



Medication Adherence

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November 23, 2008

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Agenda

- Medication Adherence Domains
- Claims' Limitations
- DMAA Recommendations
- DMAA Considerations
- Validation Study
- Next Steps

Medication Adherence

- “...the extent to which a patient acts in accordance with the prescribed interval and dose of a dosing regimen.”¹
- Adherence/Compliance
- Persistence
- Self-Reported Data

¹Cramer JA, Roy A, Burell A, et al. Medication Compliance and Persistence: Terminology and Definitions. Value Health 2008 2(1): 44-47.

Claims' Limitations

- Administrative claims data
 - Lag/run-out
 - Highly variable information regarding days supply/units for inhalers and liquid medications
- Claims data analysis cannot reveal underlying barriers to adherence (cost, side effects, forgetfulness, etc.)
- Claims data analysis cannot reveal if the patient actually complied with the prescribed regimen [timing, frequency, restrictions (e.g., with meals, do not crush, etc.)]

DMAA Recommendations²

- DMAA recommends the measure of Medication Possession Ratio (MPR) when assessing outcomes
- MPR is a population-based measure reported as a percentage:
 - Data sources: Administrative pharmacy claims and eligibility data
 - Evaluation Period: A fixed calendar length – 12 months (annual). One month run-out will be allowed for claims lag; therefore, the measure can be calculated at the end of month 13.
 - Enrollment Criteria: A continuous evaluation period with no more than a 45-day gap in pharmacy benefits coverage
 - Denominator: The duration from first (index) prescription to the end of the evaluation period
 - Numerator: The days supplied over the same period

²Outcomes Guidelines Report, Volume 3. DMAA: The Care Continuum Alliance. p56-7.

■ DMAA Recommendations² (cont.)

- What to Report: MPR as a percentage and by quartiles (e.g., box plot/box-and-whisker diagram)
- Whom to Report: Reported by condition and by drug classes applicable to that condition. Individuals with multiple conditions [e.g., coronary artery disease (CAD) and diabetes] will be counted for all conditions and for all appropriate drug classes
- Inclusion/Exclusion Criteria:
 - Intended for oral medications only.
 - Excludes inhalers and liquids.
 - Intended for more prevalent common chronic conditions [CAD, congestive heart failure (CHF), diabetes, hypertension and hyperlipidemia]
 - Index prescription must occur within the first six months of the evaluation period
 - Excludes “carry in”
 - Excludes “carry out”

²Outcomes Guidelines Report, Volume 3. DMAA: The Care Continuum Alliance. p56-7.

Representative Drug Class List

	CAD	CHF	DIAB	HYPL	HTN
<input type="checkbox"/> Angiotensin II Converting Enzyme Inhibitors	■	■	■	□	■
Angiotensin II Receptor Antagonists	■	■	■	□	■
Beta Blockers	■	■	□	□	■
Biguanides	□	□	■	□	□
Bile Acid Sequestrants	■	□	□	■	□
Calcium Channel Blockers	■	□	□	□	■
Cardiac Glycosides	□	■	□	□	□
Diuretics	□	■	□	□	■
Fibric Acid Derivatives	□	□	□	■	□
Hydroxymethylglutaryl Reductase Inhibitor Combos	□	□	□	■	□
Hydroxymethylglutaryl Reductase Inhibitors	□	□	□	■	□
Sulfonylureas	□	□	■	□	□
Thiazolidinediones	□	□	■	□	□

KEY:

CAD Coronary Artery Disease
CHF Congestive Heart Failure
DIAB Diabetes
HYPL Hyperlipidemia
HTN Hypertension



■ Included for condition/drug class
□ Not included for condition/drug class

Note: Combination drugs (e.g., ACE + Diuretic) will be measured in all conditions and all classes to which that medication belongs.

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Potential Confounders

- Concomitant Therapy
- Contraindications
- Medication Switches
- Samples
- Overlap
- Clinical Utilization
- Discount Drug Programs

DMAA Considerations

- Specific topics of consideration during the medication adherence workgroup's deliberations included:
 - Adherence versus Compliance
 - Orals, Inhalers and Liquids
 - Feasibility, Practicality and Priorities
 - Conditions to include
 - Carry In, Carry Out, FFDO
 - MPR “Benchmark”

■ MPR – Is this it?

- Only one portion of the overall adherence domain
- Requires continuous quality improvement
- Requires diverse (socioeconomic, geographic, MCOs, employers, etc.) industry comparison and additional validation testing

Validation Study

- Used DMAA methodology
- Caveats: adults (18+ yo); individual MPR capped at 100% (days supply \leq days)
- Service dates: CY2007
- Paid dates: CY2007 + January '08 (claims lag)
- Two business segments represented:
 - Employer group (58+K lives)
 - Health plan (575+K lives)
- MPR calculated by condition (%), per condition/per drug class (%) and via quartiles

Validation Results

- Employer condition-specific MPR ranged between 75.4% - 76.5%
- Plan condition-specific MPR ranged between 78.9% - 83.6%
- Based on another CVS Caremark product line (Adherence to Drug Therapy program) that computes MPR (albeit, slight differences), these results are within the 2007 book of business 95% confidence interval for employer group and health plan populations



Next Steps

- Continuous Quality Improvement (CQI) of MPR
- Persistence
- Self-Reported Data
 - Barriers to Adherence
 - Confirming Adherence to Taking Medication as Prescribed



Thank You!

Questions?

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