

TRAMM Tool (Medication Adherence) Pocket Guide

A quick and easy reference to the *Transplant Recipient Adherence Monitoring and Management (TRAMM) Tool* for transplant professionals to use within their post-transplant clinical practice

Medication Adherence MONITORING

- Refer to these key steps to help define your process for medication adherence monitoring
- Individualize to fit your practice model
- Refer to the TRAMM tool for additional details (scan QR code)



1. Select monitoring STRATEGY

- **Proactive:** monitoring occurs as part of the standard of care follow up
- **Reactive:** monitoring occurs once adherence issue is identified
- **Hybrid:** monitoring combines mix of proactive and reactive strategies

2. Select patient POPULATION

- **All:** monitoring occurs for every recipient
- **Subset:** monitoring occurs for a specific recipient group(s) (i.e. those with risk factors or identified medication non-adherence)

3. Select monitoring TOOL(s)

Self Report: questions directly investigate medication adherence or other variables via patient response

Scan the QR codes for links to validated self-report questions

BAASIS



ITAS



ITBS



Immunosuppressant Levels: adherence is defined according to drug level measured and quantification method

Examples

Inpatient variability (IPV)	<ul style="list-style-type: none"> • Fluctuation in drug concentrations (e.g., tacrolimus trough) within an individual over a period of time • Usually calculated via standard deviation (SD) or coefficient of variation (CV) SD: measures extent of deviation amongst a group of drug levels CV: calculated as $SD/sample\ mean \times 100$
Undetectable trough levels	<ul style="list-style-type: none"> • Drug levels (e.g., tacrolimus) that are too low to be detected by laboratory tests
Time in therapeutic range (TTR)	<ul style="list-style-type: none"> • Percentage of time the patient's drug level (e.g., tacrolimus) was within the target range

Medication Refill Records: review of refill history to estimate percent of time patient had enough medication to take as prescribed

	MPR (medication possession ratio)	PDC (proportion of days covered)
Calculation	$\frac{\text{Days supply for all fills in period}}{\text{\# of days in period} \times 100\%}$	$\frac{\text{\# of days covered during period}}{\text{\# of days in period} \times 100}$
Considerations	<ul style="list-style-type: none"> • Often overestimates adherence • More likely to be affected by early refills 	<ul style="list-style-type: none"> • Addresses stockpiling and early refills by moving forward additional supply to the next period • Better equipped to accurately estimate adherence when considering all drugs in a regimen together

Visit Completion Frequency:

- Compare ACTUAL to EXPECTED number of visits completed within a defined time period
- Quantify the number of no-show visits
- The number of visits can be calculated separately (i.e. lab or appointment visits) or combined (i.e., lab plus appointment visits)

Pill Count: objective measure to count the actual number of dosage units (e.g., pill, tablet) at a specified time point

$$\frac{\text{\# of dosage units dispensed} - \text{\# of dosage units remained}}{\text{Prescribed \# of dosage units per day} \times \text{\# of days between 2 timepoints} \times 100}$$

4. Select FREQUENCY and define process for DOCUMENTATION

- **All:** at every time point or patient interaction (i.e., every clinic visit)
- **Subset:** only at specific timepoints (i.e., every 6 month visit (clinic or virtual))

TRAMM Tool (Medication Adherence) Pocket Guide

A quick and easy reference to the *Transplant Recipient Adherence Monitoring and Management (TRAMM) Tool* for transplant professionals to use within their post-transplant clinical practice

Medication Adherence MANAGEMENT

- Refer to these key steps to help define a patient specific adherence management plan
- Individualize to fit your practice model
- Refer to the TRAMM tool for additional details (scan QR code)



1. Identify CAUSE(S) of non-adherence

- Use motivational interviewing
- Practice active listening
- Identify potential barriers
- Utilize strategies aimed to address identified barriers

Barriers to adherence

Cognitive Impairment	Forgetfulness	Language Barriers	Low Health Literacy
Age	Insurance Issues	Visual Impairment	Side Effects

Barrier-specific strategies

Cognitive impairment, forgetfulness, daily routine interruption	Involve family and adequate support for medication management. Consider a simplified regimen (e.g., once-daily dosing, monotherapy). Encourage counseling/behavioral intervention (e.g. reminders, alarms, use of pillbox, motivational interview)
Language barriers	Ensure teaching tools in native language. Use teach back method. Use an interpreter service. Establish effective communication plans for longitudinal care.
Low health literacy	Involve family and adequate support for medication management. Use a pillbox with visual aid (e.g., numbering system)
Age	Consider different learning strategies for pediatrics versus adults. Identify vulnerable populations (e.g., transition to adult, elderly). Peer group mentorship or support groups may be helpful, especially for pediatric populations
Visual Impairment	Consider > 16 font print on prescription labels, braille labels, blister cards

2. Select TOOL(s) aimed to improve medication adherence most appropriate for patient/situation

- Patient education
- Medications - simplify/organize regimens
- Technology
- Self-action plan
- Family/caregiver involvement

3. Include MULTIDISCIPLINARY TEAM(s) in management based on identified causes

- Transplant team (e.g., pharmacist, social worker, financial counselor, physicians, advanced practice providers, nurses, psychologists, dieticians)
- Medical teams (e.g., cardiology, endocrinology, primary care)
- Other (e.g., pharmacy technician, home health aide)

4. Involve PATIENT to establish a management plan

- Schedule frequent patient meetings (e.g., in-person, telephone or video visit)
- Shared decision making is key

5. Establish FOLLOW-UP

- Define frequency of follow-up / adherence assessments
- Develop process to ensure management plan and follow up is documented and shared with patient and involved teams