Predictive Modeling

Analyzing Medicaid Data to Identify High-Opportunity Patients in Washington State

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Center for Health Care Strategies

Medicaid Best Buys 2008: Using Predictive Modeling to Pinpoint “High-Opportunity” Medicaid Beneficiaries

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Which PM tools do we currently use?

- Contracted with external vendor to use ImpactPro in care management pilots implemented in early 2007
  - Chronic Care Management pilots for high risk Medicaid-only ABD clients
  - Intensive Chronic Care Management pilot for ABD clients using in-home LTC services
- Chronic Illness and Disability Payment System (CDPS) and Medicaid-Rx tools developed by Kronick and Gilmer have been integrated into an agency-wide analytical data warehouse
How do we use PM tools?

1. To identify high-risk ABD Medicaid patients to target for care management initiatives
   - Currently focused on risk of high future medical costs

2. To provide information used in care management by clinical staff
   - Disease conditions
   - Pharmacy and medical service use
   - Identification of care gaps based on HEDIS and other care guidelines
How do we use PM tools?

3. As a multi-purpose tool for program planning, monitoring, and evaluation

- Free CDPS and Medicaid-Rx models with risk weights calibrated to the WA State ABD experience

- Underlying disease and pharmacy indicators used to profile client subgroups

- Risk scores and detailed indicators used as baseline “controls” for quasi-experimental program evaluation
Resources required to implement in-house PM tools

- **PM project staff skills**
  - Statistical analysis
  - Data management
  - Communication

- **IT resources**
  - Hardware
  - Software
  - Support staff
Challenges to using PM tools in care management pilots

- Which conditions are impactable?
- How do we match impactable clients to effective interventions?
- How do we engage clients – especially those with mental illness and chemical dependency?
- Timeliness of information for care management
Other challenges

- Integrating Medicaid ABD population data into a tool developed for commercial populations
- Limitations of relying on medical claims data
- Lack of Medicare data for dual eligibles
- Infrequent updating of the Medicaid-Rx tool
Future Directions

- Continue to use PM to identify high-risk Medicaid patients to target for care management initiatives

- Integrate medical, mental health, substance abuse and long-term care service data:
  - To create a more complete profile of the patient’s risk factors
  - To identify risk factors associated with a wider range of health service outcomes:
    1. “Avoidable” ED visits
    2. Psychiatric inpatient stays
    3. Deterioration of functional status leading to increased LTC service use
    4. Institutionalization