Vermont Chapter

INCORPORATED IN VERMONT

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®

VERMONT ACADEMY OF
FAMILY PHYSICIANS

November 23, 2021

Lauren Hibbert, Director
Lauren Layman, Attorney
Office of Professional Regulation
89 Main Street, 3rd Floor
Montpelier, VT 05620-3402

Dear Director Hibbert and Attorney Layman,

On behalf of the Vermont Medical Society, Vermont Psychiatric Association, Vermont Academy of Family Physicians and American Academy of Pediatrics Vermont Chapter, representing over 2400 physicians from across specialties and geographic locations of Vermont, we submit comments on the Sunrise Review to allow psychologists to prescribe "medications for the treatment and management of mental disorders," including controlled substances contained in Schedules I-V of the Controlled Substances Act. We appreciate the opportunity to provide testimony through the two public hearings as well as the opportunity to provide written comments. We look forward to working with you as the Office of Professional Regulation reviews this proposal.

We submit these comments in opposition to expanding the scope of practice for psychologists, as laid out in H.392, to include prescriptive authority. While psychologists are experts in important behavioral interventions and are highly valued members of the health care community, the proposal before OPR would not provide adequate clinical training to expand their scope to include prescriptive authority while adequately protecting the public.

1. No evidence of increasing access. There is no evidence that authorizing psychologists to prescribing medications will increase access to needed mental health services in Vermont. In other states with prescriptive authority, few psychologists have sought such authority and they have not moved to underserved areas of those states.

2. Unsafe solution to practitioner shortages. Psychiatric medications are among the most potent in modern medicine. They affect the central nervous system, but also affect other organ systems and interact with other medications. With these benefits come real risks. These medications have potentially disabling and life-threatening side effects if improperly prescribed. Expanding prescriptive authority to insufficiently trained clinicians poses great risk to the public without increasing access to adequate care.

3. Insufficient education and training. Psychologists receive no biomedical training. Psychology programs are highly variable, lacking any substantive pharmacological education and training. The proposal for a master's degree in psychopharmacology would not adequately prepare psychologists to safely prescribe any medication, let alone controlled substances. The training proposed entirely lacks preparation in the basic sciences (chemistry, biology, and physics, all of which are required for clinician prior to medical, APRN or PA programs); lacks consistent, rigorous in-person training requirements; and does not include supervised clinical rotations, through which physicians and other prescribers gradually practice skills with greater independence.

4. Safe and evidence-based alternatives exist to provide safe psychiatric care to the patients of Vermont. Access to mental health and psychiatric services is a legitimate concern in Vermont, and there are evidence-based answers that address access to care while maintaining physician or advanced practice professional prescribing.

After reviewing the factors cited above and detailed below, last year the Washington State Department of Health, after a similar sunrise review process deemed that the proposal did not meet the sunrise criteria, which state that unregulated practice can clearly harm or endanger the health, safety, or welfare of the public; the public needs and can reasonably be expected to benefit from an assurance of professional ability; and the public cannot be effectively protected by other means in a more cost-beneficial manner.[1]

<u>Access</u>

After almost 20 years of prescribing psychologist laws in the United States, there are only 190 licensed prescribing psychologists in the entire United States.[2] This includes anyone prescribing in the Department of Defense and Indian Health Services. Psychologist prescribing has not shown itself to be an effective way to increase access to care. One 2011 study of the impact of prescribing psychologists identified only approximately half of the psychologists with prescription privileges were actually practicing part-time or full-time.[3]

States that have granted psychologists prescriptive authority have not experienced significant migrations of psychologists into underserved areas. A peer-reviewed study of psychologist prescribing found that there is "no data to suggest that providing prescription privileges to psychologists will increase access to quality psychiatric care. This lack of study is particularly disturbing in light of the fact that psychologists have been prescribing for more than a decade. The extant data call into question

[1] https://www.doh.wa.gov/Portals/1/Documents/2000/631086-PsychPrescripAuthSunrise.pdf

[2] See data obtained from individual licensing boards:

Louisiana State Board of Medical Examiners

Current number of active prescribing psychologists (medical psychologists) = 114
Note that "medical psychologists advanced practice" are also included in that 114 number

New Mexico Regulation & Licensing Department

Current number of active RXP Initial Conditional License = 15
Current number of active RXP Prescription Certificate = 56

Idaho Division of Occupational and Professional Licenses

Current number of active prescribing psychologists = 2
Note that neither of them live in Idaho (one lives in Texas and the other in Montana; they likely work for DoD or IHS)

Unfortunately, neither Iowa nor Illinois have updated their public search to include prescribing psychologists. Physicians who are able to view this data in Iowa said there are no licensed prescribers yet. We are attempting to obtain data in Illinois. As of early summer, our understanding is that there are three in Illinois.

[3] Tompkins, T. & Johnson, J. (2016). What Oregon Psychologists Think and Know About Prescriptive Authority: Divided Views and Data-Driven Change. *Journal of Applied Biobehavioral Research*, 21, 12-161 (attached).

claims of improved access."[4] Further, "…data from New Mexico and Louisiana suggest that most prescribers either move out of the state (20%) and do not prescribe or primarily treat patients in urban (59%) versus rural settings."[5]

NAMI is the nation's largest grassroots mental health organization dedicated to building better lives for the millions of Americans affected by mental illness. NAMI policy[6] states that it "does not endorse proposals currently before state legislatures to expand prescribing privileges to psychologists. NAMI acknowledges that serious shortages exist in the mental health professional workforce, particularly in public mental health systems and in rural and medically under-served regions of the country. However, there is no current evidence that expanding prescribing privileges to psychologists will address these shortages."

The attached maps drawn from the AMA Health Workforce Mapper show that in Vermont, psychologists overwhelmingly practice in the same locations as do physicians, APRNs or PAs. We have seen no evidence from other states nor offered in Vermont to indicate that psychologists would travel outside of these overlapping locations and expand access to care.

By their own reporting, psychologists do not have satisfactory coverage in rural areas. A granting of prescriptive authority through a scope increase would not increase the net availability of providers in rural areas and therefore would not address a provider shortage.

Patient Safety

Psychiatric medications used to treat mental illnesses are among the most potent in modern medicine. They affect the central nervous system, but also affect other organ systems and interact with other medications. See Appendix I and II and attached testimony from witnesses. With these benefits come real risks. These medications have potentially disabling and life-threatening side effects if improperly prescribed. Ongoing medical assessment, including ordering and interpreting labs and EKGs, is required during maintenance of medication. Even among the 30 most commonly prescribed psychotropic medications, 18 carry "Black Box Warnings," the FDA's most serious warning of potential side effects.

Such medications should only be prescribing by those with extensive biomedical training – beyond what has been put forth in the proposal before us. A peer-reviewed study of psychologists found that there is little evidence to support the assumption that psychologists are safely and effectively prescribing.[7] Medicare does not reimburse for evaluation and management or pharmacologic management by prescribing psychologists, specifically citing psychologists' lack of knowledge and ability in the matter.[8]

Another safety concern raised by this proposal is that it is impossible to define what is and is not a psychiatric medication "for the treatment and management of mental disorders." Physicians and other

---

[4] Tompkins, T. et al.
[5] Tompkins, T. et al.
[6] https://www.nami.org/getattachment/About-NAMI/Policy-Platform/Public-Policy-Platform-up-to-12-09-16.pdf (pages 22-23).
[7] Tompkins, T. et al.
[8] *CY 2013 Medicare Physician Fee Schedule Final Rule with Comment, CMS-1590-FC (pages 314 & 539-540) - https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/Downloads/2013-Medicare-Physician-Fee-Schedule-Final-Rule.pdf*.

prescribers use anti-seizure medications such as lamotrigine, valproic acid, and carbamazepine to treat bipolar disorder. They use blood pressure medications such as clonidine and prazosin to treat post-traumatic stress disorder and anxiety. Medications are medications, drugs are drugs, and there is no easy way to carve out just "psychiatric" prescribing privileges.

Further, opioids appear to be contemplated by this proposal. The state of Vermont continues to battle an opioid epidemic, exacerbated by the COVID-19 pandemic, and it would be irresponsible to grant increased prescriptive authority to another group of providers with little to no medical training, thus inappropriately increasing access to opioids, either legally or through diversion. Any person with the privilege of prescriptive authority for opiates should have extensive training in the biology and physiology of pain, the pharmacodynamics and pharmacokinetics of opiates and how they create dependence, the signs and symptoms of withdrawal and intoxication, treatment of withdrawal and overdose, and a full understanding of other treatments options for pain (surgical - implants, ablations, decompressions, stimulations; physical/occupational therapy; other types of mechanical therapy; and other medication classes) that could be used instead of opiates. Physicians and APPs have this background, are also trained to recognize abuse of these medications, and are required under Vermont law to participate in the Vermont Prescription Monitoring Program and complete required CME courses – none of which are addressed in H. 392.

Physicians and other prescribers are also trained to recognize the potential adverse interactions among medications and existing health conditions, including interactions of psychotropic medications and other, non-psychotropic medicines – see Appendix I. Physicians and advanced practice prescribers with medical training and clinical training experience earned through thousands of hours of required patient care have gained the skills to recognize that diseases such as depression can be caused by physical illnesses such as diabetes and thyroid dysfunction, in addition to psychiatric causes.

H. 392 similarly fails to address the additional risk of prescribing for certain populations such as children, seniors and those with co-occurring disorders, with no additional training, supervision or limits on prescribing for these populations.

The idea of expanding psychotropic medication to nonmedical professionals is about 20 years out of date. Twenty years ago, the field of medicine was quite optimistic about what psychiatric medications had to offer and frankly did not fully comprehend the potential downsides for many of the medications prescribed. The mood in the field of psychiatry and medicine generally was one of therapeutic optimism and use of psychotropics became widespread. Since that time, we have heard more from those prescribed psychiatric medications as well as conducting longer-term research and retrospective reviews. In doing this, we have found that all psychotropic medications carry some risk, both short- and long-term. Some of these risks can be significant and life altering. The mood in the field over the past 10 years especially has become much more cautious. While the therapeutic promise of the medications prescribed in psychiatry is sometimes considerable, with growing recognition of their potential problems, prescribers have become more judicious when starting medication, and once someone becomes stable on a medication, consider the need for those medications in an ongoing way. Deprescribing, or the judiciously gradual discontinuation of psychiatric medications is one of the most challenging tasks facing medical professionals when prescribing psychotropic medications and those who do this effectively and safely have the most training and experience. Conversely, those with the least training have the most difficulty with this task and often leave patients on medications rather than

risk reducing them. This is completely understandable: it can be destabilizing and potentially risky to stop medication. That is why instead of promoting the idea that we need new prescribers with little training, we need to leverage the time and expertise of the most well-trained medical professionals in order to promote safer, more judicious prescribing of psychotropic medications.

Education & Training

Psychologist prescribing legislation as proposed in Vermont does not require psychologists to obtain adequate medical training to prescribe. No one can gain enough medical training to prescribe in the model training laid out by the American Psychological Association, which calls for content that can be covered in a 400 hour-long course and what amounts to 10 weeks of training. Limited coursework in basic life sciences, pharmacology, and neurosciences is a poor substitute for the many years of advanced medical training required to become a physician or advanced practice professional. See the attached charts outlining the differences between educational requirements contained in the proposal in H. 392 with that of psychiatrists, family physicians, psychiatric APRNs and physician assistants. See also the attached presentation by Dr. Judith Lewis outlining the requirements for psychiatry training in Vermont. The differences start even before professional school: physicians, PAs and APRNs must all take undergraduate prerequisite science classes even prior to beginning professional training. While psychologists will obtain a doctorate degree in psychology after an undergraduate degree, this training is highly variable; psychology programs do not have equivalent, consistent requirements as do MD or DO degrees with baseline ACGME requirements, and contain no biomedical coursework.

Medical students spend four years focusing on the entire human body and all of its systems – cardiovascular, endocrine, neuropsychiatric, and more. This training addresses the gastrointestinal system that absorbs drugs, the liver/hepatic system that processes drugs, the kidney/renal system that eliminates drugs, and all the other systems that can benefit from or be hurt by the side effects from medications, including the cardiovascular system (heart), the respiratory system (lungs), the immune system, the musculoskeletal system, and the reproductive system. In addition to learning for a full year the anatomy of the body and how all of these systems work normally, medical school includes a full year of learning how all of these systems can become dysfunctional, how to systematically assess symptoms in the complete biopsychosocial context of the patient, how to narrow it down to a diagnosis and develop a comprehensive treatment plan specifically for each patient. All steps of this process are then managed in an ongoing way as a patient's life changes and a complex interplay of ongoing symptoms, new symptoms and treatment effects are managed simultaneously. Pharmacology training starts with the chemistry and cellular biology in pre-medical (college) classes and continues with specific courses about receptor subtypes and cellular cascades that are how drugs exert their actions.

The second half of medical school is two years of working with and learning from sick patients in clinical settings. It's easy to read something in a book and forget about it – when you see a patient with a condition, and treat them, that's when the knowledge solidifies, and that is the experience that you want your prescribers to have had.

After graduating medical school, doctors are not allowed to practice on their own yet. Three to seven more years of intensive training is required in the form of residency, with different lengths of time depending on the medical specialty. This clinical training allows physicians to further develop and refine

their ability to safely evaluate, diagnose, treat, and manage a patient's full range of medical conditions and needs. APRN and PA training similarly require extensive classroom training on all of the body systems as well as clinical rotations in areas such as medicine, OB/GYN, pediatrics, psychiatry and geriatrics. By gradually allowing trainees to practice skills with greater independence but still under supervision, clinical training prepares physicians, PAs and APRNs for the practice of medicine and prescribing medications. It is crucial to have in-person and hands-on experience on prescribing after spending years learning differential diagnoses.

H. 392 would allow a professional trade association – the American Psychological Association – not an independent accrediting body – to designate adequate coursework for prescribing. This would give little assurance of adequate training compared to national accrediting bodies such as the ACGME for medical education. APRN and PA training programs similarly have independent accrediting bodies. Currently, many psychopharmacology degrees of the type that would be allowed by H. 392 are online, distance learning programs. In fact, if you Google "psychopharmacology degree online," the results will show schools questionably promoting 100% online degrees.

The model proposed by H. 392 also fails to identify an adequate, independent examination to show proficiency after training. The proposal requires passing an exam developed by a "nationally recognized body," which could mean the 150-question multiple choice Psychopharmacology Exam for Psychologists (PEP). PEP is a product provided and administered by the American Psychological Association. Physicians, APRNs and PAs must all pass independent exams (or multiple exams) before practicing, which are separate from professional trade associations in order to prevent conflicts of interest. See the attached charts comparing exam requirements.

Finally, H. 392 does not adequately address collaboration between prescribing professionals. All states with RxP currently require collaborative agreements for prescribing psychologists, so no training programs can legally prepare psychologists to practice independently. Yet, H. 392 does not require collaborative or supervised practice, simply obtaining a "concurrence" to prescribe.

Why is the extensive didactic and clinical biomedical training offered by MD, DO, APRN and PA programs so critical? Because psychiatric care is much more than just prescribing. More than half of patients with mental illness also have an underlying physical illness. For example, people with diabetes or heart disease often suffer from depression. The complex interactions between mental and physical health conditions and the medications used to treat them require advanced medical training in order to ensure high-quality clinical care. It is also not so straightforward to translate what you read in a textbook or an online module to actual clinical practice. It requires the opportunity to ask questions of a more senior expert, re-reading, re-learning, and supervised clinical experience.

Narrow psychopharmacology training will also not prepare psychologists to perform differential diagnoses, which is the process of differentiating between two or more conditions which share similar signs or symptoms. It takes years of training in medical settings to learn to recognize and diagnose physical diseases that can mimic or significantly contribute to mental illness (see Appendix II), to manage the complex interplay between all the systems of the body including the nervous system, and to distinguish medical conditions from purely psychiatric. Physicians and APPs spend years learning differential diagnoses, pharmacology, and honing their medical skills.

Psychologists also will not have adequate training to properly monitor patients who are on medication, which involves ordering lab work and being able to accurately determine whether medication is having adverse effects on the heart, kidneys, or other important bodily functions. Only an individual with medical training will be able to determine whether changes in lab work are due to age, underlying medical illness, or harm from the medication.

The necessary biomedical training cannot be replicated in a 400-hour training period, which is the length of the add-on program psychologists take to obtain prescribing privileges. A recent peer-reviewed study of psychologists, by psychologists, found that "many psychologists agreed that an RxP training model should resemble a medical training model (46%) and psychologists should receive the same amount of training as other non-physician prescribers (69.2%)." They also point out that "psychology has the core curriculum with probably the least overlap with traditional medical curricula."[9] A review of the history of RxP training models "noted a decreasing trend in the amount of recommended training over time with the current APA model involving less than half of the amount of medical training required of any other prescribing professions."[10]

Psychologists in Vermont have concern about the adequacy of the training proposed. Several shared comments with VMS members, though asking to remain anonymous:

1) I asked a female psychologist who has not had great experience advocating for preventative mental health in legislature. She did recommend OPR take a survey of psychologists on this subject. She feels that if a psychologist wants to do this they should go back to school to be a PA or NP. She says first obligation is to do no harm. Unfortunately she declined [to comment publicly].

2) I don't plan to testify or write about this for various reasons. Most significantly, because … I don't wish to speak for my entire department or organization; written comments and/or verbal testimony may be perceived as such.

I personally have no desire for prescription privileges. I haven't read what the specialized training for psychologists would look like but my sense has always been that while basic psychopharmacology might be readily learned, everything else you learn in medical school and residency can and should not. I appreciate the various metabolic and organic considerations and the fact that many medical conditions (e.g. thyroid, etc.) can look like a psychiatric one, etc. I recognize that there are myriad potential drug interactions and other considerations I have no desire to manage. Honestly, had I wished to become a physician, I would have pursued Medicine.

I have no wish to add to a community of polypharmacy prescribers and have great respect for my psychiatry colleagues who engage in through diagnostic evaluation and practice conservatively. I worry about some of the treatment plans I hear about from colleagues who prescribe multiple agents, sometimes 2 -4 in the same class. I understand that our APA ethical guidelines permit us to comment on/recommend medication to patients, but the way I understand that is that I am qualified to encourage a patient to seek psychiatric consultation to discuss the possibility of medication, etc. I prefer to restrict

---

[9] Tompkins, T. et al. *Quoting* Fox, R.E., DeLeon, P.H., Newman, R., Sammons, M.T., Dunivin, D.L., & Baker, D.C. (2009). Prescriptive authority and psychology: A status report. *American Psychologist*, 64, 257-268.
[10] Tompkins, T. et al.

myself to the practice and teaching of psychotherapy with psychiatric residents, fellows and psychology interns and postdocs.

…. I understand how in the military and in rare other circumstances there may have been a case for limited prescriptive practice for psychologists. In general, however, and in VT in particular, I do not wish to pursue this.

The presentations to OPR at the public hearings describing the training model in Illinois highlight the vast differences between that and the proposal in front of us in Vermont. We understand that the Illinois model is based on physician assistant training and requires a much higher level of undergraduate basic sciences and extensive supervised clinical rotations.

It is clear that a psychologist's training and education is highly variable and there are not equivalent, consistent or independently-overseen requirements. As envisioned by this proposal, doctoral level psychologists will not receive adequate training in the relevant areas of pharmacology, differential diagnoses, or the human body and its systems to safely prescribe medications.

Alternatives

Access to mental health care is a legitimate concern in the United States. However, it is inappropriate to address actual or perceived workforce shortages in the medical profession by exposing patients to health care providers whose education and training does not support the caregiving role they seek. There are other evidence-based answers that address access to care concerns while maintaining physician or advanced practice professional involvement in psychiatric care. Many of these efforts are already happening in Vermont in a limited way and expanding them would be of significant benefit to the health of Vermonters. Evidence-based solutions include:

1. Increase retention and recruitment of psychiatrists in Vermont by:
    a. Enhancing loan repayment for psychiatrists practicing in Vermont, especially in rural areas
    b. Continuing the ability for psychiatry to provide telephone and telehealth care at payment parity with in-person care
    c. Improving the ability for psychiatrists from outside the state to provide telehealth care within Vermont though licensing reforms
    d. Improving reimbursement for psychiatry, especially in the Medicaid program
2. Continue to support ongoing training of primary care providers in basic psychotropic management of psychiatric conditions through UVM, Dartmouth, AHEC and other partners.
3. Reimburse psychiatrists and primary care providers for consulting with each other directly (i.e. "curbside consults", "E-consults").[11] This model allows for direct communication with primary care providers around specific cases in which they have assessment or treatment questions. For more straightforward questions, a psychiatrist-to-primary care-consult can often provide the necessary support to allow for psychotropic prescribing within a patient's medical home safely and effectively.

---

[11] Golberstein, E., Joseph, J.M., Druss, B.G. *et al.* The Use of Psychiatric eConsults in Primary Care. *J GEN INTERN MED* **35,** 616–617 (2020). https://doi.org/10.1007/s11606-019-05048-w

This also allows for ongoing training and education of primary care providers who do the majority of psychotropic prescribing currently

4. Increase access for primary care practices to the Collaborative Care Model (also known as COCM).[12]This model leverages limited psychiatric time to maximum effect. The Collaborative Care Model, where psychiatrists work with primary care providers along with other mental health providers to integrate behavioral health and substance use services with general and/ or specialty medical services, is also a way to truly increase access to care. With over 90 randomized control trials showing its effectiveness, it has emerged as the most effective model of integrating mental health care in primary care settings and is the only integrated care model with a clear evidence base.[13] Support for COCM could involve:
    a. Providing further training in this model for psychiatrists, primary care providers and mental health professionals.
    b. Providing grants fund COCM in individual practices
    c. Requiring Medicaid and private insurance companies to activate collaborative care codes (in addition to Medicare which already allows these codes to be used)
5. Support from the State for Designated Agencies in Vermont to become Certified Community Behavioral Health Centers.[14] This model allows for stronger funding of mental health services in Vermont similar to the way Federally Qualified Health Centers are funded. In Vermont, we have seen Federally Qualified Health Centers successfully recruit more mental health staff including psychiatrists to the state. If the state of Vermont supports CCBHCs, it is likely Vermont would be able to successfully retain and recruitment more psychiatrists.
6. Support funding for the psychiatry Advanced Practice Registered Nurse (APRN) program at UVM. This would allow for more nurses in Vermont to receive advanced practice training. In the past, when there was an APRN program at UVM, we saw many of those nurse practitioners remain in Vermont and serve communities throughout the state.

Cost

The proposal for psychologist prescribing authority implies that psychologists could successfully manage their patients while avoiding referrals to physicians (dual utilization). Unfortunately, there is no data to support that granting of prescriptive authority would change referral patterns. We argue that errors in psychologist prescribing could actually continue the trend of dual utilization and will not obviate the need for the patient to see a physician.

We are concerned that there could ultimately be an increase in cost associated with psychologist prescribing. Patients may be overprescribed medication or have adverse effects from wrongly prescribed medication leading to increased health care utilization (urgent care and emergency room visits, PCP visits, and hospitalizations). Many psychiatric medications can irreparably and irreversibly damage an individual's liver, kidneys, or other organs – increasing or creating health issues where none before existed.

---

[12] See https://www.psychiatry.org/psychiatrists/practice/professional-interests/integrated-care/learn
[13] https://www.psychiatry.org/psychiatrists/practice/professional-interests/integrated-care/get-trained
[14] See https://www.thenationalcouncil.org/ccbhc-success-center/ccbhcta-overview/ for an overview of the model and description of how the model can "dramatically increase access to mental health and substance use disorder treatment."

We know that many patients with mental illness also have physical comorbidities, and their mental illness is often caused by an underlying physical condition. If a psychologist has not been trained in recognizing and treating medical diseases, they will not recognize these conditions in their patients. Delayed or misdiagnosis would not only lead to patient safety implications but increased cost to the patient and health care system.

Conclusion

Thank you for providing our organizations with the opportunity to testify and submit comments to inform OPR's important decision on expanding psychologist scope of practice to include prescribing. Given the lack of evidence that there are independently-accredited training programs, competency examinations and data showing that such a practice is safe and will expand access for Vermont patients, the request does not meet the criteria established in the sunrise process and we ask OPR to deny the request at this time.

Attachments

Attachment 1: Maps of Physician, APP and Psychologist Distribution in Vermont

Attachment 2 & 3: Training Comparisons – Summary and Full Chart

Attachment 4: Medication graphic

Attachments 5-8: Footnoted documents

Witness Testimony

Appendix I - Potential adverse interactions among medications and existing health conditions

Prescribing medications, by design, requires a high level of education, experience, expertise, and training. Moreover, the co-prescribing of these medications with other medications can be incredibly fraught and requires a wholistic training and expertise to ensure patient safety and to avoid patient harm.

Described below, prescribing providers require use of the full base of their experience and understanding of interactions of medications and health issues to work with patients who often present with multiple health conditions and underlying health concerns and overlapping treatments.

- One of the black box warnings are on antidepressant medications when used for adolescents and young adults where there is a risk of increased suicidal ideation. Children, adolescents, and young adults are a specialized population where even psychiatrists must complete an additional 2-year fellowship in order to treat this population due to the complexities of treating a developing brain, especially with medications. Having undertrained providers prescribe these medications could potentially lead to an increase in completed suicides whether through under- or over-prescribing these medications due to their lower level of training and experience with the medications.
- Antipsychotic medications are used for more than psychotic symptoms, they are also used for mood stabilization, anxiety, and the side effect of sleepiness. However, they can also cause diabetes and high cholesterol, but a provider who is undertrained in physiology and how all the organ systems in the body interact will not be able to adequately mitigate this risk or assess when this risk does not outweigh the psychiatric benefit.
- Anxiety is incredibly prevalent in the population. There are many ways to treat anxiety, including many medications, some of which can cause addiction, such as benzodiazepines. If a provider is undertrained without having had enough experience with people who have addiction disorders, are developing addiction disorders, or have predisposing factors to develop an addiction disorders, these medications can be overprescribed and used injudiciously and thus increase the addiction epidemic we are already fighting.
- Stimulant medications can also cause addiction. However, they are incredibly beneficial for someone with ADHD. They can also cause sudden death. Or exacerbate an eating disorder. Or cause high blood pressure. Someone must have a sufficient understanding of the underlying physiology and accompanying medical illness and predisposing factors to mitigate these risks.
- Treating psychiatric disorders without understanding the person's full medical health can be very dangerous. For example, when treating someone for ADHD without taking into account that the person also has Type 1 Diabetes. A stimulant can make the person lose their appetite, cause their blood sugar to drop and continuously go into hypoglycemia
- Cancer and treatments for cancer such as chemotherapy can cause depression. Antidepressant medication can be helpful but can also gravely interact with chemotherapy so as to make the chemotherapy useless, or overconcentrate the chemotherapy and cause intolerable side effects.
- Psychiatric medications, including antidepressants, antipsychotics, and stimulants, can have significant effects on the heart, including what is known as "QT prolongation," a change in the heart rhythm that can increase risk for an arrhythmia or heart attack.

- The most generic and “harmless” drugs that psychiatrists prescribe, selective serotonin reuptake inhibitors like Prozac or Zoloft, can cause significant problems in other systems of the body. For example, there are serotonin receptors in the gut, and these drugs can have significant gastrointestinal side effects. There are also serotonin receptors on platelets and these medications can lead to clotting problems that can be dangerous if not recognized.
- Lamotrigine, a medication used for seizures and also used for mood stability in bipolar disorder, can cause a life-threatening rash. Recognizing different kinds of rashes, and which ones to be concerned about, is therefore needed for prescribing psychiatric drugs
- Autoimmune encephalitis is an inflammation of the brain that can appear as psychosis. Those who are undertrained will often treat this with antipsychotic medication rather than understanding that there is an underlying deadly brain disease that needs to be treated with non-psychiatric medications.
- Delirium is a not uncommon illness that presents as psychosis with people hearing and seeing things that are not there and acting very differently than their normal selves. Undertrained providers often jump to treating this with antipsychotics. However, there is always a medical/physiological cause of the delirium and if that is not treated, then delirium can actually lead to death. For example, it is not uncommon for people in older age groups to develop urinary tract infections (UTI) that can cause delirium. If the UTI is not treated and they are simply given antipsychotics, this can be fatal.

Appendix II - Physical diseases that can mimic or significantly contribute to mental illness

Here are just a few examples among many of the diseases that physicians and advanced practice professionals learn to recognize and diagnose during their medical training:

- Hypothyroidism can cause symptoms that appear to be depression and hyperthyroidism can look like anxiety or mania, but psychopharmacological medication will not treat these, the underlying medical illness needs to be treated and the symptoms that appear to be psychiatric will then resolve.

- Eating disorders are a uniquely psychiatric disease as they are manifested in both physical and psychological symptoms such that the physical malnourishment may cause symptoms that appear as anxiety or depression. When the malnourishment is treated the psychological symptoms can resolve, but eating disorders also increase the risk for other psychiatric illness. A medical provider with extensive training is needed to be able to recognize the difference and treat both the psychiatric and physical symptoms.

- Episodes of hypoglycemia, or low blood sugar (glucose), can look like panic attacks or intoxication.

- Grave's disease, or hyperthyroidism, can present with anxiety, restlessness, irritability, depression, insomnia, and difficulty concentrating; physical signs such as increased sweating, diarrhea, and heat intolerance are easily missed.

- Delirium is an acute confusional state with disorientation and abnormal behavior that is difficult to recognize and distinguish from conditions such as depression and schizophrenia; very often physicians who are not psychiatrists have a hard time recognizing and treating delirium.

- Hashimoto's Encephalopthy, related to high levels of antithyroid antibodies, may present as acute psychosis, worsening depression, or declining cognition, all of which can be easily mistaken for a primary psychiatric condition. The treatment is immunosuppression, not psychiatric medication.

- HIV/AIDS is commonly associated with depression but can also present with mania or psychosis, and almost half of HIV/AIDS patients have neurocognitive deficits.

- Limbic Encephalitis, an inflammation of part of the brain, presents as a psychological decompensation over the course of weeks, usually with psychosis, changes in personality, hallucinations, and confusion.

- Huntington's Disease, a progressive degenerative brain disorder, starts with years of personality and mood changes before any abnormal movements begin.

- Alzheimer's Disease, a fatal neurogenerative disease, often first presents with behavioral changes, depressive symptoms, or anxiety, before memory problems are readily apparent.

- Dementia with Lewy Bodies is a disease with features similar to Parkinson's disease, but with more mental symptoms than physical. It is hard to recognize and easily missed, and in the early phases can present primarily with well-formed visual hallucinations in addition to cognitive problems, depression, confusion, and falls. If the diagnosis is missed and an antipsychotic is prescribed for the hallucinations, the antipsychotic can be harmful and worsen the disease. - Frontotemporal Dementia is the third most common form of dementia, and it begins with alterations in personality, apathy, and lack of initiative

that can be easily mistaken for depression; socially inappropriate behavior and lack of empathy can likewise be mistaken for a psychiatric condition.

- Normal-Pressure Hydrocephalus is a treatable form of dementia with a potentially good outcome if it is caught early. Physicians learn that the classic triad of symptoms are cognitive changes, balance changes, and urinary incontinence. Apathy, anxiety, and slowed cognition are often mistaken for psychiatric disorders, and the balance changes and urinary incontinence can be missed or attributed to unrelated conditions in the elderly.

- Migraines, a very common disorder, very often mimic epilepsy, stroke, gastrointestinal disease, and psychiatric illness, and often present with neuropsychological symptoms including mood changes, irritability, concentration problems, hallucinations, distorted body perceptions, altered sense of reality, or delusions. Some forms of migraine are not accompanied by pain, making this a more difficult diagnosis than it might seem.

- Brain Tumors, especially those in the frontal parts of the brain, often first present with neuropsychological symptoms including hallucinations, personality changes, mood changes, psychosis (hallucinations or thought process changes), cognitive disturbance, or confusion.

- Multiple Sclerosis has highly variable signs or symptoms as the lesions can be anywhere in the nervous system; very often, neuropsychological symptoms such as depression, anxiety, suicidal thoughts, emotional lability, and hypomania are the first presenting symptoms and overshadow physical signs and symptoms.

- Partial Seizures are common mimics of psychiatric disorders, presenting as brief episodic changes in perception, behavior, cognition, and experience of reality, and can easily be mistaken for anxiety, panic attacks, dissociation, post-traumatic stress disorder, or attention deficit disorder.

- Tourette Syndrome is a common condition where patients have motor and vocal tics, and very often co-occurs with obsessive compulsive disorder (OCD). The tics can seem voluntary even though they are not. Tourette syndrome can be mistaken for attention deficit disorder or missed as a separate condition from the OCD.

- Arsenic poisoning, which happens in modern times due to occupational exposures, environmental pollutants, or unregulated dietary supplements and traditional remedies, presents as a mood disorder, personality change, or slowly progressing dementia with some physical symptoms that may at first seem unrelated.

- Carbon monoxide poisoning, with low-level exposure over time, can present with hard-to-diagnose waxing and waning mood and thinking problems.

- Lead poisoning presents with fatigue, insomnia, irritability, decreased libido, depression, apathy, and personality change, and if the exposure is not mitigated will eventually progress to dementia. Headaches, joint pain, and abdominal pain can easily be dismissed as unrelated or as physical symptom of depression.

- Charles Bonnet Syndrome is when a person with vision problems has visual hallucinations that are complex and are often small versions of people and animals. A person who has not heard of this condition could easily mistake the hallucinations for psychosis or schizophrenia, and prescribe unnecessary and potentially harmful drugs.

- Chronic subdural hematoma is a life-threatening slowly expanding bleed in the brain that is common in the elderly, and often presents with drowsiness, problems with attention and concentration, apathy, and headache, and can easily be misdiagnosed as depression.

- Creutzfeldt-Jakob disease, a fatal brain condition, initially presents with subtle waxing and waning mental symptoms including anxiety and depression, insomnia and fatigue, irritability, mental slowness, and problems concentrating, as well as hallucinations and delusions.

- Narcolepsy, a disorder characterized by abnormally frequent switching from wake to sleep, is easily missed and can present with fatigue, cognitive slowing, and depression, as well as hallucinations when a patient is falling asleep or waking up.

- Parasomnias, or abnormal behaviors during sleep like sleep walking, sleep eating, and acting out nightmares, are often mistaken for psychiatric conditions. One parasomnia in particular, REM Sleep Behavior Disorder, is very important to not miss as it is often an early sign of neurodegenerative disease.

- Restless Legs Syndrome can be mistaken for anxiety.

- Sleep Apnea, a condition where a patient stops breathing several times an hour when asleep, can present primarily as mood changes, fatigue and slowed cognition. If a clinician does not ask about snoring, hypertension, and headaches, this diagnosis is easily missed. Psychiatric medications do not help, but sleep apnea is very treatable with a sleep breathing device (CPAP).

- Vitamin B12 deficiency can mimic dementia, schizophrenia, and depression; very often the only signs are mental. Physical signs such as abnormal tingling in the extremities can be missed or dismissed as unrelated.

- Addison's Disease is when the adrenal glands do not produce enough cortisol, aldosterone, and androgen hormones, and can be fatal. Patients often present primarily with depressed mood, loss of motivation, fatigue, diminished appetite, and weight loss, and sometimes psychotic symptoms (hallucinations or disorganized thinking).

- Cushing's Syndrome is a condition where the body has too much cortisol (stress hormone), and frequently presents with psychiatric symptoms such as depression, irritability, anxiety, insomnia, or psychosis, and psychiatric symptoms might be the only presentation for years. Associated physical symptoms (high blood pressure, obesity, diabetes, osteoporosis, fatigue, etc.) might be dismissed as unrelated.

- Acromegaly is a condition usually caused by a pituitary tumor releasing excessive growth hormone. Acromegaly can present with depression, irritability, apathy, and loss of libido. Due to the psychiatric presentation patients are often symptomatic for years before receiving an accurate diagnosis.