

Applying the Antimicrobial Stewardship Framework to Non-Antimicrobials

Psychotropic Stewardship Models

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Objectives

- **At the conclusion of this presentation, the audience will be able to:**
 - **Describe** the concept of psychotropic stewardship and its role in promoting safe, effective, and appropriate medication use.
 - **Identify** examples of psychotropic stewardship activities across different clinical practice settings.
 - **Discuss** the potential relevance and opportunities for psychotropic stewardship within clinical practice.

Psychotropic Stewardship

- **Psychotropic Stewardship:** A systematic approach to ensure safe, effective, and appropriate use of psychotropic medications.



- **Comprehensive Medication Management (CMM):** A patient-centered process where pharmacists collaborate with prescribers to optimize medication therapy and monitor outcomes.
- Stewardship aims to ensure that prescribing practices balance therapeutic benefit, risk management, legal mandates, patient rights, and public safety while supporting evidence-based care.
- **Goals of Psychotropic Stewardship:**
 - Promote appropriate and safe use of psychotropic medications
 - Reduce harm and unintended consequences
 - Improve patient outcomes

Why Psychotropic Stewardship?

- Complex medication management
- Opportunities to optimize prescribing
- Medication-related harm
- Barriers to effective treatment
- Need for a systematic approach

Psychotropic Stewardship

Parallel to antimicrobial stewardship

Core Elements of Stewardship Programs

1. Hospital leadership commitment
2. Accountability
3. Pharmacy expertise
4. Action
5. Tracking
6. Reporting
7. Education

Perfect for a new hospital and expanding residency program



1. Verify Psychotropic Allergies



- Although 10% of the population in the United States reports a penicillin allergy, less than 1% of the population is truly penicillin allergic.¹
- When possible, obtain a more detailed history of the penicillin reaction and review previously prescribed antibiotics. Alert the provider of your findings if you think the patient can tolerate a beta-lactam antibiotic, when appropriate.

2. Avoid Duplicative Antipsychotics



- Duplicative anaerobic coverage, such as piperacillin/tazobactam and metronidazole, is unnecessary in most cases.²
- When the pharmacy receives antibiotic orders for two or more agents with anaerobic activity, alert the provider that the antibiotics have overlapping spectra of activity.

3. Reassess Benzodiazepine Therapy



- Review the patient's microbiology results (e.g., rapid diagnostic tests and clinically relevant cultures).³
- Prompt the provider to consider **stopping** or **tailoring** antibiotic therapy as appropriate.

4. Avoid Irrational Polypharmacy



- Patients with asymptomatic bacteriuria should not be treated with antibiotics in most cases.⁴
- Consider the importance of signs and symptoms consistent with urinary tract infection (UTI) when reviewing positive urine cultures and/or making treatment recommendations.

5. Use Shortest Treatment Course Needed



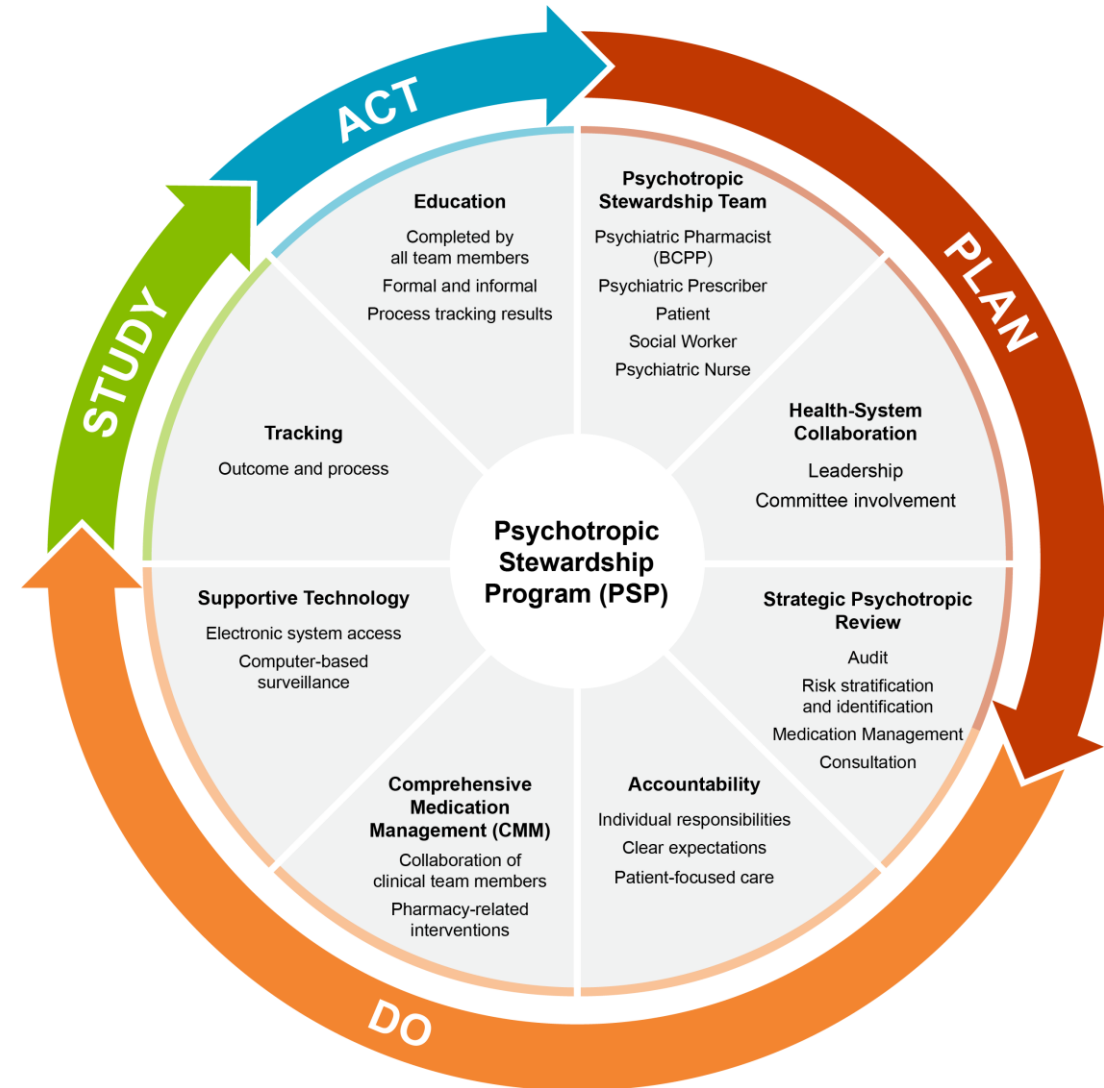
- Guidelines for treatment duration are available for common infectious diseases such as pneumonia, UTI, and skin and soft tissue infection.^{5,6,7}
- Alert the provider if the total days of inpatient and post-discharge antibiotic therapy exceeds the recommended duration.

Core Elements of a PSP

Core Elements of PSP

1. Team Structure
2. Health System Collaboration
3. Strategic Psychotropic Review
4. Accountability
5. Comprehensive Medication Management
6. Supportive Technology
7. Tracking
8. Education

Committee/Department	Role in PSP
P&T Committee	Central oversight (pharmacy-driven, multidisciplinary input)
PSP Subcommittee	Reports directly to P&T
Medication Executive Committee (Med Exec)	Final approval authority
Patient Safety Committee	Safety oversight
Clinical Practice Committee	Clinical standard alignment
Psychiatry Department	Specialty expertise
Pharmacy Department	Medication stewardship leadership
Nursing	Implementation and patient care
Quality Department	QA and process improvement
Transitions of Care Committees	Aftercare coordination
Informatics / EHR Committee	Data extraction and reporting support



Risk Stratification

	Critical	Preferred	Recommended
Patient-related	• Life-threatening reaction or suspected severe ADR (NMS, cardiac arrhythmias)	• Recurrent inpatient admissions • Treatment resistant symptoms • Inadequate response • Legal complexities • Dual diagnosis with SUD	• Comorbidities • Non adherence • Unclear diagnostic picture • Partial reponse • High healthcare resource utilization (HRCU)
Medication-related	• Recurrent drug-related incidences	• > 3 antipsychotics • > 2 antidepressants • High-risk medications • High doses exceeding max • Clozapine eligibility	• Dose titration or optimization • Complex LAI scheduling • Missed LAI doses
Safety-related	• Major deviation from safe practice standards	• QTc prolongation • EPS • Metabolic syndrome • Suboptimal drug levels	• Complex drug-drug interactions • Complex drug-disease interactions

Therapeutic Areas to Consider

- High-risk psychotropic management
- Psychotropics QTc risk
- Metabolic monitoring
- Benzodiazepine tapering
- Clozapine monitoring
- EPS prevention and management
- Lithium monitoring and management
- Anticholinergic burden
- LAI considerations
- Psychotropic medication updates
- Acute agitation management
- Beers criteria medications

Transitions of care?

Strategic Review Strategies

- **Strategic Psychotropic Review**
 - Inpatient
 - Weekly comprehensive psychotropic reviews
 - Multidisciplinary rounds-based discussion
 - Documentation:
 - PSP-specific progress note
 - Recommendations and/or changes
 - 48-hour follow-up (“time-out”) for unresolved recommendations
 - Outpatient
 - CMM under collaborative practice
 - Clinical pharmacist/Lead responsibilities:
 - Conduct patient interviews
 - Assess and manage medication regimens
 - Optimize therapy outcomes
 - Prescriptive authority under collaborative agreements

Metric Outcomes

- Prescribing practice
- Interventions
- Clinical outcomes
- Operational
- Financial

Metric	Examples
Psychotropic polypharmacy rate	• % of patients prescribed ≥ 2 psychotropics within the same class • % of cases with documented clinical rationale
High-dose antipsychotic use	• % of high-dose regimens reduced to guideline-recommended ranges • % of patients exceeding CPZ-equivalent high-dose thresholds
Clozapine utilization	• TDM compliance rate • % of clozapine patients receiving concurrent antipsychotic therapy • ANC monitoring compliance rate
LAI antipsychotic utilization	• % of eligible patients offered or receiving an LAI • % of patients discharged from an inpatient admission on LAI with documented outpatient follow-up • Missed-dose rate
PRN antipsychotic use	• Incidence of IM antipsychotic use • % of PRN administrations without documented indication or reassessment
Lithium management	• TDM compliance rate • Documentation of patient education • Documentation of medication interaction review
Benzodiazepine prescribing	• New starts per reporting period • Presence of risk-benefit documentation • % concurrent opioid and benzodiazepine use

Psychotropic Stewardship & Deprescribing

- **Deprescribing**: Important portion of psychotropic stewardship using a shared-decision framework to reduce or discontinue inappropriate medications
 - **For behavioral health, it is not...**
 - Anti-prescribing
 - Invalidation of human suffering
 - Rejection of evidence-based medicine

Getting Started: Think Small and Build Up!

- **Identify an opportunity**
 - Focus on a specific gap in medication safety, prescribing practices, or patient care.
- **Build on existing practices**
 - Incorporate stewardship principles into established clinical services and workflows. (BPAs, CDS)
- **Start with targeted interventions**
- **Measure impact**
- **Build on early successes**
 - Use experiences and feedback to refine approaches and identify future opportunities.

Small Examples

The background of the slide features several thick, flowing, wavy lines in various shades of purple. These lines originate from the left side and sweep across the frame towards the right, creating a sense of movement and depth. The colors range from a light lavender to a deep, dark purple.

Psychotropic Stewardship: Adverse Effect Management & Medication Adherence

Psychotropic Medication Adverse Effects

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Psychotropic Medication Adverse Effects Consultation Service

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ABSTRACT

Background: Adverse effects secondary to psychotropic medications are a common cause of medication non-adherence and can lead to suboptimal outcomes for patients receiving psychiatric pharmacotherapy. Non-adherence to psychotropic medication is often unrecognized, leading to alterations in pharmacotherapy that may not be warranted. In rural states with limited access to psychiatrists, complex psychotropic medication regimens are often managed and prescribed by primary care providers and mid-level practitioners, many of whom may have less experience in identifying psychotropic related adverse effects. The utility of developing a formal psychotropic medication side effect consultation service could be beneficial in assisting with the management of patients experiencing adverse effects secondary to psychotropic medication.

Description of Innovative Service: This pilot service is based on a pure consultation model and is provided at the University of Vermont Medical Center, a 562-bed teaching hospital, in Burlington, Vermont. Patients are seen on referral by a clinician managing psychotropic medications with suspected adverse effects. Patients are seen by a board-certified psychosomatic medicine psychiatrist in conjunction with a board-certified psychiatric pharmacist who see the patient together. The consultation includes a review of the patient's medical-psychiatric history, a medication history, a patient interview and assessment, and recommendations for the consultee. A consultation note is provided to the consulting clinician including recommendation strategies to treat the adverse effect or to alter the patient's medication regimen.

Impact on Patient Care: The psychotropic medication adverse effects consultation service is in its initial stages of launching and is currently accepting patients from primary-care providers, mid-level practitioners, and occasionally psychiatrists. The intent of the service is to assist clinicians in effectively treating psychiatric conditions that respond to psychotropic medications, but are at risk of being inadequately treated because a psychotropic medication is causing intolerable adverse effects leading to non-compliance or drug-induced disease. Since the inception of the service, a total of 5 patients have been seen and treatment recommendations have been provided to the consulting clinician. Reception of the consults provided has been consistently positive.

Conclusion: Adverse effects of psychotropic medications can interfere with the successful management of psychiatric conditions, leading to non-compliance or suboptimal medication outcomes. A consultation service utilizing psychosomatic psychiatrists and psychiatric pharmacists can be beneficial in assisting clinicians with difficult cases involving adverse effects from psychotropic medications.

DESCRIPTION OF INNOVATIVE SERVICE

The Psychotropic Medication Adverse Effects Consultation Service is a pilot consultative program serving as an extension of the Psychiatry Consultation Service (PCS) at the University of Vermont Medical Center (UVM/MC).

History: The Psychiatry Consultation Service (PCS) began at UVM/MC in 1998 and is currently staffed by the PCS Chief, two consultant psychiatrists, and a rotating PGY-4 psychiatry resident. Additionally, a clinical psychiatric pharmacist collaborates with the PCS service on difficult cases involving complex pharmacotherapy. The service works alongside medical psychologists to provide psychiatric consultation to other inpatient services at UVM/MC, notably Family Medicine, Oncology, Obstetrics-Gynecology, Cardiology, Surgery, Pediatrics, and Internal Medicine. As the service developed and expanded from the mid 1990s, additional requests were made for the PCS to examine outpatients at the request of colleagues within the hospital organization. These consultations were generally limited to those with a primary psychiatric condition with extensive medical comorbidity. A large proportion of outpatients that were evaluated by the PCS were patients receiving treatment with psychotropic medications that were not responding as expected. Some problems that were encountered by the service included: pharmacotherapy being dose inappropriate, inadequate duration of pharmacotherapy, or incorrect pharmacotherapy was selected for the working diagnosis. As noted by the PCS Chief through evaluations, many patients were discontinuing psychotropic medications due to adverse effects. This was not often reported to the primary provider due to multiple reasons (e.g., patient not wanting to disappoint their provider, shame, etc.). Additionally it was noted that many adverse effects that were reported as problematic by the patients were brushed-off as insignificant by the treatment providers and were not being appropriately addressed (i.e., dry mouth, constipation, somnolence). Many patients were receiving successful treatment with psychiatric pharmacotherapy, but had developed adverse effects that were impacting compliance and continued therapy. Consultations began to be placed for treatment of psychiatric medication adverse effects. To address concerns regarding psychotropic adverse effects, a pilot consultative service specializing in managing psychotropic adverse effects was initiated.

Service: This pilot service is based on a pure consultation model and is provided at the University of Vermont Medical Center, a 562-bed teaching hospital, in Burlington, Vermont (See Figure 1). The service requires a referral from an outpatient treatment provider and the reason for the referral must be related to a psychotropic adverse effect. The referral cases are primarily primary care physicians and mid-level practitioners (APRNs, PAs) handling complex psychotropic medication regimens. Referrals for second opinion by a psychiatrist is also available. Patients are seen on referral by a clinician managing psychotropic medications with suspected adverse effects. Patients are seen by a board-certified psychosomatic medicine psychiatrist in conjunction with a board-certified psychiatric pharmacist who see the patient together. The consultation includes a review of the patient's medical-psychiatric history, a medication history, a patient interview and assessment, and recommendations for the consultee. A documented note is outlined for the outpatient provider detailing recommendations. The service does not provide prescriptions and only briefly discusses possible recommendations with the patient at the time of visit, in order to prevent any take-over of care. Follow-up appointments are scheduled as needed to address additional issues that arise with recommendations. The service is in early pilot-testing and is now being advertised to outpatient providers and accepting patients.



Figure 1: The University of Vermont Medical Center (UVM/MC) in Burlington, Vermont.

THE
University of Vermont
MEDICAL CENTER

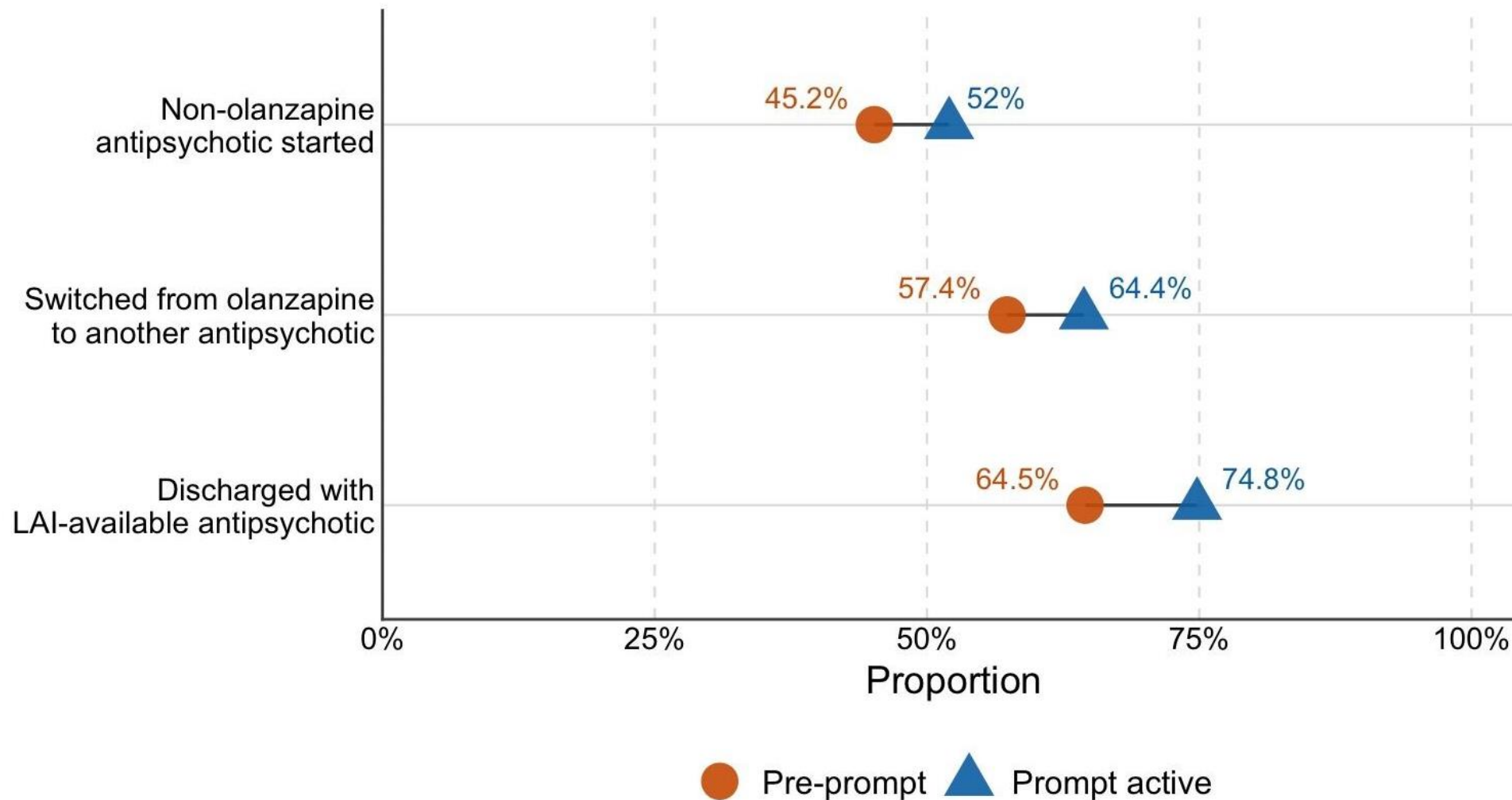
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- Innovative service to address adherence and adverse effect management

- Multiple positives and multiple limitations; primarily due to limited scope of pharmacy practice within the state

Olanzapine CDS Alert



Establishing Standards of Care

- Develop clinic-specific prescribing and monitoring guidance to promote consistent, evidence-based practices
- Current outpatient guidance under development at my current practice:
 - Clozapine: Outpatient-specific monitoring, care coordination, and medication management considerations that differ from inpatient practice.
 - Incorporating metrics for lab follow-up now REMS eliminated
 - Benzodiazepines: Ongoing risk–benefit assessment and monitoring.
 - Stimulants: Prescribing practices, safety monitoring, and follow-up expectations.

Open Discussion

- ***What are your initial impressions of applying the stewardship concept to psychotropic medications?***
 - Does this feel like a natural extension of stewardship, or something different from how you've traditionally thought about it?
- ***Of the examples discussed today, what resonates most with you?***
 - Deprescribing, adverse effect management, LAI access and continuity, or clinical decision support? Are there other examples that come to mind?

Open Discussion

- ***Where, if anywhere, do you see opportunities for psychotropic stewardship in your own practice or setting?***
 - This could be something already happening or an area that might benefit from more attention.
- ***Is this an area you'd be interested in seeing explored further?***
 - What would make a psychotropic stewardship approach meaningful or useful to you?

Conclusions

- **Psychotropic stewardship** provides a systematic approach to promoting safe, effective, and appropriate psychotropic medication use.
- Stewardship extends beyond deprescribing to include medication optimization, adverse effect management, access to treatment, and continuity of care.
- **Start small!** Stewardship principles can be incorporated into existing clinical practices.

Questions

