David Mancuso, PhD • November 17, 2016

DSHS | Research and Data Analysis

Washington State Department of Social and Health Services 1

Analytics in the Social and Health Service Environment

- **Medicaid expenditures are disproportionately concentrated in populations with multiple comorbid physical and/or behavioral health conditions**
- **Overall social and health service program costs are driven by a relatively small number of persons with overlapping risk factors and service needs,** often exacerbated by extreme poverty, trauma, mental illness, substance use disorders, cognitive limitations or functional impairments
- **High-cost clients often have significant social support needs** such as the need for economic, housing or employment support, or interventions to reduce the risk of criminal justice involvement
- **Increased demand to use state agency data to directly inform care**
- **Increased emphasis on quality/outcome measurement and value-based payment structures**

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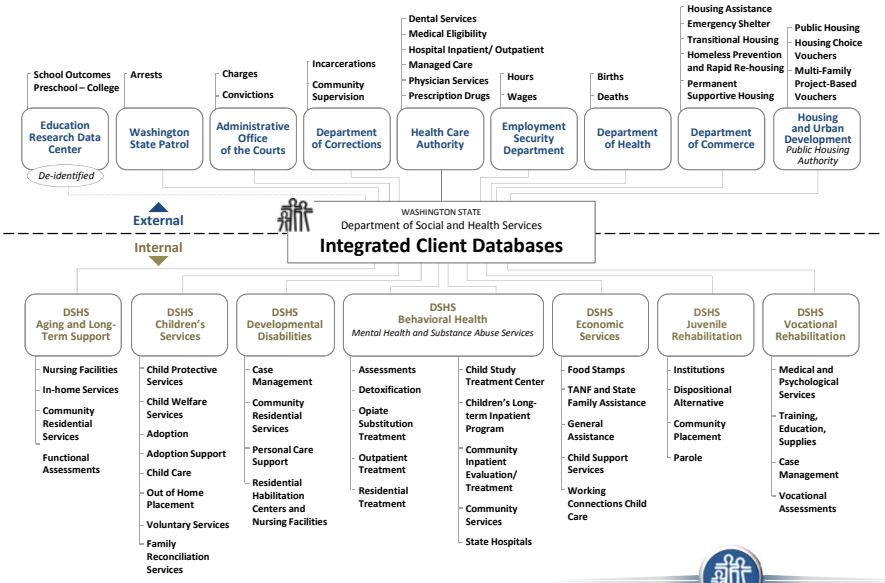
Washington State Department of Social and Health Services 2

How do we use integrated administrative data?

- **Policy analysis**
  - Example: describing the link between ED utilization and prescription narcotic drug-seeking behavior
- **Program evaluation**
  - Example: evaluating the impact of SUD treatment on health care costs and criminal justice involvement
- **Predictive modeling and clinical decision support**
  - Example: dynamic risk scoring to identify high-risk patients for engagement in Health Homes
- **Performance measurement**
  - Example: monitoring health care quality, utilization and "social determinants" outcome measures

Data Sources in the DSHS Integrated Client Databases



Lessons Learned: Data Integration Challenges

- Obtaining the necessary financial resources
- Establishing effective cross-agency governance structures
- Building and maintaining trust among data owners, including addressing privacy concerns
- Conscripting time from state agency subject matter experts
- Maintaining support of constantly evolving state agency leadership
- Maintaining an analytical data infrastructure in a constantly evolving policy, program and IT system environment
- Recruiting and retaining internal staff with analytical expertise, or finding external contractors with relevant subject matter expertise
- Data are plentiful – analytical skills informed by policy and program expertise are scarce

Lessons Learned: Keys to Washington State's Success

- Senior agency leadership recognizing potential for integrated data analytics to support improved service delivery
- Maintaining close connections between analytic staff and program operations
- Focus on supporting service delivery systems rather than "academic" interests
- Maintaining a commitment to analytical integrity to build trust with other agencies, the Legislature, and external stakeholders
- Commitment to engage data owners in timely review of sensitive results before public release
- Initial development occurred within a single large umbrella agency
- Integration of new sources driven by external partner agency interest

Using the Integrated Data Systems to Inform Policy: Program Evaluation

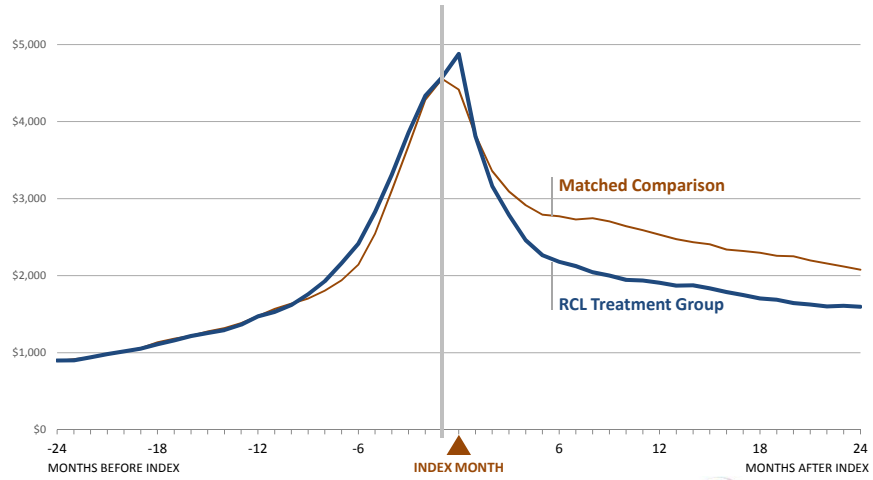
Example: Evaluating the Roads to Community Living Program

- Evaluation of a program designed to facilitate client transitions from nursing facility settings to home- or community-based long-term care
- General approach is relevant to super-utilizer programs and other programs targeting enrollment of persons with "baseline" utilization patterns that are not a credible projection of future utilization
- Addresses regression-to-the-mean issues by matching based on baseline risk factors and utilization dynamics
- Limitations of causal inference should be understood: matching is not a "silver bullet" to mitigate selection bias

TOTAL – ALL LTSS COSTS, INCLUDING RCL DEMONSTRATION COSTS

HCBS, Nursing Home and RCL Demonstration Supplemental Service Costs

MONTHLY AVERAGE ACROSS ALL TREATMENT AND MATCHED COMPARISON GROUP MEMBERS
INCLUDING CLIENTS WITH NO COSTS WHO DID NOT RECEIVE LTSS SERVICES IN THE MONTH



DSHS Research and Data Analysis Division, Client Outcomes Database, August 2016

Peer-Reviewed Journal Quality Is Possible on a Rapid-Cycle Timeline

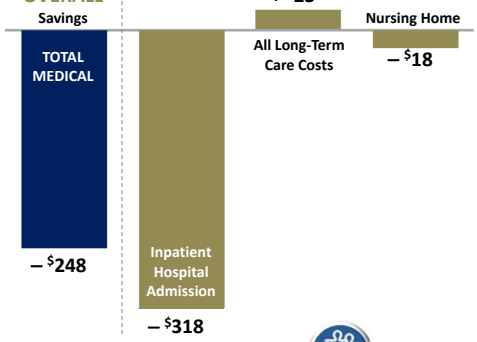
- **Example: "Care Coordination Program for Washington State Medicaid Enrollees Reduced Inpatient Hospital Costs" published in April 2015 Health Affairs**
  - Statistically significant reduction in hospital costs
  - Promising reduction in overall Medicaid medical costs

Care Coordination Program For Washington State Medicaid Enrollees Reduced Inpatient Hospital Costs

http://content.healthaffairs.org/search?submit=yes&fulltext=care+coordination+program+for+washington+state+medicaid+enrollees+reduced+inpatient+hospital+costs&x=0&y=0

Cost Detail

Estimated per member per month impact



Using Integrated Data Systems to Inform Care Delivery: Predictive Modeling and Clinical Decision Support

PRISM: Rapid-Cycle Predictive Modeling and Data Integration in a Clinical Decision Support Web Application

- **Data sources**
  - Medical, mental health and LTSS services from multiple IT systems
  - Medicare Parts A/B/D data integration for dual eligibles
  - LTSS functional assessments
  - Housing status (including some local jail stay data) from the State's eligibility data system
- **Data refreshed on a weekly basis for the entire Medicaid population**
- **Dynamic alignment of patients to health plans and care coordination organizations, with global patient look-up capability for providers**
- **1,000 currently authorized users**
- **700,000 page views in past 12 months**

Selected PRISM Uses

- **Triaging high-risk populations through predictive modeling** to more efficiently allocate scarce care management resources
- **Informing care planning and care coordination for clinically and socially complex persons** through integrated and intuitive display of risk factors, service utilization and treating providers
- **A source of regularly updated client and provider contact information** to support outreach, engagement and coordination efforts
- **Identification of child health risk indicators** including mental health crises, substance abuse, excessive ED use, and nutrition problems
- **Identification of opiate abuse, psychotropic medication polypharmacy and poor medication adherence**

Getty Images

The CMS Blog

Washington MFFS Preliminary Evaluation Report

JANUARY 22

By Patrick Conway, M.D., CMS Principal Deputy Administrator and Chief Medical Officer

Today we released a report summarizing preliminary results from the Washington Health Homes demonstration under the Medicare-Medicaid Financial Alignment Initiative. This demonstration, which began serving enrollees in July 2013, seeks to leverage Medicaid health homes to improve service quality and integration while reducing costs of care for high-risk, high-cost Medicare-Medicaid enrollees (sometimes referred to as "dual eligibles") in Washington State.

More than 10.7 million Americans are enrolled in both the Medicare and Medicaid programs. A longstanding barrier to improving quality and reducing costs of care for Medicare-Medicaid enrollees has been a lack of alignment and cohesiveness between the two programs, including misaligned incentives for payers and providers. The Washington Health Homes demonstration tests new mechanisms to coordinate services across Medicare and Medicaid for Washington State Medicare-Medicaid enrollees, and allows the State and the Federal governments to share in savings resulting from quality improvements.

The preliminary results in this report are based on experience during the first demonstration performance period, from July 2013 – December 2014. Despite the relatively short time period, estimates show a reduction of $21.6 million in Medicare spending relative to a comparison group, representing more than 6% savings. Future analysis will include Medicaid spending estimates as the data become available.

The report also includes early quality and utilization results, eligibility and enrollment data, characteristics of the population eligible for the demonstration, beneficiary focus group findings, and a discussion of the initial implementation experience.

While these findings are preliminary, they provide an encouraging first look at how efforts in Washington to improve quality of care by focusing on the needs of high-risk, high-cost members can reduce Medicare spending.

continued

WA State Medicare-Medicaid Dual Eligible Demonstration produces $21.6 million in Medicare savings in first performance period

PART 4

Using Integrated Data Systems to Measure Performance

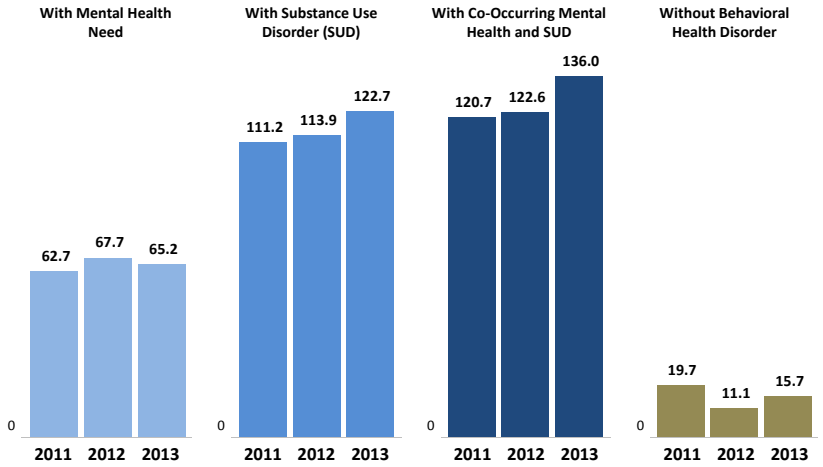
Example: Transitioning SSI Clients from FFS to Managed Care

- **Washington State transitioned disabled Medicaid clients from FFS to managed physical health care in SFY 2013**
- **A broad set of quality and outcome measures are available to assess the experiences of the affected population**
  - ED and inpatient service utilization
  - HEDIS and related quality metrics
  - "Social" outcome metrics
- **Centralized measure production supports stratification (e.g., by behavioral health risk factors) to assess the experiences of subpopulations of interest**

Diabetes Short-Term Complications Admission Rate

Persons 18-64 • PQI-01 • Admissions per 100,000 Member Months

- **Avoidable hospital admissions among SSI clients are driven by behavioral health risk**

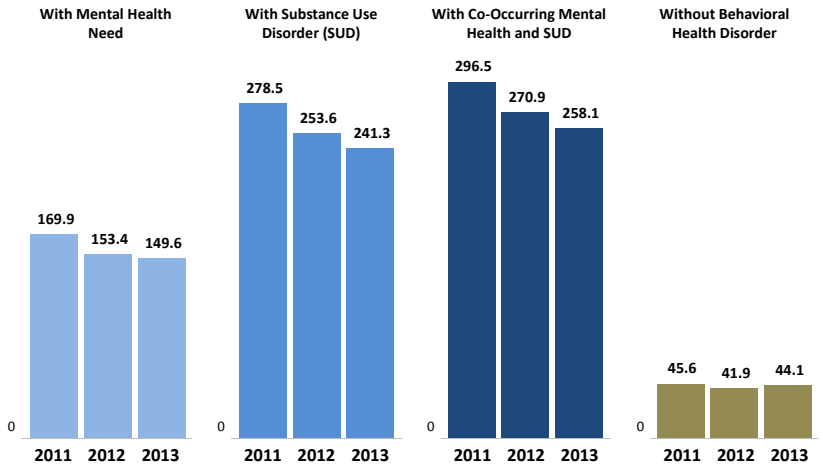


SOURCE: DSHS Research and Data Analysis Division, *Managed Medical Care for Persons with Disabilities and Behavioral Health Needs: Preliminary Findings from Washington State,* JANUARY 2015.

Outpatient Emergency Department Visits

AGES 18-64 • Visits per 1,000 Member Months

- **ED utilization among SSI clients is driven by behavioral health risk**

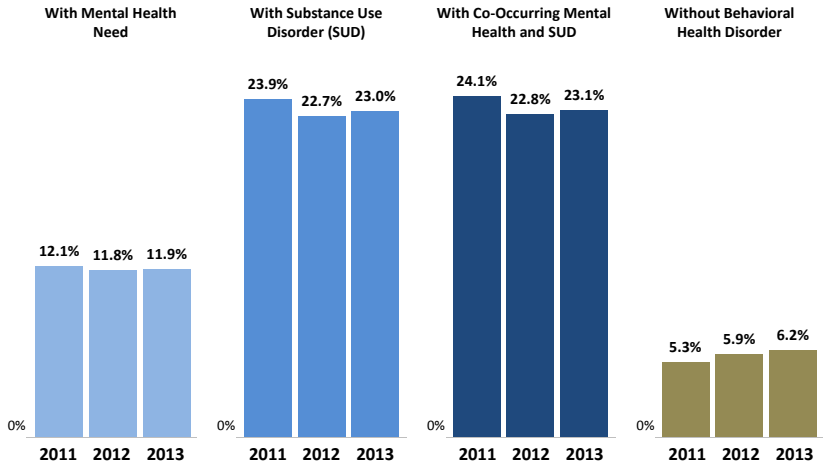


SOURCE: DSHS Research and Data Analysis Division, *Managed Medical Care for Persons with Disabilities and Behavioral Health Needs: Preliminary Findings from Washington State,* JANUARY 2015.

Percent Arrested

Disabled Medicaid Adults Ages 18 – 64 (Excludes Duals)

- **Individuals with substance abuse issues are much more likely to be arrested**



SOURCE: DSHS Research and Data Analysis Division, *Managed Medical Care for Persons with Disabilities and Behavioral Health Needs: Preliminary Findings from Washington State,* JANUARY 2015.

Lessons Learned: Issues to Consider

- **Phase development based on:**
  - Resource availability
  - Source IT system data quality
  - Data owner support
  - Analytical value in relation to agency priorities
- **Potential high-value data integration areas**
  - Integrated analysis of physical and behavioral health data
  - Connecting behavioral health risk and service data to potentially available "social determinant" data: employment, criminal justice involvement, housing services

Questions?

https://www.dshs.wa.gov/sesa/rda/research-reports