

Risk Adjusting Quality Measures: A Role for Claims Data



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- DHS received **Grant funding from CMS** to build capacity to collect, report, and analyze data on the Core Set of Health Care Quality Measures.
- MN DHS contracted with **The Lewin Group** to develop risk adjustment methodologies for use with the Adult Core Set, and technical assistance to implement risk adjustment of quality measures.
- The goal of risk adjustment is to **account for variability of patient population variables outside of provider or payer control**, to more equitably compare the quality of care by providers, accountable care organizations (ACOs) and managed care organizations (MCOs).
- Results: The results show the impact of using Adjusted Clinical Groups (ACGs) model in combination with socio-demographic member characteristics.

The Process



Used logistic regression to identify variables with strongest relationship to each quality measures.

Utilized MN DHS's expertise to identify other variables to consider based upon policy considerations.

Took results of models to derive risk adjusted adherence rates for each MCO.

Compared *expected rate* (from model) with *observed rate* (from data).

List of Quality Measures



- Hemoglobin A1c testing*
- Follow-up after mental illness hospitalization*
- Antipsychotics adherence for schizophrenics*
- Antidepressant medication management*
- Drug or alcohol dependence treatment*
- Diabetes short-term complications admissionⁿ
- Breast Cancer Screening*
- Cervical Cancer Screening*
- Women's Chlamydia Screening*
- Annual monitoring for patients taking ACE inhibitors, ARBs, digoxin, diuretics, or anticonvulsants*
- COPD or asthma admissionⁿ
- Heart failure admissionⁿ
- Postpartum care*

*NCQA/HEDIS Quality Measure

ⁿAHRQ Quality Measure

List of Risk Adjustment Variables Considered



Clinical/Health Status

- Developmental Disability
- Disability (Enrollment)
- Frailty
- Mental Health
- Health Status (ACG RUB value as the indicator)
- Substance Abuse
- Dialysis

Utilization

- Emergency Department Visit
- Inpatient Hospitalization
- Major Procedure
- Nursing Service
- Outpatient Visit
- Providers (Count)
- Saw a Specialist
- Saw a Generalist

Sociodemographic

- Age
- Education
- Gender
- Language
- Metropolitan vs. Rural County
- Race/Ethnicity
- Families and Children Medical Assistance
- Immigration Status



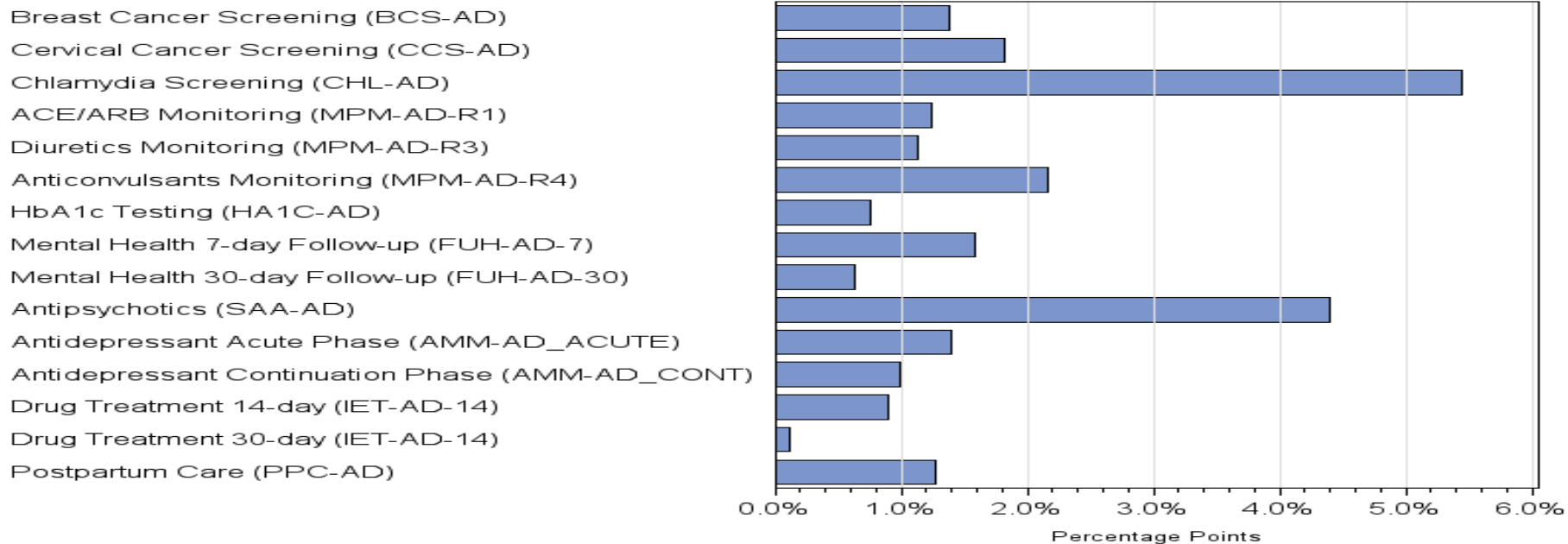
- Almost all the quality measures were able to be risk adjusted.
 - **Only two measures could not be risk adjusted** (annual monitoring for enrollees on digoxin and the congestive heart failure admission) due primarily to **limited sample size**.
- **Health risk and age** were the most influential factors in risk adjustment of quality measures.
 - Health risk was statistically significant in 94% of quality measures.
 - Age was statistically significant in 71% of quality measures.
- For most MCOs the risk adjusted quality measure adherence rates differed from their unadjusted rates by a **small amount**.
 - The degree of difference varied by quality measure.

Overall Results (Cont.)

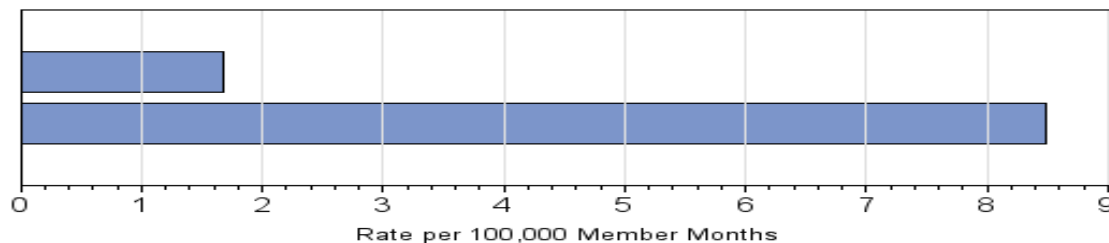


- In addition to **age**, **other sociodemographic variables were also important.**
- While commonly statistically significant, **the amount of influence from this group of risk factors was generally smaller** relative to health risk and age.
- The influence of **sociodemographic factors was mixed**
 - No clear, describable pattern across the quality measures
 - Both positive and negative influences
- Results only apply to **THIS** set of risk factors. Other factors may be more influential on quality scores/adherence rates.

Aggregate Impact of Risk Adjustment



Diabetes Admission (PQI01-AD)
 COPD/Asthma Admission (PQI05-AD)

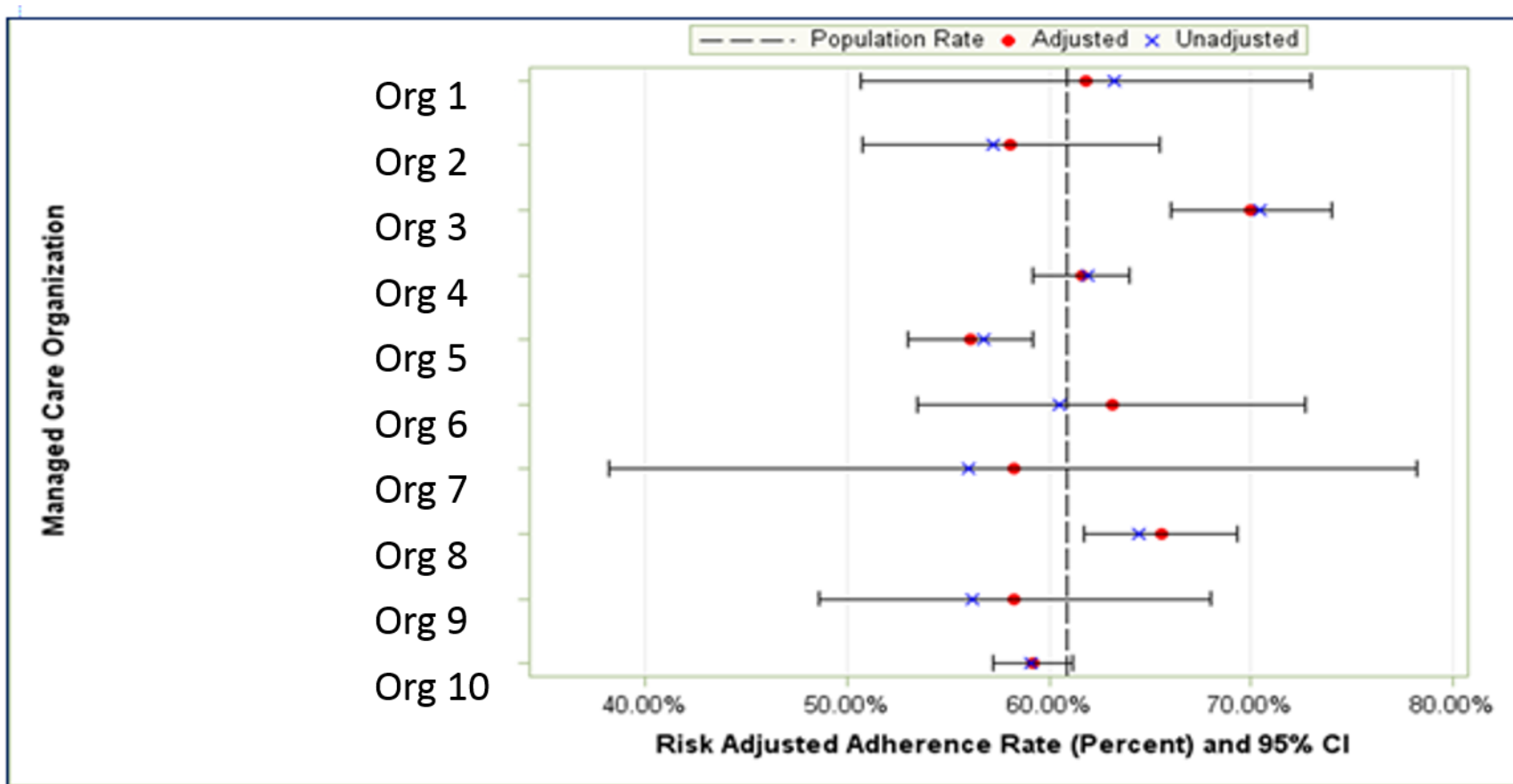


Ex Specific Quality Measure: *Women's Chlamydia Screening*



- **Health status had a larger impact.**
 - Healthy enrollees (i.e., low health risk) and members with a disability were **less likely** to be screened.
- Race/Ethnicity was an influential sociodemographic variable.
 - Non-white enrollees were significantly more likely than white enrollees to receive chlamydia screening.
- Metropolitan County was another influential sociodemographic variable.
 - Enrollees who live in a metropolitan county were significantly more likely to receive chlamydia screening.

CHL Screening Rates By Example Organization RA & NON RA



*"Population Rate" refers to actual rate for population (i.e., population numerator/population denominator)

Policy Implications



- These results show that MCO populations in MN vary in clinical and sociodemographic variables
 - variation does impact the results of several quality measures.
- Adjustment for clinical & demographic variables may help “level the playing field” when comparing quality measure performance , **but the impact is modest in most cases**
- Consider other methods to supplement the approach e.g. stratification by SES variables vs risk adjustment