



## Topic Brief: Team-based care for Psychiatric Disorders

**Date:** 3/21/2024

**Nomination Number:** 1048

**Purpose:** This document summarizes the information addressing a nomination submitted on May 30 2023 ([link to nomination](#)) through the Effective Health Care Website. This information was used to inform the Evidence-based Practice Center (EPC) Program decisions about whether to produce an evidence report on the topic, and if so, what type of evidence report would be most suitable.

**Issue:** People with psychiatric disorders often experience serious co-morbidities, some of which are exacerbated by adverse reaction of medication. Fragmented care can lead to poorer outcomes for this already vulnerable population of patients. The nominators are interested in evidence that evaluates the impact of including a psychiatric pharmacist on the healthcare team to improve patient outcomes through better medication management and reduce cost of care.

### **Program Decision:**

The EPC Program will not develop a new systematic review at this time. The topic meets all criteria but was not selected for funding.

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### **Background**

The National Survey on Drug Use and Health (NSDUH) from the Substance Abuse and Mental Health Services Administration found that 59.3 million U.S. adults had any mental illness (AMI) and 6% had serious mental illness (SMI) in 2022.<sup>1</sup> Diabetes, cardiovascular disease, cancer, and respiratory disorders commonly co-occur with depression, anxiety, and some SMIs like schizophrenia and bipolar disorder.<sup>2</sup> People with depression have a 40% higher risk of developing cardiovascular and metabolic syndrome (MetS) than the general population, and people with SMI are nearly twice as likely to develop these conditions.<sup>3</sup> Additionally, people living with SMI often experience reduced life expectancy due, in part, to significant morbidity and mortality related to insufficiently treated medical conditions, modifiable lifestyle factors and side effects of antipsychotic medications compounded by stress intrinsic to living with serious and persistent mental illness.<sup>4</sup> Antipsychotics are associated with physical side effects, including impaired glucose tolerance, weight gain and dyslipidemia, also referred to as metabolic syndrome.<sup>5</sup> Weight gain has been shown to occur with mood stabilizers and antidepressants; and cardiovascular disease has been associated with MetS.<sup>6</sup>

Costs associated with mental illness in the United States are significant. In 2020, among Americans aged 18 and older, total cost of care for treatment of mental health disorders was \$213 billion,<sup>7</sup> and costs an additional \$193.2 billion in lost earnings.<sup>8</sup> Ninety percent of the U.S.'s

\$4.1 trillion in annual health care expenditures are for people with both mental health and chronic conditions.<sup>9, 10</sup>

Despite the prevalence of these conditions, the NSDUH found that only around 50% of adults with AMI and 67% of adults with SMI reported receiving treatment in the past year.<sup>1</sup> There are significant health disparities in the outcomes of treatment of mental illness. Multiracial adults were most likely to have AMI or SMI, while Hispanic and Black adults with major depression were less likely than White or Multiracial adults to receive treatment.<sup>11</sup> Further, access to mental health services is reduced for individuals with lower income, less education, and a lack of insurance.<sup>12</sup>

Both clinical pharmacists and board-certified psychiatric pharmacists are advanced practice pharmacists who work collaboratively with multidisciplinary teams to optimize pharmacotherapy. However, BCPPs specialize in psychiatric and mental health care and require additional post-graduate training and clinical experience. Their in-depth understanding of medication management enables them to provide comprehensive treatment, which is a plan based on the assessment of the patient that may include medical, psychological, developmental or substance abuse factors, and is focused on the patient's overall well-being. Psychiatric pharmacists play a vital role within interdisciplinary mental health teams by directly engaging with patients, medication management, monitoring adverse medication effects, and collaborating with multidisciplinary teams. Clinical pharmacists specialize in psychiatric medication management, collaborate with multidisciplinary teams to optimize therapy, monitor adverse effects, and educate patients. Clinical pharmacists may also manage certain mental health and chronic medical conditions by providing medication management, monitoring for potential adverse drug reactions and interactions, and educating families and patients on medications. As of August 2023, all 50 states allowed collaborative practice agreements enabling expanded pharmacist roles. However, only 38.6% of U.S. psychiatric hospitals employed clinical pharmacists despite potential benefits of these clinical services.<sup>13</sup>

### Nomination Summary

The American Association of Psychiatric Pharmacists (AAPP) are interested in a systematic review of the evidence that identifies, describes, and assesses the effectiveness of pharmacist-led interventions for patients with mental illness who are at risk for chronic medical conditions including cardiovascular disease and modifiable cardiometabolic diseases. The nominators want to use the evidence report to inform policymakers and other stakeholders about the benefits of integrated clinical pharmacists on the health care team.

### Scope

1. In patients with psychiatric disorders, does the inclusion of a clinical pharmacist on the multidisciplinary care team improve care and outcomes?

**Table 1.** Questions and PICOTS (population, intervention, comparator, outcome, timing and setting)

<b>Questions</b>	Clinical pharmacist outcomes
<b>Population</b>	Adults ≥18 yrs. with psychiatric disorders, who have or are at risk for chronic medical conditions including cardiovascular disease and modifiable cardiometabolic disease

<b>Interventions</b>	Clinical pharmacist-led intervention, a multidisciplinary healthcare team that consists of a clinical pharmacist involved in the management of patients with psychiatric conditions
<b>Comparators</b>	Studies with some forms of comparator were included
<b>Outcomes</b>	<p><i>Patient outcomes-</i></p> <ul style="list-style-type: none"> <li>• medical outcomes in patients with psychiatric and medical comorbidities—diabetes, hypertension, cardiovascular disease, modifiable cardiometabolic diseases (e.g., overweight/obesity, hyperglycemia, hypertension, dyslipidemia, metabolic syndrome), and other chronic diseases</li> <li>• Medication adherence (i.e., compliance, discontinuation, and medication persistence) and consistency</li> <li>• Identification and resolution of polypharmacy, medication interactions, and pharmacovigilance.</li> <li>• Health equity focus on equal access to quality psychiatric and medical comorbidity care</li> </ul> <p><i>Economic outcomes-</i></p> <ul style="list-style-type: none"> <li>• Total cost of care, total pharmacy costs</li> <li>• Health care utilization (physician visits, hospitalizations, inpatient or outpatient, emergency room visits)</li> </ul>
<b>Setting</b>	Hospitals and inpatient/outpatient settings

**Assessment Methods**

We assessed nomination for priority for a systematic review or other AHRQ EHC report with a hierarchical process using established selection criteria. Assessment of each criteria determined the need to evaluate the next one.

1. Determine the *appropriateness* of the nominated topic for inclusion in the EHC program.
2. Establish the overall *importance* of a potential topic as representing a health or healthcare issue in the United States.
3. Determine the *desirability of new evidence review* by examining whether a new systematic review or other AHRQ product would be duplicative.
4. Assess the *potential impact* a new systematic review or other AHRQ product.
5. Assess whether the *current state of the evidence* allows for a systematic review or other AHRQ product (feasibility).
6. Determine the *potential value* of a new systematic review or other AHRQ product.

For additional information about assessment methods, see Appendix A.

**Summary of Literature Findings**

Our searches found a total of 288 potentially relevant studies and five reviews. Two reviewers assessed these studies for inclusion, and found 15 primary studies addressing the key question broadly.<sup>14-28</sup>

While we did not find a systematic review covering the full scope of the topic nomination, we found five reviews that examined pharmacist-led interventions for various health conditions.<sup>29-33</sup> The five reviews—two systematic reviews, two scoping reviews and one mixed-methods systematic review—showed positive patient outcomes. While these reviews are informative for pharmacist led interventions such as cardiometabolic monitoring and medication adherence, none of them addressed issues of polypharmacy, medication interactions, pharmacovigilance, health equity, total cost of care, pharmacy costs or health care overutilization. The five reviews

were not found to be duplicative due to limited clinical outcomes, the limitations of some of their objectives, the age of literature reviewed, and the narrowness of their included populations. One review had a limited patient population and looked at the clinical pharmacists' role in peripartum mental health,<sup>33</sup> one review looked at only the patient outcomes of cardiometabolic risk and metabolic syndrome,<sup>29</sup> one review examined pharmacist input on metabolic screening,<sup>32</sup> one looked broadly at patient adherence,<sup>30</sup> and one exclusively looked at consumer reported outcomes such as satisfaction with pharmacy services.<sup>31</sup>

The systematic review authored by Sud and published in 2021<sup>29</sup> conducted a mixed-methods examination of the role of pharmacy interventions in addressing cardiometabolic risk, metabolic syndrome, and related diseases in individuals with severe mental illness like schizophrenia, who have a shortened life expectancy largely due to cardiovascular disease. Across 33 identified studies, interventions varied greatly in characteristics. Twenty studies reported quantitative outcome data, showing that including face-to-face interaction as an implementation strategy, even alone, seemed important for positively impacting measured outcomes. However, few studies involved community or general practice pharmacists, evaluated clinical outcomes, followed up long-term, or synthesized qualitative data. The findings suggest face-to-face pharmacist interactions with multidisciplinary teams can improve process outcomes, but further research on clinical outcomes, community pharmacy roles, and qualitative perspectives is needed.

Another systematic review, conducted by the American Association of Psychiatric Pharmacists examining the impact of psychiatric pharmacists<sup>34</sup>, was published in 2024 after we performed our literature search. Searching from 1961-2022, authors identified and reviewed 4,270 articles, with 202 ultimately meeting inclusion criteria of describing patient outcomes associated with pharmacist care for psychiatric/neurologic disorders or psychotropic medications. However, the SR failed to critically evaluate the quality and reliability of the included studies. While some studies included details, such as pharmacist type, level of experience, or years of training, sufficient detail was not reported in 82% of the included studies. Because the evidence spanned seven decades, the results in this SR are limited by a need for more context, given how health systems and credentials for psychiatric pharmacists have evolved. The results showed a wide range of heterogeneity in study design and outcomes, but overall findings demonstrated positive impacts of psychiatric pharmacists. However, the variability underscores the need for future research to utilize more consistent, standardized outcome measures and stronger study methodologies.

Of the 15 primary studies included, five of these were set in an inpatient psychiatric setting,<sup>18, 21, 23, 24, 28</sup> three in home-based care,<sup>15, 20, 26</sup> two in geriatric outpatient clinics,<sup>17, 19</sup> two in long-term care facilities,<sup>16, 26</sup> one in an outpatient psychiatric setting,<sup>22</sup> one in a prison,<sup>14</sup> and one in an emergency department.<sup>25</sup> Primary study outcomes focused on polypharmacy,<sup>14, 16, 18, 25, 26</sup> medication management,<sup>15, 19-21, 27, 28</sup> and cardiometabolic testing.<sup>17, 22-24</sup> All studies were U.S. based, with the exception of one Chinese study,<sup>18</sup> and varied in size, with a range of 62 to 443 patients. Of the 15 studies, all were observational.<sup>14-28</sup> Six of these studies were retrospective,<sup>14, 17, 22-25</sup> one was cross sectional,<sup>13</sup> two were longitudinal,<sup>15, 19</sup> one was prospective interventional,<sup>16</sup> one was mixed methods,<sup>18</sup> and one was quasi experimental.<sup>20</sup>

One study evaluated the outcomes of an inpatient psychiatric pharmacy program at a federal correctional medical center.<sup>14</sup> Key outcomes included cost savings when having a psychiatric pharmacist provide clinical visits instead of a psychiatrist, improvement of monitoring of medications with narrow therapeutic indices and movement disorder assessments, changes in

medication regimens and number of psychiatric medications per inmate patient after entering the program and clinical symptom improvement based on rating scales for schizophrenia, bipolar disorder and depression. The results showed a cost savings of \$151,000 annually, improved medication monitoring rates, optimization of medication regimens, and 74% of patients experiencing stable or improved psychiatric symptoms.

Three studies evaluated the outcomes of an inpatient psychiatric pharmacist for home-based care.<sup>15, 20, 26</sup> The outcomes for one was focused on integrating a clinical pharmacist into a home-based primary care practice (HBPC) to optimize medication management, evaluating the types and frequency of medication recommendations made by the pharmacist, assessment of provider acceptance rates of the pharmacist's recommendations, and estimating the potential cost avoidance from pharmacist interventions. One outcome revealed that 81% of HBPC patients received at least one medication recommendation from the pharmacist, with 30.3% of the total 175 recommendations acceptance by providers, and potential cost avoidance was \$53,000.<sup>17</sup> The authors reported that while recommendation acceptance was modest, collaborative practice agreements, team huddles, and direct pharmacist access could improve integration in this medically complex patient population. The outcomes for a second home-based care study showed that pharmacists integrated into mental health hospital-in-the-home programs were able to identify and resolve medication-related problems, improve medication adherence, and potentially reduce hospital admissions and emergency department visits.<sup>12</sup> The outcomes for the final home-based care study identified a significant number of medication therapy problems (MTPs) related to cognition, with an average of 1.58 MTPs per patient involving indications, effectiveness, or safety issues.<sup>23</sup> Over half (52%) of the MTPs identified were related to safety concerns, such as medications that impair cognition or cause undesirable effects. The authors' findings highlight the important role pharmacists can play in identifying and addressing medication-related cognitive issues as part of a multidisciplinary home-based care team for older adults. Another study that also examined a pharmacist-led medication management effectively initiated medication changes, particularly in discontinuing unnecessary medications, however hospital admissions, falls, deaths or other clinical outcomes remained unchanged.<sup>24</sup>

One study that looked at medication management of lithium therapy between pharmacists and providers showed that pharmacist-managed patients had significantly better outcomes in the key areas of safety and biochemical monitoring and were particularly more likely to have timely lithium level assessments upon admission and benefit from the pharmacy-provided education.<sup>25</sup>

One of two studies that evaluated geriatric outpatient clinics focused on psychiatric pharmacist-initiated antidepressant pharmacogenomic (PGx) testing.<sup>14</sup> Of the 67 patients referred for PGx testing, 72% successfully completed the testing, with 50% of those showing an actionable phenotype that affected drug metabolism, requiring medication adjustments. The results demonstrated high acceptance of PGx results in this population of older adults. The second study evaluating geriatric outpatient clinics<sup>16</sup> found that in a sample of 84 geriatric psychiatric patients, the clinical pharmacist provided 155 medication management services including counseling interventions and medication information. Nearly one-third (30.96%) of the services were pharmacist interventions, with the most common being for adverse drug reactions, drug interactions, and dosing issues. The vast majority of pharmacist's interventions were accepted by the psychiatrist (95.8%), demonstrating the benefits of collaborative pharmacist-psychiatrist care.

One study looked at polypharmacy in long-term care facilities<sup>16</sup> and found a high prevalence (90.5%) of potentially inappropriate psychiatric medication use among 147 hospitalized elderly psychiatric patients. The outcomes revealed that multidisciplinary medication review involving a

psychiatric pharmacist helped reduce the high rates of inappropriate medications in hospitalized elderly psychiatric patients. A second study that looked at polypharmacy<sup>15</sup> identified a high number of potentially inappropriate medications and potential prescribing omissions, however, only a small percentage (41%) of psychiatric clinical pharmacists interventions were implemented, resulting in no reduction in polypharmacy prevalence. The final study that looked at polypharmacy<sup>22</sup> identified 298 discrepancies out of 484 medications reviewed with “no longer taking,” and “omission” being the most common reported reasons. However, the authors found no difference between pharmacist- and non-pharmacist led interventions. One study that looked at medication management focused on the outcome of adverse drug reactions, medications changes, discontinuations, and dose reductions at a psychiatric hospital.<sup>18</sup> The outcomes showed that a multidisciplinary team with an embedded pharmacist, accelerated positive pharmaceutical care changes.

One of the studies that examined metabolic functioning to improve compliance with metabolic monitoring in patients prescribed antipsychotics resulted in a significant increase in screening rates—from 69.2% to 90.4%—following implementation of a pharmacist collaborative practice agreement.<sup>20</sup> However, a second study that examined metabolic function monitoring by clinical pharmacists in patients prescribed antipsychotics resulted in no difference in compliance rates.<sup>19</sup> One study examined QTc-interval monitoring protocol by pharmacists to decrease cardiac risk in at-risk patients in an acute care inpatient psychiatric facility.<sup>21</sup> The results showed a significant improvement, with a 25.5% increase in appropriate ECG utilization and a 26% improvement in appropriate ECG omission. However, changes in ECG utilization did not reach statistical significance.

**Table 2.** Literature identified for the Key Question

Question	Systematic reviews (12/2018-12/2023)	Primary studies (12/2018-12/2023)
Question 1: Does the inclusion of a clinical pharmacist improve care and outcomes?	Total: 5 <sup>29-33a</sup> <ul style="list-style-type: none"> <li>• Cochrane: 0</li> <li>• AHRQ: 0</li> <li>• Other: 5</li> </ul>	Total: 15 <sup>14-28</sup> <ul style="list-style-type: none"> <li>• <u>RCTs</u>: 0</li> <li>• <u>Retrospective cohort</u>: 6<sup>14, 17, 22-25</sup></li> <li>• <u>Cross sectional</u>: 1<sup>13</sup></li> <li>• <u>Longitudinal</u>: 2<sup>15, 19</sup></li> <li>• <u>Prospective interventional</u>: 1<sup>16</sup></li> <li>• <u>Mixed methods</u>: 1<sup>18</sup></li> <li>• <u>Quasi experimental</u>: 1<sup>20</sup></li> </ul>

<sup>a</sup>These reviews were too narrow in scope and population to be considered duplicative; however, they could inform the development of a new evidence product.

### Summary of Selection Criteria Assessment

The nominator would like a systematic review or similar evidence product that would be used to inform policy makers, employers, and payers regarding the inclusion of clinical pharmacists on multidisciplinary teams for psychiatric patients who have or are at risk of developing cardiovascular and metabolic syndromes. In a review of the literature on the topic, we did not find any systematic reviews that fully address the scope of the nomination and found 15 primary studies addressing the nomination.

See Appendix B for detailed assessments of all EPC selection criteria.

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## Appendix A: Methods

We assessed nomination for priority for a systematic review or other AHRQ Effective Health Care report with a hierarchical process using established selection criteria. Assessment of each criteria determined the need to evaluate the next one. See Appendix B for detailed description of the criteria.

### Appropriateness and Importance

We assessed the nomination for appropriateness and importance.

### Desirability of New Review/Absence of Duplication

We searched for high-quality, completed or in-process evidence reviews published in the last three years <date> on the questions of the nomination from these sources:

- AHRQ: Evidence reports and technology assessments
  - AHRQ Evidence Reports <https://www.ahrq.gov/research/findings/evidence-based-reports/index.html>
  - EHC Program <https://effectivehealthcare.ahrq.gov/>
  - US Preventive Services Task Force <https://www.uspreventiveservicestaskforce.org/>
- US Department of Veterans Affairs Products publications
  - Evidence Synthesis Program <https://www.hsrd.research.va.gov/publications/esp/>
  - VA/Department of Defense Evidence-Based Clinical Practice Guideline Program <https://www.healthquality.va.gov/>
- Cochrane Systematic Reviews <https://www.cochranelibrary.com/>
- PROSPERO Database (international prospective register of systematic reviews and protocols) <http://www.crd.york.ac.uk/prospero/>
- PubMed <https://www.ncbi.nlm.nih.gov/pubmed/>
- WHO Health Evidence Network [https://www.who.int/europe/groups/health-evidence-network-\(hen\)](https://www.who.int/europe/groups/health-evidence-network-(hen))

### Impact of a New Evidence Review

The impact of a new evidence review was qualitatively assessed by analyzing the current standard of care, the existence of potential knowledge gaps, and practice variation. We considered whether it was possible for this review to influence the current state of practice through various dissemination pathways (practice recommendation, clinical guidelines, etc.).

### Feasibility of New Evidence Review

We conducted a search of primary literature from Medline published within the last 5 years from December 2018 through December 2023. We reviewed the entire search yield for Medline, 288 entries in total, for relevance.

Search strategy

**MEDLINE ALL <1946 to December 16, 2023>**

Date searched: December 17, 2023

1 severe and persistent mental disorder\* OR severe and persistent mental illness\* OR schizophrenia spectrum OR psychotic disorder\* OR bipolar OR depressive disorder\* OR anxiety disorder\* AND pharmacy OR pharmacist (22195)

2 severe[Title/Abstract] AND persistent mental disorder\*[Title/Abstract] OR severe[Title/Abstract] AND persistent mental illness\*[Title/Abstract] OR schizophrenia spectrum[Title/Abstract] OR psychotic disorder\*[Title/Abstract] OR bipolar[Title/Abstract] OR depressive disorder\*[Title/Abstract] OR anxiety disorder\*[Title/Abstract] AND pharmacy[Title/Abstract] OR pharmacist[Title/Abstract] (8587)

3 severe[Title] AND persistent mental disorder\*[Title] OR severe[Title] AND persistent mental illness\*[Title] OR schizophrenia spectrum[Title] OR psychotic disorder\*[Title] OR bipolar[Title] OR depressive disorder\*[Title] OR anxiety disorder\*[Title] AND pharmacy[Title] OR pharmacist[Title] (2878)

4 severe[Title] AND persistent mental disorder\*[Title] OR severe[Title] AND persistent mental illness\*[Title] OR schizophrenia spectrum[Title] OR psychotic disorder\*[Title] OR bipolar[Title] OR depressive disorder\*[Title] OR anxiety disorder\*[Title] AND pharmacy[Title] OR pharmacist[Title] Filters: Clinical Trial, Meta-Analysis, Randomized Controlled Trial, Systematic Review, in the last 5 years (329)

5 severe[Title] AND persistent mental disorder\*[Title] OR severe[Title] AND persistent mental illness\*[Title] OR schizophrenia spectrum[Title] OR psychotic disorder\*[Title] OR bipolar[Title] OR depressive disorder\*[Title] OR anxiety disorder\*[Title] AND pharmacy[Title] OR pharmacist[Title] NOT antimicrobial[Title] AND NOT antibiotics[Title] AND NOT opioid\*[Title] AND NOT Cancer[Title] AND NOT Antiviral[Title] ( Filters: Clinical Trial, Meta-Analysis, Randomized Controlled Trial, Systematic Review, in the last 5 years (104)

6 diabetes OR cardiovascular disease OR respiratory OR metabol\* AND team AND pharmac\* (3051)

7 mental health OR psychiatry OR psychiatric AND Psychiatric pharmacist\* (645)

8 care team, patient[MeSH Terms] OR collaboration[MeSH Terms])) AND pharmac\*[MeSH Terms] (559)

9 diabetes OR cardiovascular disease OR respiratory OR metabol\* AND team AND mental AND pharmac\* (146)

10 pharmacist AND psychiatry AND team (278)

11 Search: ((clinical pharmacist[MeSH Terms]) AND (mental health[MeSH Terms])) AND (care team, medical[MeSH Terms]) (240)

12 pharmacy OR pharmacist AND severe and persistent mental disorder\* OR severe and persistent mental illness\* OR schizophrenia spectrum OR psychotic disorder\* OR bipolar OR depressive disorder\* OR anxiety disorder\*

13 (((team) OR (multidisciplinary)) OR (collaborative) OR (multidisciplinary) AND (psychiatr\*)) AND (pharmacy) (288)

14 (((team) OR (multidisciplinary)) AND (mental)) AND (pharmacy) (98)

(((team) OR (multidisciplinary)) AND (behavior\*)) AND (pharmacy) (89)

15 collaborative care model AND pharmacist (478)

16 mental health OR psychiatr\* AND collaborative care model AND pharmacist (32)

17 mental health OR psychiatric OR psychiatry OR bipolar OR schizophrenia AND team AND pharmacist (179)

18 #5 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #16 OR #17 Filters: in the last 5 years, English (288)

Results deduplicated.

## Value

We assessed the nomination for value. We considered whether or not the clinical, consumer, or policymaking context had the potential to respond with evidence-based change, if a partner

organization would use this evidence review to influence practice, and if the topic supports a priority area of AHRQ or the Department of Health and Human Services.

## Appendix B. Selection Criteria Assessment

Selection Criteria	Assessment
<b>1. Appropriateness</b>	
1a. Does the nomination represent a health care drug, intervention, device, technology, or health care system/setting available (or soon to be available) in the U.S.?	Yes. Clinical pharmacists are authorized mental health providers.
1b. Is the nomination a request for an evidence report?	Yes. The nominator is interested in clinical care benefits and medication safety outcomes driven by a clinically integrated clinical pharmacist. Such guidance would ideally be supported by an evidence review.
1c. Is the focus on effectiveness or comparative effectiveness?	Yes. The nominator is interested in effectiveness.
1d. Is the nomination focus supported by a logic model or biologic plausibility? Is it consistent or coherent with what is known about the topic?	Yes.
<b>2. Importance</b>	
2a. Represents a significant disease burden; large proportion of the population	Yes. The 2022 NSDUH found 59.3 million American adults had AMI and 6% had serious mental illness SMI. <sup>1</sup> Only around 50% with AMI and 67% with SMI received treatment. Diabetes, cardiovascular disease, cancer, and respiratory disorders commonly co-occur with depression, anxiety, and some SMIs like schizophrenia and bipolar disorder. <sup>2</sup> People with depression have a 40% higher risk of developing cardiovascular and metabolic syndrome (MetS) than the general population, and people with SMI are nearly twice as likely to develop these conditions. <sup>3</sup>
2b. Is of high public interest; affects health care decision making, outcomes, or costs for a large proportion of the United States population or for a vulnerable population	Yes.
2c. Incorporates issues around both clinical benefits and potential clinical harms	Yes. The nominator is interested in both benefits and harms.
2d. Represents high costs due to common use, high unit costs, or high associated costs to consumers, to patients, to health care systems, or to payers	Yes. In 2020, among Americans aged 18 and older, total cost of care for treatment of mental health disorders was \$213 billion and costs an additional \$193.2 billion in lost earnings. <sup>4</sup>
<b>3. Desirability of a New Evidence Review/Absence of Duplication</b>	
3. A recent high-quality systematic review or other evidence review is not available on this topic	We did not find any high-quality systematic reviews that covered all areas of the nominator's interest. We included 5 narrow systematic or scoping reviews that might inform a new evidence product.
<b>4. Impact of a New Evidence Review</b>	
4a. Is the standard of care unclear (guidelines not available or guidelines inconsistent, indicating an information gap that may be addressed by a new evidence review)?	Yes, the standard of care is unclear because of the limited evidence.
4b. Is there practice variation (guideline inconsistent with current practice, indicating a potential implementation gap and not best addressed by a new evidence review)?	There is practice variation, and a lack of high-quality, recent evidence reviews that cover the AAPP's scope of interest.
<b>5. Primary Research</b>	

<p>5. Effectively utilizes existing research and knowledge by considering:</p> <ul style="list-style-type: none"> <li>- Adequacy (type and volume) of research for conducting a systematic review</li> <li>- Newly available evidence (particularly for updates or new technologies)</li> </ul>	<p>We identified 288 studies in our search. Though the number of studies is modest, there were many studies older than 2018 that might be valuable.</p>
<p>6. Value</p>	
<p>6a. The proposed topic exists within a clinical, consumer, or policy-making context that is amenable to evidence-based change and supports a priority of AHRQ or Department of Health and Human Services</p>	<p>Yes.</p>
<p>6b. Identified partner who will use the systematic review to influence practice (such as a guideline or recommendation)</p>	<p>The nominators, the AAPP, plan to use the evidence to increase patient access to clinical pharmacists and plan to use this evidence to inform stakeholders—employers, payers, healthcare systems and policymakers—about the benefits of including clinical pharmacists on the psychiatric health care team.</p>

Abbreviations: AAPP=American Association of Psychiatric Pharmacists; AHRQ=Agency for Healthcare Research and Quality; AMI=any mental illness; NSDUH=National Survey on Drug Use and Health; SMI=serious mental illness