

# Family Doctor

*A Journal of the New York State Academy of Family Physicians*



Winter 2025

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*Focus:*

## **Mental Health**

### **FEATURE ARTICLES:**

- Reducing Generalized Anxiety Disorder using Osteopathic Manipulative Treatment/Techniques
- Generative Chatbots in Mental Health
- The Aftermath of COVID-19 on the Mental Health of Pediatric Populations
- Loneliness Among Older Adults
- Eating Disorder Toolkit for Primary Care: Enhancing Identification, Diagnosis, and Management
- Solution-Focused Therapy: Helpful Tools for Family Physicians

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## Articles

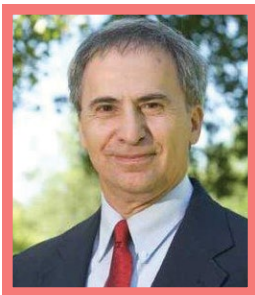
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## From the Executive Vice President

By Vito Grasso, MPA, CAE

The second coming of a Trump Administration presents unique challenges.

The intense and persistent partisan divisions which have developed are becoming more difficult to understand in the aftermath of the 2024 national elections.

Polls showed continuing division among voters along partisan lines and pundits were convinced the outcome would be another close election with no definitive mandate for the winner. Instead, President Trump won decisively, carrying Republicans to majorities in both Houses of Congress. Post-election analysis suggests that many people voted for Trump while also supporting causes which he rejects, such as access to abortion, rights for LBGQTQ people, social justice and other causes which have not been embraced by the Republican party.

It may be that many voters prioritized the state of the economy and concerns about wars in Europe and the Middle East over social issues in deciding who to vote for in the presidential election. The logic may simply be that social issues have defied resolution for generations and will not be improved without further evolution of society and personal values, while the economy and foreign wars are immediate challenges that must be addressed to reduce the diversion of resources that are needed if we are ever going to create public programs to address social issues.

Many health care professionals have been vocal in expressing concerns about the nomination of Robert F. Kennedy, Jr., to be secretary of the Department of Health & Human Services (HHS). These concerns have been amplified by liberal and progressive politicians and manufacturers of vaccines who have focused on Kennedy's association with the anti-vaccine movement. The self-interest of vaccine manufacturers combined with the partisan interests of liberals and progressives in the Democratic Party, will assure intense resistance to Kennedy's confirmation. Many health care professionals and patient advocacy organizations committed to evidence-based medicine, are also likely to resist Kennedy's confirmation because of his rejection of scientific evidence that vaccines are safe and effective and his persistent reiteration of debunked theories about an association between vaccines and autism. Kennedy's accusations of widespread corruption among pharmaceutical companies and alleged collusion between the industry and regulators such as the Food & Drug Administration (FDA), however, resonate with many voters.

It appears that the AMA and its state affiliates will be part of the chorus opposing the Kennedy nomination. This presents an interesting challenge for the medical profession. Although Kennedy's position on vaccines has been the focal point of criticism of his nomination by the AMA and others among the medical

profession, he has also been vocal about the need for general reform of health care including the method of setting payment for physicians. Primary care advocates, including the AAFP and NYSAFP, have long been concerned about the disproportionate emphasis on acute care inherent in the work of the AMA's RVS Update Committee (RUC) which makes recommendations for physician payment. The RUC's recommendations are routinely adopted by CMS in setting Medicare fees. The RUC has historically favored procedures and acute care services by physicians to the detriment of primary care. Kennedy has said he will overhaul the physician payment process and will elevate investment in primary and preventive care, objectives the Academy has advocated for.

Confirmation of Kennedy could be the stimulus for actual reform of the payment process for physicians and other providers. Given the damage that has occurred by the emphasis on acute care and procedures over the years, an overhaul of the payment system could provide the best opportunity for reform that could improve population health by incentivizing more primary and preventive care. Thus, the dilemma. Kennedy softened his anti-vaccine position when he became a candidate for President and has maintained that he acknowledges the effectiveness of vaccines but merely wants all evidence to be considered. He has focused on food quality and chronic disease in his robust criticism of the FDA, suggesting that he will attempt to make major changes in the bureaucracies which have dominated the regulatory space for food and medical products. That may not be a bad thing.

It is not uncommon for the ideological pendulum of American politics to swing back and forth every few election cycles. This year, however, the election results defy definition along an ideological or even partisan spectrum.

The perplexing outcome of the 2024 elections may best be understood as a call for radical change. Many voters supported moderate and even progressive candidates for Congress but also voted for Trump because they likely saw Trump as the better option for shaking up the bureaucracy and producing fundamental change. For advocates of wholesale change in health care, the same may be true regarding the nominees for leadership positions with the major federal agencies involved in health care. Kennedy and Dr. Oz may not be typical candidates for their, respective, agencies but they certainly do present an opportunity for dramatic and consequential change. As an organization which has long called for substantial changes in health care, the Academy may be best advised to stand by and see what change these nominees contemplate in their public statements with legislators during hearings on their nominations before joining other organizations in simply opposing these nominations altogether.



## President's Post

By Rachelle Brilliant, DO, FAAFP

In this issue of *Family Doctor*, we explore the many aspects of mental health we treat as family physicians. From the many permutations of anxiety and depression to the complex array of mood and personality disorders including peripartum and postpartum mood disorders, we experience the full breadth of family medicine in our daily practice. It is not surprising that when we opened our submissions for mental health topics that we focused on the needs of our patients. We spend a lot of time trying to help our patients, often minimizing what we need as physicians. Family physicians are beloved and well known for their patient centered care, while often placing their own wellness second, or even a distant third.

It has been 6 years since we discussed physician burnout here in our summer 2018 issue of *Family Doctor*. Things however, have gotten worse due to the COVID pandemic and now, disdain for scientific expertise through our political discourse. Almost 50% of family physicians report at least one symptom of burnout. According to the *Medscape National Physician Burnout & Suicide Report 2020: The Generational Divide*, family medicine physicians placed in the top five specialties who reported the highest rates of burnout. AAFP offers several CME articles on identifying and self-treatment of burnout at <https://www.aafp.org/family-physician/practice-and-career/managing-your-career/physician-well-being/burnout-and-depression-support.html> or search 'burnout' after logging into [www.aafp.org](http://www.aafp.org).

Some simple options if you are experiencing symptoms of burnout (for a more comprehensive list go to AAFP.org website on burnout.)

- Get physical activity. Exercise outdoors, if possible.
- Do something you enjoy. Make it a habit to schedule "me" time each week so you can recharge for the week ahead.
- Keep a gratitude log. List one or two things each day that you're grateful for in your life.
- Get involved in NYSAFP. Applications for our commissions will go out in March for next year. Our Congress of Delegates will be May 17th and 18th in Albany, NY. If you are not sure who is coming from your county, or would like additional information contact Donna Denley at [donna@nysafp.org](mailto:donna@nysafp.org).

AAFP also has a *Physician Support Line at 888-409-0141*. It's a free and confidential resource that is staffed by volunteer psychiatrists who specialize in mental health wellness. The service is available from 8 AM -1 PM (EST) daily.

The National Suicide Prevention Lifeline is free and confidential: *(800) 273-8255 or 988*

*If you know someone who is in immediate danger, don't leave them alone and call 911.*

Let's dedicate this new year to making our own wellness as important as our patients!

Rachelle Brilliant, DO

*Family physicians are beloved and well known for their patient centered care, while often placing their own wellness second, or even a distant third.*

# Generative Chatbots in Mental Health

By Michael Liu; Julia Tartaglia, MD and Demetrios Paidoussis, MD

## Introduction

With the rising demand for mental health services and limited resources, particularly in primary care, generative chatbots are becoming valuable tools for mental health support.<sup>1</sup> Chatbots are AI programs that simulate human-like conversation, using natural language processing (NLP) to respond to user inputs in real-time. Many of these tools now incorporate evidence-based therapeutic techniques, such as cognitive behavioral therapy (CBT), aiming to assist individuals with symptoms of anxiety, mild depression, and stress.<sup>2-4</sup> Unlike traditional mental health apps, chatbots are dynamic, engaging users in personalized dialogues that can mimic aspects of human interaction, offering immediate responses without the need for scheduling or waiting.<sup>5</sup>

These AI-driven tools present both opportunities and challenges. While they are accessible and scalable, making them particularly valuable in underserved communities, they have limitations, especially in detecting mental health crises and recognizing the boundaries of their capabilities. As more patients turn to these tools for mental health support, it becomes crucial for family physicians to understand both the benefits and risks of integrating chatbots into mental health care. This article explores the current applications of mental health chatbots, their potential role in primary care, and the ethical considerations necessary to ensure safe and effective use alongside physician oversight.

## What Chatbots Do Well

Generative chatbots are designed to help users manage mild to moderate mental health issues by employing evidence-based techniques in a conversational format. Many popular chatbots, like Woebot and Wysa, are grounded in principles of CBT and offer structured exercises, mood tracking, and self-reflection prompts to guide users through common challenges. Chatbots are available 24/7, providing support at any time of day, which can be particularly beneficial for individuals who experience anxiety or stress outside regular office hours.

The core strength of chatbots lies in their ability to provide accessible support, especially in environments where mental health services are scarce or stigmatized. In many rural and underserved areas, access to mental health providers is limited, and primary care physicians are often the first and sometimes only line of support. For patients uncomfortable with traditional therapy or constrained by financial barriers, chatbots offer an alternative that can introduce them to therapeutic principles and techniques without the cost or stigma associated with formal therapy.<sup>6-8</sup>

Chatbots have also shown promise in reaching populations that may be hesitant to engage in traditional mental health care, such as adolescents and individuals from stigmatized backgrounds. Young adults, in particular, often feel more comfortable opening up to an anonymous chatbot than to a human provider, which can reduce barriers to seeking help.<sup>9</sup> In some countries, chatbots have been specifically designed to address taboo topics, such as adolescent reproductive health, allowing users to access information they might otherwise avoid discussing with family or healthcare providers.<sup>7</sup>

## Addressing Engagement Issues in Traditional Mental Health Applications

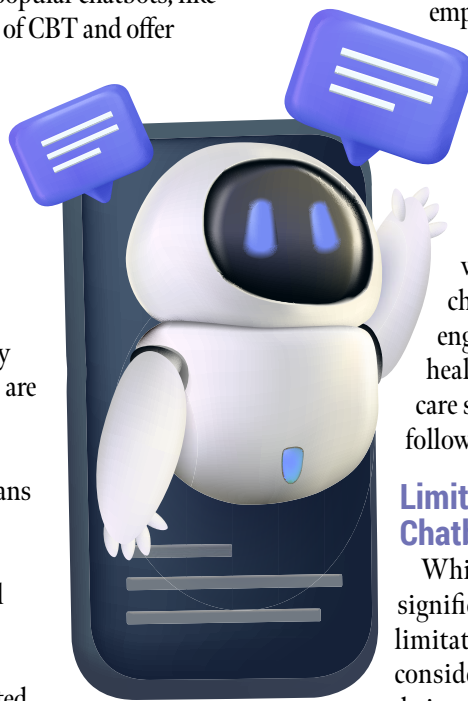
While traditional mental health apps, like Headspace, have introduced therapeutic techniques to millions, they often struggle with low user engagement. Many users download these apps with good intentions, only to abandon them shortly thereafter.<sup>4</sup> Chatbots, on the other hand, provide an interactive experience that may encourage users to return. Studies show that chatbots with a conversational interface and adaptive and empathetic responses can sustain user engagement over time, a critical factor in achieving long-term mental health improvement.<sup>4,10</sup>

Patients tend to respond particularly well to chatbot interventions that reframe their thoughts with empathy and specificity. For example, users often find greater value in responses that go beyond simple encouragement like “stay positive,” favoring instead interventions that guide them to view specific situations from a new, constructive perspective.<sup>10</sup> This approach makes patients feel heard and understood, fostering a stronger connection with the tool.<sup>10</sup> The empathetic tone and tailored responses help create a therapeutic alliance that is often missing in traditional apps and is essential for long-term engagement.

One particular study explored the potential of a self-compassion chatbot to encourage self-reflection, finding that users were more willing to engage in therapeutic exercises with a chatbot than with a static app.<sup>3</sup> This increased engagement can lead to better adherence to mental health interventions, a critical factor in primary care settings where physicians may have limited follow-up with patients.

## Limitations and Ethical Concerns in Using Chatbots for Mental Health

While chatbots offer clear benefits, they also have significant limitations. Understanding these limitations is essential for family physicians considering the recommendation of such tools to their patients.



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One of the most pressing concerns with mental health chatbots is their limited ability to detect and respond to crises. Chatbots are primarily designed to handle low-stakes situations, such as mild anxiety or daily stress.<sup>2-4</sup> However, when a user experiences a severe mental health episode, such as suicidal ideation or psychosis, chatbots may not adequately recognize or address these cues. Unlike human therapists, who are trained to assess risk based on verbal and non-verbal cues, chatbots rely solely on keyword recognition and lack the contextual understanding necessary for accurate crisis intervention.<sup>8</sup>

The recent tragic case of a 14-year-old boy, who died by suicide after extensive interactions with a chatbot on the Character.AI platform, highlights the potential risks of AI technologies not specifically designed for mental health or with mental health professionals.<sup>11</sup> The chatbot failed to escalate the situation or provide appropriate resources, and its responses may have unintentionally reinforced the user's distress, according to a lawsuit filed by his mother. While some chatbots are programmed to suggest crisis resources or notify trusted contacts, most still lack comprehensive protocols to ensure user safety. This reinforces the need for human oversight and emphasizes that chatbots should be considered adjuncts in the care continuum, not standalone solutions. For family physicians, encouraging patients to reach out to real people during crises remains essential for safeguarding patient safety.

Another potential risk is that users might develop an over-reliance on chatbots, preferring them over real human interactions. While chatbots are designed to be convenient and accessible, they lack the depth of human empathy and connection that is essential for mental health support. There is a concern that users who frequently interact with chatbots might reduce their reliance on friends, family, or professional help, inadvertently isolating themselves. This could lead to a decrease in the development of social support networks, which are vital for mental health resilience.<sup>8</sup>

This concern is particularly relevant in the primary care context, where family physicians often serve as the initial point of contact for mental health concerns. If patients come to rely heavily on chatbots, their engagement with family, friends, and other social support systems might diminish, potentially impacting their long-term well-being. Social support is a well-known protective factor in mental health, and family physicians should encourage a balance between chatbot use and maintaining real-world connections.<sup>12</sup>

### Balancing Chatbot Use with Physician Oversight

To integrate chatbots effectively into the mental health continuum, it is essential to strike a balance between AI support and physician oversight. Chatbots can serve as helpful tools for early intervention and symptom management, but their limitations require that they operate within a framework that includes oversight by healthcare professionals.

It is essential for family physicians to set clear boundaries around chatbot use, explaining to patients that these tools are intended to be

supplemental rather than substitutes for traditional therapy. This guidance is especially important for patients with complex mental health histories or those at higher risk for severe episodes. Physicians should emphasize that while chatbots can help manage day-to-day challenges, they are not equipped to handle emergencies or provide the depth of care that a licensed therapist or psychiatrist can offer.

Providing patients with a list of crisis resources and making them aware of the chatbot's limitations can help prevent misunderstandings and over-reliance. For example, a physician might recommend a chatbot for daily journaling or CBT exercises but advise the patient to reach out directly if they experience thoughts of self-harm or other severe symptoms.

### Conclusion

Generative chatbots have carved out a promising niche in mental health care, offering an accessible and scalable way to manage mild to moderate symptoms of anxiety, depression, and stress. For family physicians, understanding the capabilities and limitations of these tools is essential for recommending them appropriately within the primary care context.

While chatbots are valuable tools for early intervention and supplemental support, they are not a substitute for human oversight. Integrating chatbots into a broader mental health strategy, with clear boundaries and physician involvement, allows for the best of both worlds: accessible support when patients need it and professional guidance for more complex issues. As technology continues to advance, the collaboration between AI tools and healthcare providers holds potential for more comprehensive, patient-centered mental health care.

By recognizing chatbots as complementary tools, family physicians can empower patients with accessible mental health support while ensuring that clinical care remains at the center of any mental health strategy. Family physicians, as initial points of contact for mental health care, are uniquely positioned to educate patients on responsible chatbot use, emphasizing that these tools should enhance, not replace, real-world social support and professional guidance.

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## Upcoming Events

### 2025

Feb. 23, 2025  
Winter Cluster

Feb. 24, 2025  
Advocacy Day

May 10, 2025  
Congress of Delegates  
Opening Day

May 17-18, 2025  
Congress of Delegates  
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# Geisinger

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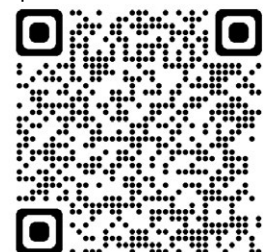
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EOE/AA: Disability/vet.

# Loneliness Among Older Adults

By Albert Levy, MD and William McDonald, MD

When a patient comes to our office, we add to the vital signs a simple question with profound significance to our encounter, “How often are you lonely?” This question usually catches them off guard, but it is indeed vital. Social isolation during the pandemic protected us from spreading COVID, but it led to significant increases in adult loneliness.<sup>1</sup> Bridge games were canceled, dinner dates were held off, and tennis matches were postponed. Only now are we starting to see the effects of those changes. Last year, Surgeon General Dr. Vivek Murthy highlighted the impact of loneliness, calling it an underappreciated public health crisis.<sup>2</sup>

Loneliness is an emotional state characterized by a state of solitude or being alone.<sup>3</sup> Loneliness was originally associated with a more spiritual state that allowed time for self-reflection and perhaps connection to a higher power. However, even at that time, the four humors demanded that every aspect of one’s health required moderation and balance.<sup>4</sup> It is only more recently that medicine has determined the consequences of increased loneliness. To reflect this, loneliness has been described as a “social pain” where a patient feels a discrepancy between desired social connections and their actual interactions.<sup>5</sup>

While it can affect individuals of any age, it is particularly prevalent among older adults. Currently, one in three older adults report loneliness, representing a major unmet health need. This was especially true among adults living alone and those with annual incomes <\$60,000. It was also seen among those with impaired hearing, highlighting the increased vulnerability of those with impaired senses.<sup>6</sup> This effect was only heightened by the pandemic. Countries across the world instituted critical policies to curb infectious spread of the COVID-19 virus including shelter-at-home orders and physical distancing. In addition, employment and education across the world were transitioned to remote interaction, and many of these policies remain in place today. Due to widespread isolation, the cases of loneliness increased significantly.<sup>5</sup>

We are only beginning to understand more about the negative effects of loneliness. Patients with loneliness perceive they have poor health, and they are more likely to experience mental

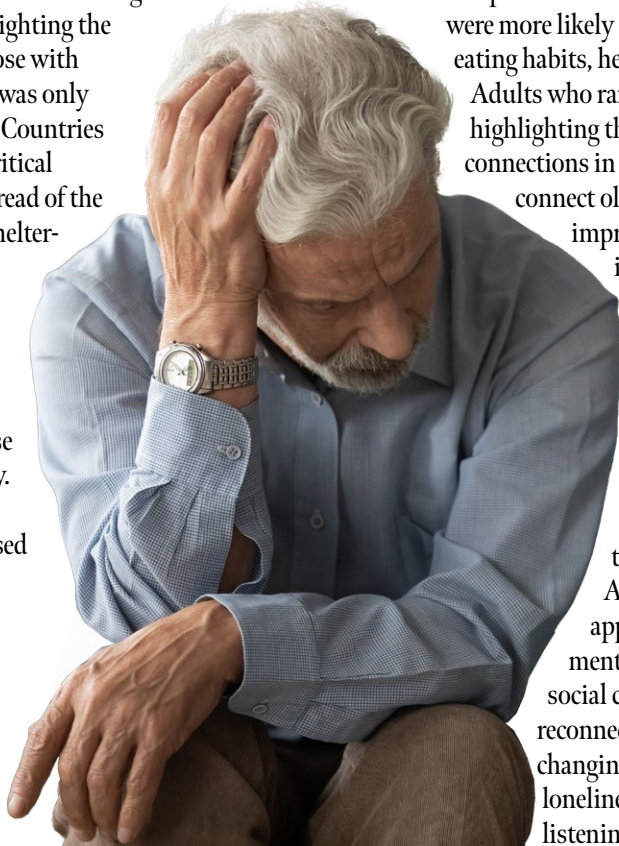
illness including depression.<sup>6</sup> Loneliness has been connected to an increased risk for heart disease, stroke, and premature death, and in older adults leads to a 50% increased risk for developing dementia.<sup>7</sup> All of these factors showcase the need for change, but a major barrier is that loneliness is often undetected.

In clinic, providers regularly screen for depression but rarely ask about loneliness, which is entirely unique from symptoms of depression. Just by presenting to the appointment, the patient has taken the first steps toward seeking help. Several scales have been developed to accommodate an already busy clinic environment.<sup>8</sup> Of these, we should be regularly screening for older adult loneliness through a validated and direct simple question adapted from the 3 item-UCLA Loneliness scale, “how often are you lonely?”<sup>9</sup> This brief screening is enough to determine if an older adult is truly lonely, and it is a question that could easily be a required component of the annual wellness visit.

Once identified as lonely, a family physician should feel empowered to take the next step in helping patients take positive actions toward improving their health. It is important to establish a social network baseline. Start by noting if the patient has come into the office alone or with a companion, and expanding to asking about social groups and spiritual organizations can also be helpful. Understanding the social network baseline is critical to knowing how to take the next steps in the path toward reconnecting. When compared to lonely adults, patients that did not report loneliness were more likely to report being physically active, practice healthy eating habits, hear better, have better sleep, and avoid tobacco use.

Adults who rarely felt loneliness also were more socially active, highlighting the need to encourage patients to find new social connections in their lives.<sup>6</sup> Support groups specifically designed to connect older adults experiencing loneliness led to improvements in both physical and mental health, including decreased hospitalizations.<sup>10</sup>

The rise of urbanization, technological dependence, and the breakdown of traditional social structures have exacerbated loneliness globally. It has become clear there are effects on both physical and mental aspects of a patient’s health, and there is no one-size-fits-all approach to treating loneliness. Instead, time must be set aside to explore what is driving a patient’s loneliness. Addressing loneliness requires a multi-faceted approach, incorporating community engagement, mental health support, and policies aimed at fostering social connectedness.<sup>8</sup> With a combined effort, the effect of reconnecting lonely older adults could be truly life-changing. Family physicians are primed to combat loneliness, but we need to be asking the right questions and listening to the answers.



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**Table 1: Suggestions to Decrease Loneliness Among Older Adults**

<b>1. Expand the social circle:</b>	<ul style="list-style-type: none"> <li>• Utilize local older adult centers sponsored through organizations such as the Agency on Aging</li> <li>• Find community events through local newsletters and newspapers</li> </ul>
<b>2. Rekindle old connections:</b>	<ul style="list-style-type: none"> <li>• Develop a set schedule to check in on family and friends</li> <li>• Write memoirs to share with younger members of your family</li> </ul>
<b>3. Learn a new skill:</b>	<ul style="list-style-type: none"> <li>• Seek out older adult education courses at local colleges and universities</li> <li>• Increase proficiency in technology such as Zoom to keep social connections alive</li> </ul>
<b>4. Get involved:</b>	<ul style="list-style-type: none"> <li>• Volunteer at a local animal shelter or consider adopting a pet</li> <li>• Find a cause that is meaningful and volunteer</li> </ul>
<b>5. Stay healthy:</b>	<ul style="list-style-type: none"> <li>• Become a member at a local gym or find group exercise classes</li> <li>• Try health-conscious recipes with family and friends at home</li> </ul>
<b>6. Build a team:</b>	<ul style="list-style-type: none"> <li>• Utilize a multidisciplinary team of geriatricians, social workers, and geriatric care managers to establish a framework for success</li> <li>• Consider if psychotherapy would be beneficial (if there is concern for comorbid mental illness)</li> </ul>

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# Albany Report

By Reid, McNally & Savage

The 2025 NYS legislative session begins on Wednesday, January 8, 2025, in Albany and will run through June 12th. On January 14th Governor Kathy Hochul unveiled her 2025 State of the State address identifying her leading priorities for the year and the Governor is expected to release her SFY 2025-26 Executive Budget by January 21st.

Our firm has been working with NYSAFP to gear up for the new year and new session. Below is a summary of recent advocacy successes and efforts for NYSAFP, and priorities that we will continue to address this year. We have also included a summary of 2024 state election results and recent actions taken by Governor Hochul this fall on health-related legislation that passed both houses in 2024.

## NYSAFP Advocacy Works

### Wrongful Death Bill Vetoed by Governor Hochul

Thanks to strong opposition from NYSAFP, partners in medicine, as well as hospitals, insurers and others, a third version of the “wrongful death” bill passed by the Legislature in June was again vetoed by Governor Hochul on December 21st. Efforts included NYSAFP’s outreach and members’ grassroots letters to the Governor asking her to again veto the bill, working with a coalition of stakeholders, as well as an ad campaign in Empire Report NY (see below). This advocacy clearly registered strong opposition as in her veto message she noted the higher costs this bill would likely place on patients and consumers, and the health care system as a whole. Thank you to the full membership for your strong efforts that contributed to this positive outcome.



It takes a team of healthcare professionals to care for patients

**NYS can't afford to lose any members of the team**

**Governor Hochul:**  
Please Veto Wrongful Death Expansion  
S8485/A9232

## Ongoing Advocacy

**Reproductive Health Funding:** \$1 million was included in the final state budget in 2024 and it has been broadly allocated towards abortion access specific to services in New York State. RMS has been working with NYSAFP leadership and members to meet with key legislators, agency staff, and the Governor’s staff to seek funding to go toward interested family medicine training programs and support for medication abortion care provided pursuant to New York’s 2023 shield law. We have had several planning/strategy meetings with Senator Krueger, Assemblymember Epstein, and various stakeholders for their bill, S.3060-B/A.3279-C, which would establish a reproductive health services training program fund. We also had productive meetings with Senator Hinchey in which she pledged her support for prioritizing these areas for state funding and with the Governor’s office to urge inclusion in their SFY 2025-26 Executive Budget. We will continue these advocacy efforts to set up a strong foundation for this funding request ahead of session and the Academy’s annual Advocacy Day on February 24, 2025.

**Vaccine Advocacy:** NYSAFP and RMS continue to lead a vaccine coalition in New York, *Let’s Get Immunized NY* to help support education

and advocacy around immunizations for children and adults. We are continuing to grow both the partners and funding for this important effort as we move into year four of the campaign in 2025. Further, during the 2024 legislative session, the American Cancer Society Cancer Action Network held a lobby day and included advocacy in support of legislation to require adult vaccine reporting to the State Immunization Registry strongly supported by NYSAFP. The Academy also continues to advocate for the public purchase of all vaccines with the State to ensure access, and to treat vaccines as the public good they are.

**Preceptor Tax Credit:** For many years, the Academy has supported legislation to establish a personal income tax credit for clinicians who provide preceptor instruction to students, S.2067/A.2230. The bill was passed by the Senate in 2024, and it will again serve as an Academy priority for 2025 in support of family practice in New York. In September, Dr. Brilliant sent letters by RMS to every medical school dean in New York asking for their help in building support for this legislation. We have also been in touch with the bill sponsor, Senator Stavisky, to offer our assistance with identifying a new Assembly sponsor given Assemblywoman Gunther's retirement in 2024.

**Shield Laws:** NYSAFP has been working amongst a coalition including the New York Civil Liberties Union, Planned Parenthood of Greater New York, the Abortion Coalition for Telemedicine Access, and others to enhance New York's shield laws protecting abortion and gender-affirming care. Several meetings have been held throughout the fall to ensure changes made to the bill language will work to further protect clinicians and patients and address concerns that Senate leadership had in 2024. Additionally, NYSAFP has been working directly with Senator Mayer to develop a bill, which has been pre-filed for the 2025 session, to protect the identity of individual clinicians providing medication abortion care in light of out-of-state attacks on abortion access. We have several meetings scheduled for early 2025 with additional legislators and central staff, and plan to heighten advocacy efforts in coordination with other groups as needed, to hopefully get these bills and other reproductive legislation passed by the Assembly and Senate in January, prior to federal administration changes on January 20, 2025.

**Insurance & Payment Reforms:** We are continuing to pursue greater investments in primary care by supporting legislation to require a minimum investment of the health care spend in NYS for primary care. We also continue to advocate for insurance simplification and reforms to remove insurance barriers to access to care and time-consuming processes imposed on physician practices. We have also worked to support increased funding for primary care recruitment and retention efforts and for improvements in how the Doctors Across NY program operates. These efforts will continue in 2025.

**Medical Aid in Dying:** NYSAFP has been supporting legislation to authorize medical aid in dying in the State for several years and will be active again this session discussing the bill with legislators and participating in public relations activities. We have been working with the New York Alliance for Medical Aid in Dying to share and coordinate advocacy efforts and are building on the

Academy's efforts by pursuing outreach to a handful of Senators that have been on the fence. We have shared a toolkit to assist Academy members in connecting with their Senators in key districts and have also encouraged any interested individuals outside of those areas to also reach out to their lawmakers.

## 2024 New York State General Election Update

As anticipated, both the State Senate and Assembly remain in control by the Democratic party in New York following the November 2024 elections, however some incumbents lost their seats and there were a number of retirements last year. In the Senate, Democrats secured a 41 to 22 majority, and several new representatives will be heading to Albany this month. To start, Iwen Chu (Democrat) was defeated by Republican challenger Steve Chan for the 17th Senate district seat in Brooklyn by over 10 percent, and in central New York, after a contentious race to replace Senator John Mannion (Democrat) and a ballot recount, Chris Ryan (Democrat) was declared the winner of the 50th Senate district seat by a slim majority. Additionally, Siela Bynoe (Democrat) won the 6th Senate district seat replacing Senator Kevin Thomas (Democrat) who vacated his seat; Assemblymember Pat Fahy (Democrat) won the 46th Senate district replacing retiring Senator Neil Breslin (Democrat); and April Baskin (Democrat) won the 63rd Senate District seat replacing Senator Tim Kennedy (Democrat) who went to Congress.

On the Assembly side, Democrats maintained control with a 103 to 47 majority. Notable changes include Monica Wallace (Democrat) lost the 143rd Assembly district seat to Republican Patrick Chludzinski; Gina Sillitti (Democrat) lost the 16th Assembly district seat to Republican Daniel Norber; and Brian Curran (Republican) lost the 21st Assembly district seat to Judy Griffin (Democrat) who previously held the seat.

The chart below shows vacated seats in the Assembly and the individuals that will be succeeding them after winning their respective races, grouped by region.

<b>Long Island</b>	AM Fred Thiele (D-1st District) replaced by Thomas Schiavoni (D)
	AM Kimberly Jean-Pierre (D-11th District) replaced by Kwani O'Pharow (D)
	AM Taylor Darling (D-18th District) replaced by Noah Burroughs (D)
<b>NYC</b>	AM Jeffrion Aubry (D-35th District) replaced by Larinda Hooks (D)
	AM Juan Ardila (D-37th District) replaced by Clair Valdez (D)
	AM Helene Weinstein (D-41st, District) replaced by Kalman Yeger (D)
	AM Daniel O'Donnell (D-69th District) replaced by Micah Lasher (D)
<b>Hudson Valley</b>	AM Inez Dickens (D-70th District) replaced by Jordan Wright (D)
	AM Kenneth Zebrowski (D-96th District) replaced by Patrick Carroll (D)
<b>Capital Region</b>	AM Aileen Gunther (D-100th District) replaced by Paula Elaine Kay (D)
	AM Pat Fahy (D-109th District) replaced by Gabriella Romero (D)
<b>Western NY</b>	AM Marjorie Byrnes (R-133rd District) replaced by Andrea Bailey (R)
	AM Goodell (R-150th District) replaced by Andrew Mark Molitor (R)

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## **Bills of Interest to NYSAFP Passed by Both Houses in 2024 and Acted on by the Governor**

### **Hospital Flu Vaccines for Admitted Persons Age 50+ (A9886, Peoples-Stokes/ S9550, Skoufis)**

This bill amends the public health law to lower the age requirement for hospitals to offer inpatients the influenza vaccine from age 65 to age 50. NYSAFP joined a number of organizations and sent a sign-on letter to the Governor urging her to sign this legislation into law before the end of the year. We also noted the importance of having all adult vaccines reported to the State/NYC vaccine registries to avoid duplication. This bill was signed into law 11/22/24, chapter 492 of the laws of 2024 and takes effect after 90 days on 2/20/25.

### **Controlled Substance Dispensing**

#### **(A5984-B, McDonald/ S7177-B, Fernandez)**

This bill would allow clinicians working in a hospital without a full-time pharmacy to dispense three days of buprenorphine and methadone, consistent with the Drug Enforcement Agency (DEA). This bill was signed into law 11/22/24, chapter 466 of the laws of 2024 and takes effect after 90 days on 2/20/25.

### **Health Care Proxy**

#### **(A7872-A, Paulin/ S8632-A, Hoylman-Sigal)**

This bill would require a patient's attending health care practitioner to counsel a patient receiving palliative care about the benefits of completing a health care proxy and appointing a health care agent. We are working to gain confirmation from the State that medical residents would be included within the health care practitioner definition, as we were told by the bill sponsors. We sent a letter to the Governor, NYSDOH, and NYSED seeking clarification and explaining the negative effects this requirement would have on patient flow and medical residents' relationships with their patients if residents are not included. This bill was signed into law 11/22/24, chapter 471 of the laws of 2024 and took effect immediately.

### **Physician Assistants as PCPs under Medicaid Managed Care (S2124, Rivera/ A7725, Paulin)**

This bill would authorize Physician Assistants (PAs) to serve as primary care providers (PCPs) under Medicaid Managed Care. NYSAFP sent the Governor a letter explaining our concerns with this legislation, including the confusion it may cause related to roles and practice standards, as the bill does not change the scope of PAs or practice standards, and the lower standard of care this change could lead to. We asked her to again veto the bill and were successful in this opposition effort as the Governor vetoed the legislation on 11/22/24.

### **Physician Assistant Expanded Practice**

#### **(S9038-A, May/ A8378-A, Paulin)**

This bill would:

- Expand the ratio of PAs that a physician can supervise to 6:1 in private practice and 8:1 in Department of Corrections and Community Supervision (DOCCS) facilities;
- Authorizes PAs to prescribe or issue a non-patient specific standing order to registered professional nurses for immunizations, emergency anaphylaxis, PPD or other TB tests, HIV testing, Hepatitis C testing, naloxone or similar for opioid overdose, syphilis, gonorrhea and chlamydia screening, EKG tests, point of care glucose testing, administering tests/IV lines to persons with sepsis/septic shock, pregnancy tests and COVID-19 and flu tests;
- States that a PA employed/privileged by a hospital may write medical orders for DME under supervision of a physician; and
- The provision allowing PAs to issue standing orders to nurses for COVID-19/flu testing would expire 7/1/26.

While we were actively opposing this bill during session this year as it would have allowed PAs to practice independently, the bill was amended last-minute and now would maintain current PA supervision requirements while expanding some duties. This bill was signed into law 11/22/24, chapter 520 of the laws of 2024 and takes effect after three months on 2/22/2025.

### **Wrongful Death Expansion**

#### **(A9232-B, Weinstein/ S8485-B, Hoylman-Sigal)**

This bill would expand the possible damages in a wrongful death action to include compensation for grief or anguish, the loss of services, support, assistance, and loss or diminishment of inheritance, and the loss of nurture, guidance, counsel, advice, training, companionship and education resulting from the decedent's death. Limits those eligible to file for wrongful death to a decedent's spouse, domestic partner, distributees, or any person standing in loco parentis to the decedent. This bill was vetoed and tabled on 12/21/24.

### **CoPays for OT/PT Care**

#### **(S1470, Breslin/ A6345, Weprin)**

This bill would require that copayment or coinsurance amounts charged to an insured by state-regulated commercial insurance plans for physical therapy and occupational therapy services be no greater than the copayments/coinsurance imposed on an insured for services for an office visit for the service of a licensed primary care physician or osteopathic doctor for the same or a similar diagnosed condition. This bill was vetoed and tabled on 12/13/24.

### **Routine Maternal Depression Care (S2039-B, Brouk/ A2870-B, Solages)**

This bill would direct DOH in consultation with OMH and other stakeholders to develop guidance for incorporating maternal depression screenings into routine perinatal care. The guidance would also specify when these services should be initiated and the frequency during pregnancy and postpartum. Guidelines would also include recommendations for screenings for social needs, substance use disorders, and related referrals as well as recommended reimbursement methodologies. This bill was signed into law 12/21/24, chapter 644 of the laws of 2024, and takes effect after 180 days on June 19, 2025.

### **Doula Access in Maternal Health Care Facilities (S5992-A, Persaud/ A6168-A, Solages)**

This bill would allow a pregnant person to designate a doula to be fully accessible to them in a maternal healthcare facility during delivery and/or inpatient care post-delivery. This bill was signed into law 12/11/24, chapter 550 of the laws of 2024 and takes effect after 90 days on March 11, 2025.

### **Allow Presence of Doulas During C-Sections (S5991-A, Persaud/ A7606, Solages)**

This bill would require maternal healthcare facilities to permit doulas to be present in the operating room while a cesarean section is being performed. Requires such facilities to publicly post this information as well as provide information packets in waiting areas. This bill was signed into law 12/21/24, chapter 654 of the laws of 2024 and takes effect immediately.

### **Breast Cancer Screening for Incarcerated Individuals (S204, Cleare/ A4957, Jean-Pierre)**

This bill would require that routine mammogram screenings be offered every two years at no cost to individuals housed in state and local correctional facilities. Requires the Department of Corrections and Community Supervision to provide incarcerated individuals with educational programs focused on the importance of preventative health care, including breast self-examinations. This bill was signed into law 12/13/24, chapter 570 of the laws of 2024 and takes effect after 180 days on June 11, 2025.

### **Step Therapy Rules (A901-A, McDonald/ S1267-A, Breslin)**

This bill would require a utilization review agent to follow certain rules when establishing a step therapy protocol and that the protocol accepts any attestation submitted by the insured's health care professional stating that a required drug has failed, as sufficient evidence that the required drug has failed. This bill was signed into law 12/21/24, chapter 641 of the laws of 2024 and takes effect after 120 days on April 20, 2025.

### **Provider Network Data System (A7214, McDonald/ S3472, Rivera)**

This bill would update the Provider Network Data System to require that health care plan provider network information be included and authorize a designee to register, transmit, enter and update information on their behalf to improve compliance. This bill was signed into law 12/13/24, chapter 572 of the laws of 2024 and takes effect after 90 days on March 13, 2025.

### **Medicaid Coverage Reviews for Health Technologies/Services (A6022-A, Paulin/ S4787-A, Rivera)**

This bill would add a process by which providers of health technologies and services can be assured that their applications for Medicaid coverage are reviewed by DOH. The amendments require DOH to publish receipt of the application, to notify the Legislature when such reviews of coverage occur and sets timeframes for review by DOH. The bill would also require DOH to detail deficiencies in such application and notify the applicant of the completeness of application before review begins. This bill was vetoed and tabled on 11/22/24.

### **Medicaid Coverage for Remote Ultrasound and Fetal Non-Stress Tests (A8168, Paulin/ S7690, Webb)**

This bill would amend social services law to require Medicaid coverage for remote ultrasound scans and remote fetal non-stress tests when recommended by a physician or other health care practitioner under Title 8 of the education law, for the purposes of improving maternal health outcomes and reduction of maternal mortality. This bill was signed into law 11/22/24, chapter 474 of the laws of 2024 and took effect immediately.

### **Epinephrine Auto-Injector Coverage (S7114-A Rivera/ A6425-A O'Donnell)**

This bill would require insurance coverage of epinephrine auto-injectors and sets a maximum copayment of \$100 annually for two epinephrine auto-injector devices, with an exemption for certain high deductible plans to comply with federal law. This bill was signed into law 12/12/24, chapter 553 of the laws of 2024 and takes effect on January 1, 2026.

*All of us at Reid, McNally & Savage would like to thank the leaders and full membership of NYSAFP for your strong support and advocacy this year. We look forward to continuing to work with you in 2025 to pursue priorities of importance to family physicians and your patients.*

# TWO VIEWS: Perinatal Mental Health

## VIEW ONE

### POSTPARTUM MOOD DISORDERS: EXPLORING DIAGNOSIS, SCREENING, RISK FACTORS, AND TREATMENT

By Rebecca Cyrek; Amy Liu and Elizabeth Loomis, MD, FAAFP

#### INTRODUCTION

The postpartum period is a significant time of change and adjustment in an individual's life and body. Although the postpartum period is widely regarded as a pivotal time for bond development between mother and infant, the mother's overall wellbeing and adjustment to this new life event is often overlooked and misunderstood. Despite repeated efforts by the United States Preventive Services Task Force (USPSTF), screening for perinatal depression occurs only 40% of the time, compared to a 96% rate for gestational diabetes.<sup>1</sup> Despite this discretion, the USPSTF website currently states that screening for gestational diabetes and perinatal depression are both grade B recommendations. The rates of mood disturbance in the postpartum period vary with prevalence reports ranging from 5-20% for postpartum depression and up to 50% for postpartum blues<sup>2</sup> and this suggests the need for a significant improvement in postpartum care. Compared to the general population, women with postpartum depression are especially susceptible to developing new-onset anxiety and obsessive compulsive disorder (OCD) related symptoms immediately postpartum, with OCD symptoms continuing as long as 6 months postpartum and becoming a disruptive force in a woman's life.<sup>3</sup> These are significant findings, and a deeper analysis into the effects of pregnancy-related changes is necessary to understand how they contribute to mood disturbances on a clinical level which can lead to permanent effects on mental health.

Changes due to postpartum mood disorders can be drastic, causing long-lasting effects that extend beyond the birthing process. These can encompass biological, biochemical, psychological and social aspects of life,<sup>4</sup> straining family dynamics and potentially affecting the strength of the parent-child bond. Recognizing and treating those at risk for postpartum mood disturbances has shown to reduce negative consequences on the health of the mother, her child, and the child's well-being in the future.<sup>1</sup> More robust screening protocols and increased efforts to remove barriers to treatment will better serve individuals in the postpartum period.

#### DEFINING POSTPARTUM MOOD DISORDERS

To better care for patients suffering from postpartum mood disorders, it is important to have a clear and comprehensive understanding of several key definitions. Table 1 outlines the different postpartum mood disorders along with their descriptions and specific timelines. In general, "baby blues" is the mildest of these mood disturbances, while postpartum psychosis is the most severe. Understanding the different disorders, including onset and duration, is pivotal in identifying patients and making an accurate diagnosis.

## VIEW TWO

### COMPREHENSIVE CARE FOR PERINATAL MOOD AND ANXIETY DISORDERS (PMADS): A PRIMER FOR FAMILY MEDICINE PROVIDERS AND MENTAL HEALTH CLINICIANS

By Kristin Koberstein, PhD, LMFT, PMHC; Sarah M. Minney, MD and Rhianna Hibbler, MD

#### INTRODUCTION AND CLINICAL RELEVANCE

In family medicine we have the unique role of caring for persons as infants through adults and often care for families across generations. This positions us to witness the range of emotional experiences that family systems face during times of transition, such as the addition of a child. The perinatal period is one such transition defined as the time between conception to 12 months postpartum, or after pregnancy or infant loss. Conditions arising during this period are not only relevant to those providing direct antepartum and postpartum care, but also to anyone caring for patients in this potentially years-long life stage. Perinatal mood and anxiety disorders (PMADs) are mental health conditions that arise during the perinatal period and include depression and anxiety in pregnancy, postpartum depression and anxiety, perinatal obsessive-compulsive disorder, and postpartum psychosis. Symptoms of bipolar disorder, ADHD, PTSD, and eating disorders can also worsen in birthing persons during the perinatal period and at times are included in PMAD literature. Much like the developmental period of adolescence, the perinatal time is a multi-year developmental life stage where the biopsychosocial systems shift for individuals and families, causing an increase in risk for mental health distress. Of note, PMADs are separate and distinct from short-term postpartum mood changes colloquially referred to as "baby blues" that likewise require assessment and follow-up, but do not constitute a mental health diagnosis.

Non-birthing parents can also experience exacerbations in mood disorders during this time, with the rate of anxiety and depression both estimated at 10%.<sup>1</sup> PMADs may affect same-sex or gender-diverse couples, with one study noting the incidence of probable postpartum depression at 12% for gay fathers whose children were born through surrogacy.<sup>2</sup> Another study revealed that birthing patients who are female-identified sexual minorities (e.g. bisexual, queer, pansexual, asexual, demisexual) were more likely to be screened and screen positive for depression during the postpartum period.<sup>3</sup> While the reported prevalence of PMADs varies across studies, it is estimated that each year in the US, 800,000 people, or approximately 25% of perinatal individuals, will experience a condition under this umbrella.<sup>4,5</sup> For context, in 2021 approximately 8.3% of birthing persons received a diagnosis of diabetes during pregnancy, and in 2019 an estimated 15.9% of birthing persons were diagnosed with a hypertensive disorder of pregnancy.<sup>6,7</sup> As US maternal morbidity and mortality rates increase, specifically with 22.7% of pregnancy-related deaths attributed to mental health conditions per the CDC's 2017-2019 Maternal Mortality Review, we

**Table 1: Defining Postpartum Mood Disorders**

Postpartum Mood Disorders	Definition
<b>Postpartum Blues or “Baby Blues”</b>	<ul style="list-style-type: none"><li>• Symptoms begin 3-4 days after delivery and typically subside &lt;2 weeks after childbirth<sup>5</sup></li><li>• Mood lability, tearfulness, confusion, anxiety, or irritability without interfering with ability to function<sup>2</sup></li></ul>
<b>Postpartum Depression (PPD)</b>	<ul style="list-style-type: none"><li>• Onset usually &gt;2 weeks after childbirth, but can emerge up to one year later</li><li>• Indistinguishable from depression with symptoms of sadness, hopelessness, loss of interest/pleasure, fatigue, sleep disturbance, change in appetite, poor concentration, suicidal thoughts<sup>5</sup></li></ul>
<b>Postpartum Anxiety</b>	<ul style="list-style-type: none"><li>• Onset usually &gt;2 weeks after childbirth</li><li>• Excessive worry or restlessness, frequently checking on infant leading to sleep deprivation, panic attacks<sup>2</sup></li></ul>
<b>Postpartum Obsessive Compulsive Disorder (OCD)</b>	<ul style="list-style-type: none"><li>• Onset usually &gt;2 weeks after childbirth</li><li>• Intrusive thoughts regarding their baby's safety (maternal neurosis), or thoughts of harming their baby<sup>2</sup></li></ul>
<b>Postpartum Psychosis</b>	<ul style="list-style-type: none"><li>• Onset occurring in the first 2 weeks after childbirth with early onset 48-72 hours after delivery<sup>6</sup></li><li>• Requires IMMEDIATE medical intervention<sup>7</sup></li><li>• Severe disorder with hallucinations, delusions, mood lability, and disorganized thinking similar to a manic or mixed bipolar episode<sup>8</sup></li><li>• High risk for infanticide and suicide<sup>6</sup></li></ul>

### RISK FACTORS

Patients can be more susceptible to postpartum mood disorders based on biological, psychological, and socioeconomic factors. Women face significant hormonal changes during pregnancy and immediately after delivery. Estrogen and progesterone drop dramatically after delivery affecting neurotransmitter activity and regulation of mood. Decreased levels of cyclic adenosine monophosphate are associated with postpartum depression while increased norepinephrine was found to be related to baby blues.<sup>9</sup> Drastic changes in cortisol and thyroid hormone after delivery have also been correlated to mood dysregulation. Patients with a previous history of psychological disorders, such as depression, are at much greater risk of developing a postpartum mood disorder. Similarly, those with a past history of postpartum mood disorders or depression during pregnancy are more vulnerable.<sup>7</sup> Other important risk factors include being a primigravida, unplanned cesarean section or other perinatal complications, family history of postpartum disorders, history of sexual abuse, unrealistic expectations of motherhood, and lack of strong social support.<sup>8</sup>

### DIAGNOSIS AND SCREENING

Prior to making a diagnosis, medical causes of mood disturbance must be ruled out including thyroid dysfunction, anemia, and

believe that primary care providers are uniquely positioned to provide comprehensive and family-centered mental health screening and care for birthing persons and their families.<sup>8</sup> Furthermore, early interventions including referrals to therapy and provision of pharmacological treatment may help reduce complications for not only the birthing person, but also for their children and their family system, and are effective in the prevention, reduction and treatment of PMADs.<sup>9</sup> In this article we will review risk factors for the development of PMADs as well as racial and ethnic disparities in screening and treatment, then provide an overview of treatment recommendations and care models that may enhance detection and treatment of PMADs in the primary care setting.

### OVERVIEW OF RISK FACTORS AND SCREENING RECOMMENDATIONS

Many risk factors for PMADs are similar to the risks for development of mood and anxiety disorders in persons outside of the perinatal period (Table 1). Risk factors more specific to the perinatal population include multiparity, unplanned or undesired pregnancy, poor financial or emotional support, pregestational or gestational diabetes, adolescent pregnancy or parenthood, history of infant loss, and racial/ethnic minority status.<sup>9</sup> Many of these risk factors can be detected and addressed within a comprehensive primary care setting. Universal screening for depression is recommended in all adults by the USPSTF (grade B),<sup>11</sup> and in all women by ACOG,<sup>12</sup> but each organization also chooses to highlight the recommendation for universal screening in the perinatal period.<sup>11,13</sup> Screenings are recommended at specific time points during pregnancy and after delivery, as well as at well-child checks (See Table 2).

### RACIAL AND ETHNIC DISPARITIES IN PERINATAL HEALTH

Race and ethnic background are additional risk factors for the development of PMADs as well as for increased health complications during pregnancy, delivery, and the postpartum period. Black mothers in the United States are 3-4 times more likely to experience pregnancy-related deaths which is a higher rate than one century ago.<sup>14,15,16,17</sup> Black, Hispanic, and Asian mothers have statistically significantly higher rates of cesarean section births, blood transfusions, and infant mortality when compared to White mothers.<sup>15</sup> During the postpartum period, African American and Hispanic women meet their feeding goals less often than White women.<sup>18</sup> Additionally, Black mothers report higher levels of discrimination during perinatal care than White mothers.<sup>15</sup> They are also less likely to report shared decision-making with their providers and are twice as likely as White mothers to have their medical care reviewed due to poor outcomes.<sup>15</sup>

The increased rates of health complications are directly linked to mental health and distress and present a cyclical issue.<sup>14</sup> Rates of PMADs for Black and Hispanic mothers are 3 times higher than their White counterparts, with some studies reporting over 50% of screened Black patients meeting criteria for PMADS during the prenatal and postpartum periods.<sup>16,17,19,20,21</sup> In addition to the screening data, health care inequities can also be found when looking at referral disparities. Boama-Nyarko et. al found in a Massachusetts based population study that minority perinatal patients (those who identified as Black, Asian, Hispanic, Pacific Islander, Native American, and multiracial) had significantly lower odds of treatment referral following screening during perinatal visits than White non-Hispanic patients.<sup>19</sup> However, when following those who

vitamin deficiencies. An in depth physical exam including a neurological examination should be completed to rule out organic causes of mood dysregulation such as Sheehan's syndrome.<sup>5</sup> The Edinburgh Postnatal Depression Scale (EPDS) is an effective screening method for postpartum depression. The scale consists of ten questions inquiring how the patient has felt over the past week and can be completed both during pregnancy and after delivery. A score greater than thirteen indicates the patient is likely suffering from depression and should receive medical attention.

Access the EPDS here: [https://med.stanford.edu/content/dam/sm/ppc/documents/DBP/EDPS\\_text\\_added.pdf](https://med.stanford.edu/content/dam/sm/ppc/documents/DBP/EDPS_text_added.pdf)<sup>11</sup>

In addition, a cross-sectional study with 447 participants revealed that the patient health questionnaire-9 (PHQ-9) was as effective as the EPDS at detecting major depressive episodes.<sup>10</sup>

There are several challenges that physicians face when making a diagnosis. It can be difficult to differentiate between typical postpartum experiences such as fatigue, appetite change, and mood swings and the similar symptoms of depression. Stigma around seeking care for mental health and cultural differences leads to fewer women receiving the care they need because these patients may be unlikely to share their true symptoms.<sup>7</sup> With this in mind, it is important for physicians to understand how the various disorders present and the many different risk factors, anticipate any stigma that may be holding the patient back, and conduct regular screening with the EPDS or PHQ-9.

## TREATMENT

It is pivotal for healthcare providers to have an in-depth discussion regarding treatment options including risks and benefits to help determine the best option for the patient and infant's wellbeing. Treatment for the various postpartum mood disorders typically includes personalized psychotherapy and pharmacological interventions.

Psychotherapy that has shown effectiveness includes cognitive-behavioral therapy (CBT), interpersonal therapy (IPT), and support groups. CBT for the treatment of postpartum mood disorders focuses on identifying negative thoughts and developing coping mechanisms to manage various symptoms thereby creating a more positive outlook on motherhood.<sup>7</sup> IPT works to navigate the many changes in motherhood and the shifts it can create in relationships. This form of therapy helps address these changes, improve communication skills, and work to form healthy, meaningful, and supportive

relationships.<sup>7</sup> Support groups are an invaluable opportunity to connect, share without judgment, and receive empathy from those who have faced similar challenges.

Pharmacological treatments are typically reserved for moderate to severe cases or those unresponsive to psychotherapy. Postpartum baby blues does not typically require specific treatment other than support and reassurance, although individuals with risk factors including a history of depression should be closely monitored.<sup>5</sup> Selective serotonin reuptake inhibitors (SSRIs) are the drug of choice for postpartum depression, anxiety, and OCD.<sup>7</sup> SSRIs have been deemed safe during breastfeeding with peak concentrations 6-8 hours after ingestion, allowing feedings to be adjusted accordingly if desired.<sup>7</sup> Postpartum psychosis is considered a psychiatric emergency requiring inpatient treatment. Lithium, valproic acid, and carbamazepine are very useful mood stabilizers for postpartum psychosis. Additionally, antipsychotics including olanzapine, risperidone, and haloperidol are commonly used for acute treatment.<sup>5</sup> Breastfeeding is generally discouraged during postpartum psychosis as sleep disturbances can greatly worsen symptoms.<sup>8</sup> Electro-convulsive therapy is an effective treatment option for patients with severe, drug-resistant depression or psychosis.<sup>5</sup>

## CONCLUSION

Postpartum mood disorders remain underdiagnosed when it comes to addressing mental health and the effect it has on the parent, child and their social relationships.<sup>4</sup> Early identification and appropriate treatment are critical and can lead to improvements in not just a woman's life but also in the well-being of her baby.<sup>8</sup> Successful management is multifactorial and unique to each individual however the outlook and prognosis of postpartum mood disturbances with early detection and intervention is overall very good.<sup>8</sup>

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were referred, they found that the rates to initiate and sustain treatment (only 20%) were similar across all racial and ethnic backgrounds.<sup>19</sup> Similarly, within the Finger Lakes region of New York, Black women were more likely to rate their mental and emotional health as fair or poor compared to White women, but were less likely to receive help.<sup>14</sup> This local data matches findings elsewhere in the United States further highlighting the disparities in care and emphasizing the need for interventions to focus on referral differences.<sup>19</sup>

## OVERVIEW OF PREVENTION AND TREATMENT RECOMMENDATIONS

Despite the improvements in policy, public health education, and research informing direct patient care, rates of PMADs remain high, and availability and engagement in treatment remain low.<sup>9,17</sup> An estimated 50% of pregnant and or postpartum patients will not be screened, diagnosed, or treated.<sup>17,19</sup> Of those who are screened, only 50% of patients screening positive for PMADs will be referred for treatment and only 20-40% of those will begin and remain in treatment.<sup>5,17,19</sup> Low referral and engagement rates are often attributed to individual stigma around mental health, systemic and structural barriers such as inadequate health insurance coverage, transportation and childcare concerns, lack of services in the areas and poor care coordination, lack of culturally responsive care, and provider bias in the referral and treatment process.<sup>14,19</sup>

Therapy is first-line both for the treatment of PMADs as well as a prevention tool.<sup>9,22</sup> Since 2019, the USPSTF has recommended therapy referral for those with risk factors particularly for perinatal depression due to evidence that this can prevent its development (Grade B).<sup>23</sup> Medical offices should consider standardizing the referral process for therapy much like the screening process for PMADs. An effort to make referrals for all patients who are at risk or screen positive may begin to address the aforementioned inequity and provider bias that is commonly cited as a barrier to connection to treatment.<sup>14,19,23</sup> In recent years the availability of telemedicine services for mental health has expanded, including access to both medical and counseling care for patients. This may be particularly appealing to those in the perinatal period who are experiencing barriers related to cost of travel, parking, or gas, distance between their home and available providers, limited ability to drive after childbirth due to medical conditions, or lack of childcare.<sup>24</sup>

ACOG published a Clinical Practice Guideline in June 2023 for the treatment of PMADs that provides a comprehensive overview on evidence and recommendations for treatment that can serve as a primer for clinicians.<sup>25</sup> Similar to non-birthing persons, the first line pharmacologic treatment for perinatal depression and anxiety disorder are SSRIs (excluding paroxetine which is FDA pregnancy Category D) and SNRIs. These can be safely started (or restarted) in pregnancy and during chest-feeding, with specific counseling regarding the potential transient effects of these medications on the newborn after delivery when used during pregnancy (referred to as neonatal adaptation syndrome). This comprises a constellation of symptoms including jitteriness, poor feeding, irritability, poor sleep, and possibly respiratory distress that is usually self-limited and does not require treatment. We counsel patients on this risk while acknowledging the much higher risk of low birth weight, pre-term delivery, pre-eclampsia as well as maternal suicide in untreated perinatal mood and anxiety disorders.<sup>25</sup> Down-titration of SSRIs and SNRIs has not been shown to reduce the risk of adaptation

syndrome in neonates and do increase the risk of relapse and worsening maternal symptoms, so is not recommended.<sup>25</sup> Individuals with OCD and bipolar disorder are best cared for with psychiatric consultation or transfer, and perinatal psychosis is considered an emergency diagnosis for which psychiatric hospitalization is usually indicated. Individuals with a history of bipolar disorder and postpartum psychosis have the highest rates of recurrence in the perinatal period and so greatly benefit from the long-term continuity of care that primary care providers can provide in terms of monitoring and prompt referral to specialty psychiatric care. One essential step all providers can take is pausing before making any changes to a care plan or current medication when a patient becomes pregnant. In some cases it may even be more harmful to stop a medication than continue to take a medication as prescribed due to increased risk of relapse with discontinuation of antidepressants.<sup>27</sup> Providers can also use perinatal psychiatric consultation services such as Project Teach in New York State or a national consult line such as the one offered by Postpartum Support International in order to receive guidance on best practices for medication treatment of various mental health diagnoses.<sup>26</sup> Evidence-based smartphone apps like InfantRisk HCP and LactMed also provide comprehensive safety data regarding medication use in pregnancy and chest-feeding. Lastly, MotherToBaby provides patient-facing educational materials on its website regarding the use of various medications including psychiatric medications in pregnancy and chest-feeding.<sup>38</sup>

Additional programs and services have also been found to be effective in preventing and reducing PMADs for perinatal families. Many of these evidence-based programs focus on increasing support and addressing systemic stressors for families. Examples of such programs include Centering Pregnancy Program, Mothers and Babies (MB) Program, the ROSE program, the Nurse-Family Partnership® program, the use of doulas, and other community support groups.

Centering Pregnancy programs are group medical visits for prenatal patients with a focus on covering a wide range of health and wellness topics including perinatal mental health as well as learning about local resources. Centering programs have been found to reduce depression rates and other negative health outcomes such as low birth weight and chest-feeding difficulties.<sup>29</sup> The Mothers and Babies (MB) Program is a cognitive-behavioral preventive intervention shown to reduce risk of postpartum depression.<sup>22</sup> The ROSE Program stands for Reach Out, Stay Strong, Essentials for mothers of newborns, and randomized control trials of the program have shown a reduction in the cases of postpartum depression by half among low-income women.<sup>22</sup> It works as a prevention program for those at increased risk of perinatal depression, and includes four to eight group prenatal sessions and one postnatal individual “booster” session, which can be completed by nurses, health educators, and other members of a healthcare team.<sup>25</sup> The Nurse-Family Partnership® program matches first-time mothers with nurses who will come out to the patient’s home throughout pregnancy and until the baby is 2 years old and has been found to improve child and mother health outcomes including reduced rates of depression.<sup>30</sup> In upstate New York, the Healthy Baby Network’s Black Doula Collaborative provides mental, physical and social support to pregnant and postpartum families, and has recently received accreditation for community-based doula programming through

**Table 1. Perinatal Mood and Anxiety Disorders<sup>10, 34, 35, 36</sup>**

<b>Perinatal Mood and Anxiety Disorder</b>	<b>Screening Tools</b>	<b>Risk Factors</b>	<b>Symptoms</b>	<b>Treatment</b>
<b>Anxiety</b>	General Anxiety Disorder - 7 (GAD-7), Perinatal Anxiety Screening Scale (PASS)	Personal or family history of depression or anxiety, current symptoms of depression or anxiety that do not meet full criteria, history of sexual abuse, unplanned pregnancy, current stressful life events, diabetes, complications during pregnancy, low income, lack of family and social support, teen or single parent, having multiples, past personal history of abuse, current exposure to partner violence, sensitivity to hormonal changes, infant in the NICU, fertility challenges, and thyroid imbalances	Constant worry, feeling that something bad might happen, racing thoughts, disturbances of sleep and appetite, inability to sit still, physical symptoms could include dizziness, hot flashes diarrhea and nausea, irritability, nervousness, trouble relaxing	Increase social support including prioritizing sleep, time for self, refer to parent support groups, doulas  Address systemic stressors such as childcare needs, transportation, housing and insurance issues  Cognitive Behavioral Therapy and Interpersonal Psychotherapy, as well as general counseling Psychiatric medication
<b>Depression</b>	Patient Health Questionnaire-9 (PHQ-9), Edinburgh Postnatal Depression Scale (EPDS)  Both PHQ-9 and EPDS-P can be used to screen partners		Lack of interest in the baby, irritability, disturbances of sleep and appetite, crying and sadness, feelings of guilt, shame or hopelessness, loss of interest, joy or pleasure, thoughts of self-harm	
<b>Obsessive Compulsive Disorder</b>	Obsessive Compulsive Inventory 4 or 12 (OCI-4 or OCI-12)	In addition to factors listed above: Personal or family history of OCD symptoms	Persistent doubts about the safety of the child, reoccurring 'what if?' thinking, staying up all night, checking on the child's breathing, excessively cleaning to stop contamination, excessive worry they are a risk to the child, may also be paired with scary images of bad things happening to the child or others	Cognitive Behavioral Therapy  Exposure Response Prevention  Psychiatric medication
<b>Peripartum Psychosis</b>	Psychosis Symptom Checklist (PSC)  *Rule out bipolar, depression, and OCD when considering psychosis	In addition to risk factors listed above: Personal or family history of bipolar disorder, previous psychotic episode, prolonged lack of sleep	Delusions or strange beliefs, hallucinations, agitation, hyperactivity, severe depression, inability to sleep, paranoia and suspiciousness, rapid mood swings, difficulty communicating	Considered a medical emergency, immediate evaluation and treatment with crisis services or emergency room  Following emergent treatment, ongoing medication management and therapy

HealthConnect One, joining a growing number of national sites.<sup>31</sup> Doula programs such as this provide culturally aligned and community-focused care which have also been shown to reduce rates of PMADs for both the patient and partner.<sup>32</sup>

**CONCLUSIONS AND FUTURE DIRECTIONS**

Family medicine and family-focused mental health providers are skilled in caring for patients who are navigating stressors associated with developmental transitions and shifts in family dynamics, and can therefore contribute greatly to improving the screening, treatment, and prevention of PMADs for our dyads. In addition to the previously discussed community programs, there are new primary care models championed by the IMPLICIT network, a maternal-child health learning collaborative with sites across the U.S., in which screening for PMADs and referral for treatment is incorporated into well-child checks (Interconception Care Model) and throughout pregnancy and the postpartum period through a new 4th Trimester Care model.<sup>33</sup> In the innovative 4th Trimester Care model, birthing persons are seen within 2-4 weeks after delivery as recommended by ACOG,<sup>34</sup> in addition to the “standard” 6 week postpartum visit. Preliminary data collected at the University of Rochester Medical Center demonstrated that over half of patients with positive depressive screens were identified at the 4th trimester visit,<sup>35</sup> and as of this publication’s submission, 31.9% of patients with completed data had a documented history of major depression by the time of their postpartum visits, and 10.4% had a documented history of postpartum depression (IMPLICIT Rochester data), highlighting the tremendous need for mental health care for this population.

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**Table 2. Perinatal Mood and Anxiety Disorder Recommendations and Resources for the Primary Care Setting<sup>24,27,28,30,34,35,37</sup>**

<p><b>When to Screen</b></p> <ul style="list-style-type: none"> <li>• First prenatal visit</li> <li>• At least once in second trimester</li> <li>• At least once in third trimester</li> <li>• First postpartum visit and at least by 6 weeks postpartum</li> <li>• Repeated screening at 6 and/or 12 months in obstetric and primary care settings</li> <li>• 3, 9, and 12 month pediatric visits</li> </ul>
<p><b>Follow-up to Screening</b></p> <ul style="list-style-type: none"> <li>• Referral to behavioral health services</li> <li>• Initiation of medication as indicated</li> <li>• Consult a perinatal psychiatrist if in need of further guidance</li> <li>• Assess for social supports and systemic stressors</li> <li>• Consider referral and connection to an evidenced-based program or service</li> <li>• Schedule a follow-up visit to ensure and assist with connection to supports and programs</li> </ul>
<p><b>Evidence-Based Programs and Services</b></p> <ul style="list-style-type: none"> <li>• Mothers and Babies (MB)</li> <li>• Reach Out, Stay strong, Essentials for mothers of newborns (ROSE)</li> <li>• Mindfulness-Based Cognitive Therapy for Perinatal Depression (MBCT-PD)</li> <li>• Practical Resources for Effective Postpartum Parenting (PREPP)</li> <li>• Centering Pregnancy (CP)</li> <li>• Nurse-Family Partnership® (NFP)</li> <li>• Doula programs and services</li> </ul>

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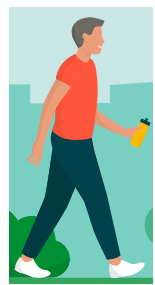
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# Non-Pharmacologic Approaches to Managing Anxiety and Depression

By Bilal Abou Al Ardat, MD; Klaudia Sarwinski, MD, and Michael Raghunath, MD

Mental disorders are within the top 10 leading causes of disease burden globally and have shown a case per year increase of nearly 50% over the last three decades, with depressive and anxiety disorders being the two most common.<sup>1</sup> It is estimated that by the year 2030, depression will be the leading cause of disease burden globally.<sup>2</sup> The New York Health Foundation has reported that at least 33% of New Yorkers experience one or both of these disorders, with little improvement since the Covid-19 pandemic<sup>3</sup>, and with higher frequency in more vulnerable populations, such as those with lower socioeconomic status, younger age, elder age, and races such as Hispanic, Black, and Asian New Yorkers.<sup>3,4</sup> Due to the complex nature of mental disorders, addressing lifestyle factors should be central in any strategy aimed at optimizing mental health. Holistically approaching patients includes utilizing non-pharmacological interventions to supplement psychological and pharmacologic therapies to bridge gaps, as they are often more accessible, inexpensive, and have fewer side effects than pharmacologic options.<sup>5</sup>



## Exercise

The benefits of exercise on mental health have been well researched. A meta-analysis shows that exercise (SMD = -0.45, 95 % CI [-0.67, -0.23]), antidepressants (SMD = -0.33, 95 % CI [-0.48, -0.19]) and combined treatments (SMD = -0.45, 95 % CI [-0.76, -0.14]) were superior in reducing non-severe depressive symptoms compared with controls.<sup>6</sup>

There was no evidence of superiority of antidepressants or combined treatment over exercise.<sup>6</sup> Another study reported benefit in combining exercise with standard treatment compared to standard treatment alone (SMD = -0.62,  $p < 0.00001$ ).<sup>7</sup>

Different forms of physical activity have shown perceptible reductions in depressive symptoms.<sup>8</sup> Compared with active controls, large reductions in depression were found for dance (Hedges'  $g = -0.96, -1.36$  to  $-0.56$ ), and moderate reductions were found for walking or jogging ( $g = -0.63, -0.80$  to  $-0.46$ ), yoga ( $g = -0.55, -0.73$  to  $-0.36$ ), strength training ( $g = -0.49, -0.69$  to  $-0.29$ ), and mixed aerobic exercises ( $g = -0.43, -0.61$  to  $-0.25$ ).<sup>8</sup> Furthermore, evidence on the relative effectiveness of exercise based on intensity is mixed.<sup>8,9</sup> Some studies report a dose-response curve between intensity and effect of exercise, with stronger effects for vigorous exercise (e.g., running, interval training;  $g = -0.74, -1.10$  to  $-0.38$ ).<sup>8</sup> Other studies report a significantly larger effect size of lower-intensity (0.907) compared to moderate intensity interventions (0.271).<sup>9</sup> Additionally, some studies favor shorter duration of combined resistance and endurance training, compared to either training alone.<sup>10</sup> Since incorporating exercise regimens into busy schedules can be a challenging lifestyle modification for

many patients, the duration of exercise needed to achieve mental health benefits can be a major limiting factor. Evidence suggests that even a small amount of physical activity can have significant mental health benefits.<sup>11</sup>

An inverse dose-response association between activity and incident depression exists, especially at the lower end of the physical activity range.<sup>11</sup> Starting from a baseline of no activity, an 18% or 25% reduction in depression risk can be seen with half or all the recommended volume of weekly physical activity (150 minutes of moderate physical activity per week).<sup>11</sup> This reflects significant benefits of activity even below the recommended weekly volume. Moreover, the impact of exercise on mood can be acute and immediate, within 30 minutes of exercise completion.<sup>12</sup> In one study, general mood ( $g = 0.336, 0.234$  to  $0.439$ ), anxiety ( $g = 0.497, 0.263$  to  $0.730$ ), and depressive symptoms ( $g = 0.407, 0.249$  to  $0.564$ ) improved immediately post-exercise.<sup>12</sup> This evidence reflects the importance of exercise as an adjunct to standard therapy.



## Light

Light can have varying effects on mood with several characteristics playing a role, including the nature, timing, and dose of light.<sup>13-15</sup> Some evidence supports the use of bright light therapy for alleviating depressive symptoms in patients with major depressive disorder (SMD = 0.48, 95 % CI [0.22, 0.74],  $p < .001$ ).<sup>16</sup> On the other hand, some studies report a positive association between artificial light at night and mental disorders, including depressive symptoms, highlighting the importance of natural light and maintaining circadian rhythms.<sup>17</sup> Some studies show a positive impact on mood, whether through short-wavelength light activating the amygdala<sup>13</sup>, or through increasing the functional connectivity between the amygdala and the dorsolateral prefrontal cortex.<sup>13</sup>

The same systematic review also showed positive effects of narrow bandwidth long-wavelength light on objective measures of affect.<sup>13</sup> The effects of light on mood are mixed, with some studies showing both positive and negative impacts in response to narrow bandwidth long-wavelength light.<sup>14</sup> Some studies report blue-enriched light for 30 minutes a day, for 5 days a week, improved mood, although quality of evidence was low.<sup>15</sup> Regardless of the mixed evidence, the impact of light on mood is a phenomenon worth exploring. As the world relies more heavily on technology and human beings become more anchored to smart devices, further research is needed to illuminate the complex role of light on mental health.

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## Human-Animal Interaction

Various forms of human-animal interaction and their potential mental health benefits, including animal-assisted therapy, animal-assisted activities and pet-ownership have been and are continuing to be studied.

Animal-assisted therapy involves a certified provider facilitating interactions between patients and animals, promoting activities with human-animal collaboration, with the goal of improving social, emotional, physical or cognitive functioning.<sup>18-20</sup> In contrast, animal-assisted activities are less structured and standardized and primarily include pet visitation.<sup>19</sup> Research increasingly supports the therapeutic benefits of animal-assisted therapy on the treatment of depression, particularly in elderly individuals. The social effects of animal-assisted therapy, particularly in the elderly, has limited evidence but includes relief of social isolation and boredom and may contribute to the improvement in symptoms of depression.<sup>21</sup>

The neurological basis for the positive impact of human-animal interactions on mood is complex, but many potential explanations have been hypothesized. Frontal cortex and amygdala activation have been demonstrated amongst people interacting with their companion animal.<sup>22-26</sup> In addition, studies have shown potential autonomic modulation in humans when interacting with their companion animals with significant decreases in heart rate and blood pressure.<sup>22,27-29</sup> Hormonal levels are also affected with oxytocin level being shown to significantly rise and cortisol levels decreasing in both owners and their companion dogs during their interactions.<sup>18,22,30-33</sup>

Some things to keep in mind when considering human-animal therapies for the treatment of depression are fear of animals, allergies, risk of injury and potential for zoonotic infections, which may potentially lead to more harm.<sup>34,35</sup>



## Music

Music therapy involves using evidence-based music interventions by credentialed professionals.<sup>36</sup> It has been shown to provide short-term benefits compared to psychological and pharmacological therapies, with primary outcomes for both clinician-rated depressive symptoms (SMD -0.98, CI [-1.69,-0.27]) and patient-reported depressive symptoms (SMD -0.85, CI [-1.37,-0.34]). Unlike human-animal interactions, music therapy has not been shown to be associated with more adverse events.<sup>37</sup> Music medicine, in which a medical professional provides a patient music to listen to for greater than 60 minutes per week, has also been shown to have significant benefit on depressive symptoms (SMD -3.00; CI [-3.64,-2.35]). Additionally, in settings where a more cost-effective option is required, music listening can be useful for reducing anxiety and depressive symptoms (Cohen's  $d = -0.97$ , CI [-1.70,-0.24],  $p = 0.009$ ).<sup>38,39</sup> Both music medicine and therapy may be an effective addition to a patient's treatment regimen when treating anxiety or depression.



## Nutrition

Based on what we know about the importance of nutrition on our physical well-being, it is no surprise that it is also vital in managing our emotional well-being. Approaching a lifestyle centered on low-inflammatory nutrition can help support both our mental health and innate immune system.<sup>40-42</sup> Inflammation is influenced by psychological stress, inadequate sleep, obesity, smoking, and as we discuss here, poor diet.<sup>43</sup> One diet, which has been shown in observational studies to be associated with reduced levels of inflammatory markers is the **Mediterranean diet**, which is characterized by higher intakes of polyunsaturated fatty acids, fruits, vegetables, and overall fiber content.<sup>44,45</sup> Interventional studies also demonstrate that following a Mediterranean

dietary pattern can significantly improve markers of inflammation.<sup>46</sup>

Inflammation has also been shown to play a role in depression, and fatigue.<sup>47</sup> The “leaky gut” phenomenon is believed to contribute to this connection between major depressive disorder and gut-brain axis.<sup>48</sup> It is proposed that stress compromises the epithelial barrier of the gastrointestinal tract, increasing intestinal permeability, thus leading to the translocation of gram-negative bacteria into the immune system and enteric nervous system.<sup>49,50</sup> This triggers an immune response marked by elevated inflammatory mediators like IL-6 and IFN $\gamma$ .

There have been studies in both animal and human models that establish the connection between the gut-brain-axis and mental health, as well as the importance of early-life microbiota in shaping later health outcomes. Disturbances to this microbial balance, particularly in early life, play an important role in inflammatory responses, and may promote a chronic inflammatory state. This can lead to maladaptive changes in mood and behavior, including increased responsiveness to stress and increased incidence of stress-related disorders.<sup>51</sup>

Gut microbiota and the central nervous system communicate via nervous, immune, and endocrine signaling. These microbes are influenced by the brain through the autonomic nervous system, regulating gut motility, intestinal transit, secretion, and permeability.<sup>52</sup> Coupled with genetics, antibiotic exposure, lack of breastfeeding, birth by Caesarean section, infection, stress exposure, and other environmental influences can alter the microbial composition of our digestive tract.<sup>49</sup> The bidirectional nature of anxiety and GI distress is evident as an altered gut microbiome triggers responses in the prefrontal cortex, posterior cingulate cortex, and precuneus. The vagus nerve has been proposed to serve as the most important neural pathway for this communication.<sup>54</sup> For example, children who have encountered adverse caregiving experiences can feel visceral pain, feelings of sickness, constipation, diarrhea, and/or bloating.<sup>53</sup>



## Herbs

Herbs can be used in a variety of ways to supplement diets geared towards addressing anxiety and depression. One of the most recognized herbs used for its anxiolytic and anti-depressive properties is **Chamomile** (*Matricaria chamomilla*, *Matricaria recutita*). A 2024 systematic review showed that oral intake of chamomile can help improve anxiety symptoms both in people with anxiety disorders and in people of other groups, for example, young women with dysmenorrhea or postmenopausal women.<sup>55</sup> Chamomile and several of its flavonoid components are believed to effect neuro-transmission of serotonin, norepinephrine, dopamine, and GABA, as well as have an indirect action on the HPA axis and vasomotor systems.<sup>55-57</sup> Chamomile is considered Safety Class 1, meaning it is considered safe to consume when used appropriately, and Interaction Class A, meaning no clinically relevant interactions are expected.<sup>58</sup> There is a theoretical interaction potential with warfarin due to the coumarin content of the herb.<sup>59</sup> In addition, there are some reports that allergic reactions to chamomile include anaphylaxis and contact dermatitis.<sup>60</sup>

**Lavender** (*Lavandula angustifolia* Mill.) is another commonly used herb for anxiety, stress management, exhaustion, sleep, etc. It is aromatic and has been formulated in teas, tinctures, and essential oils as a bath additive.<sup>61</sup> In a 2021 systematic review and meta-analysis, lavender was superior to placebo or no treatment in reducing anxiety ( $g = -0.72$ , CI [-0.90, -0.55],  $p < .001$ ) and depression ( $g = -0.43$ , 95% CI, -0.59 to -0.27,  $p$  value  $< .001$ ).<sup>62</sup> Many essential oils are inappropriate for oral administration in their undiluted form because of irritant, inflammatory, or cytotoxic effects on skin and caution should be taken with use.<sup>63</sup> Lavender is Safety Class 1 and Interaction Class A.<sup>58</sup>

**Lemon balm** (*Melissa officinalis*) has been used as a modulator of mood and cognitive function due to its anti-depressant and anxiolytic effects.<sup>64</sup> A small 12-week double-blind clinical trial showed a statistically significant mean change of depression and

anxiety scores between the two groups ( $p < 0.001$  and  $p = 0.04$ , respectively), correlating with a significant decrease in depression and anxiety severity ( $p < 0.001$  and  $p = 0.01$ , respectively) at the end of the study compared with baseline.<sup>65</sup> Lemon balm preparations are typically well-tolerated with few adverse events.<sup>66-68</sup> Some animal and in vitro studies indicate that lemon balm may affect thyroid hormone levels and inhibit binding of thyroid-stimulating hormone (TSH) to its receptors<sup>69,70</sup>, although no human cases of thyroid effects have been reported. Lemon balm is also Safety Class 1 and Interaction Class A.<sup>58</sup>

**Tulsi leaf** (*Ocimum tenuiflorum* L., *Ocimum sanctum* L.), also known as holy basil, is a relatively safe part of an Ayurvedic holistic approach to health that may assist in normalizing glucose, blood pressure and lipid profiles, and may be an effective adaptogen that has a role in helping to address the psychological, physiological, immunological, and metabolic stresses of modern living.<sup>71,72</sup> Holy basil is Safety Class 1 and Interaction Class A.<sup>58</sup> Human and animal studies have also shown decreases in blood glucose levels<sup>73-75</sup> as well as increase in insulin levels and glucose tolerance.<sup>76</sup> Other animal studies show tulsi may temporarily reduce sperm count and sperm motility.<sup>77,78</sup> A reduction in serum levels of thyroxine as well as glucose-6-phosphatase activity was observed in an animal study with relatively high doses (500 mg/kg) of holy basil.<sup>79</sup> Thus, people with diabetes and thyroid dysfunction are advised to closely monitor their blood sugar and thyroid hormone levels, respectively.

Similar to tulsi, **ashwagandha** (*Withania somnifera*) has also been used in the traditional Ayurvedic systems of India as an adaptogen that can address anxiety and stress, as well as possibly help with sleep.<sup>80</sup> There are also reports of anti-inflammatory, antimicrobial, cardioprotective and anti-diabetic properties.<sup>81</sup> Also known as Indian ginseng and winter cherry, ashwagandha can moderate glucose levels<sup>82</sup> as well as lower thyroid hormone levels in the blood which is impaired in thyroid disease.<sup>83</sup> A randomized double-blind placebo-controlled trial concluded that ashwagandha extract could potentially support SSRI therapy in patients with generalized anxiety disorder as it

significantly reduced HAM-A (Hamilton Anxiety Rating Scale) and to a lesser extent, reduced DASS-21 (Depression, Anxiety and Stress Scale) scores.<sup>83</sup> Ashwagandha is considered Safety Class 2b<sup>58</sup>, meaning it should not be used during pregnancy as conflicting literature states that ashwagandha has been used for abortion<sup>84</sup> while other studies indicate that ashwagandha is used to prevent miscarriage and stabilize the fetus.<sup>85</sup> In Ayurvedic medicine, ashwagandha has traditionally been used to promote lactation.<sup>86</sup>

It is noteworthy that many of these studies on herbal effects and interactions are performed by treating with high doses. While it is possible to obtain tinctures which are highly concentrated, much of the products sold commonly in stores in the USA are in loose herb and/or tea formulations with combinations of herbs with similar functions to promote synergistic effects.<sup>61,87</sup> For example, it is common to find combinations of chamomile, lavender, and lemon balm in “calming” blends. These teas are much less potent and suitable for drinking numerous servings in a daily period with minimal adverse effects.

In conclusion, light, music, human and animal interaction, and nutrition play a vital role in maintaining a healthy mind and body. While the combination of pharmacotherapy and cognitive-based therapies have been proven to aid in the management of mental illnesses like anxiety and depression, an individual can adopt many holistic approaches to supplement their lifestyle in their journey towards wellness.

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# The Aftermath of COVID-19 on the Mental Health of Pediatric Populations

By Vivian Li, Steven Clark and Elizabeth Loomis, MD

Coronavirus, or COVID-19, is caused by the SARS-CoV-2 virus, and was first identified by the World Health Organization in January of 2020. By March of 2020, a global pandemic was declared, which resulted in national lockdown procedures.<sup>1</sup> Strict social distancing measures affected daily activities and postponed major lifetime milestones.<sup>2</sup> While post-pandemic mental health has been studied extensively in adults, there have been a limited amount of studies focusing on the mental health of our youth. COVID safety measures generated feelings of social isolation, reduced physical activity, and caused significant lifestyle changes that had profound lasting impacts on the mental health of children and adolescents.<sup>3</sup> Multiple studies have found increased levels of stress, depression, anxiety, insomnia, and drug misuse among young individuals attributable to the pandemic.<sup>4</sup>

Socioeconomic factors, such as academic difficulty, economic disadvantages, family conflicts, food addiction, and alcohol consumption were found to be risk factors for worsening pediatric mental health.<sup>5</sup> Certain groups that may be particularly vulnerable included those who were diagnosed with COVID,<sup>6</sup> as well as individuals that identified as being Black or Hispanic.<sup>7</sup> Hawes et al also found a significant gender difference with girls being more likely to develop depressive and panic/somatic symptoms compared to boys. Girls specifically experienced a nearly threefold increase in rates of clinically significant depression compared to levels pre-COVID, and nearly half (49%) experienced clinically significant generalized anxiety during COVID.<sup>4</sup> Stressors identified included concerns about passing classes, juggling schoolwork with other responsibilities, and online classes being poor quality. A unique finding of the study showed that social anxiety actually decreased with home confinement, and the mental health of these individuals actually improved during the COVID lockdown procedures.<sup>4</sup>

The consequences of the pandemic are not short-lived, and may present new challenges to family medicine clinicians requiring a specific focus on mental health. A cohort study of approximately 1.7 million individuals aged 5 to 22 conducted from 2017 to 2021 showed overall incidence and prevalence of depression increased by 60%, and anxiety increased by 31%.<sup>8</sup> Untreated mental illness is the number one risk factor for suicide, and is one of the leading causes of death in adolescents.<sup>9</sup> Children and adolescents with mental health disorders account for up to 70% of those incarcerated in juvenile detention centers, and are also more likely to experience developmental abnormalities as they advance through life.<sup>9</sup> The current standards of care recommend annual screening from ages 12-21 for depression using a validated screening tool such as the two question PHQ-2, and screening for anxiety from ages 8-18 (Table

1).<sup>10</sup> SCARED is a 5-item screening tool which can differentiate anxiety from other mental health disorders in children (Table 2).<sup>10</sup> Positive screens should be followed by a comprehensive history and physical to establish a diagnosis.<sup>11</sup>

Identifying early signs of anxiety and depression are critical to the long-term health of our patients, and allows for earlier personalized intervention.<sup>12</sup> Pre-COVID research has shown that children who are out of school for holidays and summer vacation are less physically active, have longer screen times, irregular sleep patterns, poor diets that lead to weight gain, and loss of cardiopulmonary fitness, all of which are risk factors for poor mental health.

One study showed that the mean post-traumatic stress scores were four times higher in children who have been quarantined, compared to those who were not.<sup>12</sup> Social interventions can include modification of academic curriculum, consistent sleep schedule, and increasing opportunities for social interaction. Schools can promote a health-conscious schedule by including mental health information and workshops into their curriculum.

In addition to school supported activity, parent education can aid in teaching parents coping mechanisms and concerning signs to be aware of to better support their children and adolescents. Parents can address mental health concerns directly by having conversations with their kids and expressing support to help mitigate their children's levels of anxiety, and avoid panic surrounding social situations.<sup>13</sup> Through recognizing early warning signs of declining mental health, parents can be a voice for their kids when speaking to family doctors. Strengthening the bond between parental figures and their children can improve the family dynamic, leading to improved mental health for all in the household. Recreational programs and volunteer opportunities have also been shown to help enhance social experiences and increase physical activity.<sup>14</sup> Interventions targeting the entire family have also been found to be perhaps more influential than child-focused interventions.<sup>15</sup> Family routines, cultural practices, and rituals that promote mental health have been found to have profound impact on resilience in families experiencing adversity.<sup>15</sup> A cross-sectional study including 1,164 participants showed that problem-solving coping skills, and social support were associated with better emotional health.<sup>16</sup>

Mental health disorders carry with them a stigma that may make it difficult for patients to discuss.<sup>9</sup> Family clinicians can be the first point of contact for many patients, and are often the ones with whom they feel most comfortable speaking about these issues.<sup>9</sup> Additionally, the holistic care provided by family doctors is



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necessary and valuable, as the mental health problems facing our youth often involve the entire family. The variety of roles a family doctor fulfills, such as medical management, and behavioral, substance abuse, and mental health counselor, are greatly beneficial to pediatric populations who may not routinely see other doctors, such as psychiatrists, or neurologists. Research has also shown that patients with a history of one depressive episode have a 40-60% chance of experiencing a subsequent depressive episode, so continuity in care is vital.<sup>17</sup> As we continue to deal with the fallout from the COVID-19 pandemic, recognizing and addressing these issues will become even more important.

**Table 1: PHQ-2 Questionnaire**

Over the last 2 weeks, how often have you been bothered by 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
Feeling down, depressed, or hopeless	0	+1	+2	+3

A score of 3 or greater indicates major depressive disorder is likely. [https://med.stanford.edu/content/dam/sm/ppc/documents/Mental\\_Health/PHQ-2\\_English.pdf](https://med.stanford.edu/content/dam/sm/ppc/documents/Mental_Health/PHQ-2_English.pdf)

**Table 2: 5-item SCARED**

I get really frightened for no reason at all	Not true or hardly ever true (0)	Somewhat true or sometimes true (+1)	Very true or often true (+2)
I am afraid to be alone in the house	Not true or hardly ever true (0)	Somewhat true or sometimes true (+1)	Very true or often true (+2)
People tell me that I worry too much	Not true or hardly ever true (0)	Somewhat true or sometimes true (+1)	Very true or often true (+2)
I am scared to go to school	Not true or hardly ever true (0)	Somewhat true or sometimes true (+1)	Very true or often true (+2)
I am shy	Not true or hardly ever true (0)	Somewhat true or sometimes true (+1)	Very true or often true (+2)

A score of > 3 indicates anxiety. The current SCARED screening used typically include 41 questions. <https://pubmed.ncbi.nlm.nih.gov/10517055/>

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# Binge Eating Disorder in Primary Care

By Mariam Kirvalidze, DO, Dipl ABOM; Lovedhi Aggarwal, MD and Ghazal Sinha, MD, Dipl ABOM, MSCP

Binge-eating disorder (BED) affects 1.9% of the general population worldwide,<sup>1</sup> and 1-2% of adolescents experience BED.<sup>2</sup> A US-based longitudinal study of adolescent girls found the lifetime prevalence was 6.1%.<sup>3</sup> The Diagnostic and Statistical Manual of Mental Disorders (DSM), 5th edition, defines binge-eating disorder by several criterion, including recurrent episodes of eating a large amount of food in a discrete period of time, a sense of a lack of self-control during these episodes, as well as three of the following five: eating much more rapidly than normal, eating until uncomfortably full, eating large amounts of food when not feeling physically hungry, eating alone because of being embarrassed, and feeling disturbed with oneself after overeating. Marked distress regarding binge eating must be present, and binge eating episodes must occur at least 1 day a week for 3 months, and the binge eating must not be associated with compensatory behaviors like purging or occur solely during an episode of bulimia nervosa or anorexia nervosa.<sup>4</sup> These criteria for binge-eating disorder are summarized in Table 1.

Despite its prevalence, BED is underdiagnosed by physicians. In one US study, 41.6% of physicians never assess for binge-eating disorder.<sup>5</sup> Moreover, many healthcare professionals do not recognize BED to be a discrete eating disorder.<sup>6</sup> Additionally, less than 50% of patients with BED ever seek help for their disorder,<sup>7</sup> with the most identified barrier to help-seeking by affected persons being stigma and shame.<sup>8</sup> A majority of patients who are diagnosed with BED or meet criteria for BED reported seeing a primary care doctor (PCP) for their symptoms,<sup>9</sup> and family doctors – who are often well-versed in weight management – are in a unique position to diagnose BED and refer patients for appropriate care.

Binge-eating disorder is often associated with a range of other medical and psychiatric co-morbidities. Most individuals with BED meet diagnostic criteria for at least one other lifetime psychiatric disorder, the most common in a national study being major depressive disorder, followed by alcohol use disorder, borderline personality disorder, and an association of history with suicide attempts in

22.9% of individuals.<sup>10</sup> BED also has a significant association with obesity compared to those without an eating disorder.<sup>11</sup> Individuals with binge eating disorder (BED) face a higher lifetime risk of developing diabetes compared to those without eating disorders.<sup>12</sup> Moreover, within a five-year period, they are significantly more likely to be newly diagnosed with components of metabolic syndrome, such as hypertension, dyslipidemia, or type 2 diabetes, compared to BMI-matched individuals without BED.<sup>13</sup>

Recognizing binge-eating disorder is the first step in treatment. Binge-eating disorder is prevalent in patients seeking weight loss treatment<sup>14</sup> and in patients with obesity<sup>15</sup> and should be assessed for when a patient visits to discuss weight management. PCPs should assess risk factors for BED including weight and dietary issues, and should routinely ask about eating habits, and monitor changes in body weight.<sup>16</sup> Weight history should include weight cycling, evaluation of eating patterns for irregular or restrictive eating habits, and overeating and compensatory behaviors, as well as assessing patient's body image.<sup>17</sup> The physician should take a nonjudgemental, empathetic approach when interviewing to help their patient disclose their symptoms.<sup>17</sup> Motivational interviewing techniques can be used as with other eating disorders, to start the conversation with your patient, and assess their motivation for change, for example, "would it be okay if we discussed your eating habits?"<sup>18</sup> There are several validated diagnostic tools for eating-disorders including the Eating Disorders Examination-Questionnaire and the Questionnaire of Eating and Weight Patterns-Revised which may be given to the patient to complete, but may not always be doable in a routine visit. Shorter assessment tools may be used including the Eating Disorder Screen for Primary Care, and the 7-item Binge Eating Disorder Screener,<sup>16</sup> the last of which is the only listed brief screening tool specifically for binge-eating disorder, and reflects DSM-5 criteria for BED.<sup>19</sup>

The primary goals of treatment for BED (Summarized in Table 2) are reduction or elimination of binge eating and associated psychopathology, improvements in mood and other psychiatric symptoms, and improvements in metabolic indicators like HgbA1c, as well as improvements in quality of life.<sup>20</sup> The outpatient treatment team should include an experienced therapist, dietician, and a clinician and typically care is provided as 20 or more weekly sessions spread out over a year.<sup>17</sup> Psychotherapy, specifically cognitive behavioral therapy (CBT), is the most effective treatment for BED in terms of achieving abstinence, and is the first-line treatment of BED.<sup>21</sup> CBT generally involves weekly sessions over four to 12 months for eating disorders, depending on the



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patient.<sup>17</sup> From a nutritional counseling standpoint, binge episodes are triggered by dietary restriction, so caloric restriction should be moderated, and no food choices should be eliminated.<sup>22</sup> Physical activity should also be encouraged, given its inhibitory effects on excessive food intake.<sup>23</sup> Studies suggest long-term effectiveness for treatment of binge-eating disorder with psychotherapy alone, and studies with pharmacotherapy, mainly antidepressants, revealed lesser effects on binge-eating episodes. Combination of both psychotherapy and medication is not generally more effective than psychotherapy alone for BED, but studies with CBT plus fluoxetine and CBT plus topiramate did show reduction in binge frequency and medications enhanced weight loss.<sup>24</sup> Pharmacotherapy alone can be used as first-line therapy for those patients who do not have access to psychotherapy or would rather initiate treatment with medications.<sup>25</sup>

Lisdexamfetamine (Vyvanse) is currently the only medication approved by the US Food and Drug Administration for treatment of BED.<sup>26</sup> Lisdexamfetamine has been shown to decrease binge-days per week and reduce body weight by 5-6%.<sup>20</sup>

Antidepressants particularly selective serotonin reuptake inhibitors (SSRI's) are the most widely studied in BED treatment, positively affecting eating impulsiveness as well as symptoms of anxiety and depression, which are known to trigger binges.<sup>21</sup> In trials, citalopram, fluoxetine, fluvoxamine, and sertraline had higher remission rates of BED as compared to placebo group, however these improvements were only noted in the short-term and long-term changes were not observed.<sup>27</sup> Additionally, SSRIs do not have any significant effect on weight loss.<sup>28</sup>

Topiramate, which has been utilized as well for weight loss has been studied for binge-eating disorder. Topiramate decreases binge frequency and leads to weight loss compared to placebo. Some patients may not tolerate therapy due to potential side effects of paresthesia, dry mouth, and dyspepsia.<sup>29</sup>

Naltrexone/bupropion is an FDA approved treatment for obesity and has been studied for binge-eating disorder as well. In patients who initially responded well to treatment with the combination, there was good maintenance of binge-eating remission with this medication.<sup>30</sup>

Another class of medications being considered for treatment of binge-eating disorder are glucagon-like peptide-1 receptor (GLP-1) agonists. Preliminary research suggests that GLP-1RAs may offer a novel pharmacological strategy for managing binge eating by targeting pathways associated with satiety and food reward. Small pilot studies and case reports show promising results, including reduced binge eating frequency, weight loss, and improvements in related health conditions with GLP-1RAs like liraglutide and dulaglutide, however, large-scale, rigorous, double-blind, placebo-controlled trials are essential to definitively determine the efficacy, safety, optimal dosing, and comparative effectiveness of GLP-1 receptor agonists for binge eating disorder (BED).<sup>28</sup> Patients considered for GLP-1 agonist treatments should make an informed decision with their PCPs about treatment options and understand the risks of increased binge-eating episodes with cessation of therapy.<sup>31</sup> It should be considered that GLP-1 agonists have a favorable psychiatric side effect profile compared to other medical treatments – whereas lisdexamfetamine and fluoxetine may worsen bipolar disorder symptoms, and topiramate may increase suicidal ideation,<sup>28</sup> GLP-1 agonists have

not shown these risks and can be used where there is concern for psychiatric conditions like bipolar disorder.<sup>32</sup>

When considering bariatric surgery, candidates must be carefully screened in those patients who meet criteria for weight loss surgery. Eating disorders were once considered a contraindication to bariatric surgery,<sup>22</sup> but binge-eating episodes decreased in patients following weight loss surgery at one year.<sup>33</sup> Longer follow up data is needed beyond one year.

## Conclusion

Binge eating disorder (BED) is often underrecognized by physicians. However, with proper screening and heightened suspicion in select patients, several effective treatment options are available. Cognitive behavioral therapy (CBT) remains the cornerstone of BED treatment, but pharmacological options, including lisdexamfetamine, selective serotonin reuptake inhibitors (SSRIs), and more recently GLP-1 agonists, have shown promising results. Further research is needed on BED treatment strategies through larger samples, longer follow-up times and randomized controlled trials.

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Table 1: Diagnosis of Binge Eating Disorder	
All the following criteria must be present	
<b>Criteria</b>	
A. Recurrent episodes of binge eating characterized by either of the following:	Eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is larger than most people would eat in a similar period of time under similar circumstances
	A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating)
B. Binge eating episodes are associated with at least three of the following:	Eating more rapidly than normal
	Eating until feeling uncomfortably full
	Eating large amounts of food when not feeling physically hungry
	Eating alone because of feeling embarrassed by how much one is eating
	Feeling disgusted with oneself, depressed, or very guilty after overeating
C. There must be marked distress regarding binge eating	
D. Binge eating occurs on average at least once a week for 3 months	
E. The binge eating is not associated with the regular use of inappropriate compensatory behaviors (e.g., purging, fasting, excessive exercise) and does not occur exclusively during the course of anorexia nervosa or bulimia nervosa	
Specify remission of binge eating disorder	Partial remission: after full criteria for binge-eating disorder were previously met, binge eating occurs at an average frequency of less than one episode per week for a sustained period of time
	Full remission: after full criteria for binge-eating disorder were previously met, none of the criteria have been met for a sustained period of time
Specify severity of binge eating disorder	Mild: 1-3 binge-eating episodes per week
	Moderate: 4-7 binge-eating episodes per week
	Severe: 8-13 binge-eating episodes per week
	Extreme: 14 or more binge-eating episodes per week

American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA, American Psychiatric Association, 2013.

Table 2: Treatment Options for Binge Eating Disorder	
Psychotherapy	Cognitive Behavioral Therapy
Medications	Antidepressants
	Bupropion
	Duloxetine Citalopram Duloxetine Escitalopram Fluoxetine Sertraline
	Stimulants
	Lisdexamfetamine
Anticonvulsants	Topiramate Zonisamide
Combination treatments	Naltrexone plus bupropion

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# ENGAGE NYC: Improving Access to Mental Health Services in the Community

By Kimberly Sanchez; Erin K. Ferenchick, MD; Miriam Tepper, MD and Milton Wainberg, MD

The United States is facing a behavioral health crisis where 2 out of 5 adults report symptoms of anxiety and depression<sup>1</sup> and nearly a quarter of the population have past-year use of illicit drugs.<sup>2</sup> In New York State, it is estimated that 1 in 5 adults experience a mental illness,<sup>3</sup> and 2.8 million New Yorkers experience a substance use disorder each year, with clear racial disparities in access to treatment.<sup>4</sup> Approximately 40% of office visits for behavioral health conditions occur in primary care,<sup>5</sup> but more than 60% of these primary care physicians are unable to connect patients to outpatient mental health services.<sup>6</sup> A serious and persistent shortage of behavioral healthcare providers currently exists. More than 60% of psychologists report not accepting new patients,<sup>7</sup> and over one-third of counties in the United States do not have outpatient mental health providers that accept Medicaid.<sup>8</sup> For those patients who can make an appointment, the average wait time is 48 days,<sup>9</sup> and, once patients start treatment, 60% of them drop out between sessions 3-6, giving the system just a few sessions to engage.<sup>10</sup>

In addition to treating common behavioral health conditions and referring to more specialized care, family physicians play an important role in reducing stigma by normalizing discussions about mental health and substance use and performing screenings during routine visits. They also have the opportunity to address the negative social determinants of health such as housing instability, food insecurity, and overall financial distress, which are known to be associated with worse mental health outcomes.<sup>11</sup> However, family physicians face multiple challenges to providing comprehensive care in a busy primary care practice. High patient volume and short appointment duration lead to time constraints, and mental health assessment and counseling typically require longer appointments. Furthermore, physical health concerns must also be addressed, limiting the time available for mental health needs.<sup>12</sup> Additional barriers to addressing patients' behavioral health needs include reimbursement and insurance issues,<sup>13</sup> provider training and knowledge gaps, fragmentation of care, limited referral options, and stigma leading to patient reluctance to disclose mental health concerns.<sup>14</sup> Given these implementation challenges and the limited behavioral health workforce, it is critical to seek innovative solutions to alleviate the demands placed on family physicians, and identify collaborative partnerships which ensure patients have timely access to the comprehensive care tailored to both their mental health and other individual needs.

One way to improve access to behavioral health services is through the use of community-based lay providers. In many settings, these providers are called community health workers; in substance use treatment settings, they may be called recovery coaches. Task sharing is an effective strategy used to collaboratively distribute tasks among more specialized and less specialized health care providers.<sup>15,16</sup> Through task sharing, physicians can focus more on clinical tasks and other aspects of patient-centered care,<sup>17</sup> and shift some aspects of behavioral health care to lay providers to address low-to-moderate mental health and substance use problems that may not require specialized behavioral health care. Through this approach, community-based lay providers are rigorously trained and supervised to offer certain types of behavioral health services despite not having a formal clinical background. While traditional behavioral health providers diagnose, develop treatment plans, and provide specialized psychotherapy and/or medication management, lay providers can be trained in specific skills such as facilitating access to behavioral health resources, psychoeducation and emotional support, as well as delivering evidence-based care for low-to-moderate presentations of depression, anxiety, PTSD, alcohol and substance use, and suicide risk.<sup>18</sup> The use of appropriately trained and supervised community-based lay providers to deliver specific behavioral health interventions has been demonstrated to improve access to care and behavioral health outcomes.<sup>15,16,19,20</sup>

Increasing the number of trained lay providers offers advantages for behavioral health care delivery beyond reducing wait times and expediting access to care. Many lay providers are embedded within the communities they serve, providing culturally and linguistically aligned care that fosters stronger therapeutic alliances and higher patient satisfaction.<sup>21,22</sup> Evidence demonstrates that integrating lay providers in behavioral healthcare not only improves patient engagement and retention but also reduces symptoms across diverse settings, such as in community and primary care settings.<sup>23,24</sup> Additionally, community-based lay providers can help reduce stigma,<sup>25</sup> build trust and rapport with patients, provide flexibility and accessibility, and serve as advocates.<sup>26</sup> Patients can benefit from streamlined referrals, reduced waiting times, and strengthened community relationships. For family medicine, this model is particularly valuable as it can allow providers to reallocate time and resources to other aspects of patient-centered care<sup>27</sup> while addressing longstanding referral challenges for behavioral health.

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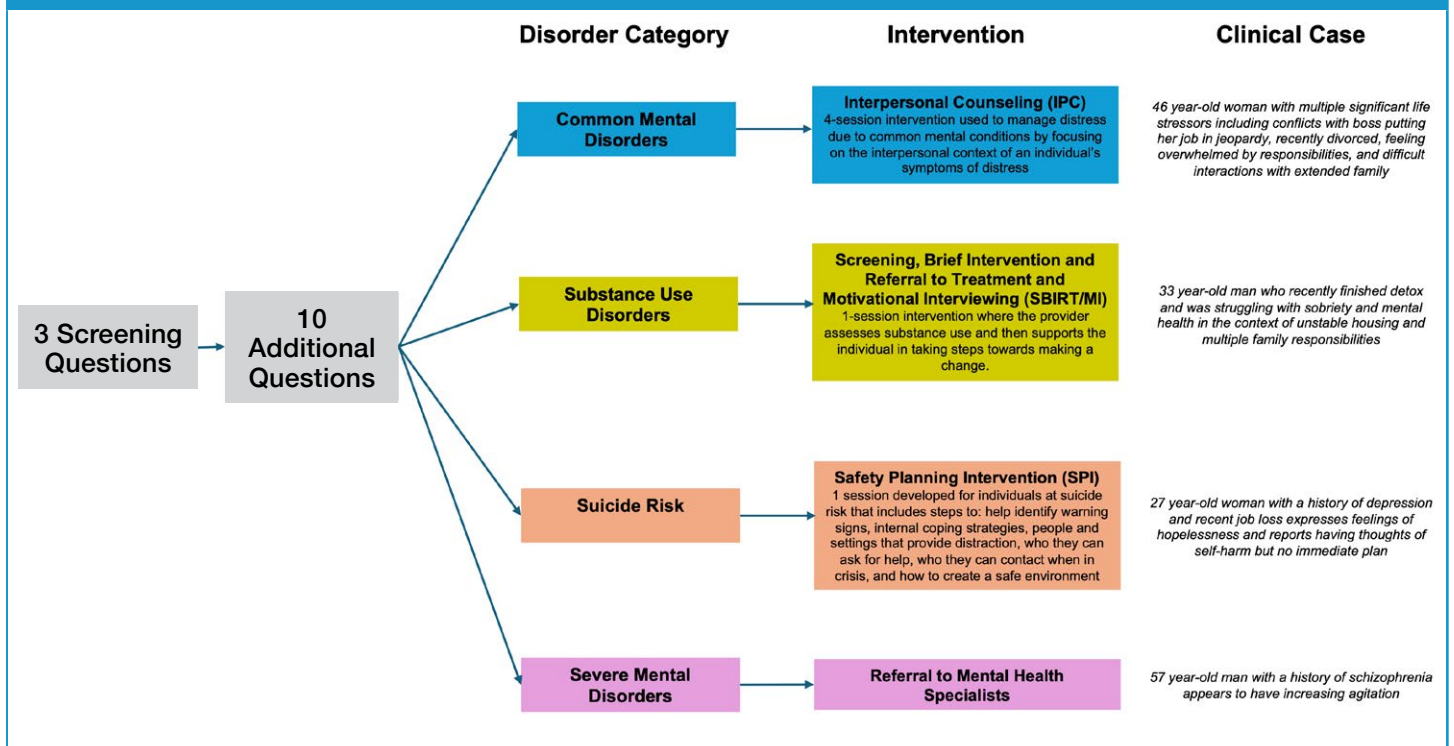
ENGAGE (Engaging Communities to Gain Mental Wellbeing and Equity),<sup>27</sup> a program that uses community-based lay providers to improve access to care, has been successfully implemented in several low- and middle-income countries. For example, in Mozambique, over 1200 evidence-based psychotherapies (EBP) providers, supervisors, and trainers were initially trained in the ENGAGE model and subsequently trained almost 600 community health workers to deliver mental health services in 23 districts of the Nampula province of Mozambique.<sup>28</sup> Using learning from this and other contexts, ENGAGE is currently being implemented across multiple sites within New York City, including at community organizations and in the primary care setting. While early in its implementation, the initial promising findings, including eliminating waitlists, suggest tremendous promise for this approach to support the behavioral health needs of the primary care patient population. Below we describe the model's structure, training, implementation and initial learnings.

With funding from the New York State Office of Mental Health, ENGAGE is overseen by the Columbia University Mental Wellness Equity Center. It aims to train a lay workforce to: 1) expand screening for mental health and substance use conditions, 2) triage based on identified needs, 3) provide evidence-based interventions to those with mild/moderate severity mental health conditions, and 4) address social determinants of health-related needs. In this model, individuals in need of clinical services are referred immediately to clinical care and those with mild/moderate severity mental health needs are offered interventions for a range of mental health conditions. Specifically, those with common conditions (i.e., depression, anxiety, and traumatic stress) are offered a four-session interpersonal counseling (IPC) intervention. Those with substance use needs are offered a one-session intervention that includes

Screening, Brief Intervention, and Referral to Treatment and Motivational Interviewing (SBIRT/MI), and those with suicide risk (not in need of immediate intervention) are offered a one-session Safety Planning Intervention (SPI). This is summarized in Figure 1. Those experiencing financial distress are offered referrals for financial support and other indicated services. The ENGAGE model aims to expand the mental health workforce, improve timely access to effective services, and reduce disparities in mental health access and outcomes.

The ENGAGE model uses the Mental Wellness Tool (mwTool) as a screening instrument designed for ambulatory populations that enables lay providers to triage into categories of need. The mwTool uses selected items from existing valid screening tools including the PHQ-9 (Patient Health Questionnaire-9 screening for depression), GAD-7 (General Anxiety Disorder-7), and the Primary Care Post-Traumatic Stress Disorder (PTSD) Screen. The mwTool has a sensitivity of approximately 95% to detect any mental disorder with three questions. With nine additional questions,<sup>29,30</sup> it then further classifies individuals into the categories of severe mental health disorders (i.e., those requiring immediate referral to clinical care), common mental health disorders, substance use disorders, and suicide risk. For individuals who screen as having mild-to-moderate common mental conditions, substance use needs, or suicide risk (i.e., not requiring immediate intervention), lay providers then offer clients the indicated intervention for each category of need as illustrated in Figure 1. For instance, a client with mild-moderate depressive symptoms can receive screening and then immediately begin the first session of interpersonal counseling (IPC) with this same lay provider. Similarly, if an individual is screened for suicide risk and does not require immediate intervention, the same lay provider who screened can conduct a one-time safety planning

Figure 1: ENGAGE Model





intervention. A financial wellness screening instrument has been developed to function similarly to the mental health screening process. Important in the model is having an established relationship with a mental health clinic to facilitate referrals when needed, and lay providers always working under the supervision of a licensed clinical provider. The lay providers also build relationships with the community-based organizations where they are embedded to facilitate deeper engagement with the communities they serve.

Figure 1 is an overview of the ENGAGE model which describes each intervention and provides an illustrative clinical example of a patient who received the indicated intervention.

ENGAGE incorporates a structured training program with several different modules, each of which has an initial didactic component that includes role-playing and skills rehearsal in small groups.<sup>27</sup> Trainees then have a period of experiential learning, in which they work with training clients until they achieve competency in an intervention. Training topics include an introduction to the ENGAGE model, the mwTool, and general skills for working with clients, followed by modules in the three mental health interventions (IPC, SBIRT/MI, and SPI), as well as a module for financial wellness. Trainees achieve competency in each module once they demonstrate skill mastery specific to the topic area. They receive ongoing weekly group supervision with agency supervisors who have been trained to supervise in the ENGAGE model, which supports program sustainability at the agency. Through this training and supervision process,<sup>27,29</sup> ENGAGE provides an approach to task sharing that ensures that lay providers are well-trained in their specific assignments, offer high-quality and effective care, are continuously supported through supervision, and have a mechanism to address any challenges that arise.

ENGAGE is not meant to replace mental health care and is not a research study; for both of these reasons, its direct impact on mental health service utilization is difficult to assess at this early stage. However, program evaluation of the initial pilot in New York City yields important data, including demonstrating that ENGAGE is serving individuals with high levels of racial/ethnic diversity and socioeconomic adversity. Of the 213 individuals screened, 26% self-identified as Black, 70% as Hispanic, and 37% as white. Their educational backgrounds were limited, with 35% with less than a high school education and 33% with a high school education. Nearly a quarter were of low English proficiency, and more than half were unstably housed. In addition, 51% self-identified as having a serious medical condition.

Screening with the mwTool resulted in 94% being categorized as having a common disorder, 22% with suicide risk, 36% with drug use, 39% with alcohol use, and 34% with a severe disorder (and therefore in need of clinical referral). For those categorized as having a common disorder, severity was in the moderate to severe range for more than half the sample for depressive symptoms, and nearly half (47%) for anxiety symptoms. Additionally, more than half screened as having probable PTSD. These individuals with common conditions were all offered interpersonal counseling (IPC), and pre and post symptom scales showed improvement in depression, anxiety, and PTSD symptoms across the range of initial severity scores.

While the ENGAGE model of training, screening, and service delivery is well-defined, its implementation is highly flexible.

Organizations currently implementing ENGAGE have done so within clinic settings as well as in varied community locations. In family medicine, there are two main approaches that could be taken to adapt ENGAGE to the specific needs of primary care practices. First, family physicians could integrate the ENGAGE model directly into their practices by collaborating with the Columbia University Mental Wellness Equity Center and its partners to train existing staff or newly hired lay providers, provide clinical supervision when necessary, and/or explore how efficient screening tools used in ENGAGE might provide new solutions to the myriad challenges they face. Alternatively, family medicine practices could build community partnerships with other organizations that have staff trained in the ENGAGE model. With either approach, improved access to mental health services by the use of trusted lay providers could be developed by identifying new implementation sites and expanding the ENGAGE model across New York State.

ENGAGE's model of addressing mental health needs – including task sharing, workforce expansion through the training of lay providers, careful triage to match patient need with service intensity, and the use of evidence-based interventions – makes it well-poised to help address the significant unmet need in historically underserved communities. Further, its implementation flexibility means that family practice settings throughout New York could use this model to address critical mental health needs among their patient populations. Through models like ENGAGE, family physicians throughout New York State will have increasing opportunities to work with community organizations to align resources and advocate for interventions that improve health outcomes for their patients.

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# Spasmodic Hysteria

By Thomas C. Rosenthal, MD

Episodes of depression and melancholy were known to visit Dr. Jabez Allen's son. In 1874 at age 22, while a medical student, the young Allen died of anthrax contracted while performing an autopsy. Heartache generated a deep-seated agitation in Dr. Allen's mind, and heightened his interest in mental health.

He was still in this state of agitation when 66-year-old Dr. Allen was asked to see twenty-six-year-old Eunice Turner's eight-year-old son. The boy was in his third day of measles and was delirious. Dr. Allen stayed the night, comforting both child and parents as best he could. At sunrise, the child died. Over the next ten days, the other three Turner children suffered their own serious cases of measles. All three survived, but the terror haunted Eunice. Her complexion turned sallow, her bowels became agitated, and she wept daily. Her husband, a glass importer, traveled often, leaving Eunice and their three children in the company of his mother. It was Eunice's mother-in-law who sent for Dr. Allen when Eunice suffered an episode of generalized twitching, unintelligible speech and collapse.<sup>1</sup>

In Dr. Allen's own words, "By my arrival, Eunice had returned to her usual self and my exam revealed no injury or abnormality. However, as I mounted my horse to depart, I was summoned back into the house to witness a second attack. Eunice lay on the floor in a rigid quiver, partially aware of her surroundings. Her utterances were forced belching that I would not describe as speech and she had no loss of urine or feces. Again, there was no injury and Eunice's recovery was rapid and complete. I could arrive at no other conclusion than Eunice was suffering from spasmodic hysteria, though it is difficult to distinguish the condition from epilepsy, mania, or catalepsy."

Nineteenth-century physicians attributed hysteria to the uterus, though the theory did not account for men who presented with similar symptoms. Griesinger wrote that people with a sensitive, irritable nervous system simply encountered a situation exceeding their mind's capacity for reason.<sup>2</sup> Medical books recommended the application of leeches to the scalp to remove blood that caused inflammation and brain dysfunction. Cathartics were added to rid the bowels of inflammatory byproducts generated in the liver.<sup>3</sup>

After following these guidelines in his first few years of practice, experience convinced Dr. Allen that recovery required a commitment to moderate exercise and conversation. The subject of conversation was unimportant, but he found that husbands and mothers seldom possessed a natural propensity for healing talk. In Eunice Turner's case, Dr. Allen recommended the family engage a local midwife who he found skilled at soothing conversation. Over the next six weeks, the midwife engaged Eunice in thrice weekly strolls through the village that resolved her hysterical condition.

In the 1840s, Dorothea Dix awakened America to the needs of patients with mental afflictions. Miss Dix's parents both suffered intemperance, forcing her to live with her grandparents, Dr. Elijah Dix and his wife Dorothea, in Boston. They provided a liberal Unitarian education and Miss Dix began teaching school at age eighteen. In 1824, at twenty-two, she published *Conversations on Common Things*. A book formatted as a conversation between mother and daughter, that became a very popular source of facts and values for woman.

Suffering her own nervous irritability, Miss Dix took a cure with a community of English Quakers. Upon returning to America, she advocated for the establishment of asylums with a labor force trained to care for the mentally ill. At the time, New York State law required families to restrain relatives considered a threat to themselves or others, but violent or suicidal behavior, hallucinations, and delusions often forced removal of the individual. Patients were then placed with any household willing to provide shelter for a fee.

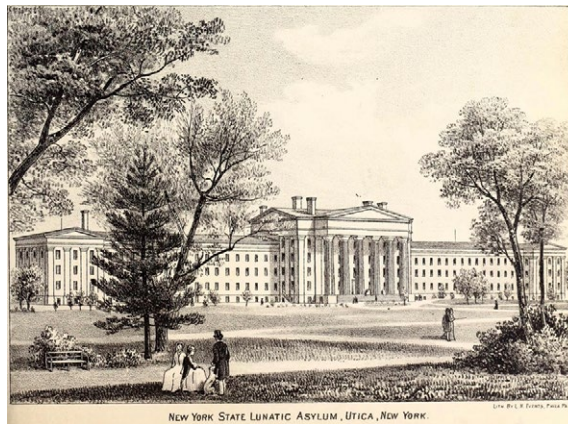
Dix's efforts led to the opening of the first New York State Lunatic Asylum in Utica, New York, in 1843. Within a year, it housed over a thousand patients. The first medical director, Amariah Brigham, received an annual salary of \$1200 and a home on the asylum campus. A pioneer alienist, Brigham encouraged Utica's patients to publish a weekly newsletter. He founded the *American Journal of Insanity* and joined with other states to form the Association of Medical Superintendents of American Institutions for the Insane.

Their first campaign replaced the term "alienist" with the European designation of "psychiatrist."

Utica patients were never chained. If they risked harming themselves, patients were placed in the Utica Crib, a bed with a thick mattress, slats on the sides and a hinged top that created a safe space eighteen inches deep, six feet long, and three feet wide. Talk sessions at Utica focused on the institution's farming, gardening, carpentry and needlework, resulting in forty percent of patients being discharged in less than a year.

In 1851, Edward Jarvis studied the records of 32,214 patients admitted to 358 asylums across Europe and America. He found 181 different causes of mental afflictions, with many patients having more than one. Jarvis opined that 13% of insanity resulted from intemperate use of alcohol, opium, and tobacco. Abuse of the genital system and sexual indulgence caused about 5%. Childbirth, pregnancy and difficulties associated with female reproduction caused between 5 and 9%. Twenty-two percent of patients had an insane parent. Admissions were precipitated by intense excitement including, sudden elation, jealousy, remorse, envy, infatuations, religious anxieties, undue parental severity, and passions such as hate, revenge and ambition.<sup>4</sup>

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While interesting, such data did little to help village doctors who were commonly asked to aid individuals not quite fitting into society, yet not quite insane. They were unique, wayward, and eccentric characters whose manners and habits are considered unusual and bothersome. Yet, within a circumscribed life, their function could be satisfactory, their productivity adequate, and there is little reason, beyond that of a concerned relative, to force conformity or remedy.

Except in rare cases of tumor or gross brain anomaly, autopsies offered little understanding about the causes of insanity. Bucknill's 1858 *Manual of Psychological Medicine* categorized mental afflictions according to three behavior patterns: *emotional* insanities (melancholia, monomania and mania); *intellectual* insanities (idiocy, delirium, delusions and hallucinations); and *volitional* insanities (phobias and anti-social behaviors). Hallucinations and delusions characterize the intellectual insanities. By the 1870s, efforts to assist an agitated insane person began with arranging a period of quiet seclusion or sleep. Opium had been used to induce this stage for over a century, but in the 1870s, bromides and chloral hydrate became available. In extreme cases, chloroform or ether was employed. Dr. Allen found cold compresses were surprisingly helpful with even the most agitated patient.<sup>5</sup>

In Dr. Allen's opinion, mental afflictions occurred when work or worry were excessive, exercise inadequate, rest unfulfilling, diet poor or alcohol overused. He felt that life in the 1870s had become quickened by steam power and telegraphy, while newspapers and magazines raised expectations beyond the grasp of many people. Dr. George M. Beard called this form of nervous exhaustion

neurasthenia.<sup>6</sup> It became a convenient label and implied that the doctor had made sense of the patient's troubles. Treatment still involved removing the patient from all sources of tension, a bland diet, and rest; submitting all decisions to others. At the first sign of improvement, a structured regimen of walking and conversation was prescribed. Drugs often prolonged the disability.

When considering the role of a family doctor in the care of mental illness, Dr. Allen's career teaches us that the well trained, attentive primary care physician has a critical role to play. Recruiting patient resources and family continuity can overcome many obstacles.

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# Reducing Generalized Anxiety Disorder Using Osteopathic Manipulative Treatment/Techniques

By Devan Trammel, DO; Kainat Meer, DO; Quinn Kensey, DO; Perry Yazzolino, DO and Lovedhi Aggarwal, MD

## Introduction/Epidemiology

Anxiety disorders rank among the most prevalent mental health conditions worldwide, posing a significant burden on individuals and healthcare systems alike. Generalized anxiety disorder (GAD), in particular, is characterized by chronic and excessive worry, affecting daily life and often leading to functional impairment.<sup>1</sup>

In the United States, the lifetime prevalence of anxiety disorders is around 34%. Specific anxiety disorders have varying prevalence rates: generalized anxiety disorder (GAD) at 6.2%, social anxiety disorder at 13%, and panic disorder at 5.2%.<sup>2</sup>

The rising incidence of anxiety disorders, particularly GAD, has been notable. Between 1990 and 2019, there was a 47% increase in cases, accompanied by a 53% rise in disability-adjusted life years (DALYs) associated with these conditions. Women are disproportionately affected, and incidence rates peak during adolescence and mid-adulthood, making targeted interventions critical for these populations.<sup>4</sup> Anxiety disorders, including GAD, are thus both pervasive and impactful, contributing significantly to global morbidity and affecting diverse age groups, genders, and regions. The chronic nature and high incidence rates underscore the need for effective interventions that address both the mental and physical dimensions of these disorders. This substantial burden calls for ongoing research and the integration of innovative treatment strategies to improve outcomes and enhance quality of life for affected individuals.

## Traditional Approaches to Treat Anxiety

The standard of care treatments for anxiety disorders include both pharmacotherapy and psychotherapy, with specific recommendations based on the type and severity of the disorder.

First-line pharmacotherapy involves the use of selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs). These medications are effective for generalized anxiety disorder (GAD), social anxiety disorder (SAD), and panic disorder (PD). The efficacy of SSRIs and SNRIs is supported by meta-analyses showing small to medium effect sizes compared to placebo<sup>13</sup> and can take up to 4-6 weeks to achieve anxiolytic effects with these medication classes.<sup>5</sup>

Cognitive behavioral therapy (CBT) is the most evidence-based psychotherapy for anxiety disorders. It has demonstrated large effect sizes for GAD and small to medium effect sizes for SAD and PD. CBT is often considered the initial treatment approach, especially for patients with milder symptoms or those who prefer non-pharmacological interventions.<sup>7</sup> The focus of CBT is on adjusting maladaptive cognition in an attempt to decrease emotional distress. CBT is used to treat a wide range of conditions, including substance use disorder, bipolar disorder, and depression. CBT also aids in treating secondary symptoms of anxiety, such as sleep disturbance.<sup>10</sup> The combination of CBT and pharmacotherapy compared to each therapy on its own can yield a more effective treatment.<sup>4</sup>

Thus, combination therapy of pharmacotherapy and CBT may be more effective than either treatment alone, particularly in cases of severe anxiety or when monotherapy is insufficient.<sup>6</sup>

There are other pharmacologic treatment options available which are not first line but are effective via different mechanisms of action. These treatment options include buspirone, benzodiazepines, pregabalin, tricyclic antidepressants (TCAs), and hydroxyzine. TCAs can be used to treat anxiety but have more adverse effects than SSRIs and SNRIs, including but not limited to dry mouth and weight gain.<sup>7,10</sup> Benzodiazepines are not routinely used, and are rather used short-term due to risk of dependence.<sup>10</sup>

These treatment modalities have been shown to be successful, and SSRIs and SNRIs are generally tolerated well.<sup>8</sup> CBT has been shown to lead to symptom reduction of 47% in adults dealing with generalized anxiety disorder.<sup>9</sup> However, there are some downsides to these treatment options. The first 2 weeks of use of SSRIs or SNRIs may cause increased feelings of anxiety.<sup>9</sup> This may reduce patient compliance, although this adverse effect can be managed or avoided by slower titration of the medication dosage.<sup>9</sup> Additionally, within the first year of discontinuing SSRIs or SNRIs, 40% of patients relapse after which treatment is typically reintroduced. 40% relapse in anxiety symptoms has also been seen after the discontinuation of CBT in the youth population.<sup>10</sup> Therefore, maintenance strategies should be implemented for better long-term outcomes.



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## What is OMT?

Osteopathic manipulation, also known as osteopathic manipulative treatment (OMT), is a set of manual techniques used by osteopathic physicians to diagnose, treat, and prevent illness or injury. These techniques involve the application of manually guided forces to improve physiological function and support homeostasis that has been altered by somatic dysfunction. The American Osteopathic Association defines somatic dysfunction as impaired or altered function of the body's framework, including skeletal, arthroal, and myofascial structures, and their related vascular, lymphatic, and neural elements.<sup>11</sup>

During an OMT session, a patient can expect the osteopathic physician to use their hands to apply various techniques such as stretching, gentle pressure, and resistance. The specific techniques used can vary depending on the condition being treated and may include soft tissue techniques, myofascial release, muscle energy techniques, and high-velocity low-amplitude thrusts.<sup>13</sup> The goal is to alleviate pain, restore function, and promote health and well-being.

OMT is commonly used to treat musculoskeletal pain, including back pain, neck pain, and headaches, and can be an adjunct to

pharmacologic treatments or an alternative to opioids.<sup>12</sup> It has also been shown to have effects on autonomic function and cerebral blood flow, suggesting broader physiological impacts.<sup>13</sup>

Patients undergoing OMT should expect a thorough physical examination, followed by the application of manual techniques tailored to their specific needs. The treatment is generally well-tolerated, with minimal adverse effects reported.<sup>14</sup>

OMT has shown promise as an adjunctive treatment for anxiety, especially GAD. A study evaluated the impact of OMT on patients with chronic nonspecific low back pain and found a significant reduction in anxiety levels as a secondary outcome. This study involved a targeted OMT protocol, including diaphragm-focused techniques that not only improved physical pain and disability but also a reduction of anxiety.<sup>14</sup> This suggests a dual benefit of OMT, as somatic manipulation may help modulate both physical and psychological symptoms, potentially through autonomic nervous system effects. Since both current and remitted anxiety disorders, observed in a large adult sample,<sup>16</sup> are associated with more disabling and severely limiting pain, particularly cardio-respiratory pain, OMT can also help modulate these symptoms.

### Hamilton Anxiety Rating Scale (HAM-A)<sup>17</sup>

Below is a list of phrases that describe certain feeling that people have. Rate the patients by finding the answer which best describes the extent to which he/she has these conditions. Select one of the five responses for each of the fourteen questions.

0 = Not present,                      1 = Mild,                      2 = Moderate,                      3 = Severe,                      4 = Very severe.

**1 Anxious mood**                       0  1  2  3  4

Worries, anticipation of the worst, fearful anticipation, irritability.

**2 Tension**                       0  1  2  3  4

Feelings of tension, fatigability, startle response, moved to tears easily, trembling, feelings of restlessness, inability to relax.

**3 Fears**                       0  1  2  3  4

Of dark, of strangers, of being left alone, of animals, of traffic, of crowds.

**4 Insomnia**                       0  1  2  3  4

Difficulty in falling asleep, broken sleep, unsatisfying sleep and fatigue on waking, dreams, nightmares, night terrors.

**5 Intellectual**                       0  1  2  3  4

Difficulty in concentration, poor memory.

**6 Depressed mood**                       0  1  2  3  4

Loss of interest, lack of pleasure in hobbies, depression, early waking, diurnal swing.

**7 Somatic (muscular)**                       0  1  2  3  4

Pains and aches, twitching, stiffness, myoclonic jerks, grinding of teeth, unsteady voice, increased muscular tone.

**8 Somatic (sensory)**                       0  1  2  3  4

Tinnitus, blurring of vision, hot and cold flushes, feelings of weakness, pricking sensation.

**9 Cardiovascular symptoms**                       0  1  2  3  4

Tachycardia, palpitations, pain in chest, throbbing of vessels, fainting feelings, missing beat.

**10 Respiratory symptoms**                       0  1  2  3  4

Pressure or constriction in chest, choking feelings, sighing, dyspnea.

**11 Gastrointestinal symptoms**                       0  1  2  3  4

Difficulty in swallowing, wind abdominal pain, burning sensations, abdominal fullness, nausea, vomiting, borborygmi, looseness of bowels, loss of weight, constipation.

**12 Genitourinary symptoms**                       0  1  2  3  4

Frequency of micturition, urgency of micturition, amenorrhea, menorrhagia, development of frigidity, premature ejaculation, loss of libido, impotence.

**13 Autonomic symptoms**                       0  1  2  3  4

Dry mouth, flushing, pallor, tendency to sweat, giddiness, tension headache, raising of hair.

**14 Behavior at interview**                       0  1  2  3  4

Fidgeting, restlessness or pacing, tremor of hands, furrowed brow, strained face, sighing or rapid respiration, facial pallor, swallowing, etc.

Further support for OMT as a treatment modality for anxiety comes from an open-label study conducted at a Toronto mental health clinic. In this study,<sup>15</sup> the researchers applied tailored OMT sessions to adults with moderate-to-severe GAD over an 8–9 week period. Inclusion criteria included patients with GAD who did not achieve remission following a minimum of 8 weeks of standard treatment and had a high Hamilton Anxiety Rating Scale.<sup>17</sup>

Patients with other axis I disorders were excluded, as were patients with alcohol abuse or dependence. Other exclusion criteria included cognitive disorder or dementia, pregnancy, other serious medical disease and significant risk of suicide.

The findings indicated significant improvements in Hamilton Anxiety Scale (HAM-A) scores, with 62% of participants achieving a 50% reduction in symptoms. Additionally, scores on the Intolerance of Uncertainty Scale improved, highlighting OMT's potential to address anxiety-provoking cognitive patterns. Even though the study had a small sample size, it concluded that OMT could serve as a valuable addition to conventional therapies for GAD, warranting further research in randomized trials.

Specific areas of somatic dysfunction that are often associated with anxiety should be targeted with osteopathic manipulation. Treatment of the autonomic nervous system in addition to vertebral segments and associated somatic dysfunctions can be done in an easy 5-15 minute treatment. Focusing on increased parasympathetic tone may improve physical symptoms of anxiety like increased acid secretion, nausea, vomiting, diarrhea. Treatment of somatic dysfunctions at OA, AA and C2 should improve parasympathetic tone. Treating the increased sympathetic tone that can be associated with anxiety can improve tachycardia and constipation. The corresponding areas associated with the autonomic supply to these organs is T1-4 and T5-L2 respectively. Muscular tension in the neck, upper back and shoulders is common in anxiety states and these areas should be evaluated and treated with appropriate osteopathic treatments. Some sample treatments to address these areas can be OA release, treatment of cranial dysfunction or CV4, treatment of individual spinal segment dysfunctions with muscle energy, FPR, BLT, HVLA or counter strain of specific muscles with appropriate tender points.<sup>18</sup> Techniques that influence the diaphragm and thoracic regions may be particularly effective in supporting parasympathetic activation, potentially reducing anxiety symptoms. Additional training for techniques as outlined above is available with both local (NYSOMS, New York State Osteopathic Medical Society) and national osteopathic associations (AAO, American Academy of Osteopathy). These techniques should only be performed by qualified practitioners.

## Conclusion

For patients with GAD seeking complementary and non-pharmacological treatment options, OMT may be considered as part of a comprehensive approach to anxiety management. With the consideration that patients with anxiety frequently have a comorbid pain syndrome, osteopathic manipulation should certainly be considered in a multimodal approach that is needed to treat complex medical conditions, including anxiety.

Family physicians should consider OMT as an adjunctive option for patients interested in alternative interventions. More research using controlled studies and large sample sizes is needed to further elucidate OMT's full therapeutic role in treatment for anxiety and other non-musculoskeletal conditions.

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# Pharmacogenomics in Behavioral Health

By Robert Ostrander, MD

Pharmacogenomics (PGx) is the application of an individual's genomic information to drug choice and dosing. There are pharmacogenomic guidelines and implications for many medications commonly prescribed in primary care with medications used to treat depression and anxiety and other behavioral health conditions among the most important. With a basic understanding of the principals and utilizing tools readily available online, applying PGx as part of a personalized treatment plan is relatively straightforward.

PGx can be divided into two domains: pharmacodynamics, which related to a drug's efficacy or risk related to the genetics of receptors and transporters, and pharmacokinetics, which relates to a drug's metabolism. With a couple exceptions (e.g. HLA-A and B genes' effect on risk of severe dermatologic reactions to carbamazepine), the large majority of clinically useful PGx evidence-based guidance for behavioral health medications is pharmacokinetic. That will be the focus of the remainder of this article.

Using PGx pharmacokinetic information is essentially an extension of what clinicians routinely do when prescribing; it is adding gene-drug interactions to renal function-drug and drug-drug interactions when considering drug choice or dosing. An understanding of the nomenclature of PGx and how this relates to drug metabolism is sufficient to apply PGx results to patient care. The genes involved for most of the commonly used behavioral health medications are part of the Cytochrome P-450 system and have specific labels like CYP2D6. The gene variants are generally identified using the \*-allele system, and the results are reported with the allele for each copy of the gene, for example CYP2D6 \*1/\*1. \*1 is the "wild type" or normal allele, but there is considerable variability in the genes which will be discussed here. Only 25% of the general US population's genotype is CYP2D6 \*1/\*1. Along with the genotype, the report will provide a metabolizer category: poor, intermediate (reduced), normal (previously called extensive), rapid or ultra-rapid. For medications which are pro-drugs (e.g. clopidogrel, codeine) metabolism increases active drug levels, but for the medications discussed here, metabolism can be understood as inactivation and reduces drug levels. Hence, poor metabolizers tend to higher drug levels than average and are prone to side effects, and rapid metabolizers have reduced drug levels and the medication may be less effective.

Applying PGx to prescribing for behavioral health requires deciding whom and when to test, what to test, and how to use the information. Additional considerations include insurance coverage and the process of ordering the tests. There are three primary resources for accessing evidence-based PGx information: CPIC (the Clinical Pharmacogenomics Implementation Consortium), the FDA, and PharmGKB. PharmGKB links to the other two.

The classes of medications that have evidence-based pharmacokinetic PGx guidelines include SSRIs, SNRIs, TCAs, serotonin receptor modulators, and atomoxetine. There are currently no established actionable guidelines or considerations for stimulants, benzodiazepines, mirtazapine, trazodone, or bupropion. However, bupropion is a strong CYP2D6 inhibitor which has implications for other medications metabolized through CYP2D6 pathways, which will be discussed below. The Dutch Pharmacogenomics Working Group does have a guideline for SGAs, but none of the US guideline organizations have included these. Whether there is an evidence-based consideration for a given medication or class can be ascertained by accessing [cpicpgx.org/guidelines](http://cpicpgx.org/guidelines) and typing the medication or class in the search box on that page.

There are two schools of thought about whom and when to test. One approach is to order PGx testing only on patients who have had problems with tolerability or lack of efficacy at the usual doses of one or more medications. The other approach is to order PGx testing for the genes with guidelines or implications for behavioral health medications at the onset of pharmacotherapy to increase the likelihood of a response and good tolerability with the initial medication and dosing program. Supporting the latter are a few studies, including a study published in 2024 of 655 patients with depression randomized to receive pre-emptive PGx testing versus usual care. At 8 and 12 weeks remission and response rates were significantly higher in the PGx group, and adverse reactions were fewer.

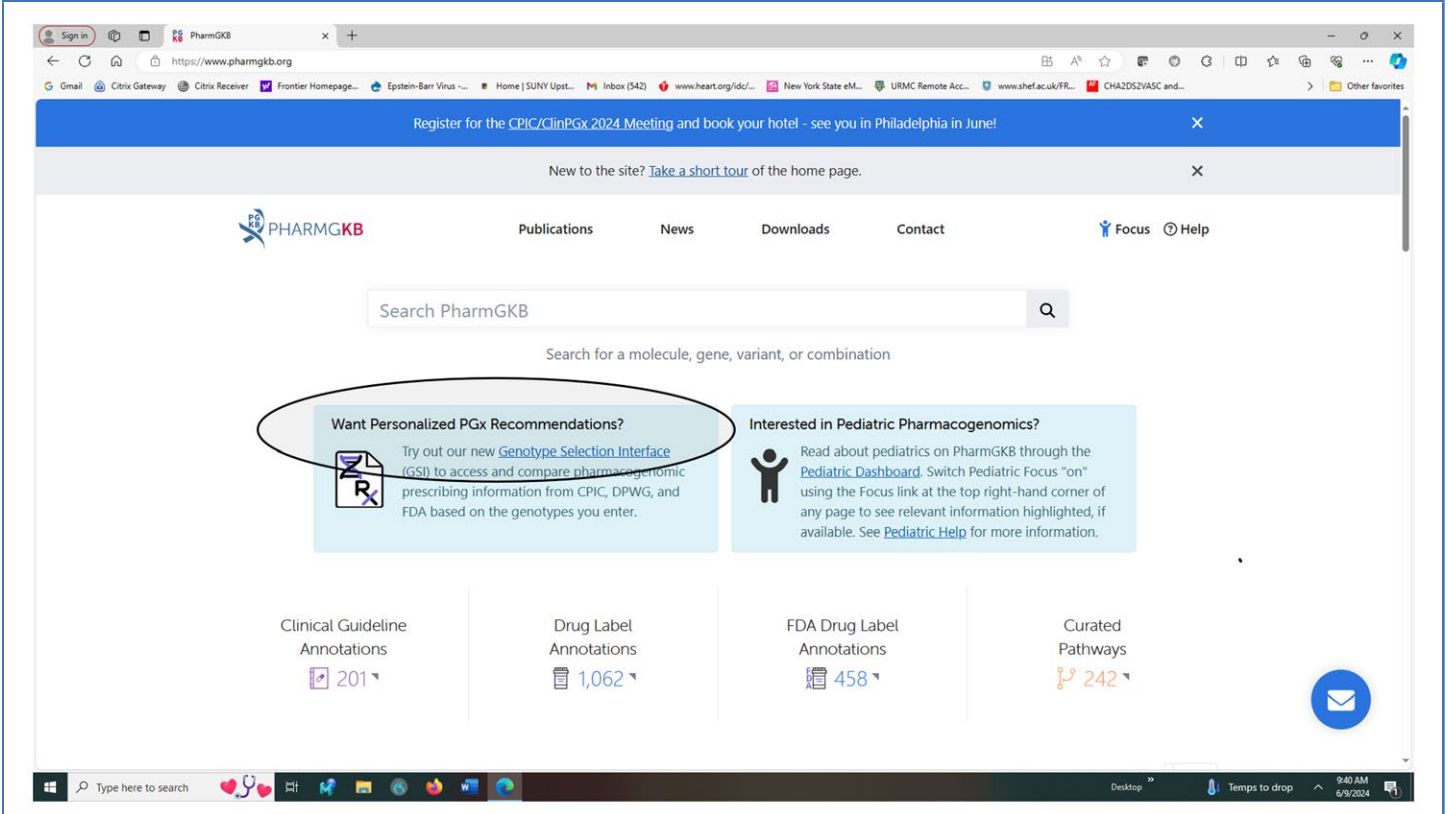
Fortunately deciding what to test in order to cover the vast majority of PGx implications for behavioral health medications is straightforward. Obtaining the genotypes for CYP2D6 and CYP2C19 will provide the information needed to apply PGx to the medications listed above, with the exception of sertraline. For sertraline adding CYP2B6 will provide additional information, since both CYP2C19 and CYP2B6 play a role in its metabolism. Depending on a practice's lab, the patient's insurance, logistics and other factors, these tests may be more easily ordered as part of a panel. However, the other tests are not likely relevant to behavioral health pGx.

There are now excellent online tools for applying the results of these tests, and reviewing the process step-by-step is worthwhile. Some commercial labs, including those that market heavily to clinicians, provide guidance with their reports. This guidance may be derived from proprietary algorithms that are not public nor peer reviewed. Experts discourage relying on that guidance, though the genotype data can be used.

The most straightforward way to get information about dosing implications is to access [pharmgkb.org](http://pharmgkb.org). Near the top of the page is a link for the GSI (Gene Selection Interface), See Diagram 1.

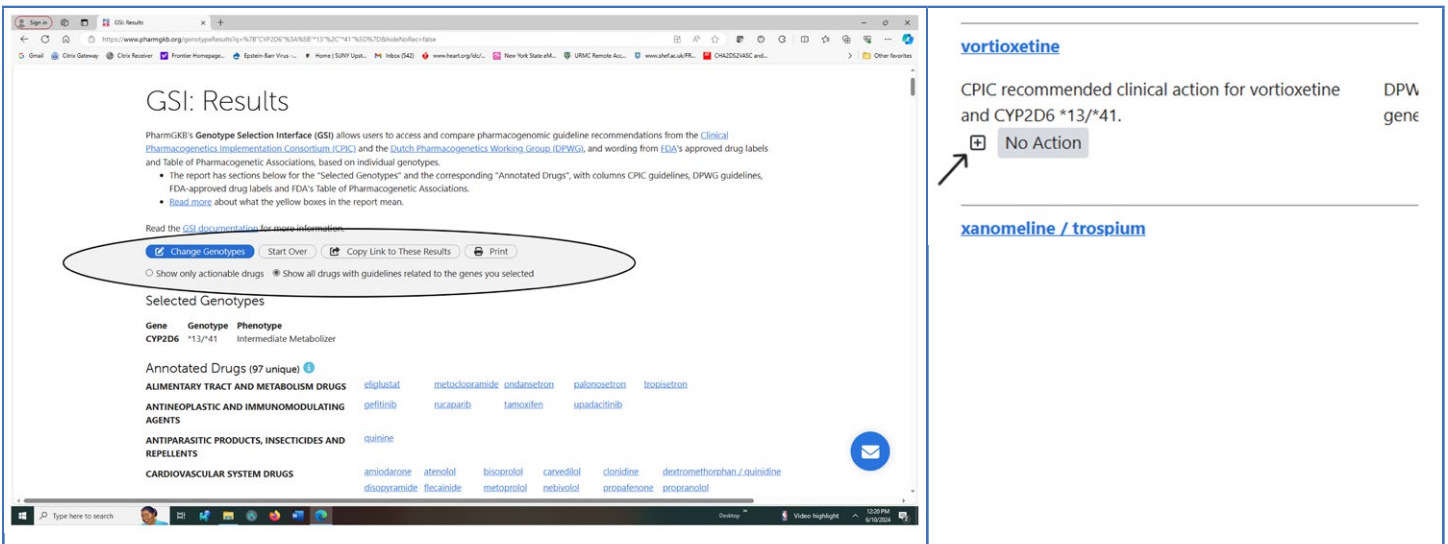


Diagram 1



That link opens a page where the \*allele results for CYP2D6, CYP2C19, and/or CYP2B6 (or other results for other genes that may have been tested for non-mental health medications) can be entered. Alternatively, the phenotype can be entered, but that is more complex because within the phenotype categories there is variation depending on genotype. There are clear instructions. Clicking on

“Make a Report” will create a report of all medication for which the genotype has an implication by category and alphabetically. In the example shown below- from an actual patient inquiry about vortioxetine- the “show all drugs with guidelines related to the genes you selected has been chosen, since it provides nuanced information and not just “actionable” guidelines.



In this case, clicking on the “+” next to the report provides the following information: “**Implications:** CYP2D6: Reduced metabolism of vortioxetine to less active compounds when compared to CYP2D6 normal metabolizers. Higher plasma concentrations may

increase the probability of side effects. **Recommendation:** Initiate therapy with recommended starting dose.” This detail would allow personalization of a dosage decision, for example in a patient who has been prone to side effects with other medications.

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Practical considerations that have to be addressed include choosing a lab, deciding whether to order a panel or just the tests needed, and insurance coverage. Many healthcare systems have a commercial lab they usually use, that may or may not include genetic testing. If not, NIH has a genetic testing registry website where labs offering specific tests can be searched (<https://www.ncbi.nlm.nih.gov/gtr>). Medicare guidelines say tests are covered if the medication is medically necessary, if there is an accepted PGx guideline (like CPIC), and the information will guide prescribing. Documenting this in the medical record can aid with prior authorization. Commercial insurance coverage is variable. Whether a panel will be covered when a specific gene is medically necessary is variable. Out of pocket costs for a single or multiple tests are typically \$250-\$350, and many labs will work with the patient and physician to minimize out-of-pocket costs.

There are a few other considerations to bear in mind when using PGx for prescribing. First, some direct-to-consumer (DTC) labs include PGx results in their offerings, and patients may present to the family physician with these results. They are not FDA approved for using in clinical decision making and need to be verified at a commercial lab. One reason for this is that DTC labs often do not test for an adequately comprehensive number of variants. Second, FDA dosing guidelines are derived from population data and are not based on the normal phenotype or “wild type” \*1/\*1 genotype. Sometimes normal metabolizers need modified dosing. Atomoxetine (Strattera) is an example, where even the maximum FDA dose may be ineffective and CPIC and PharmGKB provide dosing guidance. Finally, drug-drug interactions may affect drug metabolism, changing the phenotype of a given genotype, which is known as phenoconversion. For example, augmenting with bupropion, which is a CYP2D6 inhibitor, a patient whose CYP2D6 genotype is intermediate metabolizer, will metabolize medications where CYP2D6 plays a role (e.g. venlafaxine) as a poor metabolizer. The University of Florida has an online phenoconversion calculator for CYP2D6, <https://precisionmedicine.ufhealth.org/how-to-interpret-results/phenoconversion-calculator>.

Pharmacogenomics for mental health medication may seem complicated initially, but utilizing is, in fact, quite straightforward. Family physicians can become comfortable, facile and efficient after employing it with a small number of patients to start.

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# Solution-Focused Therapy: Helpful Tools for Family Physicians

By Timothy Smilnak, MD, MPH and Amanda Eggleton, LMSW

In this article, we present a model of Solution-Focused Therapy (SFT) in family medicine practice. We are a family physician (Dr. Smilnak) and licensed social worker (Ms. Eggleton), and together we describe the tools of SFT and how they can be helpful to family physicians in their conversations with patients about mental and behavioral health problems.

## Dr. Smilnak:

Since I started my first post-residency practice as a family physician, I've recognized how much mental and behavioral health counseling I do with patients. While I often refer patients to therapy, the waitlist is about three months and there are other barriers to engagement (work schedules, caregiving obligations, fear of going to therapy, etc.). My patients often struggle to access and participate in therapy, but they freely share their depression, anxiety, suffering, and despair with me. Family physicians manage many conditions in our brief office visits, and I often feel overwhelmed.

Two years ago, I enrolled in an introductory course in my institution's Department of Psychiatry Family Therapy Training Program<sup>1</sup>, hoping to learn skills that I could use with patients. Among the several models of therapy described in this course, one stood out for its ease of use in primary care: Solution-Focused Therapy.

## Ms. Eggleton:

SFT is a unique therapeutic model that helps patients shift their perspective away from problem-centered language to a solution-focused posture. This framework is grounded in the assumption that people are the experts of their own lives, have strengths to promote their own thriving, and can create solutions towards the change they want to see.<sup>2</sup> SFT assumes that individuals make choices to help cope with difficulties. It acknowledges that some ways of coping may be counterproductive, and provides the clinician with tools to help patients develop healthy and productive ways of coping.

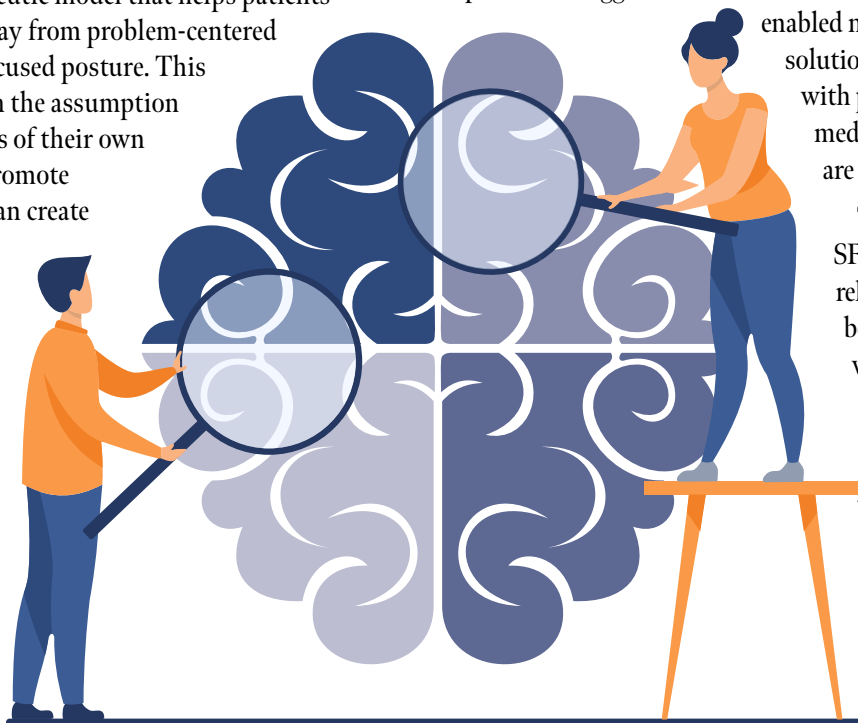
SFT helps patients focus on the here and now, and largely redirects from focusing on the past.<sup>2</sup> Therapeutic conversations are grounded in optimism, shifting of perspective, and patient and family strengths. Change is not presented as an ebb and flow of life circumstances, but as daily choices that are in the patient's control. SFT requires clinicians to shift to cooperative supporters and facilitators, rather than "experts" as patients work to find solutions to improve their circumstances. Clinicians redirect from conversations that overwhelm, drain, and discourage to conversations that instill hope, ignite motivation, and spur impactful change.

## Dr. Smilnak:

SFT is easy to learn, and family physicians can use this framework in brief primary care visits in which multiple problems are addressed. In my practice, I have found it useful to assist patients in identifying practical solutions that offer them hope and a sense of control. SFT allows physicians to focus agency on the patient, rather than perpetuating the harmful perception that we are responsible for fixing their problems.<sup>3</sup> SFT allows us to assist our patients as an encouraging and skilled facilitator, rather than an overwhelmed and too often ineffective problem fixer.

While medication treatment helps many patients, some patients struggle with adherence and/or side effects.<sup>4</sup> SFT has enabled me to have therapeutic, solution-oriented conversations with patients, even when medications or therapy referrals are ineffective or not desired.

There is ample evidence that SFT improves patient outcomes related to functionality and behavior. Two reviews of well-controlled outcome studies reported significant benefit from SFT for psychological and behavioral health outcomes in a variety of settings.<sup>5,6</sup> A systematic review and meta-analysis of randomized-controlled



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trials of SFT in medical settings found that it improves health-related psychosocial (e.g., depression) outcomes.<sup>7</sup> A primary limitation is that SFT delivered specifically by family physicians has not been extensively studied. However, there are several case studies and commentaries supporting the adaptability of SFT for use in family medicine and primary care.<sup>3,8,9,10,11</sup>

**Ms. Eggleton:**

SFT tools, described here and in Table 1, anchor conversations in hope, help patients develop a growth mindset, and identify strengths that are already working for them.<sup>2</sup>

- **Miracle questions** help patients view their problems differently. When patients adopt a new perspective of a problem, the problem itself changes. This gives patients a new lens so they can consider a future not dominated by their current problem. Clinicians encourage patients to imagine the changes they most want to see.
- **Exception questions** demonstrate that problems are not lifelong or always present. Considering this question enables patients to remember times when the problem was less intense or did not exist. Facilitators help to explore exceptions to identify what resources, strengths, and solutions the patient used at that time. Facilitators ask patients to think about what needs to happen for exceptions to happen more often.
- **Scaling Questions.** Asking patients to self-identify where they are on a scale steers them away from vague comments about how they feel and towards a specific anchor point. These questions set the stage for helping the patient to think about what would help improve their number, or to acknowledge what they have already done so that they are not at a lower number.
- **Compliments** are a vital component to SFT, in which physicians craft sincere, accurate, and hope-filled statements that serve as a gift of encouragement. In the lowest moments of suffering and despair, it is an immense task to recall the strengths and abilities one possesses. Through compliments, physicians gently challenge statements of despair, helplessness, and weakness and replace them with truth. Compliments are specific and authentic and convey the expectation that patients can achieve their goals by drawing on their own strengths and successes.
- **Tasks** are a form of homework assigned to a patient between appointments and are tailored to individuals based on the skills addressed by the other tools. Tasks call patients to pay attention to what is working that they want to continue, or to observe how a problem changes over time. Tasks anchor patients in the reality that the choices they make effect change.

**Table 1: SFT Tools**

<p><u>Miracle Questions</u></p> <ul style="list-style-type: none"> <li>- If this problem was solved the moment you walked out of here, what would people notice to be different about you?</li> <li>- If a miracle happened overnight and you woke up tomorrow having quit smoking, how would your life be different?</li> </ul>
<p><u>Exception Questions</u></p> <ul style="list-style-type: none"> <li>- When was the last time the anxiety didn't feel so big? What were you doing differently that helped lessen the anxiety a little bit?</li> <li>- Tell me about a time in the past when you consistently took your medications, even for a short time.</li> </ul>
<p><u>Scaling Questions</u></p> <ul style="list-style-type: none"> <li>- You said your coping strategies are at a three right now. What skills or habits are you doing well that are keeping you better than a one or two?</li> </ul>
<p><u>Compliments</u></p> <ul style="list-style-type: none"> <li>- It's impressive that, despite the fatigue you're experiencing, you were able to get you and your baby here for this appointment.</li> <li>- I'm impressed that you have previously gotten your A1c below 7; I believe you can do it again!</li> </ul>
<p><u>Tasks</u></p> <ul style="list-style-type: none"> <li>- For the next week, what is one specific change you want to make to get yourself from a three to a four?</li> </ul>

**Dr. Smilnak:**

We present a brief anonymized case study illustrating the use of SFT in a typical family medicine visit.<sup>1</sup>

“Naomi”, a woman in her 40s, called the office earlier in distress, and the scheduler made her a same-day appointment with me for “anxiety, depression, and migraine headaches.” I had not previously met her, and while reviewing her chart, noted that anxiety and depression are chronic issues for her, and she had been referred for therapy one month before seeing me. When I entered the exam room, she was sitting in a chair anxiously bouncing her leg, tearful and visibly exhausted.

When I asked what brought her in, Naomi spoke of worsening depression and anxiety, painful migraines, and significant insomnia. She disclosed behavioral issues with her teenage daughter and the difficulty she had quitting one job and starting a new one in the span of a week. With tears streaming, she shared how all of this was building up and that she didn't know how to handle it. She was desperate.

*Doctor: Let me ask a question. How do you think you're coping with the depression and anxiety? If you were to rate yourself on a scale of 1 to 10, 10 being the best you could possibly cope, and 1 being the worst, what would you give yourself?*

*Naomi: About a 3.*

*Doctor: What are you doing that's keeping you from being a 2?*

*Naomi: I don't know, some days it could be a 2.*

*Doctor: I hear that, but you must be doing something that's getting you to a 3.*

*Naomi: Sometimes I get away from everything, I go to my room by myself and for a moment I'm okay.*

1. Details have been changed to ensure patient confidentiality.

*Doctor: This question might sound odd, but let's assume a miracle happened tonight and tomorrow you woke up and were better. What might someone notice that's different about you than if they were to follow you around today?*

*Naomi: Well, I'm not like this all the time. They would probably see a happier person, an easier person to communicate with. Somebody who is willing to get up and do something. Right now, I don't wanna do anything.*

*Doctor: So, when you get better from this, you're going to be visibly more motivated and a little easier to interact with.*

*Naomi: Right.*

*Doctor: You said you're not like this all the time. Today is a terrible day, but not every day is as bad as today.*

*Naomi: Right. It's been like this for like a month and is getting worse.*

*Doctor: So, what were you doing differently two months ago that you could learn from now and could get yourself to a 4?*

*Naomi: I don't know, I didn't have as many stressful things going on. Sometimes reading helps me. And listening to music. (The tension in her voice lessened.)*

*[Naomi continues to share other protective factors in her life: walking, praying, and a women's group she joined. She shares her past experience with therapy and how she ended therapy when she felt like she was better. She says when she is alone, her symptoms get worse, admitting that around a year ago she struggled with suicidal ideation. She said clearly she does not want to get that bad again.]*

*Doctor: I hear you. I have a couple things to say. First, I believe that you're not giving yourself enough credit for the coping you're doing. You had the self-awareness to leave a job that wasn't good for your health. Your last job was not good for you. But you realized you had bills to pay and within a couple days you found another job. That's amazing! You have your stuff together enough that you showed up here today. So, I don't know if you're a 3 or a 4 in terms of coping, but I do know you're not giving yourself the credit you deserve. You are coping.*

*Naomi: Yeah.*

*Doctor: Another thing. If your former therapist was here, what would she be telling you? What did you learn back then that you need to start putting into practice now?*

*Naomi mentions journaling, listening to music, walking, and taking breaks from stressful situations, especially with her daughter, to regroup.*

*Doctor: It seems like you actually know a lot about what works for you. So, if you had to rate your anxiety today on a scale of 1 to 10, with 1 being the worst and 10 being very mild, what would you rate it?*

*Naomi: 4.*

*Doctor: So, what are you going to do over the next 24 hours that's going to get you from a 4 to a 5?*

*Naomi: Maybe some writing. And I might talk with my cousin. I texted her this morning. She is like a sister.*

*Doctor: It sounds like you can do this. Are you starting to believe you can do this?*

*Naomi: I have done it in the past. I gotta learn to use these steps to make me feel better, because if I'm not okay, I can't be okay for anybody else.*

*Doctor: You can do this. You found a new job. You got here today. You identified things that you can change over the next few days.*

*Naomi: Yes. Talking to you today really helped me. We have a plan and this plan will start to take effect and I'll feel better.*

**Ms. Eggleton:**

In this case, Dr. Smilnak effectively used SFT. Dr. Smilnak repeatedly guided Naomi towards change-language and choices she could control. He validated her experience, and drew on her existing strengths and accomplishments. Throughout the exchange, he reflectively listened, gently challenged, and meaningfully encouraged. When Dr. Smilnak asked a 'miracle question', Naomi became more future-oriented. Dr. Smilnak then used 'exception and scaling questions' to help Naomi move from talking about life's impact on her to her choices' impact on life. She identified that sitting alone in a room, while certainly a way of coping, makes symptoms worse. She recognized other options and the control she has to choose what is better. The 'compliments' meaningfully celebrated her strengths. Finally, 'the task' summarized the action steps discussed. Dr. Smilnak used SFT tools to cooperatively support her in leaving that appointment with an accurate and positive self-image, hope, and determination. He, in turn, likely left the room feeling rewarded, accomplished, and (almost) on time for his next appointment.

## Conclusion

By using the tools of SFT, family physicians can invest their time in conversations of quality and substance. SFT strategies give doctors a productive use of their limited time, empathy, and emotional reserves, and serve as an additional tool, along with medications and referrals to therapy, that family physicians can use in their care of patients with mental and behavioral health problems. Rather than ending appointments feeling drained and hopeless, this therapeutic approach often leaves clinicians feeling accomplished and hopeful, with the patient who is determined and postured toward growth. We encourage family physicians who are new to this approach to start by using just one of the tools described above, then expand their skills from there, and when possible, consult with a knowledgeable colleague.

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# Breaking Down Walls: Collaborating with Assertive Community Treatment (ACT) Mobile Teams to Support Patients with Serious Mental Illness in the Primary Care Setting and Beyond

By Jay Stevens, LMHC, CASAC and Sandhya Kumar, MD, MPH, FAAFP

More than 15 million adults in the United States live with what has come to be known as a serious mental illness (SMI), such as bipolar disorder, schizophrenia, and major depressive disorder.<sup>1</sup> SMI is defined as a mental, behavioral, or emotional disorder resulting in substantial impairment in one or more major life activities.<sup>1</sup> As a result of experiencing such functional impairments, individuals with SMI experience higher rates of social isolation, challenges with gainful employment, housing insecurity and homelessness, incarceration, and repeated psychiatric hospitalizations.<sup>2</sup> People with SMI have increased incidence of medical conditions such as diabetes and heart disease,<sup>3</sup> have disproportionate cancer mortality,<sup>4</sup> and have a life expectancy of 15-25 years shorter than the general population,<sup>5</sup> underscoring the importance of engaging in primary care. Among the many factors that contribute to healthcare disparities among people with SMI include stigma, discrimination, and care fragmentation.<sup>3-4</sup>

Assertive Community Treatment (ACT) is designed to serve those with SMI who are identified as having high service needs and whose needs have not been met by traditional healthcare systems.<sup>6-7</sup> ACT is a model of healthcare delivery that provides frequent and individualized support by utilizing a multi-disciplinary, mobile, community-based approach to meet patients where they are located – in the community, on the street, and in other places not accessible to traditional primary care.<sup>6-7</sup> ACT teams aim to enhance engagement in care, improve psychiatric symptoms, and advance personal goals.<sup>6-7</sup> Referrals to ACT services can be made by the individual on his, her, or their behalf, a family member, a healthcare entity or service provider, or the court system, and processing of ACT referrals varies by county. Treatment teams include a psychiatrist or psychiatric nurse practitioner, a registered nurse (RN), licensed mental health clinicians, vocational specialists, case managers, and can also

involve other team members such as peer support specialists and substance use counselors.

Despite studies that have shown that integrating primary care physicians (PCPs) within ACT teams can be effective in providing life-saving health interventions for participants,<sup>8</sup> the ACT model does not provide funding for PCPs to be embedded in the teams. PCPs may be able to improve health outcomes for their patients living with SMI by borrowing engagement and treatment techniques from ACT and also simultaneously prioritizing effective collaboration with their patients' ACT teams.

## Effectiveness of the ACT Approach

ACT teams are one of the most widely studied mobile treatment models,<sup>9</sup> with

significant evidence for their effectiveness in improving outcomes in housing, employment, and mental health symptom reduction. ACT teams' effectiveness stems not only from the mobile nature of the teams, though there are great advantages to seeing patients in their homes, on the street, or accompanying them to the offices of other providers. ACT teams employ a holistic approach to mental health recovery,<sup>10</sup> and situate themselves as fellow travelers on the participant's journey – centering the participant as the expert in their own lives. Doing so requires a whole-team mindset of humility, patience, compassion, and respect for self-determination. ACT teams also center harm reduction principles<sup>11</sup> such as low-threshold services, maximizing options, celebrating any positive change, trauma-informed care, peer services, pragmatism, awareness and acceptance of provider judgments, and social justice. They are acutely aware that mental and primary healthcare provision may have been a source of trauma for their participants in the past,<sup>12</sup> and actively seek to not re-traumatize participants while delivering services. ACT participants have been separated from and stigmatized by society, and ACT staff look to



reconnect through the slow process of rebuilding trust. That starts with “meeting them (participants) where they are at.”

The traditional role of the clinician as the expert places responsibility on the provider for instructing the patient about what the patient may need to do to improve a life-functioning area, with sometimes narrow recommendations such as “eat less sugar” or “stop smoking.” While such instructions are well-meaning, these recommendations may inadvertently 1) disempower participants; 2) create dependence on expertise that is not always accessible; and 3) invalidate the authority of the “expert” because it fails to situate the treatment advice within the reality of the patient’s daily life. Subsequently, patients may be labeled as non-compliant, as access to basic resources and the pressure of fulfilling competing needs that seem primary to the patient interfere with ability and motivation to follow through on such health advice.

“Meeting them where they are at”, when practiced to the fullest, is a substantial departure from the traditional healthcare delivery model. Instead of advice-giving, it starts with asking the patient what is most important to them, what they would like to work on, and then employing expert and supportive listening skills. With patients who have been harmed by the healthcare system and have lost trust in healthcare providers, relationship building and the manner of provider engagement may be the primary intervention.

This might look like:

Provider: *Hello, John. What would you like to talk about today?*

John: *I’m really stressed out! They are taking away my housing and it feels completely unfair.*

Provider: *That sounds really scary. I’m sorry you’re going through that – tell me more.*

In this example, the provider is decentering their own agenda, which may include the impact of stress on blood pressure. As “perceived judgmental attitude,” “lack of respect,” and “absence of listening to patients” are cited as major barriers to a therapeutic relationship between PCPs and patients with an SMI,<sup>13</sup> PCPs should prioritize the relationship as a primary intervention. This may translate to slower and incremental incorporation of evaluation methods and offering treatment for medical concerns, however, this ultimately may be more impactful.

### Trauma-informed Care

Trauma-informed care can employ permission asking (trustworthiness), honoring participant preferences (collaboration), honoring promises (trustworthiness), going at the participant’s pace (collaboration), and the use of transparency.<sup>14</sup> When practiced effectively, a provider conveys a deep respect for the participant’s experience of the world and in doing so lays the groundwork for trust. Examples of this are included in Table 1.

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**Table 1. Applying Principles of Trauma-Informed Care to Clinical Encounters**

<b>WELCOME, AGENDA-SETTING, AND INTERVIEW</b>	
<b>Provider Intervention</b>	<b>Trauma-Informed Principle</b>
“I have 15 minutes for us today, how would you like to use it?”	Transparency and Pacing
“Would it be OK if we discuss your recent diagnosis of cancer along your jaw?”	Permission-asking
“I know you don’t want to talk about your heart, and also I’m concerned about your blood pressure. Blood pressure needs to be in a certain range for surgeries to be considered safe. I would like to discuss how to get the blood pressure into a safe range.”	Transparency
<b>PHYSICAL EXAM</b>	
<b>Provider Intervention</b>	<b>Trauma-Informed Principle</b>
“Where would you be most comfortable sitting in the room?”	Honoring Preferences
“Would it be OK if I touched along your neck to check for swelling?”	Permission-asking
<b>COUNSELING, EDUCATION, AND WRAP-UP</b>	
<b>Provider Intervention</b>	<b>Trauma-Informed Principle</b>
“I just spoke for a while; would you like me to repeat any of that? Do you have questions?”	Pacing
“I’m available to see you next Friday at 2:00 PM, but won’t be available before then. If you have an emergency I encourage you to go to the hospital.”	Honoring Promises
“Would it be OK if I speak with your ACT Team to see how we can find a new surgeon for you?”	Permission-asking

## Use of Person-centered, Non-stigmatizing Language

ACT participants face stereotypes, prejudice and stigma based on their diagnoses, and often intersecting stigma based upon visible disability, race, socioeconomic status, and self-care. Reducing the impact and burden of these stigmas can start with the respectful use of language. Rather than label participants by their diagnoses (“you are schizophrenic” or “you are a schizophrenic”), ACT teams emphasize the use of person-centered language<sup>7</sup> such as “you are a person living with a schizophrenia diagnosis” and aims to only bring up diagnoses if strictly relevant to the conversation. In the primary care setting, PCPs can similarly use language that better aligns with the patient’s self-perception and avoid language that perpetuates stereotypes, such as “resistant”, “manipulative”, “non-compliant”, or “decompensating”. In both written documentation and in verbal communication, PCPs can instead use alternative language such as provided in Table 2.

**Table 2. Using Language That Avoids Perpetuating Stereotypes**

Instead of	Use
Resistant	“Has preferences that are different than mine” or “The client and I are still building trust”
Manipulative	“Creative at obtaining what they need”
Non-compliant	“Does not prefer the recommended treatment”
Decompensating	(Describe change in symptoms using strengths-based language)

## Collaborating with ACT Teams

ACT teams prioritize trust-building, and PCPs can benefit from this trust – effectively becoming a member of the mobile treatment team. Recommended practices for providers working with ACT teams include:

**Pragmatism.** Creating a treatment plan that is safe, acceptable, feasible, and realistic given patients’ various competing demands and interests requires creativity. ACT teams are often familiar with barriers or limitations, such as the ability for a patient with cognitive impairment to navigate picking up medications at a pharmacy. Primary care providers should discuss standard treatment options, ask what is possible, and be flexible to modifications based on the current reality of a patient’s interests and circumstances.

**Communicating early and often.** Providing consistent care between your team and the ACT team starts with communication. Setting up a standing case-conference with the ACT RN and/or primary case manager for your shared participant can assist with scheduling, tracking intervention efficacy, and creative problem-solving. Additionally, notifying the ACT team as early as possible about plans (discharge, change in treatment regimen) will increase your effectiveness and improve your relationship with the team and the participant.

**Asking about preferences.** ACT teams are familiar with what “works” for a participant and what will likely not be feasible or acceptable. Asking the team about communication and treatment preferences for your shared participant can both save you from

mis-steps and save the participant from the sometimes re-traumatizing experience of re-explaining their story and needs to multiple providers.

**Providing information/education to extend your care.** ACT teams employ an RN and either a psychiatrist or psychiatric nurse practitioner. These medical professionals can help your effectiveness with participants by reinforcing treatment recommendations.<sup>8</sup> Additionally, ACT’s non-clinicians can be enormously helpful in providing reminders about appointments, screenings, and for reinforcing behavior change goals.

## Conclusion

Patients with SMI experience higher rates of medical conditions, and the traditional healthcare setting insufficiently meets the needs of many patients with SMI. Working closely with and learning from effective strategies employed by ACT teams can help to maximize the success of primary care interventions by first acknowledging and respecting patients’ reality, circumstances, and interests. By actively collaborating with mobile treatment teams like ACT, primary care providers effectively extend their support of patients beyond the hospital or clinic walls.

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# Eating Disorder Toolkit for Primary Care: Enhancing Identification, Diagnosis, and Management

By Megan Hanley; Emily DeCocker and Katherine Wagner, MD

## Introduction

Eating disorders (EDs) are complex psychiatric and physical illnesses that will affect an estimated 1.7 million New Yorkers in their lifetime.<sup>1</sup> EDs often present with subtle or nonspecific symptoms, however even clear presentations can be missed due to a lack of training and low physician confidence in diagnosing EDs, especially within diverse populations.<sup>2-6</sup> Delayed diagnoses lead to more severe symptomology, longer duration of illness, lower rates of recovery, and increased healthcare expenditure.<sup>6-8</sup> Family medicine physicians find themselves in a critical role regarding the identification and management of EDs, as they are often the primary point of contact for patients. This article succinctly summarizes practice guidelines and identifying features to provide primary care physicians (PCPs) in New York State with a toolkit to utilize when faced with disordered eating in the outpatient setting.

## Risk Factors

Biological risk factors for EDs include having a first-degree relative with an ED, history of dieting, and type I diabetes (T1D).<sup>9</sup> Studies reveal that up to 39% of women and 15% of men diagnosed with T1D will develop an ED, most commonly manifesting as skipping insulin injections (“diabulimia”).<sup>9,10</sup>

Psychosocial risk factors for developing an ED are often multifactorial. Activities that historically have overvalued low weight or body fat increase the risk of developing an ED.<sup>11,12</sup> Other risk factors for EDs include a history of weight or appearance-based bullying, internalization of society’s everchanging appearance ideals, acculturation, and social isolation.<sup>9,13</sup> Contributing psychological comorbidities include a personal history of anxiety disorders, obsessive-compulsive disorder, body dysmorphia disorder, substance use disorder, and personality traits of perfectionism, emotional dysregulation, and low self-esteem.<sup>9</sup> For individuals living in larger bodies, these risk factors exist in addition to the widespread weight-based discrimination across social, professional, and healthcare settings, which can contribute to body dissatisfaction and disordered eating behaviors.<sup>13</sup> Additionally, weight bias in medicine can lead to physicians overvaluing weight loss and neglecting concerning findings that could indicate disordered eating or exercise behaviors.<sup>14</sup>

## Review of Current Evidence-based Screening Tools

The USPSTF currently has a grade I (incomplete) recommendation for screening for eating disorders among asymptomatic patients. Symptoms such as bradycardia, amenorrhea, rapid weight changes or change in growth curve trajectory should alert clinicians to potential ED pathologies and prompt screening with a validated screening tool. Clinicians should make the decision to screen asymptomatic patients individually based on risk factors and history.<sup>15</sup> Two validated screening tools available for primary care physicians to choose from are the Eating Disorder Screen for Primary Care (ESP) and SCOFF Questionnaire (Table 1).<sup>16,17</sup>

**Table 1: Evidence Based Screening Tools for Eating Disorders in Primary Care<sup>17</sup>**

Eating Disorder Screen for Primary Care (ESP)	SCOFF Questionnaire
<ul style="list-style-type: none"> <li>• Are you satisfied with your eating patterns? (A “no” to this question was classified as an abnormal response).</li> <li>• Do you ever eat in secret? (A “yes” to this and all other questions was classified as an abnormal response).</li> <li>• Does your weight affect the way you feel about yourself?</li> <li>• Have any members of your family suffered with an eating disorder?</li> <li>• Do you currently suffer with, or have you ever suffered in the past with an eating disorder?</li> </ul>	<ul style="list-style-type: none"> <li>• S: Do you make yourself Sick because you feel uncomfortably full?</li> <li>• C: Do you worry you have lost Control over how much you eat?</li> <li>• O: Have you recently lost more than One stone (14 lb or 7.7 kg) in a three-month period?</li> <li>• F: Do you believe yourself to be Fat when others say you are thin?</li> <li>• F: Would you say that Food dominates your life?</li> </ul>
3≥ abnormal responses are considered a positive screen	2≥ abnormal responses are considered a positive screen
<u>Benefits:</u> conversational and open ended to prompt further questions, higher sensitivity than SCOFF	<u>Benefits:</u> most studied, higher specificity than ESP
<u>Limitations:</u> lower specificity can lead to false positives; doesn’t address purging/exercise behaviors	<u>Limitations:</u> less evidence in BED, OSFED, ARFID, males; only validated in adults; doesn’t address purging/exercise behaviors

## History and Physical Examination

If a clinician suspects their patient has an ED, they should collect further history utilizing nonjudgemental interviewing techniques. Relevant history includes eating habits, body image, weight perceptions, physical symptoms, and psychosocial background. History taking should also identify co-occurring diagnoses and address other potential causes of malnutrition or weight changes, such as thyroid, gastrointestinal, or other mental health pathologies.<sup>18</sup>

A comprehensive physical examination allows for the assessment of medical sequelae of EDs. It is crucial to recognize vital signs including hypotension,

bradycardia, orthostasis, and hypothermia as potential signs of energy restriction.<sup>18,19</sup> Down-trending and rapidly fluctuating weight and BMI can indicate ED behaviors,<sup>20</sup> however, physicians should be cautious of overreliance on these metrics to detect EDs. Research demonstrates that young adults labeled as “obese” are 2.45 times more likely to engage in disordered eating compared to those with “normal” BMIs.<sup>21</sup> Exam findings indicative of caloric restriction include hair loss, muscle wasting, edema, skin dryness, and delayed puberty. Purging can lead to the presence of poor dentition, dental enamel erosion, parotid gland hypertrophy, and Russell’s sign (abrasion over knuckles from self-induced emesis).<sup>20</sup>

## Laboratory Evaluation

Recommended studies for patients with suspected EDs should be based on the severity of illness and co-occurring conditions. Initial laboratory testing typically includes a comprehensive metabolic panel, prealbumin, magnesium, phosphate, complete blood count, thyroid panel, and lipid panel.<sup>18,22</sup> For patients with amenorrhea, clinicians should consider evaluating the underlying cause by ordering FSH, LH, TSH, and prolactin.<sup>22</sup> Dual-energy x-ray absorptiometry scan (DEXA) is recommended in adolescent athletes who have experienced amenorrhea for at least 6 months.<sup>23,24</sup> For other populations there are no definitive guidelines; therefore, the decision to screen should be determined by clinical presentation, guided by formal clinical assessment tools for fracture and osteoporosis risk.<sup>24,25</sup> In patients with metabolic abnormalities or suspected purging, it is appropriate to order an electrocardiogram (ECG).<sup>18,22</sup> Interpretation of laboratory abnormalities can be found in Table 2, although it is important to note that normal laboratory results do not exclude an ED diagnosis.

## Holistic Outpatient Management and Level of Care Determination

When making an ED diagnosis, physicians can consult the DSM-5-TR for complete diagnostic criteria.<sup>16,28</sup> Most EDs are treated effectively with an outpatient multidisciplinary team, typically consisting of a PCP, registered dietitian, therapist, and potentially medical specialists based on sequela.<sup>18,22,26</sup> The PCP’s focus will be on managing medical complications that arise, and making appropriate referrals to specialized treatment when there are concerns about a patient’s safety or stability.

Hospitalization should be considered for patients requiring medical observation (e.g. risk of refeeding syndrome, electrolyte or ECG abnormalities, unstable vital signs), psychiatric observation, with extremely low weight (e.g. less than 75% median BMI), rapid weight loss regardless of current weight, or outpatient treatment failure.<sup>18,22</sup> Patients needing additional support but not



meeting criteria for an inpatient admission should be referred to residential, partial hospitalization, or intensive outpatient treatment based on symptom severity and availability within your geographic location.<sup>18,26</sup> Treatment centers can help determine the level of care needed during an intake interview. New York State presents additional challenges with management given the limited options for higher levels of care outside of acute inpatient hospitalizations.<sup>27</sup> The NYS Comprehensive Care Centers, as well as the National Alliance for Eating Disorders, can help clinicians find care resources in their area.

Markers of recovery include meeting weight restoration targets, which should be based on prior weight history and trajectory, resumption of menses (if lost), and improving psychological functioning and body image. The interdisciplinary team can be especially helpful in providing insight to the PCP about a patient’s recovery status. During future visits, blinded weights should be utilized and discussions about changes in weight should be limited.<sup>18</sup>

## Conclusion

Identifying and managing eating disorders in the outpatient setting can seem challenging, especially given the lack of training in medical education and low resource availability in NYS. The PCP’s priorities for treating EDs are early identification, ensuring patient safety by participating in interdisciplinary care and making referrals to a higher level of care when needed, and providing support to the patient and family through close follow-up. Awareness of local providers who are knowledgeable about ED treatment is essential to establishing an effective team. For additional learning on this topic, we recommend the following resources/organizations:

### Overview of EDs:

- Academy for Eating Disorders Medical Care Standards Committee (2021). Eating Disorders: A Guide to Medical Care, 4th Edition. (AKA “The purple book”)
- Klein DA, Sylvester JE, Schvey NA. Eating Disorders in Primary Care: Diagnosis and Management. *Am Fam Physician*. 2021;103(1):22-32.
- Golden NH, Schneider M, Wood C, AAP COMMITTEE ON NUTRITION. Preventing Obesity and Eating Disorders in Adolescents. *Pediatrics*. 2016;138(3):e20161649
- STRIPED Harvard Online Training (<https://www.hsph.harvard.edu/stripped/>, offers CME credit)

**Connecting to Care:** The National Alliance for Eating Disorders ([findedhelp.com](http://findedhelp.com)), Comprehensive Care Center for Eating Disorders in NYS (<https://www.nyeatingdisorders.org/seeking-treatment/index.html>)

- Western NYS: Golisano Children’s Hospital
- Northeastern NYS: Albany Medical Center, HPA/Livewell
- Metropolitan NYS: New York Presbyterian Hospital, NYS Psychiatric Center and Cohen Children’s Medical Center

**Patient and Family Support:** The National Alliance for Eating Disorders Support Groups, F.E.A.S.T. (for caregivers)

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**Table 2: Summary Table of Eating Disorders<sup>18,20,28</sup>**

Individual presentations and findings can vary. This is meant as a guide to possible symptoms, physical exam findings, and lab abnormalities.

<b>Anorexia Nervosa (AN)</b>	Key characteristics: significant restriction of energy intake, intense fear of weight gain or becoming fat, body dysmorphia
	Review of symptoms: weight loss, dizziness, fatigue, pallor, amenorrhea, cold intolerance, constipation, depression, anxiety, self-harm behaviors
	Physical Exam: BMI<17, HR <50, systolic BP <80, T <95.9°F, orthostatic hypotension, lanugo, pallor, dry skin, peripheral edema, muscle wasting, cyanotic extremities
	Lab abnormalities: hypoglycemia, anemia, hyponatremia, hypokalemia, hypomagnesemia, hypophosphatemia, hypocalcemia, elevation of aminotransferases
<b>Bulimia nervosa (BN)</b>	Key characteristics: episodes of binge-eating followed by compensatory behaviors (e.g. purging, misuse of laxatives, diuretics, or other medications, or excessive exercise), to avoid weight gain, self-worth overly reliant on body shape and size
	Review of symptoms: bingeing, purging, abdominal pain, bloating, heart burn, reflux, sore throat, depression, anxiety, feelings of shame and guilt, self-harm behaviors
	Physical Exam: dental enamel erosions, salivary gland hypertrophy, orthostatic hypotension, Russell's sign
	Lab abnormalities: hypokalemia, metabolic acidosis or alkalosis*
<b>Binge Eating Disorder (BED)</b>	Key characteristics: episodes of binge-eating associated with shame or guilt around episodes and a decrease in psychosocial functioning.
	Review of symptoms: bingeing, absence of purging behaviors, bloating, abdominal pain, weight gain or cycling, depression
	Physical Exam: weight gain, hypertension, acanthosis nigricans, acne, hirsutism, hepatomegaly, premature puberty, musculoskeletal pain
	Lab abnormalities: hyperlipidemia, hyperglycemia
<b>Avoidant/restrictive food intake disorder (ARFID)</b>	Key characteristics: A disrupted eating pattern marked by a continual failure to meet energy and/or nutritional needs or a significant interference in psychosocial functioning. Contributing factors can include sensory disturbances with foods, fears of consequences from eating foods, or lack of interest in foods. Can appear similar to AN, but upon further investigation poor body image does not contribute to the pathology.
	ROS, PE, and Lab Abnormalities: can appear similar to AN, but with potentially severe micronutrient deficiencies (e.g. iron deficiency anemia, vitamin C deficiency, B12 deficiency, etc.)
<b>Other specified feeding and eating disorder (OSFED)</b>	Key characteristics: a feeding or eating disorder that causes significant distress however it does not meet full criteria for any of the above disorders. <ul style="list-style-type: none"> <li>- Atypical AN: all criteria are met except for BMI&lt;17</li> <li>- Purging Disorder: recurrent purging to influence body shape without episodes of binge eating</li> <li>- BN/BED of limited duration and or frequency</li> <li>- Night Eating Syndrome</li> </ul>
	ROS, PE, and Lab Abnormalities: will depend on disordered behavior and severity with a tendency to present similar to other EDs.
* Electrolyte disturbances in BN are dependent on method of purging	

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# Somatization from Stigmatization in Asian Americans: An Approach for Patients Hesitant to Accepting Mental Health Treatment

By Yuki Takeuchi, MD and Sandy Wang, MD, MPH

## Asian Americans and Mental Health

Imagine this scenario in your clinic: an Asian American patient presents to your office with a long list of complaints including chronic fatigue, insomnia, back pain, digestive issues, and recurrent chest pain. She has been seen by multiple specialists with reassuring labs and imaging against malignancy or medical abnormality. She has been told her symptoms are due to “stress” but she is not interested in psychiatric or mental health help, as she says “people think I’m crazy.” What do you do?

It is crucial for primary care physicians to be aware of patients’ diverse cultural backgrounds, attitudes towards mental health, and even atypical somatic complaints. For example, much of the Asian American population generally underutilize mental health services due to stigmatizing beliefs about depression and its treatment.<sup>1</sup> This stigma is multifactorial including perception that mental illness is a sign of a weak character, disruption to society, association with personal failure, and views that psychiatric medications are addicting.<sup>2</sup> However, this repression of emotions can cause these populations to present with more somatic symptoms rather than psychological symptoms as signs of emotional distress.<sup>3</sup> They are also less inclined to favor psychiatric medications, which underscores the need for alternative treatment options. Unfortunately, if these psychosomatic symptoms are not addressed through a comprehensive mental health approach, minority patients’ care can become expensive as they seek a structural diagnosis with multiple specialists.

In this paper, we introduce a psychosomatic pain treatment model called pain neuroscience education (PNE), that could help patients better understand their pain. PNE has been shown to significantly reduce psychosomatic symptoms and is a simple and feasible approach for primary care settings, aiding in pain management by reframing pain as an overactive natural defensive response to stress.<sup>4,5</sup> This approach can help patients who are resistant to mental health therapy be more receptive to accepting treatment. It can also appeal to patients who may come from different cultural medicinal systems that emphasize holistic medicine. We will use the above case as a reference to give practical dialogue and application to clinicians interested in adding this modality in their toolkit in treating patients with a similar background.

## Pain Neuroscience Education (PNE)

The most important first step to PNE is affirming that the patient’s experienced symptoms are indeed very genuine and real. Therefore, spending some time in reviewing previous reassuring

labs and imaging with the patient is a good way to help the patient feel their clinician has taken the time to understand the condition.

To gently segue into PNE, clinicians start by educating patients that not all pain or chronic symptoms are necessarily due to an anatomic or structural issue. PNE aims to educate patients that, due to the brain’s neuroplasticity, symptoms can be generated by the brain even in the absence of actual peripheral structural damage. The most famous example of this is the phantom pain phenomenon which demonstrates that the brain can produce pain even without a peripheral structure; this pain arises as the brain has “learned” the pain response. This learned process is called the “neurocircuit mechanism”, which can trap patients in a vicious cycle known as the “6Fs” - Fear, Focus, Fighting, Frustration, trying to Figure it out, or trying to Fix it. As symptoms are repeatedly experienced, the neurocircuit becomes ingrained as the brain’s default pattern. Over time, as patients experience more pain/symptoms without explanation, they feel more fear, which leads to even more pain.

A patient’s symptoms can actually be triggered by various stimuli, including injury, stress, emotions, or heightened sensitivity originating from underlying anxiety, stress, or depression that are not addressed. In Asian American patients, conversation regarding stress or emotions is often withheld from their family doctor due to shame or fear from society, thus further driving physiological processes. In fact, most patients regardless of background, often feel more symptoms when their mental health stress is not controlled or when they have high adverse childhood event scores (ACES), which are now manifesting with maladaptive coping mechanisms.

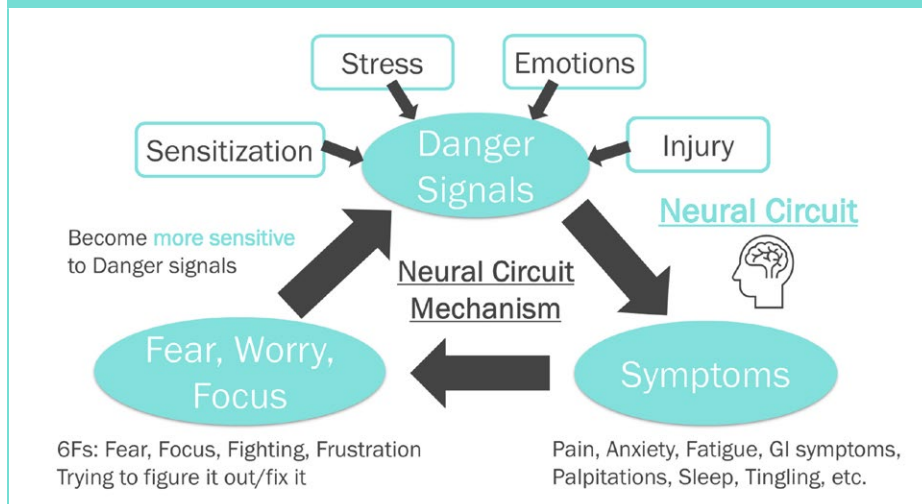
At right, we break PNE down into the steps, the individualized concepts and example scripts that can be used in practice. (Table 1)

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**Table 1: Steps of Pain Neuroscience Education.**<sup>4,5</sup>

PNE Steps		
Step	Concept	Example Script
<b>1. Validate the pain/symptoms</b>	<ul style="list-style-type: none"> <li>- Review labs, imaging, what has been done so far</li> <li>- Introduce the idea that pain is central rather than peripheral process</li> <li>- Educate that pain is protective but sometimes overprotective</li> </ul>	<p><i>"It looks like you've had bloodwork, imaging, and seen these various specialists. What do you understand so far that has been done for your condition?"</i></p> <p><i>"I see. Just so you know, your symptoms are very real, and I believe you are in pain, but the good news is, so far nothing is broken, damaged, or wrong with your bones, body, or blood."</i></p>
<b>2. The brain can generate pain even in the absence of structural damage</b>	<ul style="list-style-type: none"> <li>- Explain that pain is modulated through conditioning, cognitions, and emotions</li> <li>- Psychosomatic symptoms are attributed to activation of the brain's "danger alarm system" – a system that creates pain/symptom in response to danger signals including not only injury, but also stress, and emotions, and persists due to the activation of neural pathways (Figure 1)</li> <li>- Stress stimuli can activate pain to protect the body even if no structural abnormality is happening</li> </ul>	<p><i>"You know, not all symptoms that we feel in our body means that something is wrong. Pain was created to protect us. For example, if you were running from a lion and broke your ankle, chances are, you would keep running, whereas if you were running from a bunny, your brain would have chosen to focus on your ankle instead. This means that our brain chooses what is considered dangerous."</i></p> <p><i>"The alarm is really going off (your pain is totally real), and at the same time, there really is no fire (your body is not injured)."</i></p> <p><i>"We now know through evidence based medicine, that chronic pain and symptoms are complex and driven by multiple factors (show patient Figure 1). Stress, emotions, fear, and frustration can cause more symptoms, leading to more stress, frustration and emotions."</i></p> <p><i>"We now know that mental health is a part of a whole body process. If we do not address the mental health component, then as you can see, we do not address the whole body treatment of your symptoms."</i></p>
<b>3. Predictive coding-how acute pain becomes chronic</b>	<ul style="list-style-type: none"> <li>- The brain subconsciously predicts what will happen next based on past experiences and generates actual pain or symptoms in response to specific triggers</li> <li>- Unfortunately, the more the accompanying neural pathways are activated, the more they become normalized as default pathways</li> </ul>	<p><i>"Do you know of the Pavlov dog experiment? The scientist trained the dog to hear a bell ring and associate that with food? When it hears a bell now, the dog will automatically start salivating thinking food is coming. Your brain is similar. It can be trained to associate stimuli with pain/symptoms."</i></p> <p><i>"Now, because your brain is trying to break out of the cycle of fear, pain, and frustration, the next time it sees or feels this type of pain, it overreacts. For example, recall the initial injury that caused your pain. Does your pain feel worse when you think of that injury?"</i></p>
<b>4. Vicious cycle of chronic pain</b>	<ol style="list-style-type: none"> <li>1. Pain triggers feelings of fear</li> <li>2. The fear puts the brain on high alert which causes more pain</li> <li>3. Which leads to more fear</li> <li>4. Which leads to more pain</li> </ol>	<p><i>"Tell me, when you feel your pain, do you feel fear? What is driving that fear? That you won't get better? That you cannot go back to your sport/work/career/livelihood? This is normal to feel scared. When people do not know what is going on, they feel anxious and start to have negative thinking about the next steps."</i></p>
<b>5. Adverse life experiences and psychological conflict matter</b>	<ul style="list-style-type: none"> <li>- After experiencing trauma, it is common to view new life situations through a distorted trauma-based lens, interpreting subsequent events as dangerous, even if they're unrelated to the initial events</li> <li>- People who have had adverse childhood events are hypervigilant to danger signals, and more likely to develop neurocircuit pain in their later life</li> <li>- Addressing emotionally difficult life experiences helps patients recover from neural circuit pain and syndromes</li> </ul>	<p><i>"Do you recall when your symptoms/pain started? What was going on during that time of your life? Was there something stressful around that time?"</i></p> <p><i>"Did you have a particularly bad experience during the back pain? Were you hospitalized? Were you also going through something? You know, these negative experiences can make your original pain/injury way worse if they were not addressed. Can you tell me more of your current life stressors?"</i></p> <p><i>"Thank you for telling me all your stressors. I can see you are having a difficult time in your life juggling all of these and these stressors are likely not helping your pain. Your brain is a very protective guardian. It can take the stressors you are experiencing and put it upon your body in the form of symptoms. This does not mean your symptoms are not real, but your brain has made your nervous system hypersensitized and that is why you are not getting better despite multiple medical treatments."</i></p>
<b>6. Chronic pain can be possibly reduced, or eliminated</b>	<ul style="list-style-type: none"> <li>- Possibility of reversing pain via psychological change, because adaptive learning allows patients to disengage the danger alarm mechanism, and reduce emotion and cognition-generated pain activation</li> </ul>	<p><i>"Knowing that your complex symptoms can be due to all these factors, shall we address them one at a time? I would like to talk more about these stressors and emotions that you mentioned to me as I believe addressing them can help. Once we retrain your brain to understand all the underlying factors, you can get better."</i></p>

**Figure 1. Neural Circuit Mechanism.**<sup>4,5</sup>

## Conclusion

Referring to the original case, it is first important to reassure the patient that she is not “crazy” and that her symptoms are very real so that she feels she is taken seriously. Next, asking the patient what she thinks is causing her symptoms or specific concerns (malignancy, functionality, etc.), would help start the conversation on the fear and anxiety surrounding her symptoms. This would then allow a clinician to also address nuances such as familial shame, societal pressures, racism, perceptions, and underlying repressed mental health conditions that the patient had not been open to discussing until now. Oftentimes, structural violence is suppressed in minority patients, and having a clinician empower and allow a patient to have a safe arena outside of their performative cultures is key to healing. The most challenging part of PNE is having patients start accepting that their various symptoms could be a neural circuit process.

Clinicians also express intimidation to practicing PNE in the clinic, often citing time constraints or preference for specialist referral. However, even small steps of starting the conversation about PNE can help your patient begin to accept that their condition includes a mental health component, which is an important step in their overall healing process. We usually recommend leaving the first encounter with patients feeling reassured that their condition is not due to a structural issue and start accepting it is a complex combination of stress, fear of the unknown, and anxiety. We usually pair this thinking alongside active treatments for pain such as physical therapy and non-opioid pharmacology, rather than abruptly changing treatment modalities completely. The steps of PNE can take multiple clinical visits, and should be introduced slowly over time, as rushing a patient into this process can also turn a patient off if they misunderstand the attempt as “it’s all in my head.” It is also important to set boundaries if patients present with multiple complaints, addressing each one that is important to the patient separately, one at a time, even if the clinician knows they are all likely from one neuroplastic syndrome.

For patients who present with somatic symptoms such as pain and may be hesitant about pharmacological treatments, psychological treatment strategies like pain neuroscience education (PNE) could be a useful tool in the clinical setting.<sup>4,5</sup> These approaches emphasize that pain and other somatic symptoms are not just physical sensation but are protective mechanisms deeply interconnected with the psychological state. Understanding the mechanisms of pain helps reduce fear to pain, which can improve patients’ functionality and actually lessen their pain.<sup>6</sup> Demonstrating that mental health is part of the neurocircuit syndrome can help patients accept that mental health is part of the whole body treatment rather than an isolated system from the rest of the body.

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# Collaborative Primary Care Approach for Depression and Behavioral Disturbances in Dementia

By Mahima Master, MD; Eiman Dai, MD; Donali Patel, MD and Alberto Melendez-Garcia, MD

## Objective

According to a 2010 World Health Organization (WHO) survey, 35.6 million individuals worldwide are anticipated to have dementia; by 2050, that number is expected to triple. Globally, 7.7 million new instances are identified annually, resulting in a medical cost burden more than the sum of the expenses for cardiovascular disease and cancer. Up to 97% of people with dementia who live in the community may at some point develop behavioral and psychological symptoms of dementia (BPSD), with the most prevalent symptoms being depression and apathy.<sup>1</sup> Caregiver reactions to BPSD differ greatly, and the way they cope with dementia-related difficulties and accept their circumstances can influence how BPSD develops. This may serve to explain why two-thirds of families report unmet needs in effectively managing BPSD, even with expert support.

This article aims to provide a comprehensive review of person-centered care through collaborative primary care approaches that effectively manage these symptoms, enhance the quality of life (QoL) for both patients and caregivers, and delay the progression of functional decline. This includes early identification of BPSD, careful assessment of underlying causes, tailored intervention strategies, and appropriate use of pharmacologic and nonpharmacologic treatments, all while ensuring a supportive environment by an interdisciplinary team of medical providers, nurse practitioners, social workers, physical therapists, and occupational therapists. Additionally, the approach aims to reduce burden of aid, promote patient safety, and optimize communication and coordination with specialists when needed.

## Method

A MEDLINE search was performed using the keywords “dementia”, “depression”, “BPSD”, “caregiver”, “primary care” and “elderly population”. For this systematic review, Pubmed and other online publication databases were reviewed. A total of 13 articles were reviewed.

## Introduction

As global life expectancy rises and mortality rates decrease among younger age groups, the population of older adults aged 60 and



above, including those with dementia, is steadily growing. Dementia is characterized by a progressive decline in cognitive functions, such as memory and reasoning, which interferes with the ability to carry out daily activities. Per a WHO report, nearly 10 million new cases of dementia are reported to occur annually, and over 55 million people worldwide presently have the disease, with over 60% of those affected living in low- and middle-income nations. Dementia can result from various causes, including Alzheimer’s disease, vascular dementia, frontotemporal dementia, Lewy body dementia, and Parkinson’s disease, among others.

Alzheimer’s disease is the most prevalent form of dementia, but other common types include vascular dementia, Lewy body dementia, and frontotemporal dementia. Some patients may develop mixed dementia, with Alzheimer’s and vascular dementia being the most commonly observed combination.<sup>2</sup>

Individuals can be affected by dementia in different ways, and symptoms can vary from person to person. A few typical early symptoms that frequently show up prior to a dementia diagnosis include memory loss, difficulty concentrating, trouble performing familiar daily tasks (such as handling money accurately while shopping), struggling to follow conversations or find the right words, confusion about time and place, and mood changes.<sup>3</sup> BPSD can affect cognition, motor function (i.e., restlessness, agitation, screaming), mood (i.e., depression, apathy, anxiety), insomnia, and anorexia. Certain types of dementia are associated with specific behaviors.<sup>1</sup> For instance, depression is more frequently observed in vascular dementia, and hallucinations are more common in Lewy body dementia. Individuals with frontotemporal dementia often display behaviors linked to impaired executive control, such as disinhibition, socially inappropriate actions, and apathy. Unlike the steady decline seen in cognitive and functional abilities, these symptoms tend to occur in episodic fluctuations, sometimes lasting six months or longer. This episodic nature adds complexity to their prevention and management.<sup>4</sup> BPSD affects up to 90% of individuals with dementia and is linked to adverse outcomes, including distress for both patients and caregivers, prolonged hospitalizations, inappropriate medication use, and increased healthcare burden.

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Patient determinants of BPSD include individual factors that may increase risk, such as neurodegeneration, genetics, acute medical issues, psychotropic medications, unmet needs, comorbidities, personality traits, sociability, functional abilities, and cognitive skills. The quality of the caregiver-patient relationship is influenced by several factors, such as stress levels, communication, ability, socioeconomic situations, and cultural background. Physical and social elements like light, noise, temperature, crowding, accessible activities, policies, social networks, resources, and leadership support are examples of environmental determinants that might cause BPSD. According to a study, 88.5% of elderly with dementia living in a community and 75% of those in nursing homes were found to have clinically significant symptoms.<sup>5</sup>

## Pathophysiology

Although each dementing condition has a unique pathological profile, a common underlying factor among them is cerebrovascular dysfunction. BPSD lacks a single, definitive cause; instead, a model suggests these neuropsychiatric symptoms arise from interactions among an individual's biology, life experiences, and current environment. Agitation, disinhibition, and psychosis associated with dementia are linked to reduced volume and decreased metabolism in areas of the brain involved in emotional regulation, self-awareness, and perception, including the prefrontal cortex, insula, and temporal lobes.<sup>4</sup> Data suggests that early-life depression may increase the risk of dementia, while late-life depression can serve as an early sign of dementia. Both conditions share biological changes, mainly white matter diseases, indicating common risk factors or neuronal damage patterns. Several mechanisms are proposed linking depression and Alzheimer's, including genetic predisposition, immune dysregulation, buildup of AD biomarkers (like amyloid- $\beta$  and tau), and brain structural changes. Additionally, BPSD is associated with imbalances in cholinergic, noradrenergic, dopaminergic, serotonergic, and glutamatergic neurotransmission. Although this evidence is preliminary and primarily focused on Alzheimer's disease, it provides a basis for some of the pharmacotherapies currently used to manage BPSD.<sup>6</sup>

## Screening and Management

The foundation of BPSD treatment is early screening and diagnosis through increased primary care physician (PCP) involvement. Training in implementing various screening tools could be beneficial by promoting accessibility to updated management and follow-up plans. In addition, it helps provide family and caregivers with an appropriate understanding of a patient's behavioral changes - allowing for improved future care preparation and increasing active collaboration with family members in treatment, overall impacting the QoL positively.<sup>7</sup> A standardized tool like the Neuropsychiatric Inventory (NPI) or the Behavioral Pathology in Alzheimer's Disease Rating Scale (BEHAVE-AD) can be used by physicians to assess overall BPSD. Both have comparable effectiveness in identifying global changes and are based on structured interviews with caregivers about the frequency and severity of distress. NPI measures in the domains of delusions, hallucinations, agitation, sadness, anxiety, euphoria,

inactivity, disinhibition, irritability, abnormal motor behavior, insomnia, and appetite disorders. BEHAVE-AD scales the severity of symptoms over a period of two weeks. Both NPI and BEHAVE-AD are gold standards for evaluating BPSD, but time constraints are one of the limitations of using these scales. The geriatric depression scale and Patient Health Questionnaire-9 can be effective screening tools for depression in primary care. A caregiver's journal of noteworthy occurrences or behavioral shifts can offer an alternate and more precise source of information.<sup>1</sup>

The American Geriatrics Society considers non-pharmacological interventions as first-line treatment with assessing underlying triggers and potential causes for behavioral changes and depression. Addressing triggers such as fatigue, depression, loneliness, boredom, overstimulation, and social stressors can lead to physical and emotional symptoms like thirst, hunger, pain, toileting difficulties, nausea, and/or mood changes. Targeting environmental measures with organizing routines of activities of daily living (ADLs) (toileting, eating, medication administration, sleep, and socialization) should be the initial step for evaluating BPSD patients. This can be achieved through proper coordination and follow-up with a caregiver. Regularly scheduled recall therapy, virtual presence therapy, group therapy and validation therapy are examples of non-pharmacologic therapies focusing on emotions and cognitive stimulation. Audio or video recordings are played to replicate the presence of a loved one in simulated presence treatment. In validation therapy, the patient's expressed desires or current emotional state are acknowledged, and the undesirable behavior may be redirected.<sup>8</sup>

Three mechanisms—the care environment, care individualization, and the development of care competencies—have been found to be essential for boosting the efficacy of non-pharmacological therapies. We may succeed within these three domains through collaborative care models, which provide comprehensive evaluation tools to measure and monitor the biopsychosocial needs of patients and caregivers, and their response to interventions.<sup>9</sup>

Pharmacological strategies will vary according to the type and intensity of the symptoms. Depression and apathy are the most common behavioral changes witnessed, which are targeted through medical management. Still, it is equally important to assess the cause behind the underlying behavioral changes, such as pain. Pain is prevalent in 50% of dementia patients, but only a proportion of patients with dementia receive pain management.<sup>10</sup> Studies show that untreated pain is associated with an increased incidence of behavioral change and agitation in the elderly population with dementia. Therefore, addressing pain plays a potential role in addressing behavioral changes by properly evaluating the type and cause of pain. Topical therapy is effective in case of localized pain. Muscle relaxants and opioids are generally avoided, considering their adverse effects on the elderly. In regards to depression, antidepressants impact cognition and affect through their mechanism of action on particular neurotransmitters, thus not only improving depressive symptoms but also agitation and mood changes. Per the current recommendation, citalopram and sertraline

have proven efficacy in the elderly population with lesser adverse effects. A lower dose is initiated in patients with appropriate Qtc monitoring and regular follow-up.

Antipsychotic use is challenging due to the increased risk of extrapyramidal symptoms, urinary tract infections, and fatigue in the elderly. Second-generation antipsychotics like aripiprazole, quetiapine, and risperidone are recommended and commonly used in acute management of behavioral disturbances such as agitation. Patients who are managed with antipsychotic medications require follow-up at a periodic interval of 3-6 months for monitoring of any adverse effects. Prior to starting antipsychotic treatment, it is appropriate to evaluate each patient's risks, especially those related to the heart, and adjust their drug selection.

An exclusive management plan requires a coordinated interdisciplinary healthcare team's active participation that collaborates with family and caregivers. Promoting the training of nurses and home health aids in various approaches towards behavioral limitations in dementia patients will increase overall outcomes as they are often the first line in recognizing and monitoring dementia patients. To target environmental factors and to provide non-pharmacological measures, partnership with physical, recreational, and occupational therapists and teams is essential. Psychologists can be trained to improve and promote innovative strategies by working with patients and institutions. In addition to screening for drug interactions and confirming dose schedules, pharmacists can help identify drugs or drug interactions that may contribute to BPSD. An interdisciplinary team approach with referrals to specialists trained in dementia care such as geriatricians, neurologists, geriatric psychiatrists, behavioral therapists, and nurse practitioners would play a dynamic role in implementing evidence-based strategies.<sup>11</sup> The goal is to build a multidisciplinary model where primary care providers can play a central role by providing education and connecting caregivers with a network of teams that directly impact screening, early diagnosis, and effective management while positively impacting the QoL.<sup>1</sup>

## Challenges

Challenges to providing appropriate care for dementia patients include:

- *Caregiver's burden:* Caregivers face physical, mental, financial, and social challenges such as increased cardiovascular illness, depression, social isolation, feelings of despair, and large financial burden. This compromises patient care due to a lack of physical ability, technical skills, or means (transportation, time spent with patients). Studies found that the burden of providing care for dementia patients is exacerbated when patients have BPSD; for example, patients may become aggressive or refuse when attempting to shower, feed, or dress.<sup>12</sup>
- *Time:* PCPs are allowed 15-30 minutes to evaluate patients for routine visits, which is often not enough time to address all the complexities patients and caregivers face.
- *Access to specialists:* Accessing and coordinating multidisciplinary meetings with all specialists needed to care for dementia patients, including neurologists, psychiatrists, dietitians, and social workers, is often challenging due to availability and coverage.

- *Reimbursement:* The diagnosis of dementia is often complex and entails physical, mental, and social aspects that may not be reflected in the reimbursement per disease.<sup>13</sup>

## Recommendations

- Conduct more training and re-enforcement of the importance of proper screening and diagnosing dementia and BPSD for primary care physicians.
- Providers should integrate screening tools in all routine visits, obtain proper history, and physical and laboratory tests to establish a diagnosis and identify triggers for BPSD.
- Providers should routinely assess caregivers for their physical and mental well-being and skills in dealing with patients. "Caregiver Self-Assessment Questionnaire" can be placed in the waiting room or handed to caregivers of patients with dementia.
- Providers should include social determinants and caregivers' burden in their documented assessment and involve social workers and other community care early on in their intervention.
- Use telehealth and all available electronic medical systems to create collaborative multidisciplinary teams to care for diagnosed dementia patients.
- Use PI projects and other quality measuring tools to improve compliance with screening and proper diagnosis.
- Conduct more studies and research to evaluate the benefit of screening for cognitive impairment.

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