

Optimizing Patients' Health by Improving the Quality of Medication Use

Mental Health Matters – How Pharmacists Can Help

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Disclosure

- Dr. Galdo is an employee of the Pharmacy Quality Alliance
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Learning Objectives

- Describe the current landscape of mental health care in the United States
- Understand the role of quality metrics in mental health care
- Customize patient care with pharmacotherapy updates
- Implement pharmacist-led mental health services
- Discuss Arkansas Medicaid changes, including PASSE



Who are the Mental Health Pharmacies in your area?

Let's Take a Short Quiz

- Passed in 2016, requirement for equal mental health as physical health for insurance coverage
- Based on the 21st Century Cures Act

2017 State of Mental Health in America - Access to Care Data

- The Access Ranking indicates how much access to mental health care exists within a state. A high Access Ranking indicates that a state provides relatively more access to insurance and mental health treatment.
 1. Adults with AMI who Did Not Receive Treatment
 2. Adults with AMI Reporting Unmet Need
 3. Adults with AMI who are Uninsured
 4. Adults with Disability who Could Not See a Doctor Due to Costs
 5. Youth with MDE who Did Not Receive Mental Health Services
 6. Youth with Severe MDE who Received Some Consistent Treatment
 7. Children with Private Insurance that Did Not Cover Mental or Emotional Problems
 8. Students Identified with Emotional Disturbance for an Individualized Education Program
 9. Mental Health Workforce Availability



Access to Care

Rank	State	Rank	State	Rank	State
1	Vermont	18	Michigan	35	Montana
2	Massachusetts	19	New York	36	Missouri
3	Maine	20	North Dakota	37	Indiana
4	Connecticut	21	Oregon	38	Virginia
5	Minnesota	22	Kansas	39	Oklahoma
6	New Hampshire	23	New Mexico	40	Illinois
7	South Dakota	24	Washington	41	Louisiana
8	Rhode Island	25	California	42	Iaho
9	Iowa	26	North Carolina	43	Florida
10	Alaska	27	Wyoming	44	Arkansas
11	District of Columbia	28	Hawaii	45	South Carolina
12	Pennsylvania	29	Ohio	46	Texas
13	Maryland	30	Illinois	47	Georgia
14	Wisconsin	31	Kentucky	48	Tennessee
15	Delaware	32	Nebraska	49	Mississippi
16	Colorado	33	Utah	50	Alabama
17	New Jersey	34	West Virginia	51	Nevada



Mental Illness without Coverage

- 17% (over 7.5 million) of adults with a mental illness remain uninsured.
- In 2011, 19% of adults with a mental illness were uninsured.
 - Alabama, Louisiana, Oklahoma, and New Mexico had the largest increase in access to mental health coverage among adults.
- 56.5% of adults with mental illness received no past year treatment
 - 20.3% continue to report unmet treatment needs.
- The state prevalence of uninsured adults with mental illness ranges from 2.7% in Massachusetts to 28.2% in Nevada.



Percent without Treatment

State	%	#	State	%	#
Alabama	48.1	41,000	West Virginia	53.9	175,000
Alaska	48.7	106,000	Wisconsin	54.2	182,000
Arizona	46.0	381,000	Wyoming	52.7	45,000
Arkansas	45.7	466,000	Yukon	52.0	71,000
California	46.0	361,000	Delaware	52.0	71,000
Colorado	48.6	469,000	District of Columbia	55.2	53,000
Connecticut	49.8	398,000	Florida	55.8	562,000
DC	50.4	237,000	Georgia	56.0	496,000
Delaware	50.8	322,000	Hawaii	56.5	136,000
District of Columbia	51.3	576,000	Idaho	56.7	176,000
Florida	51.8	502,000	Illinois	56.8	566,000
Georgia	51.3	576,000	Indiana	57.2	412,000
Hawaii	52.0	71,000	Iowa	58.0	426,000
Idaho	52.0	71,000	Kansas	58.3	345,000
Illinois	52.4	504,000	Kentucky	58.5	426,000
Indiana	52.8	384,000	Louisiana	58.5	426,000
Iowa	52.7	45,000	Maine	58.5	141,000
Kansas	52.8	384,000	Massachusetts	59.7	1,363,000
Kentucky	53.2	50,000	Michigan	60.3	1,045,000
Louisiana	53.2	50,000	Minnesota	60.5	215,000
Maine	53.3	138,000	Mississippi	61.6	89,000
Madison	53.6	148,000	Missouri	62.7	421,000
Massachusetts	53.6	382,000	Montana	62.3	1,272,000
Michigan	53.9	175,000	Nebraska	62.3	1,290,000
Minnesota	54.2	182,000	Nevada	66.0	126,000
Mississippi	54.2	182,000	New Hampshire	67.5	227,000
Missouri	54.5	449,000	New Jersey	66.0	126,000
Montana	54.5	449,000	New Mexico	66.0	126,000
Nebraska	54.5	449,000	New York	66.0	126,000
Nevada	54.5	449,000	North Carolina	66.0	126,000
New Hampshire	54.5	449,000	North Dakota	66.0	126,000
New Jersey	54.5	449,000	Ohio	66.0	126,000
New Mexico	54.5	449,000	Oklahoma	66.0	126,000
New York	54.5	449,000	Oregon	66.0	126,000
North Carolina	54.5	449,000	Rhode Island	66.0	126,000
North Dakota	54.5	449,000	Texas	66.0	126,000
Ohio	54.5	449,000	Utah	66.0	126,000
Oklahoma	54.5	449,000	Vermont	66.0	126,000
Oregon	54.5	449,000	Virginia	66.0	126,000
Rhode Island	54.5	449,000	Washington	66.0	126,000
Texas	54.5	449,000	Washington DC	66.0	126,000
Utah	54.5	449,000	West Virginia	66.0	126,000
Vermont	54.5	449,000	Wisconsin	66.0	126,000
Virginia	54.5	449,000	Wyoming	66.0	126,000
Washington	54.5	449,000	National	56.5	24,644,000
Washington DC	54.5	449,000			
West Virginia	54.5	449,000			
Wisconsin	54.5	449,000			
Wyoming	54.5	449,000			



Unmet Needs

- One out of five (20.3%) adults with a mental illness report they are not able to get the treatment they need.
- States with the highest levels of unmet need (bottom 10) are 1.6 times more likely to have people report unmet need.
- Once a person recognizes that they may have a mental health problem, finding support especially the right kind of support is often difficult. Several systemic barriers to accessing care include:
 - Lack of insurance or inadequate insurance
 - Lack of available treatment providers
 - Lack of available treatment types (inpatient treatment, individual therapy, intensive community services)
 - Insufficient finances to cover costs – including, copays, uncovered treatment types, or when providers do not take insurance.
- The state prevalence of adults with AMI reporting unmet treatment needs ranges from 13.6% in Hawaii to 25.9% in Missouri.



Youth without Mental Health Services

- 64.1% of youth with major depression do not receive any mental health treatment.
 - That means that 6 out of 10 young people who have depression and who are most at risk of suicidal thoughts, difficulty in school, and difficulty in relationships with others do not get the treatment needed to support them.
- The state prevalence of untreated youth with depression ranges from 42.1% in New Hampshire to 77.0% in Arkansas.



Mental Health Deserts

- Nationally, there is one mental health provider for every 529 individuals.
 - Psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists and advanced practice nurses specializing in mental health care.
- The workforce shortage among specialized mental health professionals are even higher.
 - Estimated 8,300 child psychiatrists across the county compared to over 15 million youths with mental health disorders.
- Over 4,000 areas across the US are considered mental health professional shortage areas, leaving people to travel hours or across state lines to access services.
- The state rate of mental health workforce ranges from 200:1 in Massachusetts to 1,200:1 in Alabama.



Shortages

1	Massachusetts	200:1	27	Utah	800:1
2	State of Georgia	250:1	28	Arizona	900:1
3	Missouri	260:1	29	Illinois	950:1
4	Minnesota	280:1	30	Michigan	1000:1
5	Oklahoma	275:1	31	Montana	1100:1
6	Oregon	270:1	32	New Jersey	1150:1
7	New Mexico	280:1	33	West Virginia	1200:1
8	North Carolina	280:1	34	Idaho	1250:1
9	Alaska	300:1	35	Alaska	1300:1
10	Connecticut	300:1	36	South Dakota	1350:1
11	Wisconsin	300:1	37	South Carolina	1400:1
12	Colorado	300:1	38	Ohio	1450:1
13	California	300:1	39	North Carolina	1500:1
14	Washington	300:1	40	Virginia	1550:1
15	New Hampshire	300:1	41	Florida	1600:1
16	Iowa	300:1	42	Indiana	1650:1
17	Montana	300:1	43	West Virginia	1700:1
18	Arkansas	310:1	44	Arizona	1750:1
19	New York	300:1	45	Delaware	1800:1
20	Delaware	300:1	46	Utah	1850:1
21	North Carolina	300:1	47	Mississippi	1900:1
22	Nebraska	300:1	48	Georgia	1950:1
23	Michigan	300:1	49	Mississippi	2000:1
24	Maryland	470:1	50	Texas	800:1
25	Mississippi	800:1	51	Alabama	1,200:1
26	Alabama	1,200:1	52	Nevada	1,200:1



Quality Metrics in Mental Health



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THE HOT SPOTTERS

Can we lower medical costs by giving the neediest patients better care?

By Atul Gawande


If Camden, New Jersey, becomes the first American community to lower its medical costs, it will have a murder to thank. At nine-fifty on a February night in 2001, a twenty-two-year-old black man was shot while driving his Ford Taurus station wagon through a neighborhood on the edge of the city.




National Quality Strategy (NQS): Introduction


The **Affordable Care Act (ACA)** required the Secretary of the Department of Health and Human Services (HHS) to establish a **national** strategy to improve:

- The delivery of health care services
- Patient health outcomes
- Population health



Quality Framework: The Triple Aim and Six Priorities in the National Quality Strategy

<p>Better Care</p> 	<p>Making care safer by reducing harm caused in the delivery of care.</p>
<p>Healthy People / Healthy Communities</p> 	<p>Ensuring that each person and family are engaged as partners in their care.</p>
<p>Affordable Care</p> 	<p>Promoting effective communication and coordination of care.</p> <p>Promoting the most effective prevention and treatment practices for the leading causes of mortality, starting with cardiovascular disease.</p> <p>Working with communities to promote wide use of best practices to enable healthy living.</p> <p>Making quality care more affordable for individuals, families, employers, and governments by developing and spreading new health care delivery models.</p>



Political Tailwind: Random Acts of Bipartisanship

- Medicare Access and CHIP Reauthorization Act (MACRA; 2015)



Quality of Care

- What is quality?
- **Who defines quality of care?**
 - Is it the government?
 - Is it the patient?
 - Is it the provider?
 - Is it private insurers?
 - Is it the caregiver?
 - Is it the employer?
- How do we measure it?



Measuring Quality

- Core principle of quality improvement is that what is not measured cannot be improved
 - Therefore, performance measures are EVERYWHERE
- Ultimate goal is to improve care and outcomes
 - Impossible if we only track; must provide change!
- Find the root cause and fix it!
- Quality improvement is mostly derived from W. Edwards Deming
 - Taught to stop depending on mass inspection to achieve quality, but focus on improving production process and put quality first



Measures of Quality of Healthcare

Structure	Healthcare Processes	Outcomes
<ul style="list-style-type: none"> Characteristics of individual healthcare providers, organizations, or facilities Possession of electronic medical record, percentage of board certified 	<ul style="list-style-type: none"> Delivery of specific clinical services Percentage of patients status post MI who receive a beta blocker 	<ul style="list-style-type: none"> Ultimate goal of healthcare Affected by healthcare, but also influenced by patient factors 30-day mortality rate



Patient Empowerment

Patient Experience

- Provides feedback on patients' experiences of care
- Ex: is the care conversation in such language any patient understands?

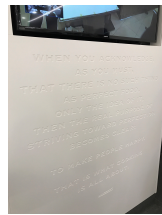
Patient Centered Care

- The patient helps establish the care plan
- Healthcare providers infuse personal bias into care
 - 80 year old man with stroke
 - Surgery to extend life for 1 year, but paralyzed
 - Without surgery, life expectancy is 4 months

From: PQA, Measuring Health Care Quality: An Overview of Quality Measures. <https://www.pqa.com/~/media/Files/2015/06/Measuring-Health-Care-Quality-An-Overview-of-Quality-Measures.pdf>



The French Laundry



When you acknowledge, as you must, that there is no such thing as perfect food. Only the idea of it, then the real purpose of striving towards perfection becomes clear. To make people happy. That is what cooking is all about.



How is a Measure Calculated?

**Comprehensive Medication Review
Completion Rate within Medicare**

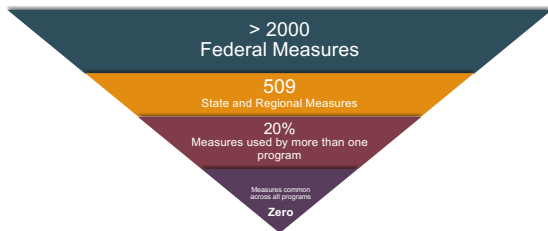
$$\frac{X}{Y}$$

X Number of patients in the plan that qualify for MTM that received a CMR

Y Total number of patients in the plan that qualified for a CMR

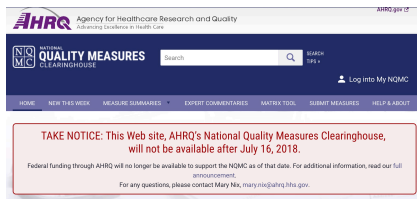
Source: National Quality Forum
PQA

Measures by the Numbers



Source: Beverly K. Bell M. The significant lack of alignment across state and regional health measure sets. Bell Health Consulting, LLC. 2013 Sep 10. PQA

Where to find Measures?




PQA

The Other Option?

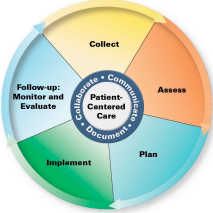
Review the pharmacotherapy

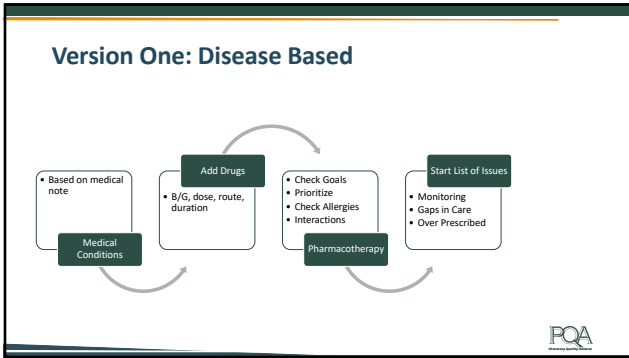
What Should We Cover?

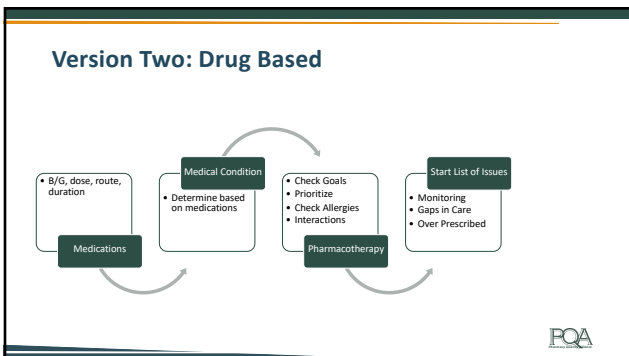
- ADHD
- Anxiety
- Depression
- Schizophrenia



Pharmacists' Patient Care Process







Think of Everything

Medications <ul style="list-style-type: none">• Brand and Generic• Dose (strength, sig)• Route• Duration	Medical Conditions <ul style="list-style-type: none">• List – does it have an ICD-10?
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FQA

Pharmacotherapy

Check Goals

- Clinical or PCO?

Prioritize


- Goal or Not?
- Kill now, or later?

Check Allergies

- Do we have any?

Interactions

- Drug, Drug
- Drug, Disease
- Drug, Food



List of Issues

Monitoring


- Disease
- Medication
- List what you need, then request what you don't have

Gaps in Care

- Based on the medical condition (or drug), what else should be prescribed?

Over/Under Prescribed

- Does the dose fit?




Cost of Prescription Drug-Related Morbidity and Mortality

Policy Outcome	Physician Visits	Drug	Physician Visits, Drug, or Injury*	Hospital Admissions	ED Visits	Deaths
Overall outcomes	525k	57k	582k	110	110	110
Respiratory (AST)	100k	10k	110k	10	10	10
Cardiovascular	150k	15k	165k	15	15	15
Emergency department (ED) visits	100k	10k	110k	10	10	10
Hospital admissions	100k	10k	110k	10	10	10
Deaths	100k	10k	110k	10	10	10

	Number of Events (all rows)	Cost Per Event	Total Cost (Billions)
Total physician visits	160.4	\$236	\$37.8
Total hospital admissions	12.1	\$14,234	\$174.0
Total emergency department visits	23.7	\$2,571	\$60.7
Total long-term care admissions	4.4	\$42,178	\$187.6
Total additional prescriptions	105.6	\$74	\$7.8
Total deaths	0.376	---	---
Total	---	---	\$528.4

*May not equal events times cost for each resource in this table because of rounding.


Watanabe, McInnis, Hirsch. Cost of Prescription Drug-Related Morbidity and Mortality. *Annals of Pharmacotherapy*. April 2018.




Attention deficit hyperactivity disorder

Attention deficit hyperactivity disorder

- The Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) consensus criteria
- For children <17 years, the DSM-5 diagnosis of ADHD requires ≥6 symptoms of hyperactivity and impulsivity or ≥6 symptoms of inattention.
- For adolescents ≥17 years and adults, ≥5 symptoms of hyperactivity and impulsivity or ≥5 symptoms of inattention are required.
- The symptoms of hyperactivity/impulsivity or inattention must:
 - Occur often
 - Be present in more than one setting (eg, school and home)
 - Persist for at least six months
 - Be present before the age of 12 years
 - Impair function in academic, social, or occupational activities
 - Be excessive for the developmental level of the child



Symptoms

<p>Hyperactivity and impulsivity</p> <ul style="list-style-type: none"> • Excessive fidgetiness (eg, tapping the hands or feet, squirming in seat) • Difficulty remaining seated when sitting is required (eg, at school, work, etc) • Feelings of restlessness (in adolescents) or inappropriate running around or climbing in younger children • Difficulty playing quietly • Difficult to keep up with, seeming to always be "on the go" • Excessive talking • Difficulty waiting turns • Blurting out answers too quickly • Interruption or intrusion of others 	<p>Inattention</p> <ul style="list-style-type: none"> • Failure to provide close attention to detail, careless mistakes • Difficulty maintaining attention in play, school, or home activities • Seems not to listen, even when directly addressed • Fails to follow through (eg, homework, chores, etc) • Difficulty organizing tasks, activities, and belongings • Avoids tasks that require consistent mental effort • Loses objects required for tasks or activities (eg, school books, sports equipment, etc) • Easily distracted by irrelevant stimuli • Forgetfulness in routine activities (eg, homework, chores, etc) <p style="text-align: right;"></p>
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Differential diagnosis for attention deficit hyperactivity disorder in children and adolescents*	
Disorder	Methods to distinguish from ADHD
Developmental conditions	
Intellectual disability	Psychometric testing
Specific language impairment	Psychometric testing
Normal variation	History
Attentional or developmental disorders	
Learning disorder	Psychometric testing
Language or communication disorder	Psychometric testing
Autism spectrum disorder	History, structured observation
Specific developmental disorder (eg, focal deficit syndrome)	History, structured clinical testing
Specific phobia	History, electrodermal topography if clinically indicated
Major depressive disorder	History
Manic depressive disorder	History, structured clinical testing, structured observation
Behavioral/Emotional disorders	
Anxiety disorder	Structured behavior scales, mental health evaluation
Oppositional defiant disorder	Structured behavior scales, mental health evaluation
Conduct disorder	Structured behavior scales, mental health evaluation
Obsessive compulsive disorder	Structured behavior scales, mental health evaluation
Posttraumatic stress disorder	Structured behavior scales, mental health evaluation
Adjustment disorder	Structured behavior scales, mental health evaluation
Psychosocial or environmental problems	
Child abuse or neglect	History or history, psychological history, evaluation
Stressful home environment	Psychosocial history
Involvement in delinquent activities	Psychosocial history
Parental psychopathology or substance abuse	Psychosocial history
Inappropriate educational setting	Response rate on structured test at home
Recent clinical diagnosis	Psychosocial history
Medical/Health conditions	
Head injury or other acquired	History and clinical course
Brain disorder	History, structured clinical testing, structured observation
Drug substance abuse	Response to structured test and other standardized studies on children
Learning disorder	Assessment of structured test
Medical disorders (eg, thyroid disease, diabetes mellitus)	Response to structured test and other standardized studies on children
Carbon monoxide (eg, heat injury)	Response to structured test and other standardized studies on children
Substance abuse	History, structured interview
Food allergy	History, allergy testing as indicated
Intoxication	Assessment of present symptoms

ADHD - Treatment

- Based on age (consensus with AAP, AACAP, NIHCE, and others)
- Preschool (4 to 5)
 - Behavioral over medication
 - Medication (methylphenidate), if expulsion, risk of injury, family history of ADHD, CNS injury
- School-aged (≥6 years)
 - Stimulate with behavioral therapy
- Monitor!



Ratings scales in the assessment and monitoring of ADHD

Scales	Behaviors assessed
Broadband assessment	
Conners 3 rd Edition ^[2]	Inattention, hyperactivity/impulsivity, learning problems, executive functioning, aggression, peer relations, DSM-IV symptoms scales for inattentive, hyperactive-impulsive and combined type of ADHD (DSM-5 scoring is also available as a supplement), ODD, conduct disorder
Behavior Assessment System for Children (BASC) ^[2]	Hyperactivity, aggression, conduct problems, anxiety, depression, somatization, academic, withdrawal, attention problems, learning problems, lack of adaptability/social/leader ship/study skills
Child Behavior Checklist/Teacher Report Form ^[2]	Somatic complaints, social/through/attention problems, anxiety/depression, aggression/delinquent behavior, withdrawal
Narrow-band assessment	
ADHD Comprehensive Teacher's Rating Scale (ACTRS) 'Inat' and 'grr' forms ^[2]	Attention problems, hyperactivity, lack of social skills, oppositional
ADHD Rating Scale ^[6]	Symptoms of ADHD according to DSM-IV criteria
Childhood Attention Problems Scale ^[7]	Combined measure of attention problems, impulsivity, hyperactivity
Conners 3 rd Edition: Short version ^[2]	Selected items from the long version to measure inattention, hyperactivity/impulsivity, learning problems, executive function, aggression, and peer relations
BASC Monitor Rating Scale ^[2]	Attention/adaptative problems, hyperactivity, problems with internalizing
Disruptive Behavior Rating Scale ^[2]	DSM-IV symptoms of ODD, ADHD, and CD (parent form only)
DISC-IV Assessment Scales ^[2]	Symptoms of ADHD according to DSM-IV criteria; screen for comorbid conditions (ODD, CD, anxiety, depression)
Assessment of medication side effects	
Side Effects Rating Scale ^[2]	Emerging appetite problems, staining/bleeding, withdrawal, anxiety, irritability, somatic complaints, emotional lability, dizziness, loss

Criteria for initiation of pharmacotherapy in children with ADHD

- Diagnostic assessment is complete and confirms diagnosis of ADHD
- Child is age six years or older*
- Parents accept medication as a contribution to management
- School will cooperate in administration and monitoring¹
- No previous sensitivity to the chosen medication
- Child has normal heart rate and blood pressure
- Child is seizure free⁴
- Child does not have Tourette syndrome⁵
- Child does not have pervasive developmental delay⁴
- Child does not have significant anxiety
- Substance abuse among household members is not a concern (for children who will be treated with immediate-release stimulants)⁶

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Comparison of drugs used to treat attention deficit hyperactivity disorder in children

Drug	Indications	Contraindications	Comments
Methylphenidate	Attention deficit hyperactivity disorder (ADHD) in children 6 years of age and older	None	First-line treatment for ADHD in children 6 years of age and older
Atomoxetine	ADHD in children 6 years of age and older	None	Alternative treatment for ADHD in children 6 years of age and older
Clonidine	ADHD in children 6 years of age and older	None	Alternative treatment for ADHD in children 6 years of age and older
Amphetamine/dextroamphetamine	ADHD in children 6 years of age and older	None	Alternative treatment for ADHD in children 6 years of age and older
Stimulant combination	ADHD in children 6 years of age and older	None	Alternative treatment for ADHD in children 6 years of age and older
Tricyclic antidepressants	ADHD in children 6 years of age and older	None	Alternative treatment for ADHD in children 6 years of age and older
Antidepressants	ADHD in children 6 years of age and older	None	Alternative treatment for ADHD in children 6 years of age and older
Antipsychotics	ADHD in children 6 years of age and older	None	Alternative treatment for ADHD in children 6 years of age and older
Antiepileptics	ADHD in children 6 years of age and older	None	Alternative treatment for ADHD in children 6 years of age and older

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Anxiety

Anxiety, DSM-5 Diagnostic Criteria

- A. Excessive anxiety and worry occurring more days than not for at least six months, about a number of events or activities
- B. The individual finds it difficult to control the worry.
- C. Three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past six months; only one for a child):
 - 1. Restlessness or feeling keyed up or on edge
 - 2. Being easily fatigued
 - 3. Difficulty concentrating or mind going blank
 - 4. Irritability
 - 5. Muscle tension
 - 6. Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep)
- D. Cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- E. The disturbance is not attributable to the physiological effects of a substance (eg, a drug of abuse, a medication) or another medical condition (eg, hyperthyroidism).
- F. Not explained by another medical condition



Anxiety - Treatment

- Mild subtype of GAD whose symptoms do not interfere significantly with functioning may reasonably elect to forgo treatment initially.
- Clinical follow-up with the patient every six months would be important to monitor the course of the disorder, and determine if symptoms were worsening and/or impeding functioning
- Initial treatment with a serotonergic antidepressant, cognitive-behavioral therapy (CBT), or both.
 - The choice between medication and CBT for GAD can be made on the basis of treatment availability and/or patient preference. There are no head-to-head comparisons of CBT and serotonergic antidepressants; meta-analyses have found their effect sizes to be roughly equivalent



Percentage of responders for treatment of adults with generalized anxiety disorder (GAD)

Study	Sample Size	Duration	Intervention	Control	Response Rate (%)	Notes
Wittchen et al. (2004)	114	12 weeks	CBT	Waitlist	57	CBT significantly superior to waitlist
Wittchen et al. (2007)	114	12 weeks	CBT	Waitlist	57	CBT significantly superior to waitlist
Wittchen et al. (2009)	114	12 weeks	CBT	Waitlist	57	CBT significantly superior to waitlist
Wittchen et al. (2011)	114	12 weeks	CBT	Waitlist	57	CBT significantly superior to waitlist
Wittchen et al. (2013)	114	12 weeks	CBT	Waitlist	57	CBT significantly superior to waitlist
Wittchen et al. (2015)	114	12 weeks	CBT	Waitlist	57	CBT significantly superior to waitlist
Wittchen et al. (2017)	114	12 weeks	CBT	Waitlist	57	CBT significantly superior to waitlist
Wittchen et al. (2019)	114	12 weeks	CBT	Waitlist	57	CBT significantly superior to waitlist
Wittchen et al. (2021)	114	12 weeks	CBT	Waitlist	57	CBT significantly superior to waitlist
Wittchen et al. (2023)	114	12 weeks	CBT	Waitlist	57	CBT significantly superior to waitlist

Copyright apply

Depression

- ## Types of Depression
- Unipolar major depression (major depressive disorder)
 - Persistent depressive disorder (dysthymia)
 - Disruptive mood dysregulation disorder
 - Premenstrual dysphoric disorder
 - Substance/medication induced depressive disorder
 - Depressive disorder due to another medical condition
 - Other specified depressive disorder (eg, minor depression)
 - Unspecified depressive disorder
- FOA

DSM-5 diagnostic criteria for a major depressive episode

A. Five (or more) of the following symptoms have been present during the same two week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

NOTE: Do not include symptoms that are clearly attributable to another medical condition.

(1) Depressed mood most of the day, nearly every day, as indicated by either subjective report (eg, feels sad, empty, hopeless) or observations made by others (eg, appears tearful). **NOTE:** In children and adolescents, can be irritable mood.

(2) Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation).

(3) Significant weight loss when not dieting or weight gain (eg, a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. **NOTE:** In children, consider failure to make expected weight gain.

(4) Insomnia or hypersomnia nearly every day.

(5) Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).

(6) Fatigue or loss of energy nearly every day.

(7) Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).

(8) Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by their subjective account or as observed by others).

(9) Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

B. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

C. The episode is not attributable to the direct physiological effects of a substance or to another medical condition.

NOTE: Criteria A through C represent a major depressive episode.

NOTE: Response to a significant loss (eg, bereavement, medical loss, losses from a natural disaster, a serious medical illness or disability) may include the feelings of intense sadness, rumination about the loss, insomnia, poor appetite, and weight loss noted in Criterion A, which may resemble a depressive episode, although each syndrome may be understandable or considered appropriate to the loss, the presence of a major depressive episode in addition to the normal response to a significant loss should only be carefully considered. This depressive episode requires the presence of clinical judgment based on the individual's history and the cultural norms for the expression of distress in the context of loss.

D. The presence of the major depressive episode is not better explained by schizoaffective disorder, schizotypal personality disorder, delirium, dementia, or other specified and unspecified schizotypal and other psychotic disorders.

E. There has never been a manic or hypomanic episode.

NOTE: This exclusion does not apply if all of the manic-like or hypomanic-like episodes are substance-induced or are attributable to the physiological effects of another medical condition.

Copyright apply

DSM-5 diagnostic criteria for manic episode

A. A distinct period of abnormally and persistently elevated, expansive, or irritable mood and abnormally and persistently increased activity or energy, lasting at least one week and present most of the day, nearly every day (or any duration if hospitalization is necessary).

B. During the period of mood disturbance and increased energy or activity, three (or more) of the following symptoms (four if the mood is only irritable) are present to a significant degree and represent a noticeable change from usual behavior:

- 1) Inflated self-esteem or grandiosity.
- 2) Decreased need for sleep (eg, feels rested after only three hours of sleep).
- 3) More talkative than usual or pressure to keep talking.
- 4) Flight of ideas or subjective experience that thoughts are racing.
- 5) Distractibility (ie, attention too easily drawn to unimportant or irrelevant external stimuli), as reported or observed.
- 6) Increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation (ie, purposeless non-goal-directed activity).
- 7) Excessive involvement in activities that have a high potential for painful consequences (eg, engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments).

C. The mood disturbance is sufficiently severe to cause marked impairment in social or occupational functioning or to necessitate hospitalization to prevent harm to self or others, or there are psychotic features.

D. The episode is not attributable to the physiological effects of a substance (eg, a drug of abuse, a medication, other treatment) or to another medical condition.

NOTE: A full manic episode that emerges during antidepressant treatment (eg, medication, electroconvulsive therapy) but persists at a fully syndromal level beyond the physiological effect of that treatment is sufficient evidence for a manic episode and, therefore, a bipolar I diagnosis.

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DSM-5 diagnostic criteria for hypomanic episode

A. A distinct period of abnormally and persistently elevated, expansive, or irritable mood and abnormally and persistently increased activity or energy, lasting at least four consecutive days and present most of the day, nearly every day.

B. During the period of mood disturbance and increased energy and activity, three (or more) of the following symptoms (four if the mood is only irritable) have persisted, represent a noticeable change from usual behavior, and have been present to a significant degree:

- 1) Inflated self-esteem or grandiosity.
- 2) Decreased need for sleep (eg, feels rested after only three hours of sleep).
- 3) More talkative than usual or pressure to keep talking.
- 4) Flight of ideas or subjective experience that thoughts are racing.
- 5) Distractibility (ie, attention too easily drawn to unimportant or irrelevant external stimuli), as reported or observed.
- 6) Increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation.
- 7) Excessive involvement in activities that have a high potential for painful consequences (eg, engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments).

C. The episode is associated with an unequivocal change in functioning that is uncharacteristic of the individual when not symptomatic.

D. The disturbance in mood and the change in functioning are observable by others.

E. The episode is not severe enough to cause marked impairment in social or occupational functioning or to necessitate hospitalization. If there are psychotic features, the episode is, by definition, manic.

F. The episode is not attributable to the physiological effects of a substance (eg, a drug of abuse, a medication, or other treatment).

NOTE: A full hypomanic episode that emerges during antidepressant treatment (eg, medication, electroconvulsive therapy) but persists at a fully syndromal level beyond the physiological effect of that treatment is sufficient evidence for a hypomanic episode diagnosis. However, cautions is indicated that four or five symptoms (particularly increased irritability, edginess, or agitation following antidepressant use) are not taken as sufficient for a diagnosis of a hypomanic episode, not necessarily indicative of a bipolar disorder.

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DSM-5 diagnostic criteria for persistent depressive disorder (dysthymia)

A. Depressed mood for most of the day, for more days than not, as indicated either by subjective account or observation by others, for at least two years.

NOTE: In children and adolescents, mood can be irritable and duration must be at least one year.

B. Presence, while depressed, of two (or more) of the following:

- 1) Poor appetite or overeating.
- 2) Insomnia or hypersomnia.
- 3) Low energy or fatigue.
- 4) Low self-esteem.
- 5) Poor concentration or difficulty making decisions.
- 6) Feelings of hopelessness.

C. During the two-year period (one year for children or adolescents) of the disturbance, the individual has never been without the symptoms in Criteria A and B for more than two months at a time.

D. Criteria for a major depressive disorder may be continuously present for two years.

E. There has never been a manic episode or a hypomanic episode, and criteria have never been met for cyclothymic disorder.

F. The disturbance is not better explained by a persistent schizophrenic disorder, schizoaffective disorder, delusional disorder, or other specified or unspecified schizotypal spectrum and other psychotic disorder.

G. The symptoms are not attributable to the physiological effects of a substance (eg, a drug of abuse, a medication) or another medical condition (eg, hypothyroidism).

H. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

NOTE: Because the criteria for a major depressive episode include four symptoms that are absent from the symptom list for persistent depressive disorder (dysthymia), a very limited number of individuals will have depressive symptoms that have persisted longer than two years but will not meet criteria for persistent depressive disorder. If full criteria for a major depressive episode have been met at some point during the current episode of illness, they should be given a diagnosis of major depressive disorder. Otherwise, a diagnosis of other specified depressive disorder or unspecified depressive disorder is warranted.

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Unipolar Depression, Monitoring

- Response – Improvement ≥ 50 percent but less than the threshold for remission.
- Remission – specific value defined as the normal range
 - Hamilton Rating Scale for Depression or the Montgomery-Asberg Depression Rating Scale
 - score ≤ 7
 - Patient Health Questionnaire – Nine Item (PHQ-9)
 - score < 5



PHQ-9 depression questionnaire

Name: _____ Date: _____

Over the last two weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly every day
Little interest or pleasure in doing things	0	1	2	3
Finding it hard to get going	0	1	2	3
Feeling tired or having little energy	0	1	2	3
Feeling bothered by things that usually don't bother you	0	1	2	3
Feeling down, depressed, or hopeless	0	1	2	3
Thoughts of hurting yourself or others	0	1	2	3
Thoughts of death or suicide, or that you or a family member might harm yourself or your family	0	1	2	3
Thoughts of suicide or death	0	1	2	3
Thoughts of suicide or death, such as thinking about suicide or wanting to harm yourself	0	1	2	3
Thoughts of suicide or death, such as thinking about suicide or wanting to harm yourself	0	1	2	3
Thoughts of suicide or death, such as thinking about suicide or wanting to harm yourself	0	1	2	3
Thoughts of suicide or death, such as thinking about suicide or wanting to harm yourself	0	1	2	3
Thoughts of suicide or death, such as thinking about suicide or wanting to harm yourself	0	1	2	3
Thoughts of suicide or death, such as thinking about suicide or wanting to harm yourself	0	1	2	3

PHQ-9 scores 0-4 indicate no depression, 5-9 indicate minor depression, 10-14 indicate moderate depression, 15-19 indicate major depression, 20-27 indicate severe depression.

Depression score range: _____

0 to 4 none
5 to 9 minor depression
10 to 14 moderate depression
15 to 19 major depression
20 to 27 severe depression

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

	Not at all difficult at all	Slightly difficult	Moderately difficult	Very difficult
_____	1	2	3	4

PHQ-9 Patient Health Questionnaire
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Copyright apply UptoDate

Depression, Treatment

- Combination of pharmacotherapy and psychotherapy
 - More effective than either of these treatments alone
 - Clinical trials have not established the superiority of any combination



Schizophrenia - Adults: Antipsychotic Drugs*			
Drug	Approved starting dose per day (mg)	Usual oral dose per day (mg)	Maximum daily dose range (mg)†
Atypical antipsychotics			
Aripiprazole	15	15 to 30	30 to 45
Asenapine	5	5 to 15	15 to 20
Brexpiprazole	3	3 to 6	6 to 12
Clozapine	12.5	12.5 to 120	12.5 to 120
Lurasidone	60	60 to 120	120 to 180
Melperone	75	75 to 150	150 to 225
Molindone	40	40 to 120	120 to 160
Quetiapine	150	150 to 600	600 to 800
Risperidone	2	2 to 4	4 to 8
Sarilumab	50	50 to 100	100 to 150
Typical antipsychotics			
Haloperidol	5	5 to 20	20 to 30
Levomepromazine	25	25 to 100	100 to 150
Molindone	40	40 to 120	120 to 160
Perphenazine	4	4 to 16	16 to 24
Thioridazine	16	16 to 64	64 to 96
Approved combination products			
Aripiprazole/risperidone	15/5	15 to 30/5 to 10	30 to 45/10 to 15
Lurasidone/melperone	60/75	60 to 120/75 to 150	120 to 180/150 to 225
Quetiapine XR/melperone	150/75	150 to 600/75 to 150	600 to 800/150 to 225
Approved extended-release products			
Haloperidol	5	5 to 20	20 to 30
Levomepromazine	25	25 to 100	100 to 150
Molindone	40	40 to 120	120 to 160
Perphenazine	4	4 to 16	16 to 24
Thioridazine	16	16 to 64	64 to 96
Approved combination extended-release products			
Aripiprazole/risperidone	15/5	15 to 30/5 to 10	30 to 45/10 to 15
Lurasidone/melperone	60/75	60 to 120/75 to 150	120 to 180/150 to 225
Quetiapine XR/melperone	150/75	150 to 600/75 to 150	600 to 800/150 to 225

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Molindone	40	40 to 120	120 to 160
Perphenazine	4	4 to 16	16 to 24
Thioridazine	16	16 to 64	64 to 96
Approved combination extended-release products			
Aripiprazole/risperidone	15/5	15 to 30/5 to 10	30 to 45/10 to 15
Lurasidone/melperone	60/75	60 to 120/75 to 150	120 to 180/150 to 225
Quetiapine XR/melperone	150/75	150 to 600/75 to 150	600 to 800/150 to 225

Schizophrenia

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Selected financial effects of pending stock repurchases for 2018

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Operating income	1,234	1,123	1,012	901	890	789	678	567	456	345	234	123	112	101	90	89	78	67	56
Operating expenses	(876)	(765)	(654)	(543)	(432)	(321)	(210)	(109)	(98)	(87)	(76)	(65)	(54)	(43)	(32)	(21)	(10)	(9)	(8)
Operating profit	358	358	358	358	458	468	478	488	498	508	518	528	538	548	558	568	578	588	598
Income tax expense	(123)	(112)	(101)	(90)	(89)	(78)	(67)	(56)	(45)	(34)	(23)	(12)	(11)	(10)	(9)	(8)	(7)	(6)	(5)
Net income	235	246	257	268	369	390	411	432	453	474	495	516	537	558	579	600	621	642	663

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Pharmacy-Led Services



Tools Available to the Pharmacist

- Mental Health Screenings**
 - Depression
 - Anxiety
 - Alzheimer's Disease
- Long Acting Injections**
 - State specific
 - What we do at FMS (in Alabama)
- Mental Health First Aid**
 - Expand the scope of technicians




High Reliability Organizations (HROs)

- Various models and definitions
 - Reason: "organizations which have less than their fair share of accidents..."
- Business operations shifted to healthcare

Five Domains for HRO per ARHQ

- Preoccupation with Failure**
 - PROACTIVE - predict and eliminate
- Reluctance to Simplify**
 - Given complex systems, simplistic solutions are not appropriate
- Sensitivity to Operations**
 - Implement processes to monitor operations and provide resources
- Commitment to Resilience**
 - Be aware work systems may fail in unexpected ways - and be ready to respond quickly
- Deference to Expertise**
 - Staff at all levels of hierarchy are experts - RESPECT THAT



Incorporating High Reliability into Practice

- Top down buy in and accountability
- Incorporate principles and practice of a safety culture throughout the organization
- Adopt and deploy most effective process

- The “Keystone Habit” – single habit shift that causes a cascade of many positive outcomes
 - Find the purpose of an organization, and engage all staff to transform the outcomes



<https://www.youtube.com/watch?v=Zzu48q05MZc>

The Depression Screenings in Pharmacies (DSIP) Study

Samford University, Birmingham, Alabama, USA | School of Pharmacy, 48020-3400 | Birmingham, Alabama, USA | Department of Pharmacy, 48020-3400 | Birmingham, Alabama, USA | School of Pharmacy, 48020-3400 | Birmingham, Alabama, USA

BACKGROUND

- Depression is the leading cause of disability among adults in high-income countries.
- The US Preventive Services Task Force (USPSTF) updated its recommendation for screening for major depressive disorders, which is a shared service through the Affordable Care Act (ACA).
- However, one of the research gaps is assessing barriers to establish optimal care and how to address these barriers.
- Community pharmacists can play an integral role in identifying and addressing these barriers.
- Pharmacist involvement can improve medication adherence and help establish models of care for essential population (e.g. long-term).

OBJECTIVE

The purpose of this project is to determine the impact implementation for depression screening has on the number of screenings and follow-up to care for patients with depression.

METHODS

- The study is a non-randomized, pre-post design.
- The pharmacist implemented a new clinical service of depression screening with a 100% target.
- Depression screenings were conducted using the Patient Health Questionnaire-2 (PHQ-2) survey and if positive result then a PHQ-9 survey and personalized patient education to care.
- Pharmacy staff identified patients for study and pharmacists were encouraged to offer services to care. The service was a walk-in event and follow up with the pharmacist did not receive any payments for the screening.
- The pharmacist provided patient education for medication adherence, insurance, coverage cost to subsidize the service, and patient centered activities.

RESULTS

Location	Number of Patients Screened	Number of Positive PHQ-2	Number of Positive PHQ-9	Number of Patients Referred
Site 1	10	6	4	7
Site 2	9	1	0	0
Site 3	7	1	0	0

CONCLUSIONS

- The initial program of pharmacist for medication services to improve depression screenings is the opportunity.
- There are a few limitations. Pharmacies have many initiatives of these services, but there are potential barriers being managed and addressing depression screening.
- Pharmacists are able to initiate these medication services due to increased interaction with patients and to broaden their scope of practice.
- The results from this study are encouraging and suggest that depression screenings with follow-up on referrals from pharmacists have a positive health care continuity.

Use Our Toolkit!

Impact of Depression Screenings in Community Pharmacies

Principal Investigator: **John Gallo, PharmD BCPS CDP**
 Project Title: **Impact of Depression Screenings in Community Pharmacies**
 Grants Awarded Number: **176**
 Status: **In Study**
 Organization: **Stanford University**
 Location:
 Grant Category: **Therapeutics, Diseases & Populations**
 Keyword: **Depression Screening**
 Grant Date: **Year 1 / Prior 1 / Poster 1 / Video**

Objective: This project is designed to assess the impact of United States Preventive Task Force USPSTF recommended screening of depression for adult patients in community pharmacies. One of its goals is to address whether these depression and the guidelines recommend every adult patient be screened. The DSP Depression Screening in Pharmacies project will be focused on developing a payment model for community pharmacies. DSP will take place in a practice-based research network with all sites having identical training. However only half will be reimbursed for the service. The DSP service will consist of the general health questionnaire of PHQ-2. Slides to date for https://communitypharmacyfoundation.org/grants/grants_list_details.asp?grants_id=71319. Accessed 10.9.2017



PHQ-2 depression questionnaire

Name: _____ Date: _____

Over the last 12 months, how often have you been bothered by any of the following problems?


Problem	Not at all	Several days	More than half the days	Nearly every day
Little interest or pleasure in doing things	0	1	2	3
Finding it hard to get going in the morning	0	1	2	3
Trouble falling or staying asleep, or sleeping too much	0	1	2	3
Trouble concentrating	0	1	2	3
Feeling tired or having little energy	0	1	2	3
Feeling hopeless, worthless, or guilty	0	1	2	3
Thoughts that you would be better off dead, or of hurting yourself in some way	0	1	2	3

PHQ-2 score: 0-2 = No depression, 3-6 = Mild depression, 7-9 = Moderate depression, 10-14 = Severe depression

Depression score report:
 0 to 2: _____
 3 to 6: _____
 7 to 9: _____
 10 to 14: _____

PHQ-2 score: 0-2 = No depression, 3-6 = Mild depression, 7-9 = Moderate depression, 10-14 = Severe depression

PHQ-2 Patient Health Questionnaire.
 Adapted by John Gallo, M.D., M.P.H., from the PHQ-9. All rights reserved. For non-commercial use only. All other trademarks and registered trademarks are the property of their respective owners. PHQ-9, PHQ-2, and PHQ-4 are trademarks of the University of Pittsburgh Medical Center.




Alzheimer's Review (Real Quick)

Mini Mental Status Exam score	
Mild AD	20-26
Moderate AD	10-20
Severe AD	<10

- Start cholinesterase inhibitor
- Augment with memantine (MMSE <17)
- Consider discontinuing therapy around MMSE <10
- Lifestyle and caregiver education is paramount

Conduct the MMSE!



Anxiety Screenings

Generalized Anxiety Disorder 7-item (GAD-7) scale

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all sure	Several days	Over half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it's hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

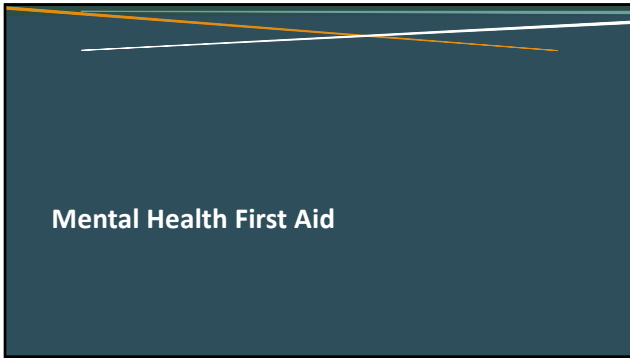


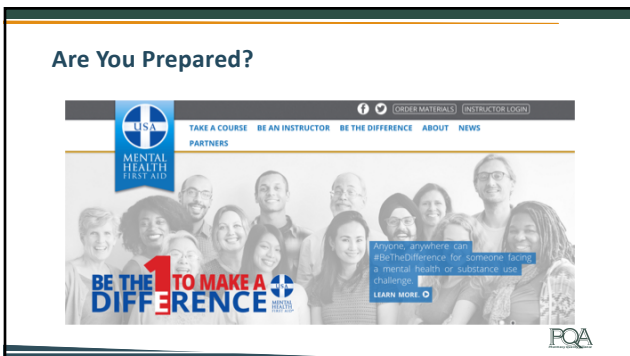
Injections!

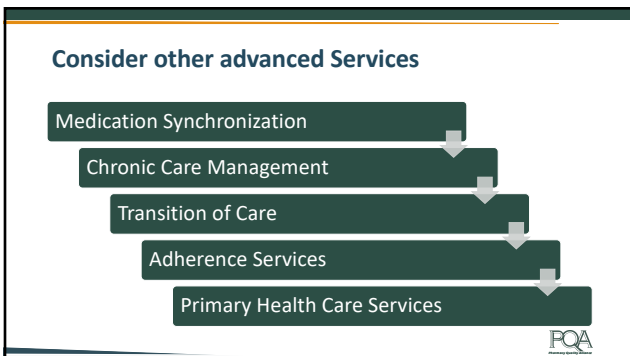
Injections of Long Acting Antipsychotics

- Triaged through the pharmaceutical companies
- Does provide direct reimbursement to the pharmacist/pharmacy










What's Going on in Arkansas?
 Medicaid changes!


PASSE

- The Provider-led Arkansas Shared Savings Entity (PASSE) is a new model of organized care that will address the needs of certain Medicaid beneficiaries who have complex behavioral health and intellectual and developmental disabilities service needs. Under this unique organized care model, providers of specialty and medical services will enter into new partnerships with experienced organizations that perform the administrative functions of managed care. Together, these groups of providers and their managed care partners will form a new business organization called a PASSE.



Purpose of PASSE

- To improve the health of Arkansans who have need of intensive levels of specialized care due to mental health, intellectual or developmental disabilities.
- To link providers of physical health care with providers of behavioral health care and services for individuals with developmental disabilities.
- To coordinate care for all community-based services for individuals with intensive levels of specialized care needs.
- To reduce excess cost of care due to underutilization and overutilization of services.
- To allow flexibility in the array of services offered to the population served.
- Will reduce costs by organizing care, not just by managing finances.
- To increase the number of service providers available in the community to the population covered.



PQA
Optimizing Patients' Health by Improving the Quality of Medication Use

Mental Health Matters – How Pharmacists Can Help

John A. Galdo, Pharm.D., M.B.A., BCPS, BCGP (Iake)
Director, Performance Measurement
Pharmacy Quality Alliance
