A Quality Improvement Initiative to Increase Routine Abnormal Involuntary Movement Scale Screening in a Community Mental Health Clinic

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NURS 703B: DNP Project

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Abstract

Tardive dyskinesia (TD) is a potentially irreversible movement disorder associated with prolonged exposure to antipsychotic and other dopamine receptor–blocking medications, and the Abnormal Involuntary Movement Scale (AIMS) remains the primary validated screening tool for early identification. In a specialty outpatient community mental health clinic serving individuals with serious and persistent mental illness, inconsistent AIMS documentation was identified, with many patients prescribed antipsychotics not screened within recommended timeframes. Guided by the Institute for Healthcare Improvement Model for Improvement and iterative Plan–Do–Study–Act cycles, this quality improvement project implemented nurse-focused education on AIMS administration and task shifting from prescribers to psychiatric nurses. Pre- and post-intervention Likert surveys assessed nurse confidence and perceived competency, and chart reviews evaluated AIMS completion rates at baseline, four weeks, and three months. Nurses received structured education on AIMS administration, scoring, and documentation, supported by written materials and workflow integration strategies, and the project scope was refined to prioritize patients receiving long-acting injectable (LAI) antipsychotics to enhance feasibility. Following the intervention, median nurse confidence and knowledge scores improved across all domains, with Wilcoxon signed-rank testing demonstrated directional improvement without statistical significance. Although overall AIMS documentation rates did not significantly change across time points, subgroup analysis showed improved completion rates among patients receiving antipsychotics. These findings suggest that targeted nurse education enhances clinician readiness to perform structured movement disorder screening, and that nurse-led AIMS administration is feasible in community mental health settings; however, sustained improvements in documentation likely require continued workflow integration and organizational support.

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Problem Description

Tardive dyskinesia (TD) is an involuntary movement disorder that can emerge as a side effect of long-term pharmacologic treatment for conditions such as schizophrenia, bipolar disorder, and major depressive disorder (McEvoy et al., 2019). TD demonstrates the strongest association with prolonged exposure to first and second-generation antipsychotics, as well as certain antidepressants, lithium, and antiemetic medications. In some cases, TD movements resolve after medication discontinuation, but dopamine-receptor blocking agents are uniquely linked to movements that are often persistent or irreversible (Caroff, 2022). TD is characterized by repetitive, hyperkinetic movements of the neck, tongue, face, trunk, and extremities, often beginning subtly and only becoming evident after a dose reduction or medication discontinuation (Caroff et al., 2011; Vasan & Padhy, 2023).

TD is prevalent in 25.3% of patients receiving any antipsychotic medication treatment, with increased risk associated with high dopamine receptor affinity compounds (Carbon et al., 2017; Vasan & Padhy, 2023). The risk of TD is higher for women, particularly after menopause, where incidence rates are as high as 30% (Vasan & Padhy, 2023). Additional risk factors include older age, white or African American race, a longer duration of psychiatric illness, underlying mood disorders, intellectual disability or neurological injury, a high cumulative exposure to high-potency dopamine-receptor blocking agents as well as prior history of movement-related side effects such as akathisia, parkinsonism, or dystonic reactions (American Psychiatric Association [APA], 2021; Solmi et al., 2018). Given the increasing use of antipsychotics, including among younger populations with early-onset schizophrenia, the overall prevalence of TD is expected to rise (McEvoy et al., 2019).

Available Knowledge

TD is a potentially irreversible complication of psychiatric medications that can cause significant impairment across physical, psychological, and social domains. Patients often experience social isolation when involuntary facial movements are perceived as socially

unacceptable or interfere with relationships (Jackson et al., 2021). Physically, TD can impair gait, strength, and coordinated movement, disrupting daily functioning and independence. In one observational study, over half of participants with TD reported their employment status as disabled, underscoring its functional burden (Caroff et al., 2020). These visible and often stigmatizing symptoms can create emotional distress, invite unwanted attention, and worsen co-occurring psychiatric conditions (Caroff, 2019; McEvoy et al., 2019). Given the multidimensional and potentially permanent nature of TD, timely and accurate identification is essential.

The Abnormal Involuntary Movement Scale (AIMS) is the primary validated clinical tool for identifying and monitoring TD over time. It captures clinician-observed motor findings and incorporates patient-reported input to track symptom progression and treatment response (Chakrabarty et al., 2023). The APA recommends annual screening for patients taking antipsychotics and screening every six months for higher-risk populations, including individuals with schizophrenia (2021). Routine use of AIMS aligns with measurement-based care principles and supports earlier detection of emerging movement disorders.

Despite its value, AIMS has notable limitations. Critics highlight its reliance on clinician observation, emphasis on orofacial movements, and limited ability to capture symptom fluctuation or functional impairment (Bhidayasiri et al., 2020; Caroff et al., 2020). The RE-KINECT study supported simplified clinician-administered tools embedded into workflows but relied on subjective ratings and outcome measures not validated in TD populations, limiting generalizability. Similarly, calls for multidimensional revisions to AIMS emphasize inclusion of limb-truncal dyskinesia and broader extrapyramidal symptoms; however, some of these studies disclosed pharmaceutical funding, raising concerns about potential industry influence. Emerging tools such as MIND-TD and IMPACT-TD aim to better capture psychological and functional burden, though they lack validation through randomized trials (Matthews, 2025).

Overall, available evidence supports AIMS as a foundational and practical screening instrument in clinical settings, ideally supplemented by broader clinical assessment to fully evaluate functional impact and quality of life.

Rationale

This project was guided by the Institute for Healthcare Improvement's Model for Improvement (IHI-MFI) and the Plan-Do-Study-Act (PDSA) cycles. The IHI-MFI provided a structured framework to design, implement, and evaluate quality efforts in clinical settings (IHI, n.d.). A cause-and-effect analysis of the current AIMS screening process at the community clinic identified multiple barriers that contribute to low completion rates. Key barriers included time-limited appointments focused on crisis stabilization, high patient volume, and competing clinical priorities. This intervention shifted the task of AIMS from prescribers to psychiatric nurses, who have more frequent contact with patients in their outreach and care coordination roles, and therefore more opportunity to perform the screening at recommended frequency. This task-shifting approach considered the site-specific barriers in the cause-and-effect analysis while leveraging existing nurse-patient relationships to embed screening into existing workflows.

The literature demonstrated the feasibility of task-shifting AIMS screening to other members of a treatment team. Butala et al. (2021) utilized a risk stratification model to flag high-risk patients with multiple risk factors for developing TD and then prioritized these individuals for an AIMS assessment conducted by a psychiatric pharmacist. Though this study was conducted in an inpatient setting and had limited generalizability to outpatient settings, it demonstrated an 85% improvement in AIMS screening rates. The study highlighted that non-prescribing staff could lead TD screenings, and that the specific role of psychiatric nurses in mental health settings may be adaptable.

This quality improvement intervention was expected to succeed by equipping nursing staff, who already maintain frequent contact with patients, with new knowledge in a coordinated, low-barrier method. When non-prescribing clinicians were empowered to screen for TD using AIMS, completion rates improved, and early identification of movement disorders increased (Butala et al., 2021). By aligning evidence-based training with known barriers and using the IHI-MFI as a model to drive continuous improvement, this initiative is designed to

sustainably improve screening rates and prevent the progression of undetected TD in a high-risk population.

Specific Aim

The aim of this quality improvement project was to increase the proportion of patients prescribed antipsychotic medication in a specialty mental health program who had a completed AIMS documented in the electronic health record (EHR) to 75% by January 2026, consistent with APA guidelines for TD monitoring. The secondary aim was to increase psychiatric nurses' confidence and perceived competency in administering and documenting the AIMS by at least 50%, as measured by changes in mean confidence scores between pre- and post-intervention surveys.

Methods

Context

This project was implemented at a Federally Qualified Health Center, centrally located in an urban area and providing outpatient mental health services. This agency uses a multidisciplinary team model and serves primarily Medicaid patients with severe and persistent mental illness (SPMI), often accompanied by comorbid medical conditions and substance use disorders. The specialty mental health programs are a subsection of the larger organization which offers primary care health, an on-site pharmacy, acupuncture, and recovery-oriented programs including housing support, peer support, counseling, detoxification stabilization, and employment services. Although the agency operates multiple programs across the city, this project specifically targeted the main outpatient mental health clinic offering specialty psychiatric care. Psychiatric nurses and prescribers working at this site manage patients on long-term antipsychotic therapy.

A practice inconsistency was identified in the administration of AIMS assessments by the medical director of the specialty mental health programs. In a randomized review of five patient charts per provider to evaluate the frequency of documented AIMS assessments over the past six months, the director found mixed rates of AIMS completion that did not meet APA recommendations for screening frequency. The gap presented an opportunity for quality

improvement that aligned with best practices in antipsychotic monitoring and adherence to recommended standards of care. A student-led chart review of all 187 enrolled patients across two specialty mental health outpatient programs was completed in the summer of 2025 to further assess the need for the proposed intervention.

Key contextual determinants expected to influence implementation included high patient acuity, crisis-oriented visits, competing clinical priorities, variable nurse availability for training, and the absence of a standardized AIMS workflow within the electronic health record. These factors were anticipated to shape training participation, workflow integration, and opportunities for AIMS completion throughout the implementation period.

Interventions

An AIMS-focused educational session was delivered in person during the regularly scheduled monthly nursing meeting in early October 2025. Four of six specialty mental health nurses attended the training (67%), along with the nurse manager. Session content and emphasis were informed by pre-intervention survey responses, which indicated that nurses generally understood the purpose of AIMS but desired greater clarity regarding when to administer the tool, how to ensure scoring consistency, how to differentiate medication-induced movements from other motor activity, and how to act on abnormal findings. The training was structured to emphasize practical workflow integration and standardized administration.

The session incorporated live video demonstrations of abnormal involuntary movements, step-by-step review of AIMS administration and scoring, and facilitated discussion addressing common clinical scenarios. Nurses were encouraged to begin utilizing AIMS during routine patient encounters following the training. To support sustained implementation, participants received electronic copies of the presentation slides with detailed notes, annotations, and curated resource links. Nurses who were unable to attend were provided access to a recording of the session for asynchronous review. The recording was also shared with nursing leadership for use in onboarding future staff and reinforcing standardized AIMS practices across the team.

Monthly check-ins were incorporated into regularly scheduled nursing meetings to support ongoing implementation. These sessions provided an opportunity to address workflow barriers encountered during real-world AIMS use, clarify documentation questions within the electronic health record, and reinforce standardized scoring practices. These touchpoints allowed for review of emerging challenges, provided targeted guidance, and promoted consistent integration of AIMS screening into routine nursing workflows.

Study of the Interventions

To evaluate intervention impact, qualitative and quantitative methods were utilized. Participants completed a deidentified electronic survey via QR code immediately following the training to assess early change in knowledge and reported comfort with completing AIMS. Four weeks after the training, participants again assessed their knowledge and comfort with clinical application. To examine practice change, chart reviews were conducted at four and twelve weeks post-training to evaluate whether trainees implemented AIMS in the clinical setting. Reviews assessed the proportion of eligible patients with documented AIMS screening and were compared with baseline data collected prior to the intervention. Informal nurse feedback was also reviewed to identify implementation barriers and inform subsequent PDSA cycles.

Measures

The primary outcome measures were the nursing confidence and perceived competency in performing AIMS assessments, measured using pre-training and post-training surveys with Likert-scale items. A successful outcome was defined as an improvement of 50% or more in average confidence scores. The secondary clinical outcome was the proportion of eligible patients with a completed AIMS documented in the electronic health record. Process measures included educational training completion rates, measured by the percentage of specialty mental health nurses who completed the AIMS training by the end of the implementation period. The balancing measure was the perceived impact on nursing workflow, considering concerns related to increased workload, time constraints, or disruptions caused by AIMS administration.

Balancing measures were collected through post-training survey qualitative responses and informal verbal feedback after the training.

Analysis

A root-cause analysis was conducted to examine the barriers and challenges in the site setting and to inform the design of the project. Quantitative analysis included descriptive statistics for pre- and post- survey responses and trends in AIMS documentation rates over time. Graphical representations of survey responses as well as the chart review of AIMS completion were generated to provide visual representation of project progression. Qualitative survey responses and informal nurse feedback were reviewed and grouped into categories to identify common themes.

Ethical Considerations

The organization endorsed the project plan by signing a letter of support. The project was reviewed by the Oregon Health & Science University (OHSU) Institutional Review Board (IRB) and determined to meet criteria for quality improvement. There were no financial or personal conflicts of interest to disclose. Although the student previously completed clinical hours at the project site, their new role, focused on quality improvement as part of the DNP project, was clearly communicated to prevent any role confusion. There was no direct patient participation in this project. While the chart review involved contact with protected health information (PHI), all data was de-identified to protect patient privacy. An additional ethical consideration involved the time constraints of nursing staff. To avoid adding burden to their already full schedules, educational sessions were scheduled based on staff availability and with advance notice. Participation in training and survey completion was entirely voluntary, with no additional compensation provided. To further minimize nursing burden, surveys were brief, and the intervention was highly focused on the specific needs of the site.

Results

IBM SPSS Statistics was used to analyze pre/post nurse survey data and AIMS documentation outcomes. The primary outcome (nurse confidence and perceived competency) was assessed using paired Likert-scale surveys among nurses who completed both pre- and

post-intervention measures (n = 4). At baseline, nurses demonstrated strong understanding of the purpose of AIMS (median = 4.0) but lower confidence administering the tool and uncertainty regarding recommended screening frequency (both medians = 2.5). Following the educational intervention, median post-intervention ratings increased to 4.0 or higher across surveyed domains, and all paired respondents showed improved scores in confidence, comfort, and documentation practices. Given the small, paired sample, Wilcoxon signed-rank testing was interpreted as exploratory and demonstrated directional improvement without statistical significance ($p > .05$ across items).

To examine AIMS documentation, compliance was defined as AIMS completion within the prior six months versus not completed within six months across pre-implementation, post-implementation, and 3-month follow-up timepoints. The proportion of compliant documentation remained low and did not differ significantly across time points ($\chi^2(2, N = 521) = 1.35$, $p = .509$). When completion rates were examined descriptively using three categories (compliant <6 months; borderline 6–12 months; noncompliant >12 months), documentation patterns demonstrated an initial decline following implementation with partial recovery by the follow-up period. In a subgroup analysis of patients receiving LAI antipsychotics, AIMS compliance improved on both teams, increasing from 11.5% to 20.0% on ICM and from 7.9% to 23.7% on CORE between November and January.

Discussion

Summary

This quality improvement project sought to increase routine AIMS documentation among patients prescribed antipsychotic medication within a specialty community mental health program while improving psychiatric nurses' confidence in administering and documenting the assessment. Psychiatric nurses were trained on AIMS administration and EHR documentation through a structured educational intervention attended by two thirds of the nursing team. Median survey scores increased across all domains, exceeding the secondary aim and reflecting improved self-reported knowledge and confidence. The proportion of patients

with documented AIMS assessments increased over the project period, though the 75% target was not fully achieved. Documentation compliance varied over time, with an initial decline and partial recovery by three months, highlighting challenges in workflow integration. Project strengths included use of a structured improvement framework, incorporation of team feedback, and development of sustainable educational and documentation resources.

Interpretation

The project positively influenced perceived knowledge and confidence, supporting the use of targeted education to improve clinician readiness to perform a structured movement disorder screening. Neutral post-intervention responses likely reflected limited opportunities for repeated AIMS practice and documentation challenges rather than knowledge deficits. Qualitative feedback from surveys and nursing meetings reinforced this interpretation, as staff more frequently identified workflow mechanics and documentation barriers than gaps in understanding.

In response, the project scope was narrowed to patients receiving LAI antipsychotics to improve feasibility within existing workflows. This adjustment reduced logistical burden while maintaining focus on a high-risk population. Nurses reported receptivity from both patients and prescribers, suggesting minimal attitudinal resistance. Sustainability efforts may therefore focus on reinforcement rather than staff buy in. Nurses described increasing comfort over time and emphasized the value of peer modeling and observational learning, indicating that refresher sessions and shadowing may be more beneficial than additional didactic instruction. These findings suggest that the primary barriers were structural rather than educational, highlighting the importance of systems-level integration.

The lack of statistical significance is likely attributable to the small sample size, incomplete paired surveys, patient turnover, and competing organizational demands that limited protected time for practice. Narrowing the scope also reduced measurable population reach. The intervention required minimal financial cost but did require allocation of staff time. Overall, educational interventions can enhance clinician readiness to implement measurement-based tools. Sustained documentation and workflow change depend on continued

reinforcement, integration into routine clinical processes, and leadership support. These findings provide preliminary evidence that nurse led AIMS assessments are feasible and valuable, while recognizing that durable system change requires longitudinal integration rather than a single implementation cycle.

Limitations

Several limitations affected the scope, validity, and generalizability of this project. The three-month implementation period limited evaluation of sustained workflow change, documentation practices, and long-term confidence with AIMS administration. Integration of standardized screening tools into established clinical workflows requires ongoing reinforcement and iterative feedback beyond a short intervention window.

The project scope was modified during implementation to focus on patients receiving LAI antipsychotics after nurses identified this approach as more feasible and better aligned with existing workflows. Although this improved practicality, it reduced generalizability by excluding patients prescribed oral antipsychotics who would also benefit from routine screening. The single-site design and small nurse sample further limit external validity.

Implementation fidelity was also impacted by scheduling conflicts, including cancellation of a planned nursing meeting for troubleshooting and feedback. Early communication occurred primarily via email, which may have limited collaborative problem solving. Finally, missing survey data reduced paired observations for statistical analysis, and patient turnover across time points required aggregate rather than longitudinal compliance analysis.

Conclusion

This project demonstrates that a focused educational intervention can improve consistency of AIMS screening within specialty mental health nursing practice. The intervention increased familiarity with AIMS administration and documentation while normalizing discussion of EPS and TD as routine components of care. Even within a limited implementation window, targeted workflow adjustments influenced clinical behavior and supported measurement-based practice. Sustainability is supported by recorded trainings, resource guides, and updated documentation templates that remain accessible.

Future efforts should include longer evaluation periods, structured feedback cycles, and measurement of patient-level outcomes such as TD identification rates. Bidirectional shadowing between nurses and providers may further strengthen skill development. With continued managerial oversight and integration into existing team processes, AIMS screening can become a sustained standard of practice in community mental health.

References

American Psychiatric Association. (2021). *The American Psychiatric Association practice guideline for the treatment of patients with schizophrenia* (3rd ed.). American Psychiatric Association Publishing. https://doi.org/10.1176/appi.books.9780890424841

Bhidayasiri, R., Kane, J. M., Freie, K. P., Caroff, S. N., Correll, C. U., Fahn, S., Jankovic, J., Hauser, R. A., & Truong, D. D. (2020). Expanding phenomenologic heterogeneity of tardive syndromes: Time for an updated assessment tool. *Parkinsonism and Related Disorders, 77*, 141–145. https://doi.org/10.1016/j.parkreldis.2020.06.023

Carbon, M., Hsieh, C.-H., Kane, J. M., & Correll, C. U. (2017). Tardive dyskinesia prevalence in the period of second-generation antipsychotic use: A meta-analysis. *The Journal of Clinical Psychiatry, 78*(3), e264–e278. https://doi.org/10.4088/JCP.15r10170

Caroff, S. N. (2019). Overcoming barriers to effective management of tardive dyskinesia. *Neuropsychiatric Disease and Treatment, 15*, 785–794. https://doi.org/10.2147/NDT.S196541

Caroff, S. N., Citrome, L., Meyer, J., Sajatovic, M., Goldberg, J. F., Jain, R., Lundt, L., Lindenmayer, J.-P., McEvoy, J. P., McIntyre, R. S., Tohen, M., & Ketter, T. A. (2020). A modified Delphi consensus study of the screening, diagnosis, and treatment of tardive dyskinesia. *The Journal of Clinical Psychiatry, 81*(2), 19cs12983. https://doi.org/10.4088/JCP.19cs12983

Caroff, S. N., Hurford, I., Lybrand, J., & Campbell, E. C. (2011). Movement disorders induced by antipsychotic drugs: Implications of the CATIE schizophrenia trial. *Neurologic Clinics, 29*(1), 127–148. https://doi.org/10.1016/j.ncl.2010.10.002

Caroff, S. N., Yeomans, K., Lenderking, W. R., Cutler, A. J., Tanner, C. M., Shalhoub, H., Pagé, V., Chen, J., Franey, E., & Yonan, C. (2020). A prospective study of the presence and healthcare burden of tardive dyskinesia in clinical practice settings. *Journal of Clinical Psychopharmacology, 40*(3), 259–268.

https://doi.org/10.1097/JCP.0000000000001201

Chakrabarty, A. C., Bennett, J. I., Baloch, T. J., Rodriguez, D. I., McCoy, T. H., & Talley, R. L. (2023, May 25). Increasing Abnormal Involuntary Movement Scale (AIMS) screening for tardive dyskinesia in an outpatient psychiatry clinic: A resident-led outpatient Lean Six Sigma initiative. *Cureus, 15*(5), e39486. https://doi.org/10.7759/cureus.39486

Institute for Healthcare Improvement. (n.d.). *How to improve: Model for improvement*. Retrieved June 4, 2025, from https://www.ihi.org/resources/how-improve-model-improvement

Jackson, R., Brams, M. N., Citrome, L., Hoberg, A. R., Isaacson, S. H., Kane, J. M., & Kumar, R. (2021). Assessment of the impact of tardive dyskinesia in clinical practice: Consensus panel recommendations. *Neuropsychiatric Disease and Treatment, 17*, 1589–1597. https://doi.org/10.2147/NDT.S310605

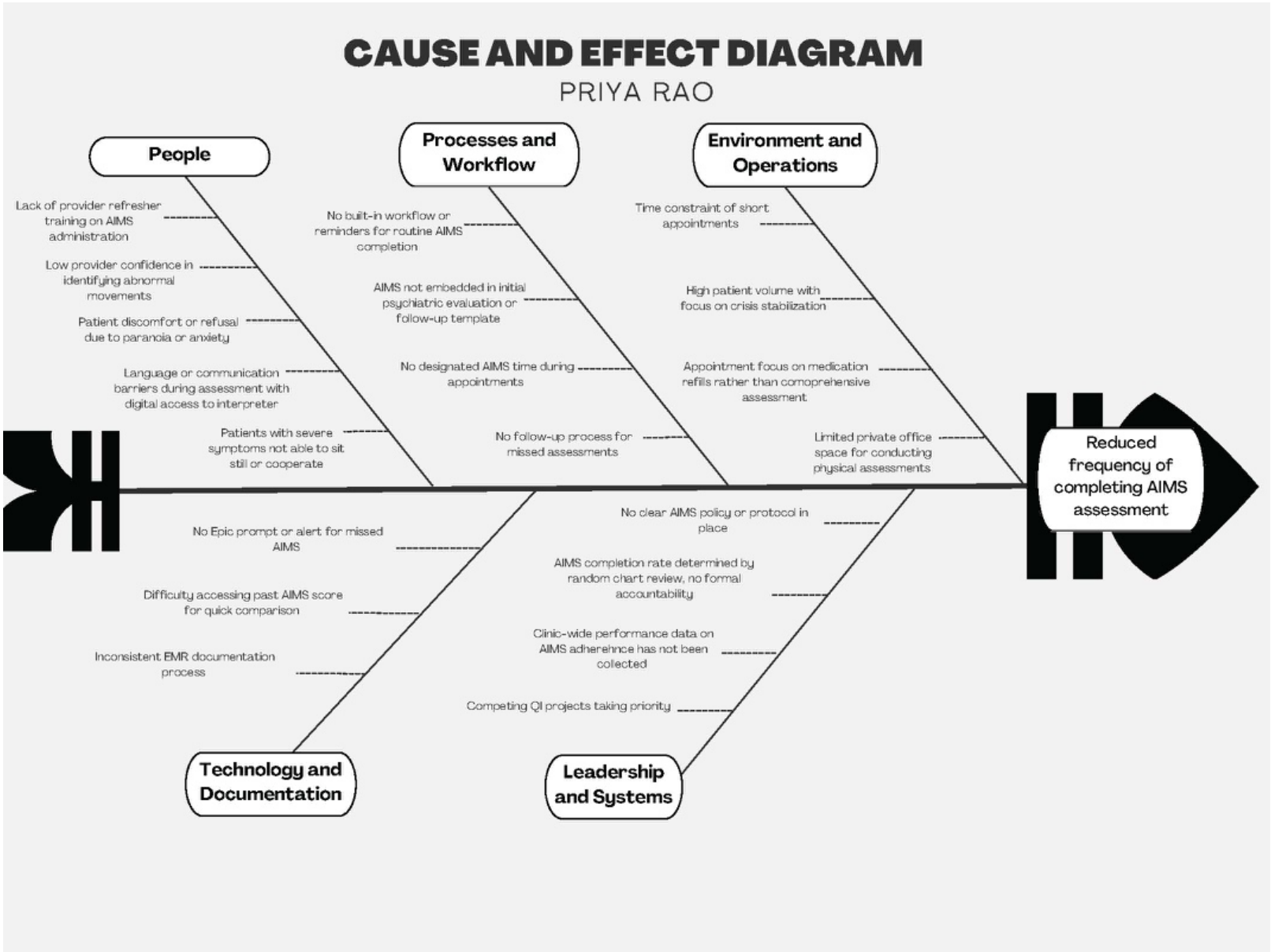
Matthews, D. (2025). From assessment to intervention: Evidence-based approaches in tardive dyskinesia. *CNS Spectrums, 30*(1), e25. https://doi.org/10.1017/S1092852925000082

McEvoy, J., Gandhi, S. K., Rizio, A. A., Maher, S., Kosinski, M., Bjorner, J. B., & Carroll, B. (2019). Effect of tardive dyskinesia on quality of life in patients with bipolar disorder, major depressive disorder, and schizophrenia. *Quality of Life Research, 28*(12), 3303–3312. https://doi.org/10.1007/s11136-019-02269-8

Solmi, M., Pigato, G., Kane, J. M., Correll, C. U., & Collaborators. (2018). Clinical risk factors for the development of tardive dyskinesia. *Journal of the Neurological Sciences, 389*, 21–27. https://doi.org/10.1016/j.jns.2018.03.005

Vasan, S., & Padhy, R. K. (2023). Tardive dyskinesia. In *StatPearls*. StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK448207/

Appendix A: Cause and Effect Diagram



Appendix B: Project Timeline

Late Spring Term 2025 (May–June)

- Finalize project permissions with on-site liaison
- Compile names and contact information for nurses on the CORE and ICM teams
- Obtain a comprehensive list of patients on the CORE and ICM teams

Early to Mid-Summer 2025 (July)

- Conduct chart review using Epic to assess the current frequency and need for AIMS screenings
- Reach out to CORE and ICM nurses via email to introduce the project and gather initial feedback

Mid to Late Summer 2025 (August–September)

- Develop a pre-training survey to assess nurse knowledge, comfort, and perceived barriers to using the AIMS
- Design a training tailored to the unique needs of psychiatric nurses working with the SPMI population
- Coordinate training dates using scheduling tools based on RN availability

Early Fall 2025 (October–November)

- Conduct AIMS trainings as scheduled based on nurse availability
- Distribute a post-training survey to gather feedback on changes in knowledge, comfort, and remaining barriers

Late Fall to Winter Term 2026 (January–March)

- Analyze data from pre- and post-training surveys
- Complete final DNP project paper
- Present project findings to OHSU peers and faculty
- Review results with the on-site liaison and CCC leadership

Appendix C: Clinical Letter of Support and IRB Approval

Date: 06/3/2025

This letter confirms that I, Sarah Spears, allow Priya Rao (OHSU Doctor of Nursing Practice Student) access to complete her DNP Final Project at our clinical site. The project is expected to occur in phases including planning, implementation, and evaluation between the dates of June 1, 2025 to March 21, 2026. This letter summarizes the core elements of the project proposal, already reviewed by the DNP Project Preceptor and clinical liaison:

Project Site(s): Old Town Recovery Center, 33 NW Broadway, Portland, OR 97209
Project Plan:
Identified Clinical Problem: A community clinic which specializes in serving patients with severe and persistent mental illness has identified a quality gap related to inconsistent completion of AIMS assessments. The problem was identified in a randomized chart review and this gap in service increases the risk of undetected tardive dyskinesia (TD), potentially impacting patients across multiple functional domains.

Rationale: The proposed intervention is aligned with an agency effort to share the responsibility of completing AIMS between the prescribers and the psychiatric nurses at CCC. Current protocols for prescribers to complete AIMS with regular frequency have been unsuccessful due to several reasons including time constraints, team-wide focus on crisis stabilization, and high patient volumes. As nurses have more frequent contact with patients in their outreach and medical coordination efforts, training the nursing team to complete AIMS assessments will increase likelihood of its successful completion. Regular AIMS will ensure that SPMI patients taking antipsychotic medication are receiving treatment aligned with evidence-based standards of care. This quality improvement educational intervention will use foundational knowledge from the Institute for Healthcare Improvement's Model for Improvement (IHI MFI) and the Plan, Do, Study, Act (PDSA) cycles. This project was modeled after the success seen in similar quality improvement initiatives which also aimed to increase the screening and identification of tardive dyskinesia in patients taking antipsychotic medication.

Specific Aims: The aim of this quality improvement project is to provide focused training to at least 80% of CORE and ICM psychiatric nurses within a 3-month implementation period on the administration and documentation of the AIMS assessment for patients taking antipsychotic medication. Additionally, this project aims to evaluate changes in nurse confidence and perceived competency in identifying and documenting abnormal involuntary movements, as measured by pre- and post-training surveys.

Methods/Interventions: An initial chart review of ICM and CORE patients taking antipsychotic medication will be completed to obtain a clear picture of the current frequency of AIMS administration and flowsheet documentation. Pre- and post-AIMS training surveys will be provided to the psychiatric nurses electronically to assess their knowledge and comfort with conducting AIMS assessments. An educational training will be conducted with psychiatric nurses on the CORE and ICM teams on how to effectively conduct AIMS. Survey results will guide the need for supplementary training as needed.

Data Management: The data obtained from the pre- and post- training session surveys will be de-identified and stored on a secure, password-protected platform accessible only to the project lead to maintain staff confidentiality. Results will inform the effectiveness of the intervention and guide future training efforts. No patient data will be collected. All retrospective chart review will be solely for the purpose of evaluating baseline AIMS utilization and documentation practices. This review will focus on the frequency of AIMS assessments and will not include any

identifiable patient information. Findings from the survey data and chart review will be used to evaluate the impact of the intervention and support future quality improvement efforts.

Site(s) Support: CCC has agreed to provide continued access to Epic, Microsoft Teams, and CCC email for chart review purposes and for maintaining contact with CORE and ICM psychiatric nurses and on-site liaison. Depending on the whether the training is to be offered in person, online, or a hybrid format for maximum flexibility, CCC will provide a meeting space to host training. Additionally, CCC will provide contact information of nurses providing direct care to patients on CORE and ICM teams along with updated lists of patient names for chart review.

During the project implementation and evaluation, Priya Rao will provide regular updates and communicate any necessary changes to the DNP Project Preceptor.

Our organization looks forward to working with this student to complete their DNP project. If we have any concerns related to this project, we will contact Priya Rao and Constance Slusarenko (student's DNP Project Chairperson.

DNP Project Preceptor (Name, Job Title, Email, Phone):

Sarah Spears, DNP, PMHNP, 503-501-5653
sarah.spears@ccconcern.org

Sarah Spears

Signature

6/18/2025

Date Signed

Appendix D: Surveys

Pre-survey

Please do not include your name on this survey. Instead, write a 3-digit number that you will remember and use the same number on all three surveys (pre-training, post-training, and 2-week follow-up). This number will allow us to link responses over time without identifying you.

My 3-digit number: _____

Knowledge and Confidence Assessment
Please indicate how strongly you agree or disagree with each of the following statements by selecting the response that best reflects your current knowledge, confidence, or experience. Use the following scale: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, 5 – Strongly Agree

1. I feel confident administering the Abnormal Involuntary Movement Scale (AIMS) to patients.
2. I understand the purpose of the AIMS tool in monitoring for tardive dyskinesia.
3. I feel comfortable identifying abnormal involuntary movements in patients.
4. I know when and how often AIMS should be completed.
5. I know how to document AIMS in the electronic health record.

Open-Ended Reflections:
1. What would you like to learn during the training?
2. What learning format do you prefer?
3. What are your concerns or questions about completing AIMS screenings?

Post-survey

Please do not include your name on this survey. Instead, write a 3-digit number that you will remember and use the same number on all three surveys (pre-training, post-training, and 2-week follow-up). This number will allow us to link responses over time without identifying you.

My 3-digit number: _____

Knowledge and Confidence Assessment
Please indicate how strongly you agree or disagree with each of the following statements by selecting the response that best reflects your current knowledge, confidence, or experience. Use the following scale: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, 5 – Strongly Agree

1. I feel confident administering the Abnormal Involuntary Movement Scale (AIMS) to patients.
2. I understand the purpose of AIMS screening.
3. I can identify abnormal involuntary movements in patients.
4. I know when and how often AIMS should be completed.
5. I know how to document AIMS in the EHR.

Open-Ended Reflections:
1. What part of the training was most helpful to you?
2. What remaining questions do you have about administering the AIMS?
3. How do you plan to integrate AIMS into your clinical workflow?

2-Week Follow-Up Survey

Please do not include your name on this survey. Instead, write a 3-digit number that you will remember and use the same number on all three surveys (pre-training, post-training, and 2-week follow-up). This number will allow us to link responses over time without identifying you.

My 3-digit number: _____

Knowledge and Confidence Assessment
Please indicate how strongly you agree or disagree with each of the following statements by selecting the response that best reflects your current knowledge, confidence, or experience. Use the following scale: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, 5 – Strongly Agree

1. I feel confident administering the Abnormal Involuntary Movement Scale (AIMS) to patients.
2. I understand the purpose of AIMS screening.
3. I can identify abnormal involuntary movements in patients.
4. I know when and how often AIMS should be completed.
5. I know how to document AIMS in the EHR.

In the past 2 weeks, how many AIMS assessments have you completed?
☐ 0
☐ 1
☐ 2-3
☐ 4 or more

Open-Ended Reflections:
1. Have you encountered barriers when trying to complete AIMS in the past 2 weeks? If yes, please describe.
2. What additional support or resources would help you use AIMS more consistently?

Appendix E: Statistical Results Tables

Table E1
Pre-and Post-Intervention Nurse AIMS Knowledge and Confidence Scores

Survey Item	Pre-test Median	Post-test Median	Direction of Change	Z	p-value
Confidence in administering AIMS	2.5	4	Increase	1.633	.102
Understanding purpose of AIMS	4.0	5	Increase	1.000	.317
Comfort identifying abnormal involuntary movements	3.5	4	Increase	0.000	1.000
Knowledge of when/how often AIMS is completed	2.5	4	Increase	1.604	.109
Knowledge of AIMS documentation in EHR	3.0	4	Increase	1.069	.285

Table E2
Chi-Square Tests for Association Between Measurement Time and AIMS Compliance

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.352	2	.509
Likelihood Ratio	1.356	2	.503
Linear-by-Linear Association	.123	1	.726
N of Valid Cases	521		

Table E3
Pre-Intervention Nurse AIMS Survey Descriptive Statistics

	Q1 (Pre-test)	Q2 (Pre-test)	Q3 (Pre-test)	Q4 (Pre-test)	Q5 (Pre-test)
N Valid	4	4	4	4	4
N Missing	0	0	0	0	0
Mean	2.50	4.25	3.50	2.50	2.75
Median	2.50	4.00	3.50	2.50	3.00
Std. Deviation	.577	.500	.577	.577	1.500

Table E4
Post-Intervention Nurse AIMS Survey Descriptive Statistics

	Q1 (Post-test)	Q2 (Post-test)	Q3 (Post-test)	Q4 (Post-test)	Q5 (Post-test)
N Valid	3	3	3	3	3
N Missing	1	1	1	1	1
Mean	4.00	4.67	3.67	4.33	3.67
Median	4.00	5.00	4.00	4.00	4.00
Std. Deviation	.000	.577	.577	.577	.577

Figure E5

Measurement Time		No	Yes	Total
Pre	Count	144	28	172
	% within Measurement time	83.7%	16.3%	100.0%
Post1	Count	154	21	175
	% within Measurement time	88.0%	12.0%	100.0%
Post2	Count	148	26	174
	% within Measurement time	85.1%	14.9%	100.0%
Total	Count	446	75	521
	% within Measurement time	85.6%	14.4%	100.0%

Figure E5 represents the distribution of AIMS completion by three measurement timepoints: pre-intervention, post-intervention, and at the end of the implementation period.

Appendix F: Graphical Results

Figure F1
Baseline Antipsychotic Medication Use Among CORE and ICM Patients

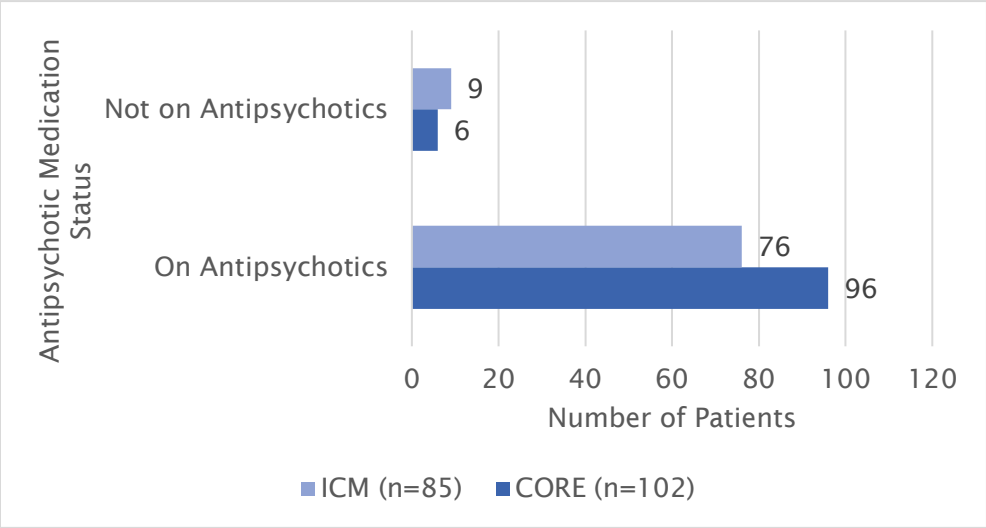


Figure F2
Baseline AIMS Recording Status for Patients on Antipsychotics on CORE and ICM Teams

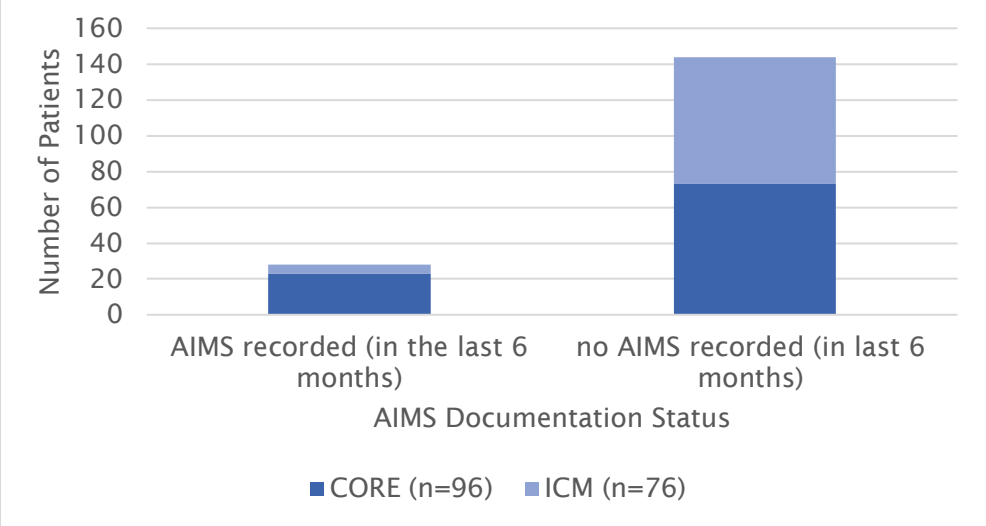


Figure F1 shows the proportion of patients across two specialty mental health teams in a community health clinic who are taking antipsychotic medication (oral or injectable) at the start of the intervention. Figure F2 represents AIMS recording status for patients on antipsychotic medication on each specialty mental health team prior to the start of the intervention.

Figure F3
Baseline AIMS Completion Status Among CORE and ICM Patients on Antipsychotic Medications

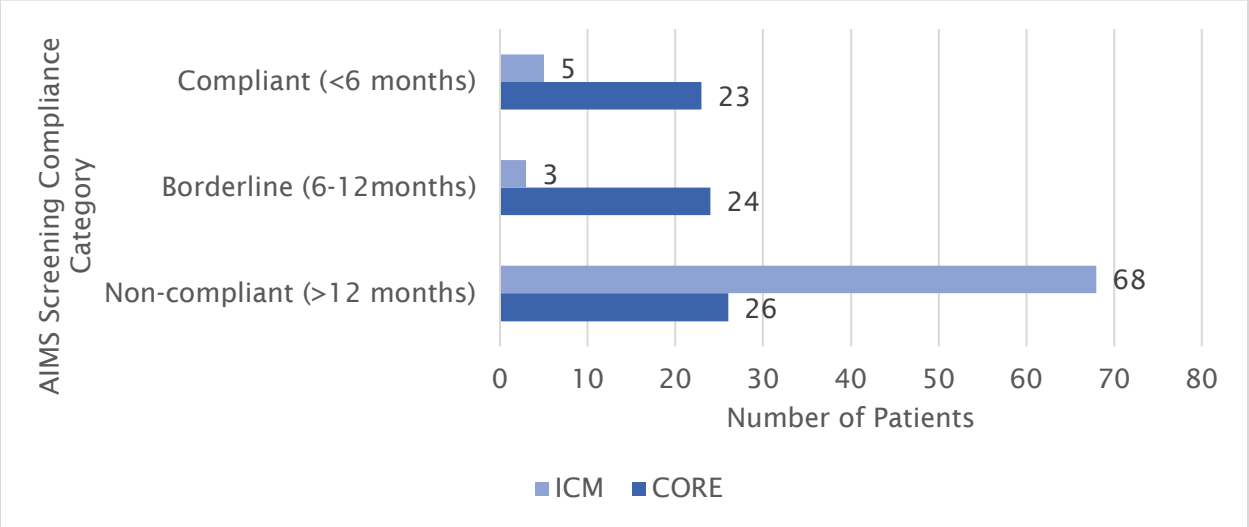


Figure F3 shows baseline AIMS completion among CORE and ICM patients taking antipsychotic medications, categorized as compliant (<6 months), borderline (6–12 months), and non-compliant (>12 months).

Figure F4
Antipsychotic Medication Type Distribution Among CORE Team Patients

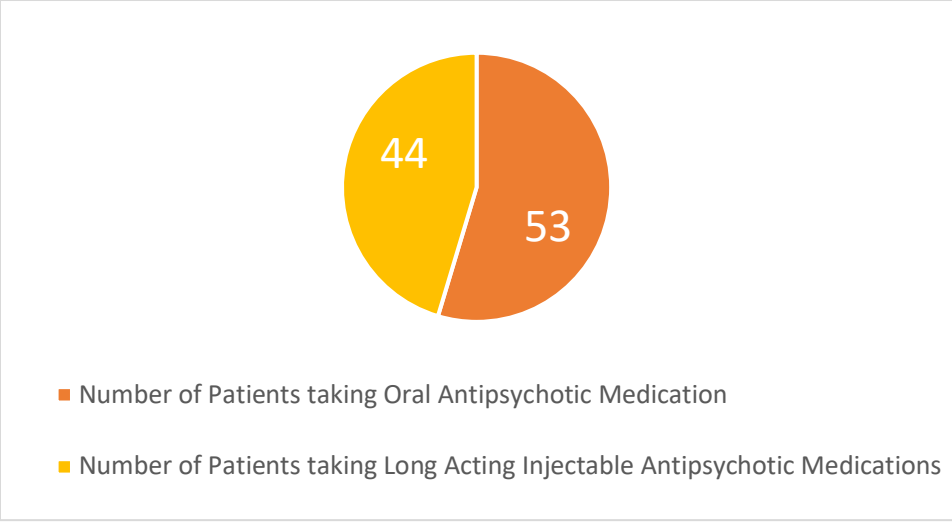


Figure F5
Antipsychotic Medication Type Distribution Among ICM Team Patients

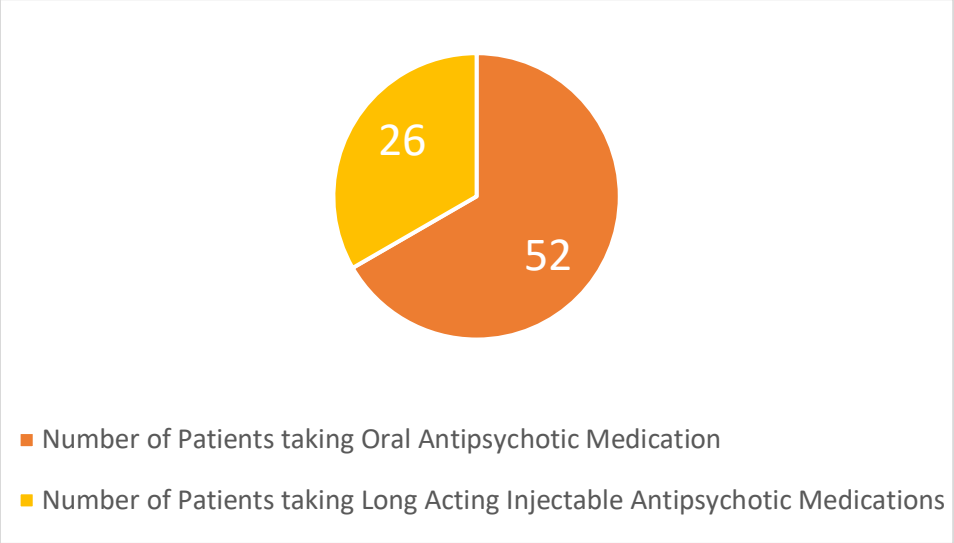


Figure F4 illustrates the proportion of CORE team patients receiving oral versus LAI antipsychotic medications four weeks after the educational intervention. Figure F5 presents the same comparison for patients on the ICM team at the same post-intervention time point. This time point reflects the project's adjusted focus on patients receiving LAI antipsychotic medications for AIMS screening.

Figure F6
AIMS Completion Among LAI Patients by Team and Timepoint

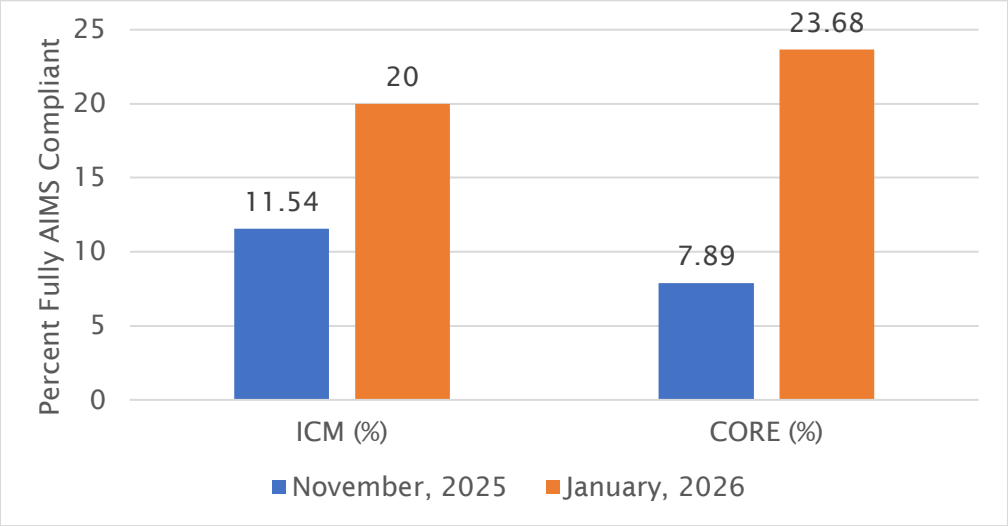


Figure F6 displays the percentage of ICM and CORE patients taking LAI antipsychotics who were fully compliant with APA recommendations for AIMS screening in November 2025 and January 2026.

Figure F7
AIMS Documentation Compliance Across CORE and ICM Teams (Combined)

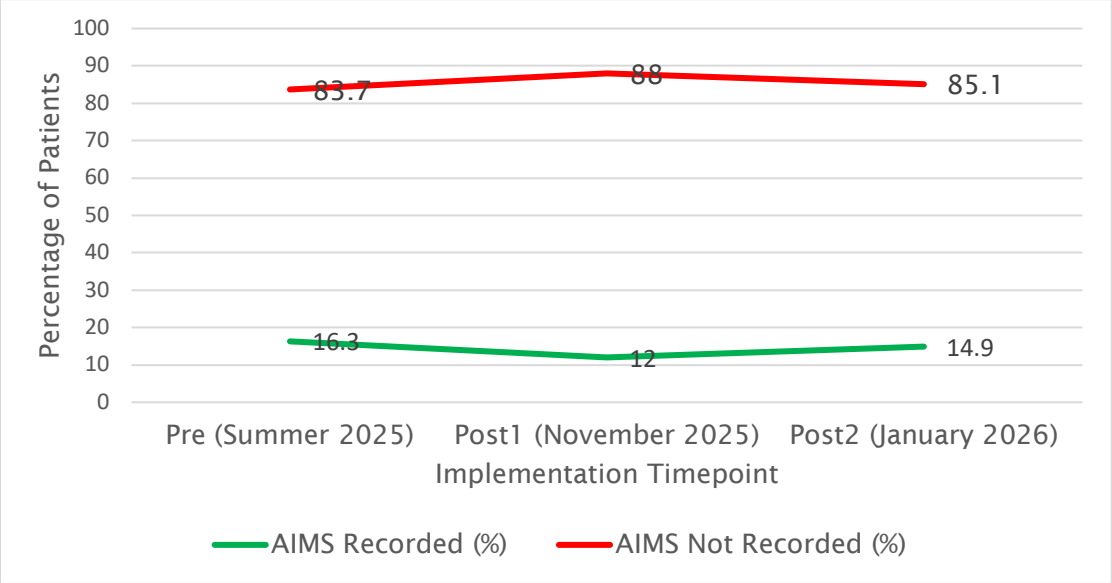


Figure F7 depicts the percentage of patients with AIMS documentation recorded versus not recorded within the previous six months across three measurement periods, pre-intervention, post-intervention, and follow-up measurements at the end of the 3-month implementation period. This figure represents patients taking oral antipsychotic medications and those taking LAI formulations.