The Importance of Medication Adherence

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"Drugs don't work in patients who don't take them." –C.Everett Koop, MD

Typical Quality Measure

- Treatment.
- Adherence.
- Outcomes.

Definitions

- **Adherence**: the extent to which a person's behavior taking medication, following a diet, and/or executing lifestyle changes corresponds with agreed recommendations from a health care provider.

- **Medication Adherence**: is a collaborative process of communication and understanding between the patient and their health care professionals that promotes optimal usage of medication therapies.

$$\frac{Number\ of\ pills\ absent\ over\ a\ period\ of\ time}{Number\ of\ pills\ dispensed\ over\ a\ period\ of\ time} \times 100\% \geq 80\%$$

World Health Organization, 2003; Mayo Clinic, 2011; Osterberg L, Blaschke T, 2005; Winkler A, et al., 2002
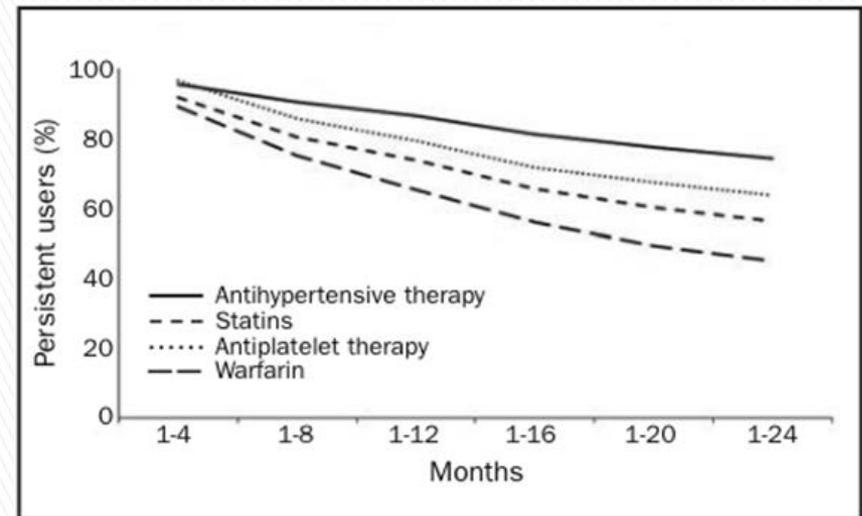
Non-Adherence

- For every 100 medications prescribed in a clinic or office:
  - 88% of the prescriptions are dispensed.
  - 76% are started.
  - 47% are continued.
- Return to Stock:
  - Overall 4.4%.
  - Per-site average is 4% to 8%.

Non-Adherence (cont.)

Persistence with secondary prevention medication in the 24 months after ischemic stroke in Sweden. Persistent use of secondary preventive drugs declines rapidly during the first two years after stroke.

Glader, 2010;
World Health Organization, 2003;
Lee, Grace, and Taylor, 2006;
Spertus JA, et al. 2006;
Airoldi F, et al., 2007

Medication Adherence

- 50% of patients are persistent with chronic medication therapy.
- Poor medication adherence leads to:
  - Increased morbidity and death.
  - Increased health costs $300 billion per year.
  - One-third to two-thirds of all medication-related hospitalizations.

Osterberg L, Blaschke T, 2005;
Steanacci RG, Guerin S, 2013.

Measures of Adherence

- Clinical Reporting System (CRS):
  - Pharmacy Quality Alliance (PQA) report:
    - Proportion of Days Covered (PDC).
    - Gaps in Therapy.

PDC: Diabetes Medications

PDC=Portion of days covered ≥ 80%   GAP = gap in therapy ≥ 30 days
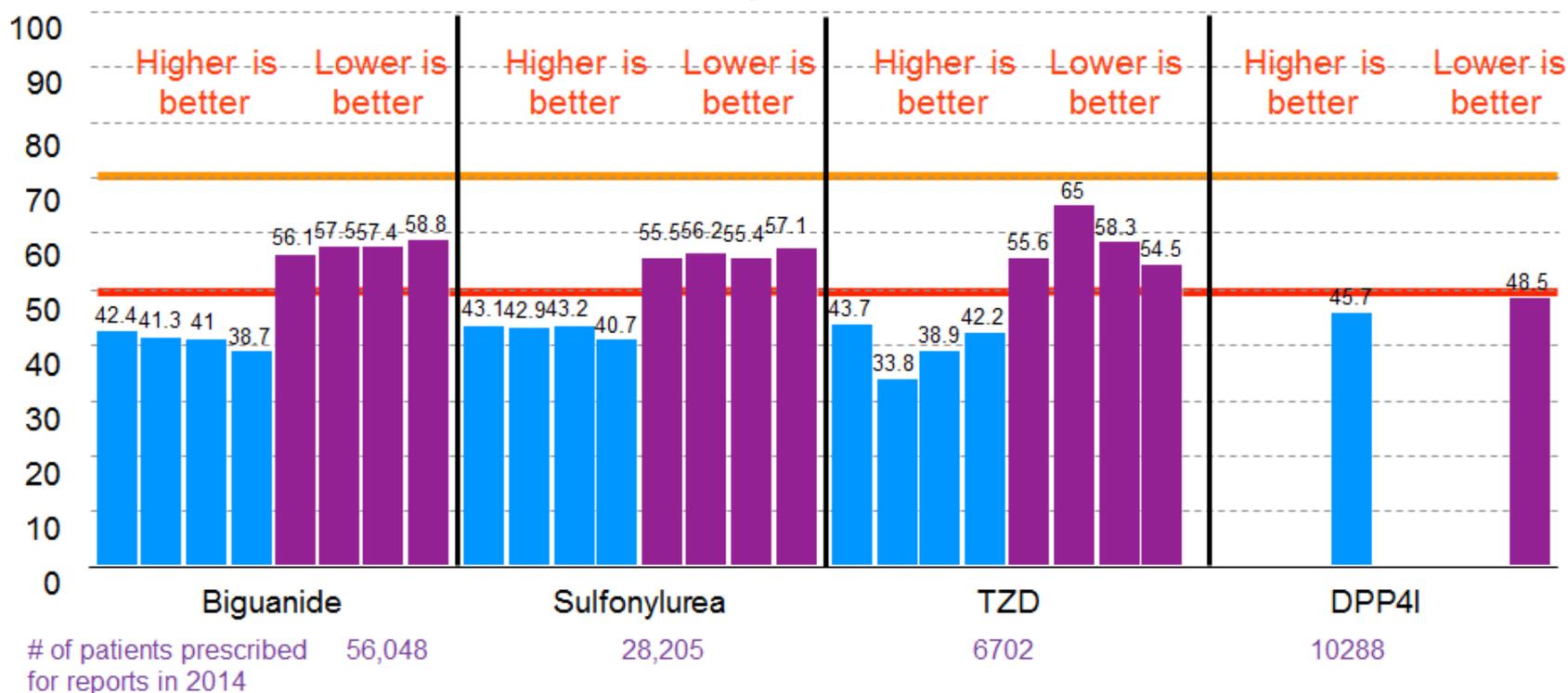
PDC and **Gap**: 2011 - 2014

For internal IHS use ONLY. Data from 164 sites (100 Tribal & 64 IHS). Collected from ONM reports 2013

PDC: HTN Medications

PDC=Portion of days covered ≥ 80%   GAP = gap in therapy ≥ 30 days

PDC and Gap: 2011 - 2014
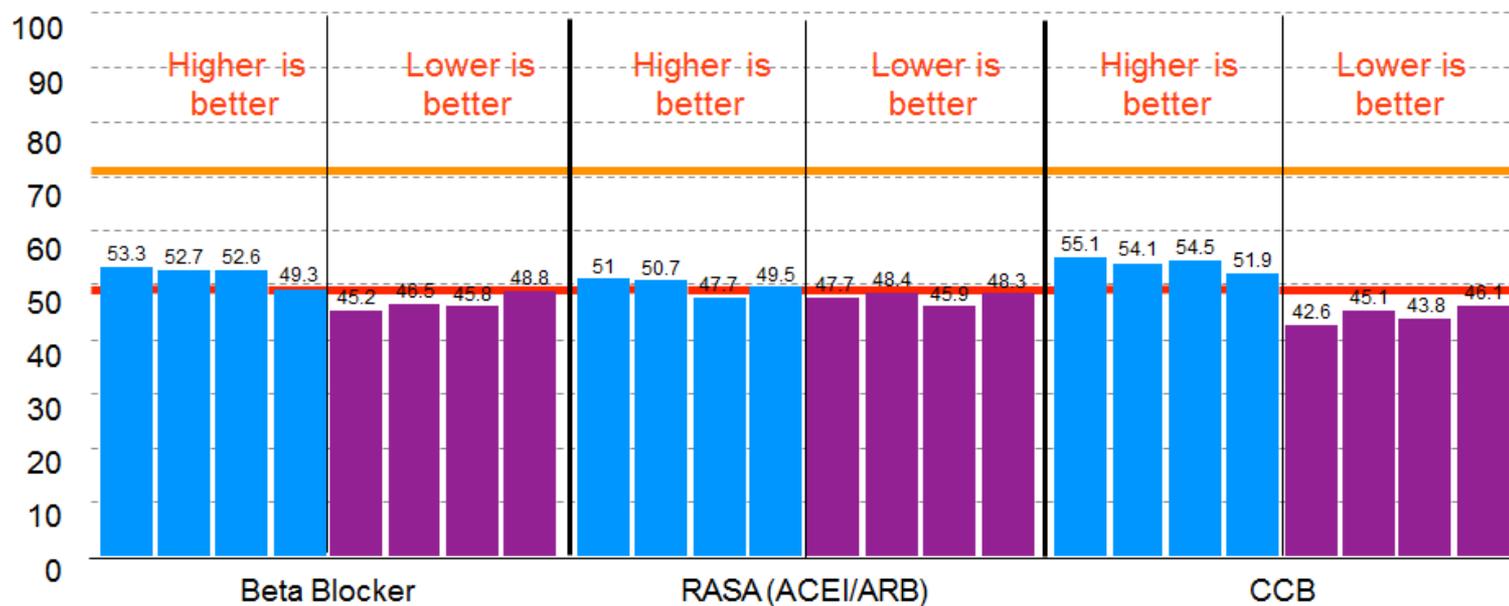
# of patients prescribed for reports in 2014: Beta Blocker 42955, RASA (ACEI/ARB) 104180, CCB 30472

For internal IHS use ONLY Data from 164 sites (100 Tribal & 64 IHS). Collected from ONM reports 2013

PDC: Statin Medications

PDC=Portion of days covered ≥ 80%   GAP = gap in therapy ≥ 30 days
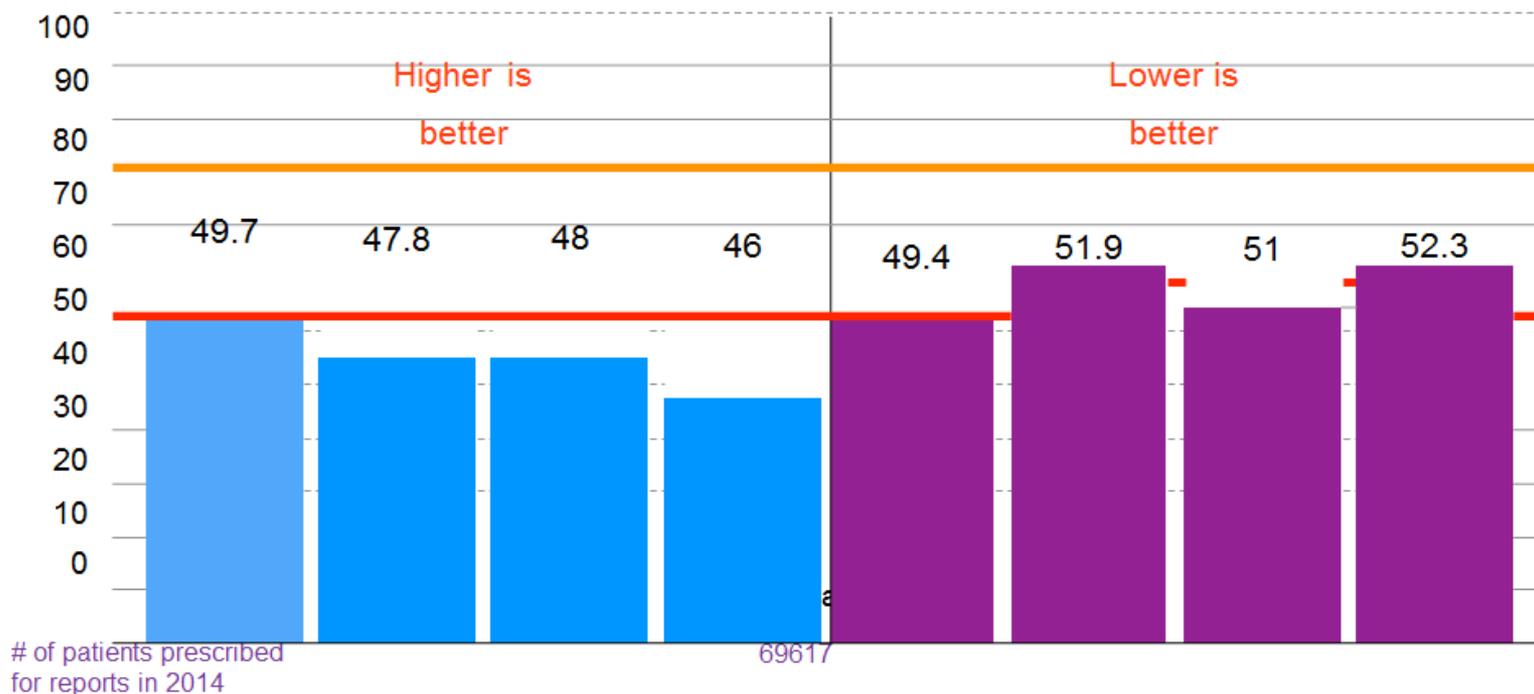
PDC and **Gap**: 2011 - 2014

For internal IHS use ONLY. Data from 164 sites (100 Tribal & 64 IHS). Collected from ONM reports 2013

PDC: Antiretrovirals

PDC=Portion of days covered ≥ 90%

PDC: 2011 - 2014
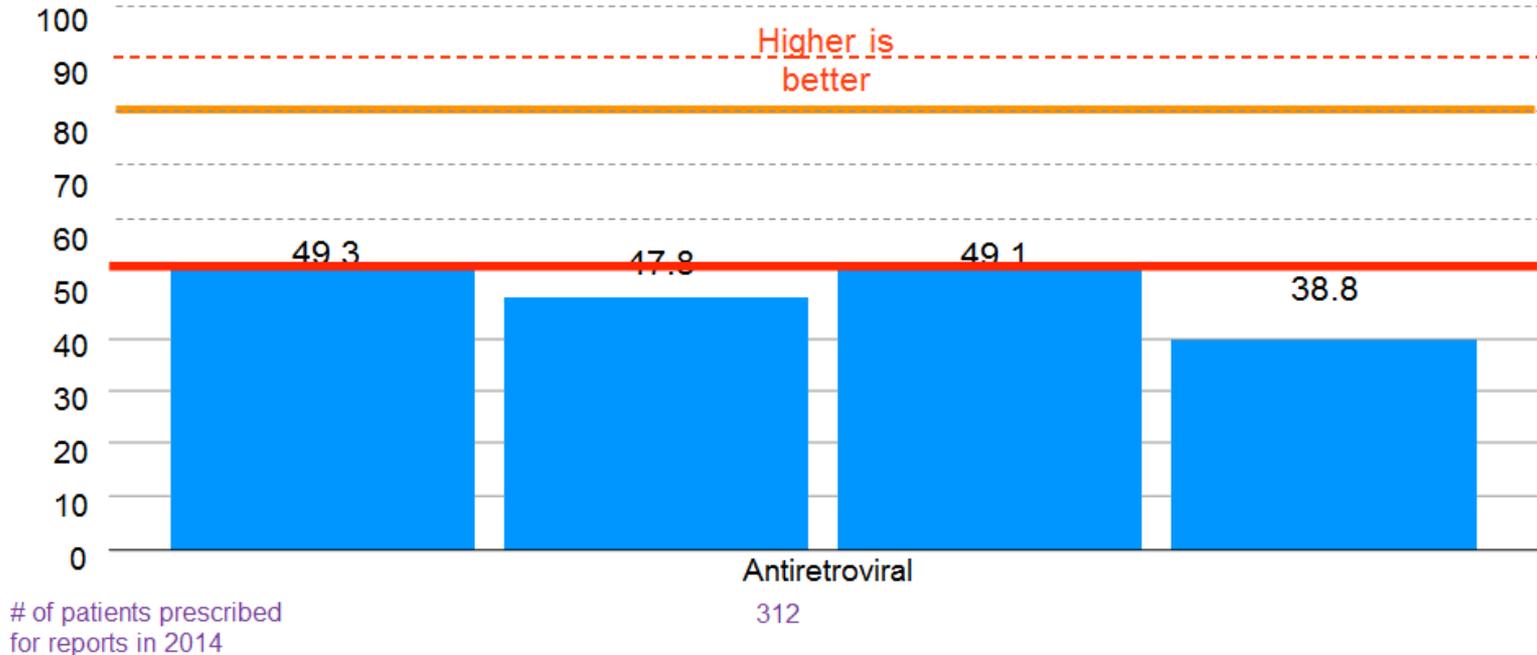
Higher is better

| | | | |
| 49.3 | 47.8 | 49.1 | 38.8 |

Antiretroviral

# of patients prescribed for reports in 2014 — 312

For internal IHS use ONLY Data from 164 sites (100 Tribal & 64 IHS). Collected from ONM reports 2013

Impact

- Increasing the effectiveness of adherence interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments.

World Health Organization, 2003;
Lee JK et al, 2006.

Barriers

- Barriers are individualized to the patient.
- Five Dimensions of Adherence:
    - Social and Economic.
    - Healthcare System.
    - Condition.
    - Therapy.
    - Patient.
- Adherence decreases as the number of barriers for the patient and provider increases.

Osterberg L, Blaschke T, 2005

Shared Responsibility

- Patients are responsible for taking their medications; however:
  - Medication adherence is not exclusively the responsibility of the patient.
  - Medication-taking behavior is complex and involves patients, the health care team, family support, and process components.
- Medication adherence improvements are achieved more often than other aspects of self-management.

Vijan et al, 2005; Rothman et al, 200

SIMPLE

- S=Simplify the regimen.
- I=Impart knowledge.
- M=Modify patient beliefs and human behavior.
- P=Provide communication and trust.
- L=Leave the bias.
- E=Evaluate adherence.

Simplify the Regimen

- Limit polypharmacy.
- Align with patient's lifestyle.
- Coordinate medication lists.

Medication Lists

Personal Health Record

Medication Refills over Time

Automated Medication Refills

Medication Synchronization

Impart Knowledge

- Training.
- Patient Education.

Document Patient Education

Modify Beliefs and Behavior

Provide Communication

RPMS DIRECT

- Message Agent.

Evaluate Adherence

- Subjective.
- Objective.
- Biochemical.

Osterberg L, 2005.

ePrescribing

- 73% of physicians utilize ePrescribing in EHR systems.

Conclusion

- Medication adherence is an important facet of patient care.
- Medication adherence is a problem in the Indian Health System.
- There are many barriers that lead to poor medication adherence. Improving adherence is an individualized process of collaboration, understanding, and support.
- Many techniques can be used to assess and address medication adherence including heath education, health literacy, health communications, patient engagement, and above all – keeping it SIMPLE.

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