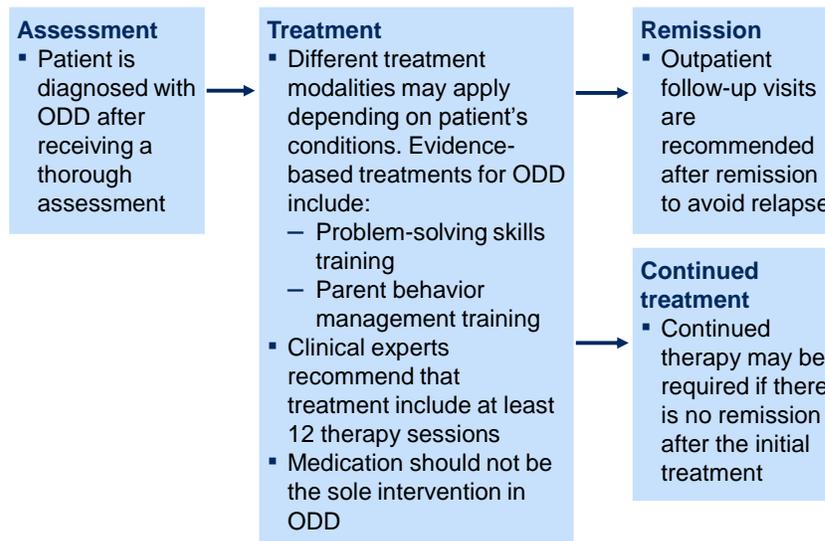
As depicted in Exhibit 1, the patient journey begins when a patient receives a thorough assessment and is diagnosed with ODD. After assessment and diagnosis,

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[7] Ibid.

[8] Oppositional defiant disorder: Frequently asked questions. Retrieved December 8, 2016, from https://www.aacap.org/aacap/families_and_youth/resource_centers/oppositional_defiant_disorder_resource_center/FAQ.aspx

patients may receive different treatment modalities depending on their conditions, which may include problem-solving skills training. Behavior management training may be given for the parents or care-takers. Clinical experts recommend that there should be at least 12 therapy sessions included in the treatment regimen. The guidelines also suggest that medication should not be the sole intervention in ODD. After initial treatment, patients in remission may require follow-up visits to avoid relapse. If there is no remission, continued therapy sessions may be required.

EXHIBIT 1 – ODD PATIENT JOURNEY

Assessment
▪ Patient is diagnosed with ODD after receiving a thorough assessment

Treatment
▪ Different treatment modalities may apply depending on patient's conditions. Evidence-based treatments for ODD include:
  – Problem-solving skills training
  – Parent behavior management training
▪ Clinical experts recommend that treatment include at least 12 therapy sessions
▪ Medication should not be the sole intervention in ODD

Remission
▪ Outpatient follow-up visits are recommended after remission to avoid relapse

Continued treatment
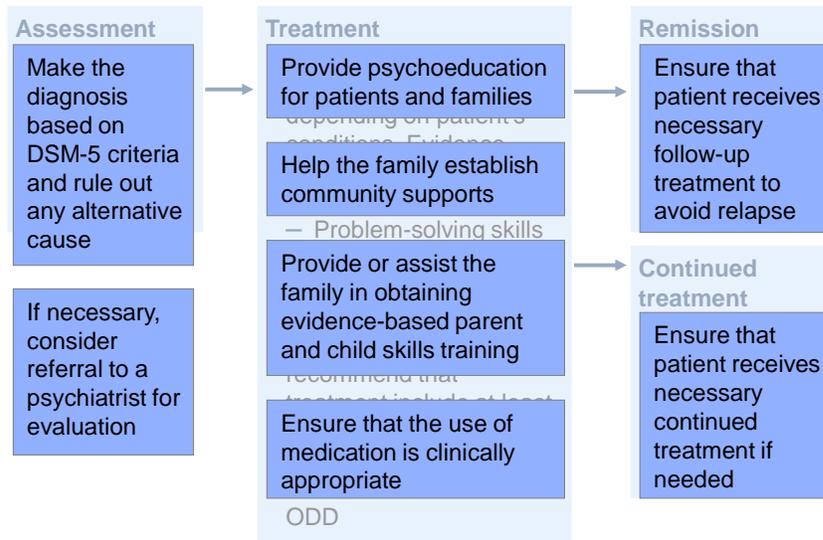▪ Continued therapy may be required if there is no remission after the initial treatment

Source: Clinical experts, American Academy of Child and Adolescent Psychiatry (AACAP) (2007); Practice parameter for the assessment and treatment of children and adolescents with oppositional defiant disorder

1.3 Potential sources of value within the patient journey

Within the ODD episode, providers have several opportunities to improve quality of care and reduce unnecessary spend associated with the episode (see Exhibit 2). For example, providers can ensure that DSM-5 criteria is met before making the diagnosis and alternative causes are ruled out. Referral to a psychiatrist for thorough evaluation may also be necessary. During the treatment phase, there is an opportunity for providers to help the patient and families with psychoeducation, establishing community supports, and ensuring that evidence-based skills training is provided. The provider can also ensure that the use of medication is appropriate. Furthermore, there is an opportunity for providers to ensure that necessary follow-up care is provided to avoid relapse and improve outcomes.

EXHIBIT 2 – ODD SOURCES OF VALUE

Assessment

Make the diagnosis based on DSM-5 criteria and rule out any alternative cause

If necessary, consider referral to a psychiatrist for evaluation

Treatment

Provide psychoeducation for patients and families

Help the family establish community supports

— Problem-solving skills

Provide or assist the family in obtaining evidence-based parent and child skills training

Ensure that the use of medication is clinically appropriate

ODD

Remission

Ensure that patient receives necessary follow-up treatment to avoid relapse

Continued treatment

Ensure that patient receives necessary continued treatment if needed

Source: Ohio Minds Matter. *Oppositional Defiant Disorder and Conduct Disorder Treatment Guide.*

2. OVERVIEW OF THE ODD EPISODE DESIGN

2.1 Episode Trigger

The ODD episode is triggered by a professional visit with an ODD primary diagnosis code. Alternatively, a professional visit with a secondary diagnosis of ODD and a primary diagnosis of a contingent code (e.g., unspecified disturbance of conduct) also triggers an ODD episode (see Table 1 for the list of trigger and contingent trigger ICD-9 and ICD-10 diagnosis codes, and Exhibit 1 for an analysis of triggers in the Appendix).

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. For the ODD episode, the following plurality logic is used to identify the PAP (see Exhibit 2 for an analysis of the PAPs in the Appendix):

■ **Visit(s) for evaluation and management (E&M), and/or medication management:** When the episode has at least one visit for E&M and/or medication management, the PAP is the provider with an eligible provider type that has the plurality of ODD-related visits for E&M and/or medication management during the episode window. The rationale is that the provider who sees patients for E&M visits and/or medication management for ODD is in the best position to manage the overall care pathway for the patient.

■ **Any visit(s):** When the episode does not have any ODD-related visits for E&M and/or medication management, the PAP is the provider with an eligible provider type that has the plurality of any ODD-related professional visits during the episode window. The rationale is that, in the absence of E&M and/or medication management visits, the provider who sees the patient the most for ODD is in the best position to manage the overall care pathway.

2.3 Episode Duration

The ODD episode begins on the day of the triggering claim and extends for an additional 179 days (called the "episode window"). The 180-day episode window was deemed an appropriate period of time to capture services associated with ODD and compare provider performance. The duration of the episode window also allows for an appropriate length of time between the PAP becoming accountable and receiving feedback through the release of episode performance reports.

2.4   Included Services

The episode model is designed to address spend for care and services directly related to the diagnosis and treatment of patients with ODD during the episode window. In addition, the included care and services are understood to be directly or indirectly influenced by the PAP during that period.

During the ODD episode window, all services that are associated with ODD are included. This means that hospitalizations, outpatient, and professional claims with a primary diagnosis for ODD, or with a secondary diagnosis of ODD and a primary diagnosis of a contingent code are included. Pharmacy claims with eligible therapeutic codes are also included.

The total episode spend is calculated by adding up the spend amounts on all of the individual claims that were included in the episode window.

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., anxiety, ADHD) 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. 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. This values is used to calculate a provider's average risk-adjusted spend across all episodes, which is the measure across which providers are compared to each other.[9] Other risk factors were included in the model to test for significance because of their clinical relevance to the ODD episode but were not determined to be significant.[10] The final list of risk factors

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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 anxiety, eating disorders, and phobias

is included in Table 2, and Exhibit 3 presents an analysis of these risk factors in the Appendix.

By contrast, an episode is excluded from a patient panel when the patient has clinical factors that suggest he or she has experienced a distinct or different journey indicative of significant increases in spend relative to the average patient. In addition, there are several "business-related" exclusions regarding 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, such as overlapping episodes, during the comparison period. Episodes with no exclusions are known as "valid" and used for provider comparisons. Episodes that have one of any of the exclusions are known as "invalid" episodes.

For the ODD episode, both clinical and business exclusions apply. Several of the business exclusions (e.g., dual Medicare and Medicaid eligibility, patient left against medical advice) are standard across most episodes while clinical exclusions relate to the scope of the episode design. Some of the episode-specific clinical exclusions include claims with diagnoses indicating 1) bipolar disorders, 2) psychosis, and 3) autism. The list of business and clinical exclusions is included in Table 3, and Exhibit 4 presents an analysis of these exclusions in the Appendix.

2.6 Quality Metrics

To ensure the episode model incentivizes quality care, the ODD episode has five quality metrics. Two are linked to performance assessment, meaning that performance thresholds on these must be met in order for PAP to be eligible for a positive incentive payment. The specific threshold amount will be determined during the informational reporting period. Three of the quality metrics are for informational purposes only.

The metrics tied to positive incentive payments are the percentage of valid episodes that meet the minimum care requirement of five relevant therapy visits during the episode window, and the percentage of valid episodes with no coded behavioral health comorbidity for which the patient received antipsychotics. Informational metrics include the average number of relevant therapy visits included in the episode, the percentage of valid episodes with no coded behavioral health comorbidity for which the patient received behavioral health medications, and the percentage of episodes that had a claim with ODD as the primary of secondary diagnosis in the year prior to the episode start. A complete list of quality metrics is provided in Table 4, and Exhibit 5 presents an analysis of these quality metrics in the Appendix.

3. APPENDIX: SUPPORTING INFORMATION AND ANALYSES

Table 1 – Episode triggers

Trigger category	Trigger codes	Code type	Description
ODD	31381	ICD-9 diagnosis	Oppositional defiant disorder
	F913	ICD-10 diagnosis	Oppositional defiant disorder
ODD contingent	3129	ICD-9 diagnosis	Unspecified disturbance of conduct
	31389	ICD-9 diagnosis	Other emotional disturbances of childhood or adolescence
	31289	ICD-9 diagnosis	Other specified conduct disorder not elsewhere classified
	V200	ICD-9 diagnosis	Health supervision of foundling
	V201	ICD-9 diagnosis	Other healthy infant or child receiving care
	V202	ICD-9 diagnosis	Routine infant or child health check
	V2031	ICD-9 diagnosis	Health supervision for newborn under eight days old
	V2032	ICD-9 diagnosis	Health supervision for newborn 8-28 days old
	V700	ICD-9 diagnosis	Routine general medical examination at a health care facility
	V703	ICD-9 diagnosis	Other general medical examination for administrative purposes
	V704	ICD-9 diagnosis	Examination for medicolegal reasons
	V705	ICD-9 diagnosis	Health examination of defined subpopulations
	V706	ICD-9 diagnosis	Health examination in population surveys
	V707	ICD-9 diagnosis	Examination of participant in clinical trial
	V708	ICD-9 diagnosis	Other specified general medical examinations
	V709	ICD-9 diagnosis	Unspecified general medical examination
	F910	ICD-10 diagnosis	Conduct disorder confined to family context

Trigger category	Trigger codes	Code type	Description
	F918	ICD-10 diagnosis	Other conduct disorders
	F919	ICD-10 diagnosis	Conduct disorder, unspecified
	F938	ICD-10 diagnosis	Other childhood emotional disorders
	F949	ICD-10 diagnosis	Childhood disorder of social functioning, unspecified
	F988	ICD-10 diagnosis	Oth behav/emotn disord w onset usly occur in chldhd and adol
	Z761	ICD-10 diagnosis	Encounter for health supervision and care of foundling
	Z762	ICD-10 diagnosis	Encntr for hlth suprvsn and care of healthy infant and child
	Z00121	ICD-10 diagnosis	Encounter for routine child health exam w abnormal findings
	Z00129	ICD-10 diagnosis	Encntr for routine child health exam w/o abnormal findings
	Z00110	ICD-10 diagnosis	Health examination for newborn under 8 days old
	Z00111	ICD-10 diagnosis	Health examination for newborn 8 to 28 days old
	Z0000	ICD-10 diagnosis	Encntr for general adult medical exam w/o abnormal findings
	Z0001	ICD-10 diagnosis	Encounter for general adult medical exam w abnormal findings
	Z020	ICD-10 diagnosis	Encounter for exam for admission to educational institution
	Z022	ICD-10 diagnosis	Encounter for exam for admission to residential institution
	Z024	ICD-10 diagnosis	Encounter for examination for driving license
	Z025	ICD-10 diagnosis	Encounter for examination for participation in sport
	Z026	ICD-10 diagnosis	Encounter for examination for insurance purposes
	Z0282	ICD-10 diagnosis	Encounter for adoption services
	Z0289	ICD-10 diagnosis	Encounter for other administrative examinations
	Z0281	ICD-10 diagnosis	Encounter for paternity testing

Trigger category	Trigger codes	Code type	Description
	Z0283	ICD-10 diagnosis	Encounter for blood-alcohol and blood-drug test
	Z021	ICD-10 diagnosis	Encounter for pre-employment examination
	Z023	ICD-10 diagnosis	Encounter for examination for recruitment to armed forces
	Z008	ICD-10 diagnosis	Encounter for other general examination
	Z006	ICD-10 diagnosis	Encntr for exam for nrml cmprsn and ctrl in clncl rsrch prog
	Z005	ICD-10 diagnosis	Encounter for exam of potential donor of organ and tissue
	Z0070	ICD-10 diagnosis	Encntr for exam for delay growth in chldhd w/o abn findings
	Z0071	ICD-10 diagnosis	Encntr for exam for delay growth in chldhd w abn findings
	Substance-related disorders (92 ICD-9 and 377 ICD-10 diagnosis codes)		

Table 2 – Episode risk factors

Risk factor	Relevant time period
ADHD	During the episode or up to 365 days before the start of the episode
Adjustment reaction	During the episode or up to 365 days before the start of the episode
Adoption status	During the episode or up to 365 days before the start of the episode
Age 6 to 12 years	Episode start date
Age 13 to 17 years	Episode start date
Emotional disturbance	During the episode or up to 365 days before the start of the episode
First ODD episode	During the episode or up to 365 days before the start of the episode

Risk factor	Relevant time period
Foster care status	During the episode or up to 365 days before the start of the episode
Male	Episode start date
Post-traumatic stress disorder	During the episode or up to 365 days before the start of the episode
Substance use (other)	During the episode or up to 365 days before the start of the episode
Unspecified mood disorder	During the episode or up to 365 days before the start of the episode

Table 3 – Episode exclusions

Exclusion type	Episode exclusion	Description	Relevant time period
Business exclusion	Dual	An episode is excluded if the patient had dual coverage by Medicare and Medicaid	During the episode window
	FQHC/RHC	An episode is excluded if the PAP is classified as a federally qualified health center or rural health clinic	During the episode window
	Incomplete	An episode is excluded if the non-risk adjusted episode spend (not the risk-adjusted episode spend) is less than the incomplete episode threshold	During the episode window
	Enrollment	Patient is not enrolled in Medicaid	During the episode window

Exclusion type	Episode exclusion	Description	Relevant time period
	Long Admission	An episode is excluded if the patient has one or more hospital admissions for a duration greater than 30 days	During the episode window
	Long Term Care	An episode is excluded if the patient has one or more long-term care claim detail lines which overlap the episode window	During the episode window
	No DRG	An episode is excluded if a DRG-paid inpatient claim is missing the APR-DRG and severity of illness	During the episode window
	Multi Payer	An episode is excluded if a patient changes enrollment between MCPs	During the episode window
	No PAP	An episode is excluded if the PAP cannot be identified	During the episode window
	One Professional Claim	An episode is excluded if it has only one professional claim included in the episode	During the episode window
	Out of State	PAP operates out of state	N/A
	Third Party Liability	An episode is excluded if third-party liability charges are present on any claim or claim detail line or if the patient has relevant third-party coverage at any time	During the episode window
Clinical exclusion	Age	Patient is younger than four or older than twenty	Episode start date

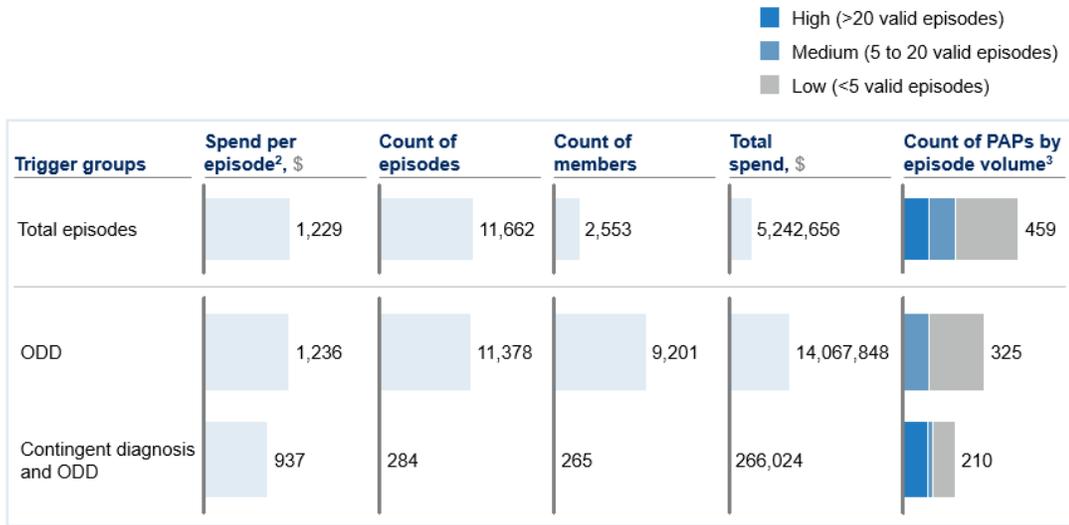| Exclusion type	Episode exclusion	Description	Relevant time period
	Death	An episode is excluded if the patient has a discharge status of "expired" on any inpatient or outpatient claim	During the episode window
	Left Against Medical Advice	Patient has discharge status of "left against medical advice"	During the episode window
	Multiple Comorbidities	Patient is affected by too many risk factors to reliably risk adjust the episode spend	During the episode or up to 365 days before the start of the episode
	Antisocial Personality Disorder	Patient has a diagnosis of antisocial personality disorder	During the episode or up to 365 days before the start of the episode
	Autism	Patient has a diagnosis of autism	During the episode or up to 365 days before the start of the episode
	Bipolar Disorders	Patient has a diagnosis of bipolar disorders	During the episode or up to 365 days before the start of the episode
	Borderline Personality Disorder	Patient has a diagnosis of borderline personality disorder	During the episode or up to 365 days before the start of the episode
	Conduct Disorders	Patient has a diagnosis of conduct disorders	During the episode or up to 365 days before the start of the episode
	Delirium and Dementia	Patient has a diagnosis of delirium and dementia	During the episode or up to 365 days before the start of the episode
	Disruptive mood dysregulation disorder	Patient has a diagnosis of disruptive mood dysregulation disorder	During the episode or up to 365 days before the start of the episode
	Dissociative Disorders	Patient has a diagnosis of dissociative disorders	During the episode or up to 365 days before

Exclusion type	Episode exclusion	Description	Relevant time period
			the start of the episode
	Homicidal Ideation	Patient has a diagnosis of homicidal ideation	During the episode or up to 365 days before the start of the episode
	Manic Disorders	Patient has a diagnosis of manic disorders	During the episode or up to 365 days before the start of the episode
	Moderate and Severe Intellectual Disabilities	Patient has a diagnosis of moderate and severe intellectual disabilities	During the episode or up to 365 days before the start of the episode
	Psychosexual Disorders	Patient has a diagnosis of a psychosexual disorder	During the episode or up to 365 days before the start of the episode
	Psychosis	Patient has a diagnosis of psychosis	During the episode or up to 365 days before the start of the episode
	Psychosomatic Disorders (Factitious)	Patient has a diagnosis of psychosomatic disorders (factitious)	During the episode or up to 365 days before the start of the episode
	Schizophrenia	Patient has a diagnosis of schizophrenia	During the episode or up to 365 days before the start of the episode
	Substance Use in Family	Patient has a diagnosis of substance use in the family	During the episode or up to 365 days before the start of the episode
	Substance Use Prescription and Illicit	Patient has a diagnosis of substance use prescription and illicit	During the episode or up to 365 days before the start of the episode
	Suicide Attempt or Self-Harm	Patient has a diagnosis of suicide attempt or self-harm	During the episode or up to 365 days before the start of the episode

Exclusion type	Episode exclusion	Description	Relevant time period
Outlier	High outlier	An episode is excluded if the risk-adjusted episode spend (not the non-risk adjusted episode spend) is greater than the high outlier threshold	During the episode or up to 365 days before the start of the episode

Table 4 – Episode quality metrics

| Metric type	Field name	Description	Relevant time period
Tied to incentive payments	Minimum care require-ment	Percentage of valid episodes that meet the minimum care requirement of five relevant therapy visits during the episode window	During the episode window
	Antipsy-chotics in non-comorbid episodes	Percentage of valid episodes with no coded behavioral health comorbidity for which the patient received antipsychotics	During the episode window
Informational	Average number of therapy visits	Average number of relevant therapy visits per valid episode	During the episode window
	Medica-tions for non-comorbid episodes	Percentage of valid epsodes with no coded behavioral health comorbidity for which the patient received behavioral health medications	During the episode window
	Repeat ODD episodes	Percentage of episodes that had a claim with ODD as the primary or secondary diagnosis in the year prior to the episode start	Up to 365 days before the start of the episode

EXHIBIT 1 – ODD EPISODE TRIGGER GROUPS[1]

					Count of PAPs by episode volume[3]
				■ High (>20 valid episodes)	
				■ Medium (5 to 20 valid episodes)	
				■ Low (<5 valid episodes)	

Trigger groups	Spend per episode[2], $	Count of episodes	Count of members	Total spend, $	Count of PAPs by episode volume[3]
Total episodes	1,229	11,662	2,553	5,242,656	459
ODD	1,236	11,378	9,201	14,067,848	325
Contingent diagnosis and ODD	937	284	265	266,024	210

1. For valid episodes (11,662 episodes) across 459 PAPs; valid episodes do not include episodes with business (e.g., third-party liability, dual eligibility) or clinical exclusions (e.g., bipolar disorder, psychosis); count of PAPs includes valid PAPs (e.g. ≥ 5 valid episodes) and invalid PAPs (e.g. < 5 valid episodes)
2. Risk-adjusted episode spend
3. 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 2 - DISTRIBUTION OF AVERAGE RISK-ADJUSTED EPISODE SPEND AND COUNT BY PAP[1]
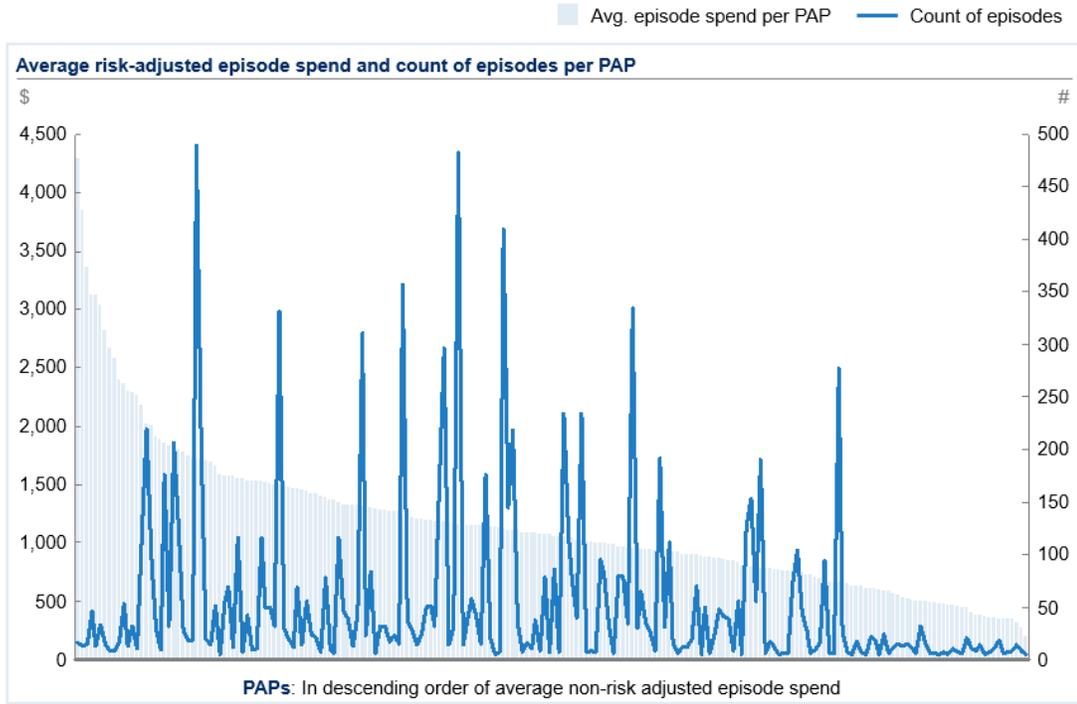
1. For valid episodes (11,241) across valid PAPs (208); valid episodes do not include episodes with business (e.g., third-party liability, dual eligibility) or clinical exclusions (e.g., bipolar disorder, psychosis); valid PAPs are physicians with five or more.
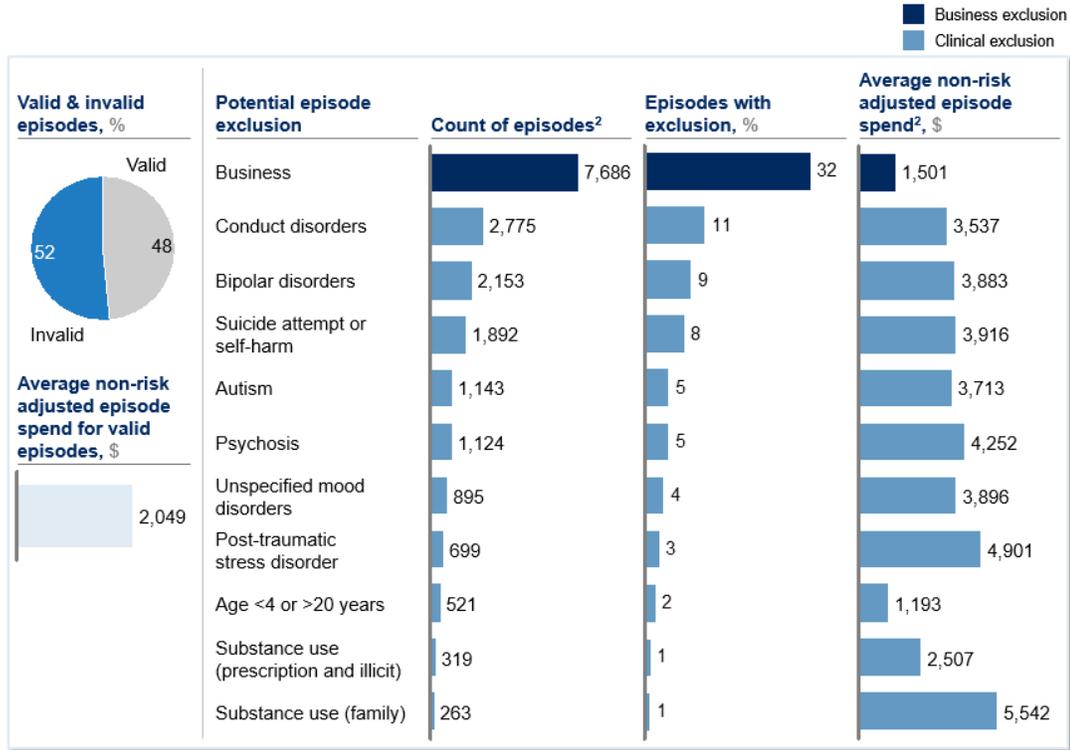SOURCE: OH claims data, episodes ending between 10/1/2014 and 9/30/2015

EXHIBIT 3 - EPISODE COUNT AND SPEND BY RISK FACTORS

Average non-risk adjusted episode spend for valid episodes, $	Potential episode risk factor	Count of episodes[1]	Episodes with risk factor, %	Average non-risk adjusted episode spend[1], $
1,647	Male	7,677	66	2,166
	Age 6 to 12 years	6,078	52	2,076
	ADHD	5,692	49	2,436
	First ODD episode	4,896	42	1,731
	Age 13 to 17 years	4,640	40	2,159
	Adjustment reaction	1,576	14	1,819
	Unspecified mood disorders	1,188	10	2,996
	Post-traumatic stress disorder	598	5	2,877
	Emotional disturbance	424	4	3,329
	Foster care status	418	4	4,077
	Adoption status	406	3	2,936
	Substance use (other)	197	2	3,156

1. For episodes with this risk factor; one episode can have multiple risk factors
SOURCE: OH claims data, episodes ending between 10/1/2014 and 9/30/2015

EXHIBIT 4 - EPISODE COUNT AND SPEND BY EXCLUSIONS[1]

Potential episode exclusion	Count of episodes[2]	Episodes with exclusion, %	Average non-risk adjusted episode spend[2], $
Business	7,686	32	1,501
Conduct disorders	2,775	11	3,537
Bipolar disorders	2,153	9	3,883
Suicide attempt or self-harm	1,892	8	3,916
Autism	1,143	5	3,713
Psychosis	1,124	5	4,252
Unspecified mood disorders	895	4	3,896
Post-traumatic stress disorder	699	3	4,901
Age <4 or >20 years	521	2	1,193
Substance use (prescription and illicit)	319	1	2,507
Substance use (family)	263	1	5,542

Valid & invalid episodes, %: Valid 48, Invalid 52
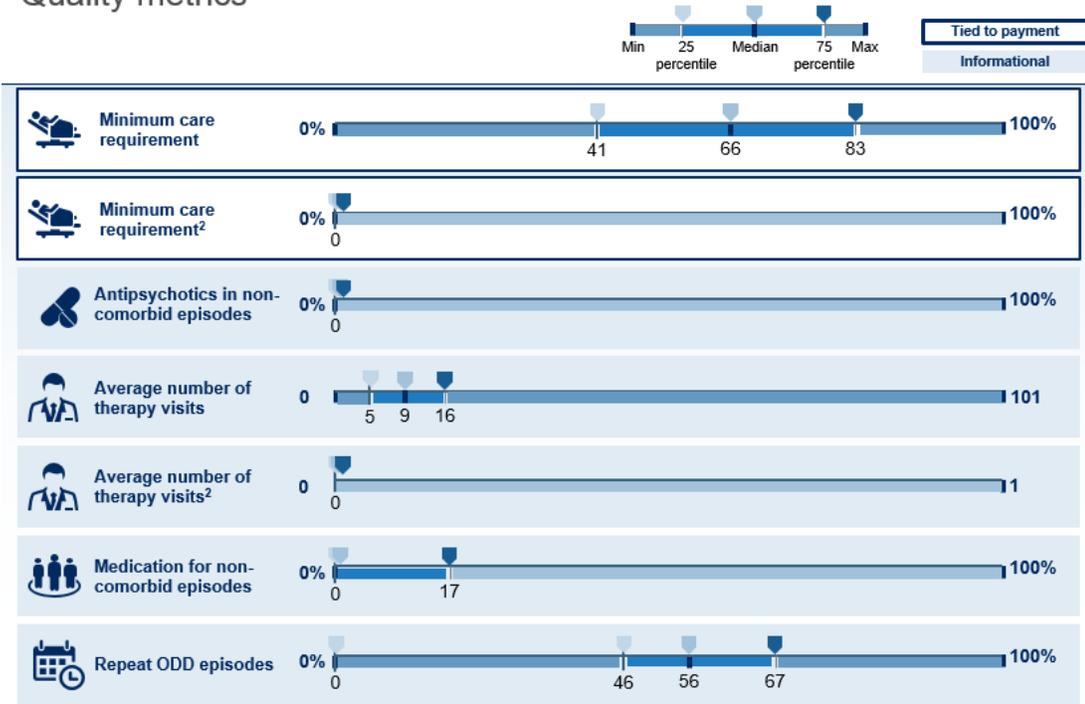Average non-risk adjusted episode spend for valid episodes, $: 2,049

1. Showing business exclusion and top ten (by volume) clinical exclusions
2. For episodes with this exclusion; one episode can have multiple exclusions
SOURCE: OH claims data, episodes ending between 10/1/2014 and 9/30/2015

EXHIBIT 5 - PAP PERFORMANCE ON EPISODE QUALITY METRICS[1]

1. For valid episodes (11,214) across valid PAPs (208); valid episodes do not include episodes with business (e.g., third-party liability, dual eligibility) or clinical exclusions (e.g., bipolar disorder, psychosis); valid PAPs are physicians with five or more. Valid episodes for invalid PAPs (those with less than five valid episodes) are not included in this analysis.
2. Calculations reflect post-behavioral health redesign code changes (e.g., not including HCPCS code H0004)

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