

## Impact of Mental Illness and/or Substance Abuse on Diabetes Intervention and Outcome

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### Description

Research suggests that the co-occurrence of mental illness with a chronic medical condition results in greater morbidity, higher cost, and poorer outcomes. This study aimed to further scientific knowledge about the effectiveness of treatments for patients with both diabetes and a behavioral health disorder, including depression, serious and persistent mental illness, and substance abuse. This study lays the foundation for Maine's efforts to identify and implement effective integrated and person-centered interventions to promote the overall health and safety of the complex individuals in the State's publicly funded health and human services system.

### Specific Aims

1. Examine the impact of four behavioral health conditions (mental illness, substance abuse, dual diagnosis of mental illness/substance abuse, and mental retardation/developmental disabilities/traumatic brain injury) on overall medical utilization, cost, and outcomes and on the interventions, quality metrics, outcomes, and costs specific to diabetes.
2. Develop sustainable systems for regular reporting on access, quality, cost, and outcomes across both physical and behavioral health on complex populations managed by DHHS offices.
3. Disseminate results from this study to inform and evaluate policy, programming, and regulatory changes to improve effectiveness of care for Medicaid members with multiple chronic conditions.
4. Inform efforts to develop standardized person-centered analytic systems based on services data to permit cross-State and cross-system comparisons.

### Main Objective

Further scientific knowledge about the effectiveness of treatments for patients with both diabetes and a behavioral health disorder.

### Chronic Conditions Considered

Depression; Serious and Persistent Mental Illness; Substance Abuse; Mental Retardation/ Autism/ Traumatic Brain Injury; Diabetes

### Study Design & Methods

Analytic epidemiologic study

Logistic regression of intervention and outcome variables

### Data Sources & Sample Size

Cohort of 63,141 Maine Medicaid only recipients aged 18-64, with continuous eligibility and full benefits in 2007-2008. Data assembled from Medicaid administrative claims data, and death records from the DHHS Office of Vital Statistics.

### Strategies Addressed from the HHS Strategic Framework on Multiple Chronic Conditions

- 1.B. Define appropriate health outcomes
- 1.E. Promote efforts to prevent occurrence of new chronic conditions
- 4.B. Understand the epidemiology of multiple chronic conditions
- 4.C. Increase clinical research
- 4.D. Address health disparities

# Impact of Mental Illness and/or Substance Abuse on Diabetes Intervention and Outcome (continued)

## Findings

- Persons with behavioral health conditions have higher rates of multiple medical comorbidities, diabetes, diabetes with complications, pre-diabetes, and death than those without behavioral health conditions, and their diabetes is more likely to worsen over time. Those whose behavioral health status becomes more complex are likely to develop worse diabetes.
- Improving behavioral health status protects against worsening diabetes.
- The impact of any one behavioral health disorder on diabetes is generally as great or greater than having multiple medical comorbidities.
- Fragmentation of primary care is higher among those with behavioral health disorders, those with multiple comorbidities, and those with complicated diabetes than among those without these conditions.
- Receiving fragmented primary care at baseline and moving from continuous to fragmented care at follow-up is associated with worse diabetes, while moving from fragmented to continuous care appears protective.
- Persons with behavioral health disorders have significantly higher utilization of all medical services: outpatient, emergency room, hospital, hospital readmission and avoidable hospitalizations.
- The per member per month costs for medical services for those with behavioral health disorders is much higher than the cost for behavioral health services, not only for persons with serious mental illness, but also for the larger population of persons with less functionally impairing mental illness seen in primary care.

## Implications

Coordinated attention from both physical and behavioral health systems of care is needed to improve the outcomes and cost effectiveness of care for Medicaid members with diabetes and other chronic medical conditions and comorbid behavioral health disorders. Systems exploring accountable care options will have difficulty realizing cost savings without integrating attention to behavioral health disorders.

## Publications (as of September 2013)

Publications currently in preparation.

## Posters and Presentations

Freeman E. When might the risks outweigh the benefits in prescribing antipsychotics to MaineCare members? QI Data Snapshot presented at the Office of Continuous Quality Improvement Services in the Maine Department of Health and Human Services; 2012 Sept 21; Augusta, ME.

Freeman E. Maine multiple complex conditions project: Physical and behavioral factors influencing diabetes interventions and outcomes for behavioral health populations. Poster presented at: Leveraging Knowledge and Action to Improve Health Care Quality. 6th Annual Conference of the Agency for Healthcare Research and Quality; 2012 Sept 9–12; Bethesda, MD.

Freeman E. Fragmentation of Care: Webinar presented on September 14, 2012. PowerPoint available at <http://www.mainemcc.org/>



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