# Attention to Medical Conditions During Mental Health Clinic Visits

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## Abstract

With increased attention being devoted to the metabolic effects of antipsychotic medications, it becomes apparent that efforts need to be made to ensure that patients receiving treatment for a mental illness receive appropriate evaluation and treatment of their medical conditions as well. The individual provider may assist by offering relevant screenings, helping patients take responsibility for their own health, decreasing barriers to treatment, enlisting the assistance of support staff, making appropriate referrals, and collaborating with other providers.

Key Words: Antipsychotic, Mental Health Services, Metabolic Side Effects

## Introduction

With the increased recognition of problems related to the development of the metabolic syndrome attributable to the use of atypical antipsychotics, there has been more emphasis placed on paying attention to physical health concerns during a mental health appointment (1, 2). Since time available to spend with each patient is necessarily limited by the availability of clinicians and individual clinic demands, one must determine what topics should take priority during each session. There has been an effort in the primary care setting to pay closer attention to psychiatric conditions, in particular, depression (3, 4) and the adverse metabolic effects of antipsychotic medications (5). Looking at these models may provide guidance for use in mental health. Certainly, some overlap between the treatment of psychiatric and medical conditions is essential in order to provide patients with comprehensive care.

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The purpose of this paper is to consider ways that medical and psychiatric care may be integrated within the mental health clinic without compromising attention to the psychiatric disorder for which the patient sought care. The focus in this paper will be on what the individual provider can do to integrate mental health and medical care, rather than address the question of program development.

# Structure and Demands of the Outpatient Clinical Encounter

What then should be considered as an essential component of a 20-30 minute psychotherapy with medication management mental health clinic visit? Generally, the provider would need to: 1) stop, look, and listen to determine from where the patient is coming at the current time (6); 2) process important events since the previous visit; 3) assist the patient in developing insights; 4) review current medications, assess for side effects, and make necessary medication adjustments; 5) review metabolic and other relevant physical parameters; 6) review the treatment plan; and, 7) document the visit appropriately. This is a lot to accomplish in a short period of time. While the advent of the computerized record is important in terms of making patient information readily available to healthcare providers, there is the added burden of data entry for each clinician and that may also impact on time available to directly interact with each patient (7).

# Metabolic Syndrome, Cardiovascular Disease, and Hyperprolactinemia

It is medical co-morbidity that leads to the need to consider the integration of medical and psychiatric care. Using claims data in a sample of patients 18-64 years old, those with a diagnosis of bipolar I disorder overall had significantly more co-morbid medical conditions, spanning a variety of organ systems, than those in the control group (8). Some of these conditions included substance abuse, chronic lung disease, asthma, peptic ulcer disease, liver disease, pancreatitis, hypertension, obesity, weight loss, hypothyroidism, renal failure, and HIV infection. The researchers acknowledged that medications may have contributed to the development of some of the conditions; for example, liver disease and/or pancreatitis that may have been precipitated by treatment with anticonvulsant medications. They found that the patients with a diagnosis of bipolar disorder were less likely to be diagnosed with hyperlipidemia, which they identified as an unusual finding in light of the general adverse effect of atypical antipsychotics on lipid profiles. Some of the subjects in the sample were younger adults. One might anticipate even more medical co-morbidity in an older population.

In a review of various international guidelines for metabolic monitoring of those receiving antipsychotic medications, there were recommendations for measurement of metabolic parameters in varying degrees of intensity (1). The joint statement of the European Psychiatric Association, the European Association for the Study of Diabetes, and the European Society of Cardiology was developed with a goal of a reduction in cardiovascular risk and an improvement in the diabetic care of those patients suffering from a severe mental illness. The statement describes the scope of the problem (9). It is suggested that the identification and management of cardiovascular risk be shared between medicine and psychiatry. It is specifically recommended that cardiovascular risk be determined at the initial visit in order to monitor for future changes. It is recommended that the history and physical examination include: 1) a previous history of cardiovascular disease, diabetes, or related illness; 2) a family history of premature cardiovascular disease, diabetes, or related illness; 3) smoking; 4) height, weight, and waist circumference to be used in the calculation of body mass index; 5) fasting glucose; 6) fasting lipid panel; 7) blood pressure to be measured twice and averaged, heart rate, auscultation of heart and lungs, and pedal pulses; and, 8) electrocardiogram (9, p. 417). The expectation is that any problem identified will then be addressed and treated in conjunction with other clinicians as necessary. In addition, it is suggested that those prescribing antipsychotic medications consider the patient's cardiovascular risk prior to the

initiation of medication and choose medications so as to minimize adverse effects on weight, glucose, and lipid levels. It has been suggested that a change to a different medication should be considered if the patient's weight increases by 5% and that patients should be informed about the possibility of weight gain related to medication when it is relevant (10).

The mechanisms involved in the development of the metabolic syndrome in relationship to antipsychotic treatment are not entirely clear. However, several hormones and other factors have been discussed that lead to alternation in appetite regulation and the secretion, regulation and utilization of insulin (11).

Some antipsychotic medications, such as clozapine and olanzapine, may increase the risk of developing metabolic syndrome more than others, such as aripiprazole and ziprasidone (12). Therefore, the provider should take this into consideration when prescribing antipsychotics and provide the patient with education regarding the need for monitoring of metabolic parameters. However, the efficacy of the antipsychotic in terms of symptom control must also be considered and the patient may choose to continue an antipsychotic, in spite of the metabolic risk. For those patients who gain weight in relationship to treatment with an antipsychotic, a combination of metformin and lifestyle intervention has been found to promote weight loss and improve insulin sensitivity (13).

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Thakore (2) suggests that patients with schizophrenia be screened for metabolic syndrome at the first episode of illness, and then annually once medication has been initiated or more often should symptoms develop that warrant closer monitoring. In terms of who should perform the screening, Thakore recommends that the general practitioners do so, but acknowledges that schizophrenic patients may not be willing to attend primary care visits, therefore psychiatry may need to assume responsibility. This is a decision that may need to be made according to the resources and skills available at each site. Some mental health facilities may not have appropriate staff or examination areas available to perform physical exams. In that case, the mental health provider could still order lab work and an electrocardiogram at regular intervals and coordinate treatment decisions with the primary care provider.

The effect of some antipsychotic medications on prolonging the QTc interval, thereby increasing the risk of torsades de pointes and sudden death, is of significant concern when initially prescribing antipsychotic medication or when considering the addition of other medications to an existing medication regimen. It is important that both mental health and primary care providers are aware of all of the medications each patient is taking in order to decrease the risk of interactions (14). Should an electrocardiogram result demonstrate a QTc interval >500 ms, it may be necessary to discontinue the antipsychotic leading to the prolonged QTc interval. In that case, the primary care provider would want to contact the mental health provider as soon as possible (5). If the primary care provider has not ordered an EKG, the mental health provider should do so in order to monitor QTc interval. This type of situation highlights the significance of collaboration between professionals.

Diabetes care was studied among two large groups of primarily male patients being treated in the Veterans Administration (VA) healthcare system: one group with a diagnosis of a serious mental illness and diabetes, and the other group with a diagnosis of diabetes and no serious mental illness (15). The researchers proposed that patients with a serious mental illness would not receive adequate treatment for their medical illnesses. The management of diabetes was assessed by determining the percentage of patients who had at least one hemoglobin A1c (HgbA1c) test over the past year, the percentage of patients with an HgbA1c level  $\geq$ 9.5%, the percentage of patients who had LDL measured, the percentage of patients with an LDL result >130 mg/dL, and the percentage of patients who had a measurement of total cholesterol. Number of hospitalizations and outpatient visits were determined. Overall, the researchers found that the quality of care for diabetes did not differ significantly between the two groups except that those patients who were not receiving hypoglycemic medications and did not have serious mental illness had HgbA1c levels that were slightly higher. The patients who had both diabetes and a serious mental illness were found, on average, to have more than double the number of outpatient visits and these visits were for both mental health and medical care (primary care, specialist, multi-clinic). It should be noted that primary care visits were considered to be those for general internal medicine, diabetes clinic, geriatrics clinic, and primary care. Mental health visits were considered to be those for both individual and group mental illness treatment, substance abuse and rehabilitation, intensive case management, and intensive individual programs. It may have been more appropriate for the researchers to consider individual and group visits separately since it is unlikely that those responsible for managing group sessions were providers authorized to order laboratory studies or prescribe medications for treatment of diabetes; however, important educational

processes may have taken place during group sessions that impacted overall quality of care. The researchers stress the importance of patients having been treated in a VA facility where medical and mental health services are integrated and often are on the same grounds. They also address the ability of providers to easily access patient information due to the VA's use of the electronic medical record, which helps facilitate coordination of care.

The quality of diabetes care was compared between patients with a diagnosis of a serious mental illness and those who did not have a serious mental illness (16). Quality of care was determined by evidence that patients had received six different services, which included HgbA1c testing, a retinal eye exam, a foot exam, blood pressure measurement, testing for urine protein, and evaluation of blood lipids. Patients were also asked about the types of diabetes education they had received over the past year, such as information about dietary adherence, exercise, medications, glucose monitoring, and smoking for those patients who smoked. Patients with a serious mental illness were found less likely to receive both a retinal eye exam and have a lipid panel assessment. This is an area where providers may need to provide additional education to patients regarding the importance of these examinations. Obtaining lipid panels may be especially problematic as patients often forget to fast for the test and would benefit from reminders a day or two prior to the test date. The researchers were optimistic in concluding that most of the patients with a serious mental illness received a mean near five (out of six) of the required services, but this is an area that still requires attention. Further work is suggested in the areas of educating both primary care and mental health providers in diabetes care, and in integration of mental health and diabetes care services. Those patients with a serious mental illness were less likely to receive any diabetes education, but current smokers with a serious mental illness were more likely to have received smoking cessation counseling. Those with a serious mental illness were also less likely to have received cues from their providers about the use of self-glucose monitoring. While glucose monitoring is important in diabetes care, it is necessary to consider each patient individually to determine if they possess the cognitive skills and manual dexterity required to perform the test themselves. If they do not possess the skills required for selftesting, someone may need to be identified who could help them, such as a caregiver or home health assistant.

When 214 patients who had a diagnosis of both schizophrenia and diabetes were compared to 3,594 patients who were diabetic, but not schizophrenic, on the appropriateness and effectiveness of treatment of cardiac risk factors, there were no significant differences between groups on appropriateness of care, but patients with schizophrenia did not meet

the goals for cholesterol and low density lipoprotein measures as often as those without schizophrenia (17). In order to ascertain the appropriateness of treatment, measures were obtained to assess: 1) the use of hypoglycemic medication for patients with a HgbA1c >7%; 2) treatment with an ACE inhibitor or ARB for all patients; 3) treatment with an antihypertensive for those who were hypertensive; 4) treatment with a lipid-lowering medication for those with lipid elevations; and, 5) daily aspirin for all patients. The effectiveness of treatment was determined by: 1) the percentage of patients with HgbA1c <7%; 2) percentage of patients with HgbA1c <9%; 3) percentage of patients with LDL <100 mg/ dL; 4) percentage of patients with LDL <130 mg/dL; 5) percentage of patients with total cholesterol <200 mg/dL; 6) percentage of patients with HDL >40 mg/dL for men and >50 mg/dL for women; and, 7) percentage of patients with blood pressure <130/80 mmHg. It was found that patients with schizophrenia were more likely to receive insulin, but the results did not achieve significance. Patients with schizophrenia were significantly more likely to receive treatment with older, non-statin, lipid-lowering medications. However, the researchers acknowledge that the smaller size of the group with both diabetes and schizophrenia might have introduced bias or led to Type II errors. Of the seven measures of treatment effectiveness, those patients with schizophrenia were significantly less likely to achieve goals for total cholesterol <200 mg/dL and LDL <130 mg/dL. This may have been explained in part by the greater number of patients diagnosed with schizophrenia who missed one or more appointments since having missed one or more appointments was significantly related to poorer cholesterol control. It was also the case that patients with schizophrenia tended to be prescribed a greater number of medications, and being prescribed a greater number of medications was also significantly associated with poorer cholesterol control. The researchers concluded that the overall attention to treatment of cardiac risk factors was very good, but they determined that, based on poorer cholesterol control in the group with schizophrenia, care for schizophrenic patients may still not be optimal.

One important area to address in any population is overall physical function. The physical functioning scale of the Medical Outcomes Health Survey Short Form-36 was used to measure physical functioning in patients attending four crisis residential programs and the data compared to national norms (18). Demographic and information about usual healthcare place and provider were obtained by interview. Data regarding drug, alcohol, and smoking use were obtained. The sample included 309 subjects ages 18–60 years. Better physical functioning was predicted by being younger, male, less lifetime smoking, having earned income in the past six months, and having a diagnosis upon admission to the program other than depression or one of the schizophrenia spectrum disorders. It was noted that the mental health subjects appeared to age more rapidly than national norms, with significant differences noted as early as the third decade and those older than 40 years reported functional scores similar to those of the elderly in comparison to the national norms. The results of this study point out the importance of providers assessing patients regularly for functional status and intervening as early as possible, especially for those in higher risk groups. Ongoing encouragement toward smoking cessation, referrals for vocational counseling if appropriate, and optimization of medical management of mental health diagnoses may help to preserve physical function.

It is important to monitor patients treated with medications that may cause increased prolactin levels, such as typical antipsychotics, risperidone, tricyclic antidepressants, and selective serotonin reuptake inhibitors due to potential problems with sexual function or bone loss related to hyperprolactinemia. If signs and symptoms of hyperprolactinemia and elevated prolactin levels occur, the provider may consider making a change to a different psychotropic medication, treating hormonal deficiencies, adding a dopamine agonist or adding aripiprazole (19). The provider may also consider obtaining bone density testing to screen for osteoporosis.

#### **Treatment Barriers**

Veterans who had a serious mental illness and considered to be at risk for dropping out of treatment were asked to report their perceptions of the barriers to their receiving both medical and mental healthcare (20). While this study was small, with a sample of only 136 subjects, 90% of whom were men, there were several interesting findings. The barriers to care were divided into the categories of money or finances, transportation or distance, time constraints, provider or institutional constraints, alliance and rapport, and personal factors (20, p. 923). The researchers found no significant differences between barriers to obtaining medical versus mental healthcare, except in the area of personal factors where the proportion of patients reporting barriers to receiving mental healthcare was greater than the proportion reporting barriers to receiving medical care. This is a little surprising since these personal factors included "personal crisis, couldn't explain self, don't know how to make an appointment, and forgot when appointment was" (20, p. 923). These are then areas that the mental health clinician may need to attend to more closely in both the provision of mental healthcare and in the integration of medical and mental healthcare in terms of allowing adequate time for patients to express their concerns, making sure that the clinician understands the patient's needs, and providing adequate instructions regarding ways to obtain needed services.

Another concern among mental health patients who also are being treated for medical illnesses is how consistently they take prescribed medications and how well their medical condition is controlled. Pharmacy data related to how frequently medications were filled were used to assess adherence to antihypertensive medications in patients being treated at a Veterans Administration facility who had been diagnosed with both a psychotic disorder and hypertension (21). Results demonstrated that the patients with a psychotic disorder demonstrated adherence that was not significantly different than patients who had no psychiatric illness. Blood pressure was checked in the general medical clinic for both of the groups and hypertension control was not as good for those with a psychotic disorder. The study group was small, with only 89 subjects in each group and the researchers acknowledge that the study may not have had sufficient power to detect differences. There is also the concern that having medications filled may not necessarily mean that the medications have been taken as prescribed. The researchers recognize this problem. The study may have been strengthened by contacting patients to see if they were taking the medications that they had obtained from the pharmacy.

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When publicly funded mental health and primary care organizations in Texas were surveyed to identify barriers to integration of care, the greatest financial barrier was related to problems with reimbursement when providers billed for mental health services in the primary care setting (22). The researchers did not include information regarding financial barriers to the provision of primary care services in the mental health setting, but one might anticipate encountering similar difficulties.

#### Importance of Collaboration

While the need for collaboration between mental health and medical providers has always been important, it may be even more compelling now in light of the negative effect that some prescribed medications may have on cardiac and metabolic parameters (23). While numerous models have been developed that may be used to assist in the integration of medical and mental healthcare, it is suggested that choice of a model be individualized based on "practice/location, size, affiliations, external support, funding/revenue sources, availability of community and academic psychiatrists, and prevalence of serious mental illness within the population served" (23, p. 190). Morden et al. (23) also point out that the activities of communicating and collaborating require both time and commitment and that some physicians may not be trained in, and therefore comfortable with, the development of these types of relationships.

In a pilot study (24), physical and mental health-related quality of life and function and symptoms of bipolar disorder were compared between two groups: one receiving usual care and one receiving care under a bipolar disorder medical care model (BCM). The BCM model included education in self-management, care management in which a nurse care manager coordinated care between patients and providers, and implementation of guidelines in which medical and mental health providers were taught about the risk factors for cardiovascular disease in patients with bipolar disorders and how to manage these risk factors based on guidelines from the American Diabetes Association and the American Heart Association. Those providers treating patients in the usual care group were also instructed in the guidelines but chose their own approach to care. Outcomes were compared to baseline at three and six months. The sample was small, with a total of 58 who completed all of the surveys: 27 in the BCM group and 31 in the usual care group. The subjects ranged in age from 30-73 and were predominantly white males. The most common cardiovascular-related diagnoses in order of percentage affected were obesity, hypertension, hyperlipidemia, and diabetes. Results showed that the BCM group experienced a significant improvement in physical health-related quality of life scores based on the SF-12 (Short-Form Health Survey), while the usual care group experienced a significant decline. The BCM group experienced an increase in mental health-related quality of life scores based on the SF-12, but it was not significant. There were no significant differences between groups for overall functioning or symptoms of bipolar disorder. The researchers suggest that the improvement in physical health-related quality of life for the BCM group might have been related to a slow in decline related to the effect of increasing the involvement of the general medical provider. The researchers acknowledge limitations of the study included small sample, brief followup period, and the use of self-reported measures. They suggest that the findings are optimistic in terms of the future use of the BCM model, but recommend further study.

The impact of care managers, who were registered nurses, was studied in patients diagnosed with a serious mental illness who were attending an urban community mental health center. The researchers sought to determine whether or not patients receiving medical care management would demonstrate a greater improvement in the quality of their primary care treatment and health-related quality of life than those patients receiving usual care (25). In this study, primary care services were provided in primary care settings outside of the community mental health center. The patients receiving care management were more likely to visit a primary care provider and did obtain significantly more of the appropriate preventive services, such as physical exams, screenings, provision of education, and receiving vaccinations. Another interesting finding is that more medical conditions, in particular hyperlipidemia and hypertension, were diagnosed in the care management versus the usual care group. Those in the intervention group also had a greater increase in the proportion of care that they received for cardiovascular disease as opposed to the usual care patients. The patients receiving care management demonstrated a significant increase in mental health-related quality of life, but not health-related quality of life. The authors suggest that an improvement in medical care may lead to an improvement in mental health as well and that improvements in health-related quality of life may take longer to develop than the twelve months included in the study. Interventions provided by the care managers in this study are those that any mental healthcare clinician may consider providing such as education, advocacy, and logistical support.

# **Conclusions and Recommendations**

Research on the prevalence of obesity in patients with the mental disorders of depression and schizophrenia, the effects of atypical antipsychotic medications on weight and related health conditions, and possible ways to modify strategies for weight control for those suffering from a mental disorder were reviewed by Allison et al. (26). After reviewing the literature, the authors concluded that more research is needed to identify methods to assist those with mental illness in managing their weight. They suggest that modification of lifestyle strategies be considered prior to or when beginning therapy with atypical antipsychotic medications and that efforts be made to ensure that providers monitor patients' weights, lipid profiles, and other relevant metabolic parameters, and also change to a medication less likely to contribute to obesity when indicated. This is a situation where collaboration with both the patient and the primary care provider may be indicated in order to optimize control of both psychotic symptoms and metabolic parameters. They also suggest several factors that may need to be considered in developing preventive or weight management interventions for those with a mental illness such as motivational differences, cognitive function, social support and resources, and financial support.

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In the mental health setting it is important to be aware of any changes in the patient's history so that the potential impact can be taken into consideration. For example, in a study that was conducted using a mailed survey to obtain baseline data and telephone survey five years later, having had a coronary procedure, the number of diabetic symptoms at baseline, and a history of depression were associated with depression at 5-year follow-up (27). The most significant predictor of major depression at 5-year follow-up was having had a baseline score of  $\geq 9$  on the nine-item depression scale of the Patient Health Questionnaire (PHQ-9) at the baseline data collection, with even a baseline PHQ-9 score of 5 to 9 being associated with twice the risk of major depression at the 5-year follow-up. This is an important finding for those working with depressed patients in the mental health setting as it becomes clear that a change in physical condition may exacerbate depression so that extra attention to depression symptoms may be necessary during these times.

Treatment of depression, complicated by other mental or physical illnesses, can be complex and recovery difficult to measure. Using a standardized depression measure, such as the PHQ-9, may not always be sufficient because scores may remain high while the patient claims satisfaction with treatment, scores may be low while the patient claims to still not feel better, scores may remain high due to chronic medical problems, or the patient's depression score may not be consistent with functional status. The clinician may be left with a score on a standardized depression measure that is inconsistent with the patient's self-report and poses a problem for the clinician while decreasing faith in use of the depression measure. In order to adequately assess the patient's recovery, a standard depression measure could be administered along with another measure that would assess functional status and health-related quality of life. It is suggested that these instruments might be completed while the patient waits for their clinic visit. Those patients in need of additional support may benefit from contact with a care manager in between visits who then provides the provider with feedback (4). This is an interesting model; however, no mention is made of how referrals are made to a mental health provider if treatment in the primary care setting is not sufficient.

Strategies for providing holistic care to patients being treated in the primary care setting and suffering from depression have been offered and may also be employed in the mental health setting to assist in the integration of care and attention to medical conditions. Identification of negative cognitions that may prevent patients from making progress toward meeting their healthcare goals may be identified and explored to help patients develop realistic plans. With a goal of optimizing functional status, attention may be directed toward assisting patients in the utilization of adaptive and compensatory methods and it may be useful to help patients identify the relationships they see between their medical and psychiatric illnesses. Patients may be able to set specific goals for participating in exercise or recreational activities, especially those that have historically been enjoyable. An empathic approach is stressed with the provider letting the patient know that their concerns are being heard and that the provider intends to persist in helping the patient work toward feeling better. It is suggested that patients be given the opportunity to choose from among treatment options and then assisted in the development of a plan to help them meet their goals. The incorporation of physical activity should be encouraged due to its potential benefits on cardiovascular status, bone health, weight management, mood improvement, adherence to a more regular routine that may decrease insomnia, and the potential for increased social interaction. Attention to specific symptoms and symptom monitoring is recommended. It is recognized that the depressed patient, who is also suffering from medical conditions, may require longer and more frequent visits in order to have their treatment needs met (3).

This writer has had the experience of providing primary care services within the mental health clinic of a VA facility. Patients who were seen for primary care were generally those whose mental illness made it difficult for them to negotiate the usual primary care services. They were able to establish a relationship with one provider who usually managed both their medical and psychiatric treatments, with consultations from other healthcare professionals as needed. However, staff may not always be available to provide this service.

Some ways to provide adequate attention to physical conditions during a visit to the mental health clinic might be to: 1) assign one provider each day to meet with each patient briefly, separately from their regular visit, to review physical health issues; or, 2) provide 15-minute group classes each day on a different topic, such as low-fat diet, home blood pressure monitoring, ways to incorporate exercise into the day, or tips to decrease smoking.

Another possibility is to increase patients' involvement in their own care. One way to do this is to provide each patient with a chart, based on the U.S. Department of Health and Human Services preventive health recommendations (28) so that patients can assist in keeping track of when screenings and other procedures are due and also have clear goals so that they know what they are working toward (BP, weight, lipid levels, Vitamin D levels, glucose/HgbA1c, etc.). A sample chart might be structured with information that is relevant to all patients on every chart and then space at the end included for information specific to particular individuals.

It certainly would be expected that the provider prescribing a particular medication would be responsible for monitoring for potential adverse effects of that medication, such as increased blood pressure or alteration in thyroid function. However, the mental health provider does need to decide when a medical problem would best be managed within the mental health setting and when the problem would be better managed by the primary care provider. It is important for the mental health provider to determine which medical conditions to address and which medical conditions should be referred to another provider for evaluation and treatment. In order to accomplish this, the provider must be able to think about patient care in a holistic manner that takes all of the information presented by the patient into consideration before deciding how best to assist the patient. Ideally, the patient will receive care that will integrate the treatment of medical and psychiatric conditions in such a way that the treatments complement one another and improve overall health and quality of life.

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