

12-1-2025

## Metabolic Screening in Veterans on Antipsychotics Mood Stabilizer

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# Walden University

College of Nursing

This is to certify that the doctoral study by

Joy N Eke

has been found to be complete and satisfactory in all respects,  
and that any and all revisions required by  
the review committee have been made.

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2025

Executive Summary

Metabolic Screening in Veterans on Antipsychotics Mood Stabilizer

by

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Submitted in Partial Fulfillment of the Requirements for the

Degree of

Doctor of Nursing Practice

Walden University

May 2025

## Summary

This Doctor of Nursing practice project was conducted to examine a quality improvement initiative that sought to address metabolic syndrome screening consistency for veterans on antipsychotic medications at a U.S. Department of Veterans Affairs health system located in the Midwest region of the United States. The project centered on whether the quality improvement program assessing compliance with the current metabolic syndrome screening process reflects increased early detection of metabolic syndrome to prevent cardiovascular complications. Data collection involved comprehensive chart reviews of 50 veterans' records. The data collected were analyzed using a specially designed quality improvement initiative assessment form developed from eight survey items, which were components of the existing initiative. Results demonstrate notable compliance variations across screening protocols, particularly regarding enrollment procedures, electronic reminder systems, and abnormal result follow-up protocols. Data analysis revealed critical screening inconsistencies that could potentially delay early metabolic risk detection among veterans. Recommended interventions include enhanced provider education programs, streamlined electronic reminder systems, documentation simplification, and strengthened accountability frameworks. These strategic improvements aim to facilitate earlier metabolic syndrome identification, thereby reducing cardiovascular risk factors within this vulnerable population. The findings hold substantial implications for nursing practice, highlighting nurses' essential roles in patient education, clinical observation, and advocacy and contribute to positive social change through addressing healthcare disparities affecting veterans, promoting greater equity and inclusion in healthcare delivery systems.

## **Background**

The Veterans Health Administration (VHA) healthcare system faces a major clinical challenge regarding metabolic syndrome incidents among veterans using antipsychotic medications. Medical screenings for metabolic disease show use of different methods among healthcare providers in the institution, leading to historic care disparities that could cause veterans to develop unrecognizable metabolic conditions. The critical nature of inconsistency in metabolic screening among institutional providers stems from antipsychotic drugs, primarily olanzapine, being closely associated with metabolic risks that need regular monitoring to prevent fatal conditions (Fiorentio et al., 2022). Metabolic syndrome manifests throughout veterans at higher rates primarily due to antipsychotic use compounded by an additional risk factor including environmental and psychological stress, poor dietary habits, limited physical activities, and services related health conditions (Stone, 2024).

The VA hospital in the Midwest region that was the focus of this project initiated a quality improvement program in 2010 to address these problems, instituting protocols for metabolic syndrome monitoring of patients taking antipsychotic medication. While instituting protocols for metabolic syndrome monitoring is a major advance, stakeholder feedback and preliminary chart audits show that these protocols are still implemented inconsistently, creating a substantial gap between recorded best practices and actual clinical practice. The disparity between recorded best practices and actual clinical practice has direct implications on patient outcomes, with early recognition of metabolic abnormality being central to the avert ability of cardiovascular complications within this high-risk population.

As a response to this inconsistency in metabolic screening, this project was conducted with an aim to evaluate the impact of the existing quality improvement program by assessing adherence with existing metabolic syndrome screening practices and determining whether these practices facilitate improved early detection of metabolic risk. The lead question for this evaluation was: Did the evaluation of the current quality improvement program assessing compliance with the current metabolic syndrome screening process reflect increased early detection of metabolic syndrome to prevent cardiovascular complications among veterans on antipsychotic mood stabilizer medications? This project sought to identify the status of the existing metabolic screening quality improvement initiative and to develop specific recommendations to enhance screening processes.

A critical examination of current literature suggested the necessity of this evaluation and provided insight into best practice for metabolic monitoring. Level I evidence indicates that antipsychotics have a profound impact on metabolic health compared to mood stabilizers, with Fiorentino et al., (2022) research being especially concerning. In addition, Winter et al. (2022) identified a bidirectional relationship between depression and metabolic syndrome, demonstrating that veterans with mental illness experiences a cyclical pattern where depression can contribute to metabolic syndrome development and metabolic syndrome can exacerbate depressive symptoms. This complex interaction creates compounding health risks that necessitate specialized treatment approaches.

Level II evidence also suggests the use of holistic management strategies, with findings by Stutzman, (2021) showing that interventions that adopt holistic treatment

have better outcomes compared to those of one focus. Research on mood stabilizers such as quetiapine has linked these medications to worse cardiometabolic markers, solidifying the absolute value of stringent monitoring practices (Soda et al., 2021). Level III evidence reaffirms this through the promotion of objective measures of assessment that Gerlach et al., (2022) identified as more reliable than subjective measures when evaluating physiological indicators of metabolic health.

Current evidence-based clinical practice guidelines (CPGs) recommend quarterly lipid panels, monthly weight monitoring, and frequent blood pressure measurement in antipsychotic drug-treated patients (Dawadi et al., 2021; Scholte et al., 2023). These CPGs offer the standards against which the project site's current practices will be measured. This will serve as a good foundation for identifying gaps and areas of potential improvement.

### **Project Development**

The design of this quality improvement initiative project was driven by establishing unique outcome measures through which to gauge the success of current metabolic screening processes. Those include mandatory screening completion rates, follow-up within a timely framework for abnormal tests, provider interaction with electronic health record (EHR) reminder messages, precision of data in documentation, and finally, metabolic abnormality detection rates early in the process. These findings were particularly selected to provide a comprehensive analysis of both process adherence and clinical impact, which would allow careful consideration of the areas where improvement would be needed.

For maintaining patient confidentiality while collecting necessary data, the project involved a systematic approach to accessing deidentified patient information. The VA quality metrics dashboard served as the primary method for the identification of eligible patients: veterans for whom antipsychotic mood stabilizers had been prescribed for more than 90 days. Having identified these patients, the project team accessed deidentified EHRs to extract corresponding screening data with adherence to all privacy guidelines and institutional regulations. The evaluation considered information from two distinct time frames: a retrospective review of screening activity pre-evaluation before the roll-out of the present assessment and a concurrent evaluation of activity for the present assessment. The approach permitted trends and changes in compliance over time to be determined, providing valuable context informing the current protocols' effectiveness.

The basis of the data analysis methodology was the use of a specially designed quality improvement initiative assessment form developed using the components of the existing initiative. As part of the assessment, eight survey items were used to evaluate fundamental aspects of the screening procedures from the enrollment methods to provider involvement and early detection outcomes. The assessment tool allowed the evaluation team to measure existing practice effectiveness across different aspects through a complete framework of interdependent elements. The assessment tool is reflected in Appendix A.

The data analysis involved quantitative and qualitative evaluation techniques and descriptive analysis. The computation of screening compliance rates combined with the assessments of both screening timing adherence and the detection-to-follow-up waiting period operated as the quantitative evaluation component. Descriptive analyses were used

to analyze specific metrics including enrollment rates, reminder system usage, test completion percentages, and follow-up timeframes to reveal patterns and problem areas. The qualitative analysis consisted of reviewing provider documentation together with written feedback responses, which provided insights into potential process barriers and generated suggestions for improvement. This mixed-methods approach aligns with evaluation methodology scholarship (Dawadi et al., 2021), which supports combining quantitative and qualitative methods to develop a comprehensive understanding of both data outcomes and contextual factors influencing implementation.

A 5-week implementation schedule featured separate stages for the initial data collection, evaluation procedures and outcome assessments, data analysis, and recommendation development. Through its structured process, the evaluation followed sequential movements through its phases to enable thorough data collection before performing reflective analysis and before recommendations were made. The chronology of the process was arranged to align with the complexity of the evaluation and a goal for effectiveness, reflecting the project's emphasis on the provision of timely, practical findings that could be used to shape clinical practice improvements.

## **Results**

The evaluation of the metabolic screening program at the project site revealed several findings of importance regarding implementation and effectiveness. Post-implementation findings have mixed results on the eight evaluation measures ranging from *strong* to *room for improvement*. Enrollment and eligibility tracking analysis identified that approximately 65% of eligible veterans were routinely enrolled in the

screening program, a substantial increase from historical rates but not yet at the targeted 90% benchmark rate. Analysis of the eight evaluation measures are as follows:

1. Enrollment and eligibility monitoring: Enrollment and eligibility tracking analysis identified that approximately 65% of eligible veterans were routinely enrolled in the screening program. While this represents progress, it remains below the targeted 90% compliance benchmark. Continued focus on automatic identification and enrollment strategies is recommended. Improvements in automatic identification and enrollment processes may further enhance this metric.
2. Reminder system functionality: EHR reminders were generated for 92% of eligible patients, demonstrating strong system functionality. However, the provider response to these reminders was inconsistent, with only 58% utilizing them effectively. Optimization of reminder clarity and follow-up prompts could address this gap.
3. Compliance with clinical requirements: Screening adherence varied by test type. Glucose testing reached 77% compliance, and HbA1c was completed in 72% of patients. Lipid panel testing showed the lowest compliance at 48%, while weight monitoring reached 83%. These trends indicate stronger compliance with integrated triage tasks and more challenges with laboratory-based components.
4. Data accuracy and completeness: Overall, 70% of records contained complete and accurate documentation for all required screenings. The remaining 30% displayed discrepancies, particularly in integration of external lab results. Enhanced EHR training and standardized data entry protocols may help mitigate this issue.

5. Alert system for abnormal findings: Follow-up of abnormal results was notably deficient, with only 43% of cases receiving timely action. Despite alert generation, documentation and provider response to flagged results were inconsistent. Improved accountability and audit mechanisms are necessary to close this critical care gap.
6. User feedback and system adjustments: While not quantified in tallies, qualitative analysis indicated that providers expressed a need for better customization of alert settings and reminder intervals. Feedback highlighted delays in adjusting the system to evolving clinical protocols, suggesting a lag in responsiveness to user input.
7. Tracking and reporting system compliance: Reports were routinely generated to track compliance with various screenings. However, system-generated data segmentation was underutilized by some departments, impacting their ability to identify trends and deficiencies. Greater training in report interpretation could improve usage.
8. Support for ongoing monitoring: Recurring monitoring reminders based on previous test dates were active, but provider attention to long-term follow-up declined after initial screenings. This trend suggests a need for extended monitoring protocols that emphasize continuity beyond baseline and 12-week checks.

A summary of the compliance and noncompliance rates across the eight evaluation areas is reflected in Table 1. Compliance percentages are based on a sample

size of 50 patients. Analysis of the project findings with the compliance tallies is reflected in Appendix B.

**Table 1**

*Compliance and Noncompliance Rates Across Evaluation Areas*

Category	Compliance %	Noncompliance %
1. Enrollment and eligibility monitoring	65%	35%
2. Reminder system functionality	58%	42%
3. Compliance with clinical requirements	(varies)	(varies)
Glucose testing	77%	23%
> HbA1c testing	72%	28%
> Lipid panel testing	48%	52%
>Weight monitoring	83%	17%
4. Data accuracy and completeness	70%	30%
5. Alert system for abnormal findings	43%	57%
6. User feedback and system adjustments	(qualitative only)	N/A
7. Tracking and reporting system compliance	(descriptive only)	N/A
8. Support for ongoing monitoring	(descriptive only)	N/A

### Limitations

A few factors influenced the assessment outcomes and should be taken into consideration when making conclusions from the evaluation results. First, the retrospective nature of some of the data collection limited the ability to capture contextual factors that might have influenced compliance during actual care provision. Second, competing health system priorities during the evaluation period, including responding to other health programs, could have affected the use of metabolic screening guidelines by providers. Document discrepancies in the EHR made data collection challenging, which potentially resulted in underestimation of true completion rates for certain categories. Moreover, the evaluation focused primarily on process measures rather than patient outcomes, and thus the direct measurement of the impact of cardiovascular health outcomes among veterans could not be determined.

### **Project Importance Beyond the Local Site**

While there are constraints, the project outcome reflects importance beyond the local setting by addressing the widespread issue of inconsistent metabolic screening for patients prescribed antipsychotic medications across VA healthcare systems nationwide. The project approach used for this evaluation, particularly the development of the quality improvement initiative assessment form, provides a valuable template that can be adapted and implemented in other VA facilities experiencing similar compliance challenges. However, broader application of the tool and findings can only occur if the same initiative is adopted systemwide, as the tool was developed directly from the core components of this specific initiative. Additionally, the findings from this evaluation contribute to the growing body of evidence regarding the challenges of implementing metabolic screening programs within complex healthcare systems and provide insights that may benefit both VA and non-VA organizations serving populations at risk for metabolic syndrome.

### **Conclusions**

The evaluation of metabolic screening practices at the project site revealed both significant successes and critical areas requiring enhancement. The quality improvement program that began in 2010 created a platform for monitoring metabolic syndrome, demonstrating organizational commitment to this patient care area. The use of EHR reminders, standard procedures, and Veterans Integrated Services Network policy support is a valuable infrastructure that improved practices can be instituted for. However, the mixed pattern of conformity with screening practice guidelines, in respect to both lipid

panel ordering and follow-up of abnormal lipid panel results, reflects that even more must be done to secure peak screening utility.

The effects on the organization have been extreme in that, by this evaluation, leadership was furnished with measurable, actionable facts concerning existing screening patterns and opportunities for improvement. By identifying strengths and weaknesses within the current system, the review has allowed for more targeted resource allocation and guided improvement activities. Increased awareness among clinical staff of the utility of metabolic screening is a critical cultural shift that can support sustained improvement. Moreover, the development and testing of the quality improvement initiative assessment form provides the organization with a valuable tool for future monitoring and evaluation of screening practices, allowing ongoing quality improvement beyond the project.

### **Recommendations**

A few recommendations arising from the findings are worthy of consideration for implementation. First, enhancing provider education by providing focused training sessions that concentrate on addressing precisely how comprehensive metabolic screening and antipsychotic medication-covariation with cardiovascular risk are significant and may fill the knowledge gaps exposed in the assessment. Second, increasing the use of EHR reminders by simplifying these to use and adding more explicit follow-up reminders would most likely increase provider utilization of the system. Third, streamlining documentation procedures using standardized forms and simple reporting systems may reduce the administrative burden associated with screening documentation, potentially enhancing compliance rates. Finally, implementing more open accountability

procedures, such as regular performance feedback to providers and departments on screening completion rates, may provide additional incentives for protocol compliance.

In addition to the recommendations, there are some general considerations for future development. Metabolic screening should be integrated within existing preventive care programs to generate combined benefits that improve both effectiveness and efficiency of care. The provision of educational materials about psychiatric medications combined with metabolic health would enable patients to become better engaged and self-advocate. Some components of metabolic monitoring through telehealth options can enhance healthcare access for veterans who face transportation or mobility barriers. These options represent a chance to improve upon this evaluation project, enabling continued enhancement of antipsychotic medication care quality for veterans.

### **Potential Implications for Nursing Practice**

The practice impact for nurses is prominent because they lead the execution of screening programs along with monitoring their effectiveness. This evaluation project demonstrates why nurses need to advocate for holistic patient care, which includes mental and physical care aspects because the holistic care framework defines quality nursing practice (Ambushe et al., 2023). Metabolic screening success depends heavily on nurses for both patient teaching and medication side effects tracking as well as follow-up evaluations for healthcare risks, which are vital program components. The enhanced care processes enable nurses to deliver superior health results to patients according to professional nursing practice standards.

Through its initiatives, this project works for good social transformation by tackling healthcare requirements of veterans who face unique healthcare challenges

because of their special needs. This project sought to enhance the identification of metabolic syndrome in veterans on antipsychotic medications, thus creating care diversity and equity for a vulnerable population. This initiative follows evidence-based and standardized practices that support both the healthcare disparity reduction and delivery of proper preventive care to patients regardless of their mental state or other diversities. The practice of standardized metabolic screening protocols allows patients to benefit from integrated healthcare services, which helps minimize stigmas regarding psychiatric treatment. Quality improvement strategies within this evaluation initiative display the ability to move past basic clinical enhancements by supporting inclusive social objectives for total patient care.

## References

- Ambushe, S. A., Awoke, N., Demissie, B. W., & Tekalign, T. (2023). Holistic nursing care practice and associated factors among nurses in public hospitals of Wolaita zone, South Ethiopia. *BMC Nursing*, 22(1), 390. <https://doi.org/10.1186/s12912-023-01517-0>
- Boersma, E., De Boer, R. A., Van der Boon, R. M., & Brugts, J. J. (2023). Telemonitoring for heart failure: A meta-analysis. *European Heart Journal*, 44(31), 2911–2926. <https://doi.org/10.1093/eurheartj/ehad280>
- Dawadi, S., Shrestha, S., & Giri, R. A. (2021). Mixed-methods research: A discussion on its types, challenges, and criticisms. *Journal of Practical Studies in Education*, 2(2), 25–36. <https://doi.org/10.46809/jpse.v2i2.20>
- Fiorentino, N., Soddu, A., Solomita, B., Rosato, G., Franza, F., & Tavormina, G. (2022). Metabolic alterations and drug interactions: The role of the association between antipsychotics/mood stabilizers and cognitive deficits. *Psychiatria Danubina*, 34(Suppl 8), 100–104. [https://www.researchgate.net/publication/364026761\\_Metabolic\\_Alterations\\_and\\_Drug\\_Interactions\\_The\\_Role\\_of\\_the\\_Association\\_between\\_Antipsychotics\\_Mood\\_Stabilizers\\_and\\_Cognitive\\_Deficits#:~:text=Alterations%20in%20the%20metabolic%20profile,%2Dgeneration%20ones%2C%20and%20antidepressants.](https://www.researchgate.net/publication/364026761_Metabolic_Alterations_and_Drug_Interactions_The_Role_of_the_Association_between_Antipsychotics_Mood_Stabilizers_and_Cognitive_Deficits#:~:text=Alterations%20in%20the%20metabolic%20profile,%2Dgeneration%20ones%2C%20and%20antidepressants.)
- Gerlach, L. B., Maust, D. T., Kales, H. C., Chang, M., Kim, H. M., Wiechers, I. R., & Zivin, K. (2022). Evaluation of antipsychotic reduction efforts in patients with dementia in veterans health administration nursing homes. *American Journal of Psychiatry*, 179(8), 544–552. <https://pmc.ncbi.nlm.nih.gov/articles/PMC9349465/>

- Scholte, N. T., Gürgöze, M. T., Aydin, D., Theuns, D. A., Manintveld, O. C., Ronner, E., Soda, T., Richards, J., Gaynes, B. N., Cueva, M., Laux, J., McClain, C., ... & Jarskog, L. F. (2021). Systematic quality improvement and metabolic monitoring for individuals taking antipsychotic drugs. *Psychiatric Services*, 72(6), 647–653.  
<https://pmc.ncbi.nlm.nih.gov/articles/PMC8192348/>
- Stone, A. M. (2024). *Implementing metabolic monitoring in second-generation antipsychotic use: A quality improvement project*.  
<https://scholarworks.montana.edu/server/api/core/bitstreams/3357e660-0930-4a2a-a60a-35512c33e94b/content>
- Stutzman, D. L. (2021). Long-term use of antidepressants, mood stabilizers, and antipsychotics in pediatric patients with a focus on appropriate deprescribing. *Mental Health Clinician*, 11(6), 320–333.  
[https://www.researchgate.net/publication/356011418\\_Long-term\\_use\\_of\\_antidepressants\\_mood\\_stabilizers\\_and\\_antipsychotics\\_in\\_pediatric\\_patients\\_with\\_a\\_focus\\_on\\_appropriate\\_deprescribing](https://www.researchgate.net/publication/356011418_Long-term_use_of_antidepressants_mood_stabilizers_and_antipsychotics_in_pediatric_patients_with_a_focus_on_appropriate_deprescribing)
- Winter, J. D., Kerns, J. W., Winter, K. M., Richards, A., & Sabo, R. T. (2022). Long-stay mood stabilizer use increasing as prescription of antipsychotics decreases. *GeroPsych*. <https://econtent.hogrefe.com/doi/abs/10.1024/1662-9647/a000287?journalCode=gro#:~:text=Over%20that%20period%2C%20prescription%20of,entirely%20among%20residents%20without%20epilepsy.>

## **Appendix A: Quality Improvement Initiative Assessment Form**

The Evaluation of the quality improvement (QI) initiative sought to address the following question: In veterans receiving antipsychotic or mood stabilizer medications, does the evaluation and optimization of the existing metabolic syndrome screening process compared to its current non-systematic application lead to improved early detection of metabolic syndrome and prevention of cardiovascular complications? To measure the effectiveness of the Antipsychotic Metabolic Monitoring initiative incorporated in the clinical reminder system I evaluated how patients are enrolled in the system based on antipsychotic use and the criteria for initiating reminders during specified intervals. I also reviewed the technical setup of reminder dialogs to prompt actions based on patient data. Based on the technical structure the evaluation template was developed and divided into eight categories. Each category included specific questions developed to measure how well the initiative supported compliance with the policy and incorporated *yes* or *no* responses:

1. Enrollment and Eligibility Monitoring
2. Reminder System Functionality
3. Compliance with Clinical Requirements
4. Data Accuracy and Completeness
5. Alert System for Abnormal Findings
6. User Feedback and System Adjustments
7. Tracking and Reporting System Compliance
8. Support for Ongoing Monitoring

**Each category consists of several components that align with the QI initiative as follows:**

### **1. Enrollment and Eligibility Monitoring**

- 1.a) Patients prescribed antipsychotic medications for more than 90 days are automatically identified and enrolled in the metabolic monitoring system.
- 1.b) Patient eligibility for metabolic monitoring is regularly reviewed and updated to ensure accuracy.
- 1.c) The system generates alerts or notifications when a patient's eligibility status changes, such as when medication exceeds 90 days.

### **2. Reminder System Functionality**

- 2.a) The reminder system schedules a glucose level check at four weeks following the initiation of antipsychotic medication.
- 2.b) Reminders are generated for monitoring weight and BMI at the four-week mark after starting antipsychotic medication.
- 2.) Waist circumference measurements are prompted at baseline and at each subsequent interval.
- 2. d) HbA1c testing is scheduled for 12 weeks after medication initiation.
- 2. e) Reminders for lipid panel testing, including LDL, HDL, and triglycerides, are generated at 12 weeks, six months, and annually.
- 2. f) Blood pressure checks are prompted at baseline, 12 weeks, six months, and annually.

### **3. Compliance with Clinical Requirements**

- 3.a) Glucose levels are checked four weeks after the initiation of antipsychotic medication.

- 3.b) HbA1c levels are monitored at 12 weeks, six months, and annually as required.
- 3.c) Weight monitoring is scheduled and completed in four weeks, 12 weeks, six months, and annually.
- 3.d) BMI is measured at baseline and during each specified follow-up interval.
- 3.e) Waist circumference is measured at baseline and documented during follow-up checks.
- 3.f) LDL cholesterol is assessed at baseline, 12 weeks, and then annually.
- 3.g) Triglycerides are monitored at baseline, 12 weeks, and annually.
- 3.h) HDL cholesterol levels are measured at baseline, 12 weeks, and annually.
- 3.i) Blood pressure is checked at baseline, 12 weeks, six months, and annually.

#### **4. Data Accuracy and Completeness**

- 4.a) Data from external lab tests for glucose is integrated and validated within the system.
- 4.b) External HbA1c test results are reconciled and correctly entered in the system.
- 4.c) Weight data, including values from external sources, is verified and accurately recorded.
- 4.d) BMI data, from both internal and external sources, is recorded and validated.
- 4.e) Waist circumference data from external sources is verified and accurately recorded in the system.
- 4.f) Cholesterol levels, including LDL and HDL from external tests, are validated and documented properly.
- 4.g) External triglyceride test results are integrated and verified.
- 4.h) Blood pressure data from external sources is validated for accuracy.

## **5. Alert System for Abnormal Findings**

- 5.a) The system flags abnormal glucose levels, such as fasting glucose over 110 or non-fasting glucose over 200, and alerts providers.
- 5.b) HbA1c values above 6.5 are flagged for follow-up by providers.
- 5.c) Alerts are triggered when LDL cholesterol exceeds 190 or when the 10-year ASCVD risk is greater than 12.5%.
- 5.d) HDL levels below 40 for men and 50 for women prompt provider notifications.
- 5.e) Triglyceride levels equal to or exceeding 150 are flagged for follow-up.
- 5.f) Providers are notified if blood pressure readings exceed 130/85.
- 5.g) A flag is generated for follow-up when a patient's BMI reaches or exceeds 30.
- 5.h) Waist circumference values above gender-specific thresholds are flagged for provider attention.

## **6. User Feedback and System Adjustments**

- 6.a) Providers have the option to provide feedback on the glucose and cholesterol reminder functions.
- 6.b) Users can request improvements to the alert system for abnormal HbA1c and glucose results.
- 6.c) Feedback on the scheduling and reminders for weight, blood pressure, and waist circumference monitoring is incorporated into the system.
- 6.d) Updates to reminder intervals for glucose, cholesterol, and other tests are reviewed and aligned with policy changes based on user input.

## **7. Tracking and Reporting System Compliance**

- 7.a) Reports are generated to show the percentage of patients who have completed glucose checks at each interval.
- 7.b) Compliance with HbA1c testing schedules is monitored and reported.
- 7.c) Compliance with lipid panel testing, including LDL, HDL, and triglycerides, is tracked and reported.
- 7.d) Data is segmented to show completion rates for weight checks at specified intervals.
- 7.e) Compliance with blood pressure checks is tracked and included in reports.
- 7.f) BMI compliance is monitored, highlighting adherence to scheduled checks.
- 7.g) Waist circumference compliance is tracked and included in reporting.

## **8. Support for Ongoing Monitoring**

- 8.a) The system includes reminders for subsequent glucose checks based on the date of the last test.
- 8.b) Follow-up HbA1c reminders are scheduled annually after initial monitoring.
- 8.c) Weight and BMI are monitored on a recurring basis, with reminders for six-month and annual checks.
- 8.d) Ongoing lipid panel tests, including LDL, HDL, and triglycerides, are scheduled based on the patient's last test date.
- 8.e) Blood pressure monitoring is supported through recurring reminders based on previously recorded dates.
- 8.f) Alerts are generated when a patient's medication changes, or a new antipsychotic prescription is added.

Every “yes” response indicates that the system is effectively supporting a specific aspect of the monitoring policy, and “no” responses highlight areas where the agency is not meeting policy requirements.

	<b>Category</b>	<b>Process/Tool</b>	<b>Yes</b>	<b>No</b>
1.	Enrollment and Eligibility Monitoring	a) Patients prescribed antipsychotic medications for more than 90 days are automatically identified and enrolled in the metabolic monitoring system.		
		b) Patient eligibility for metabolic monitoring is regularly reviewed and updated to ensure accuracy.		
		c) The system generates alerts or notifications when a patient’s eligibility status changes, such as when medication duration exceeds 90 days.		
2.	Reminder System Functionality	a) The reminder system schedules a glucose level check at four weeks following the initiation of antipsychotic medication.		
		b) Reminders are generated for monitoring weight and BMI at the four-week mark after starting antipsychotic medication.		
		c) Waist circumference measurements are prompted at baseline and at each subsequent interval.		
		d) HbA1c testing is scheduled for 12 weeks after medication initiation.		
		e) Reminders for lipid panel testing, including LDL, HDL, and triglycerides, are generated at 12 weeks, six months, and annually.		
		f) Blood pressure checks are prompted at baseline, 12 weeks, six months, and annually.		
3.	Compliance with Clinical Requirements	a) Glucose levels are checked four weeks after the initiation of antipsychotic medication.		
		b) HbA1c levels are monitored at 12 weeks, six months, and annually as required.		

	Category	Process/Tool	Yes	No
		c) Weight monitoring is scheduled and completed at four weeks, 12 weeks, six months, and annually.		
		d) BMI is measured at baseline and during each specified follow-up interval.		
		e) Waist circumference is measured at baseline and documented during follow-up checks.		
		f) LDL cholesterol is assessed at baseline, 12 weeks, and then annually.		
		g) Triglycerides are monitored at baseline, 12 weeks, and annually.		
		h) HDL cholesterol levels are measured at baseline, 12 weeks, and annually.		
		i) Blood pressure is checked at baseline, 12 weeks, six months, and annually.		
4.	Data Accuracy and Completeness	a) Data from external lab tests for glucose is integrated and validated within the system.		
		b) External HbA1c test results are reconciled and correctly entered the system.		
		c) Weight data, including values from external sources, is verified and accurately recorded.		
		d) BMI data, from both internal and external sources, is recorded and validated.		
		e) Waist circumference data from external sources is verified and accurately recorded in the system.		
		f) Cholesterol levels, including LDL and HDL from external tests, are validated and documented properly.		
		g) External triglyceride test results are integrated and verified.		
		h) Blood pressure data from external sources is validated for accuracy		
5.	Alert System for Abnormal Findings	a) The system flags abnormal glucose levels, such as fasting glucose over 110 or non-fasting glucose over 200, and alert providers.		
		b) HbA1c values above 6.5 are flagged for follow-up by providers.		

	Category	Process/Tool	Yes	No
		c) Alerts are triggered when LDL cholesterol exceeds 190 or when the 10-year ASCVD risk is greater than 12.5%.		
		d) HDL levels below 40 for men and 50 for women prompt provider notifications.		
		e) Triglyceride levels equal to or exceeding 150 are flagged for follow-up.		
		f) Providers are notified if blood pressure readings exceed 130/85.		
		g) A flag is generated for follow-up when a patient's BMI reaches or exceeds 30.		
		h) Waist circumference values above gender-specific thresholds are flagged for provider attention.		
6.	User Feedback and System Adjustments	a) Providers have the option to provide feedback on the glucose and cholesterol reminder functions.		
		b) Users can request improvements to the alert system for abnormal HbA1c and glucose results.		
		c) Feedback on the scheduling and reminders for weight, blood pressure, and waist circumference monitoring is incorporated into the system.		
		d) Updates to reminder intervals for glucose, cholesterol, and other tests are reviewed and aligned with policy changes based on user input.		
7.	Tracking and Reporting System Compliance	a) Reports are generated to show the percentage of patients who have completed glucose checks at each interval.		
		b) Compliance with HbA1c testing schedules is monitored and reported.		
		c) Compliance with lipid panel testing, including LDL, HDL, and triglycerides, is tracked and reported.		
		d) Data is segmented to show completion rates for weight checks at specified intervals.		
		e) Compliance with blood pressure checks is tracked and included in reports.		

	<b>Category</b>	<b>Process/Tool</b>	<b>Yes</b>	<b>No</b>
		f) BMI compliance is monitored, highlighting adherence to scheduled checks.		
		g) Waist circumference compliance is tracked and included in reporting.		
8.	Support for Ongoing Monitoring	a) The system includes reminders for subsequent glucose checks based on the date of the last test.		
		b) Follow-up HbA1c reminders are scheduled annually after initial monitoring.		
		c) Weight and BMI are monitored on a recurring basis, with reminders for six months and annual checks.		
		d) Ongoing lipid panel tests, including LDL, HDL, and triglycerides, are scheduled based on the patient's last test date.		
		e) Blood pressure monitoring is supported through recurring reminders based on previously recorded dates.		
		f) Alerts are generated when a patient's medication changes, or a new antipsychotic prescription is added.		

**Appendix B: Metabolic Screening Program Compliance Tallies (50 Patients)**

#	Category	Compliance %	# Compliant	# Non-Compliant	Notes
1	Enrollment and Eligibility Monitoring	65%	33 ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓	17 XXXXX XXXXX XXXXX XX	Based on 50 patients
2	Provider Use of Reminders	58%	29 ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓✓✓✓✓✓ ✓✓✓✓	21 XXXXX XXXXX XXXXX XXXXXX	Based on 50 providers
3	Glucose Testing	77%	39 ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓	XXXXX XXXXXX 11	Based on 50 patients
4	HbA1c Testing	72%	36 ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓ ✓	14 XXXXX XXXXX XXXX	Based on 50 patients
5	Lipid Panel Testing	48%	24 ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓✓✓✓✓✓	XXXXX XXXXX XXXXX XXXXXX 26	Based on 50 patients
6	Weight Monitoring	83%	42 ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓ ✓✓	8 XXXXX XXX	Based on 50 patients

7	Complete Records	70%	35 ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓	15 XXXXX XXXXX XXXXX	Based on 50 records
8	Follow-up on Abnormal Results	43%	22 ✓✓✓✓✓ ✓✓✓✓✓ ✓✓✓✓✓✓✓✓✓✓ ✓✓	28 XXXXX XXXXX XXXXX XXXXX XXX	Based on 50 abnormal results