

Health Care Coverage, Access, and Cost: Wisconsin's Medicaid and BadgerCare Programs

A Tour of Research Underway at the UW Population Health Institute

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UNIVERSITY OF WISCONSIN

Population Health Institute

Translating Research for Policy and Practice

Project Team

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Medicaid / BadgerCare Projects

- Enrollment, Take-up and Churning (*HSR*, 2011)
- Auto-enrollment (*MMRR*, June 2012)
- Crowd-out (NBER WP # 17009)
- Effect of Childless Adult Coverage on the Use of Health Care
- Innovative use of Health Needs Assessment in Medicaid Managed Care
- Effect of Public Insurance for Childless Adults on Labor Supply
- Medicaid Medical Homes for High Risk Pregnant Women

Funders

Completed: RWJF, DHS

New funding:

- RWJF SHARE:
 - Adult Coverage – Affects on Utilization, Cost
 - HNA – Predictive Value
- ICTR-CAP
 - Marshfield Medicaid Utilization
- W.E. Upjohn Institute for Employment Research
- UC-Davis Center for Poverty Research
 - Labor Market Impact Study
- UW Partnership Fund
 - Medicaid Medical Homes for High Risk Pregnant Women

ESTIMATES OF CROWD-OUT FROM A PUBLIC HEALTH INSURANCE EXPANSION
USING ADMINISTRATIVE DATA

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Working Paper 17009
<http://www.nber.org/papers/w17009>

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
May 2011

HSR

Health Services Research

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DOI: 10.1111/j.1475-6773.2010.01215.x

USING STATE-LEVEL EVIDENCE TO INFORM NATIONAL POLICY: RESEARCH
FROM THE STATE HEALTH ACCESS REFORM EVALUATION (SHARE) PROGRAM

Wisconsin's BadgerCare Plus Reform: Impact on Low-Income Families' Enrollment and Retention in Public Coverage

*Lindsey Jeanne Leininger, Donna Friedsam, Laura Dague,
Shannon Mok, Emma Hynes, Alison Bergum,
Milda Aksamitauskas, Thomas Oliver, and Thomas DeLeire*

Medicare & Medicaid Research Review

2012: Volume 2, Number 2

*A publication of the Centers for Medicare & Medicaid Services,
Center for Strategic Planning*

Wisconsin's Experience with Medicaid Auto- Enrollment: Lessons for Other States

Thomas DeLeire¹, Lindsey Leininger², Laura Dague¹, Shannon Mok³, Donna Friedsam¹

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State Health Access Reform Evaluation



Robert Wood Johnson Foundation



February 2011

The Target Efficiency of Online Medicaid/CHIP Enrollment: An Evaluation of Wisconsin's ACCESS Internet Portal

– Lindsey J. Leininger, Donna Friedsam, Kristen Voskuil, Thomas DeLeire

University of Wisconsin Population Health Institute



Robert Wood Johnson Foundation



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State Health Access Reform Evaluation

October 2009

Wisconsin's BadgerCare Plus Coverage Expansion and Simplification: Early Data on Program Impact

– Donna Friedsam, M.P.H., Lindsey Leininger, Ph.D.,
M.P.P., Thomas R. Oliver, Ph.D., Thomas DeLeire, Ph.D.



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Issue Brief

**Online Application
for Medicaid and
BadgerCare**
How Efficient Relative to
Other Application Venues?

Wisconsin has led states in building automated online processes to apply for health insurance coverage through Medicaid and BadgerCare and for other public programs. ACCESS, Wisconsin's online application system, has received attention for its reported success in enrolling users into programs, for its relative ease of use, and for its administrative simplifications.^{1,2}

Most recently, Wisconsin has been awarded a federal Early Innovator grant, which will be used to further expand the ACCESS platform

Presentations

- Academy Health Annual Research Meeting
 - Association of Public Policy and Management (APPAM)
 - American Society of Health Economics (ASHE)
 - Population Association of America (PAA)
 - National Bureau of Economic Research (NBER)
-
- Briefings: DHS Secretary, Medicaid Director, staff
 - Pop Health Sciences Poster Sessions
 - La Follette School of Public Affairs Seminar



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Sitemap

Search

HOME

ABOUT US

PROGRAMS

PUBLICATIONS

EVENTS

Home > Programs > Health Policy >

Cost, Coverage, & Access

Coverage and Access

Evaluation of BadgerCare Core Plan for Adults without Dependent Children (“Childless Adults”)

- Report #1: Evaluation of Wisconsin’s BadgerCare Plus Core Plan for Adults without Dependent Children: How Does Coverage of Childless Adults Affect Their Utilization?
- Report #2: Evaluation of Wisconsin’s BadgerCare Plus Core Plan for Adults without Dependent Children: The Utility of the Health Needs Assessment (HNA)

Cost, Coverage, Access, Financing
Publications & Presentations

Evaluation of Wisconsin’s BadgerCare Plus Health Care Coverage Program Final Reports, December 2010

- Report #1: Executive Summary Findings on Enrollment, Take-Up, Continuity, Target Efficiency, and Participation in Employer-Sponsored Insurance Coverage
- Report #2: Enrollment, Take-Up, Exit, and Churning: Has BadgerCare Plus Improved Access to and Continuity of Coverage?
- Report #3: Target Efficiency and the Displacement of Private Insurance: How Many New BadgerCare Enrollees Came from the Uninsured?
- Report #4: Wisconsin’s Lessons about the Potential of Medicaid Auto-Enrollment
- Report #5: Wisconsin’s On-Line System for Medicaid Application and Enrollment: Who Uses It? And Does it Increase Take-Up of Benefits?
- Report #6: Has Wisconsin Achieved the Policy Goal of 98% Access to Health Insurance?

Data Sets

- Medicaid CARES Eligibility and Enrollment
- Medicaid/BadgerCare Claims
- TPL – Third Party Liability (DHS)
- EVHI – Employer Verification of Health Insurance (DHS)
- Unemployment Insurance (DWD)
- ERISA self-insured employers (U.S. DOL)
- HNA - Health Needs Assessment (DHS)
- Wisconsin Health Information Exchange (WHIE)
- ACS and CPS (U.S. Census)
- Milwaukee County GAMP Claims
- Marshfield Clinic Claims
- Family Health Survey
- Vital Statistics – Birth and Death records
- HMO High Risk Pregnancy Registry

Medicaid / BadgerCare Projects

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Example of Completed Research

Estimates of Crowd-Out from a Public Health Insurance Expansion Using Administrative Data

Research Question: To what degree do new enrollees in public health insurance come from private sector coverage?

Policy Treatment

Wisconsin expanded Medicaid in February 2008 to two populations:

- All children without access to insurance (no income limits)
- Parents and caretaker relatives with family incomes below 200% of the Federal Poverty Level

Approach

- Use set of linked administrative databases from Wisconsin to estimate:
- % of new public enrollees with access to private health insurance at the time of their enrollment
- % of new public enrollees uninsured at time of enrollment
- % of new public enrollees that dropped private coverage in the six months prior to or following enrollment

Matched Administrative Data

Combine four administrative datasets using SSNs and FEINs:

- CARES: Wisconsin's program eligibility database;
- TPL: Wisconsin's Third Party Liability database;
- UI: Unemployment Insurance and quarterly wage records; and
- DOL: a U.S. Department of Labor database of all self-insured firms.

Monthly enrollment data for a total of 1,392,185 new enrollees in 433,525 unique households.

Implementation

We measure the probability of having private employer-sponsored insurance at the time of enrollment as:

$$P(ESI) = P(ESI|F) * P(F) + P(ESI|SI) * P(SI)$$

where

- $P(ESI|F) * P(F)$, or P(ESI at fully-insured firm) is observed from TPL data
- $P(SI)$, P(Employed at self-insured firm) is observed from UI/DOL data
- $P(ESI|SI)$, P(ESI at self-insured firm — Employed at self-insured firm) is estimated from survey data

We also provide upper and lower bound estimates by making alternative assumptions about $P(ESI|SI)$.

Conclusion

We use state administrative data on insurance liability to measure the proportion of public insurance enrollees with private insurance at the time of enrollment and those who dropped insurance prior to or after enrolling.

- Between 16.0% and 28.7% of public insurance enrollees in the post-reform period had private insurance
- Between 4.7% and 17.4% dropped this coverage within 6 months of enrollment
- An additional 2.3% of enrollees dropped coverage prior to enrolling
- We estimate 'crowdout' of 7% to 19.7%

Different from typical measures: not a measure of counterfactuals, only accounts for actual public enrollees.

Expanding Coverage to Uninsured Childless Adults: Effect on the Use of Health Care

Research Question:

- Does covering the uninsured with public insurance reduce the ineffective and inappropriate use of medical care, increase the use of primary and preventive care, and improve health?

Why is this question relevant for policymakers?

- The Affordable Care Act will expand Medicaid coverage to 138% FPL for all individuals, including childless adults
- The 25.2 million uninsured childless adults in the U.S. account for 57.2% of all uninsured non-elderly in the U.S.
- Of all childless uninsured childless adults, 9.6 million (38.4%) will be eligible for the coverage under the Medicaid expansion to those with incomes less than 138% FPL (Dubay et al., 2009)

BADGERCARE+ Core Plan:

Expansion of Coverage to Childless Adults

- In January 2009 Wisconsin began a new public program for uninsured childless adults <200% FPL
 - Coverage of services is similar to, but more limited than, Medicaid
- Included the automatic enrollment of roughly 12,000 very low-income uninsured in Milwaukee Co. who were part of the Milwaukee County General Assistance Medical Program (GAMP)

Quasi-Experimental Study Design

- Take advantage of the individuals in GAMP system being automatically enrolled into BC+ Core
- An exogenous change from uninsured to publicly insured
 - Move occurred because of a policy change and roll-out of a new program, not because of a choice to enroll
- We have both pre- and post-enrollment medical claims for this population
- Comparison group
 - Low income BC+ adult enrollees from Milwaukee County

External Validity:

How Representative is the GAMP Population?

- Low-income population in Milwaukee County
- Chronically Ill
- Covered by a decent health safety net
 - Perhaps had better access to care than a `typical' uninsured person?
 - FQHCs are widespread nationally, but are not everywhere
 - DSH payments to hospitals to care for indigent populations

Research Question

Does enrollment into Medicaid (from Uninsured / GAMP) lead to changes in the use of:

- Inefficient care
 - Total Emergency Department (ED) visits
 - Avoidable or unnecessary ED visits
- Hospitalizations
 - Avoidable hospitalizations
- Outpatient care
 - Primary / Preventive Care
 - Specialty Care

How Do Public Insurance Expansions Affect Utilization

1. “Access” Effect: insurance should increase utilization
2. “Efficiency” Effect: access to primary and specialty care should reduce inefficient use of care (e.g. ED)
3. “Health” Effect: both 1 and 2 should improve health and reduce hospitalizations

Previous studies tend to find that insurance coverage increases utilization, including both ED use and hospitalizations

- Andersen et al., 2011; Finkelstein et al., 2011; Card et al., 2009; Dafney and Gruber, 2005

Data

- Medicaid claims from the Wisconsin administrative claims database (interChange) system
- All claims for BC+ CORE enrollees for 2009
- All claims for GAMP enrollees from 2008
- Match GAMP claims to BC+ CORE claims at the individual level (using SSN)
- 9,619 successful matches

Methods

- 2 approaches:
- Pre-post
 - 9,619 GAMP population enrolled into CORE
 - Compare outcomes in 2008 (under GAMP) with outcomes in 2009 (under CORE)
 - Individual fixed effects model, with month dummies and controls for exposure
- Difference-in-Differences
 - Same, but also use a sample of BC+ adults as controls
 - Milwaukee County, income < 150% FPL

Outcomes

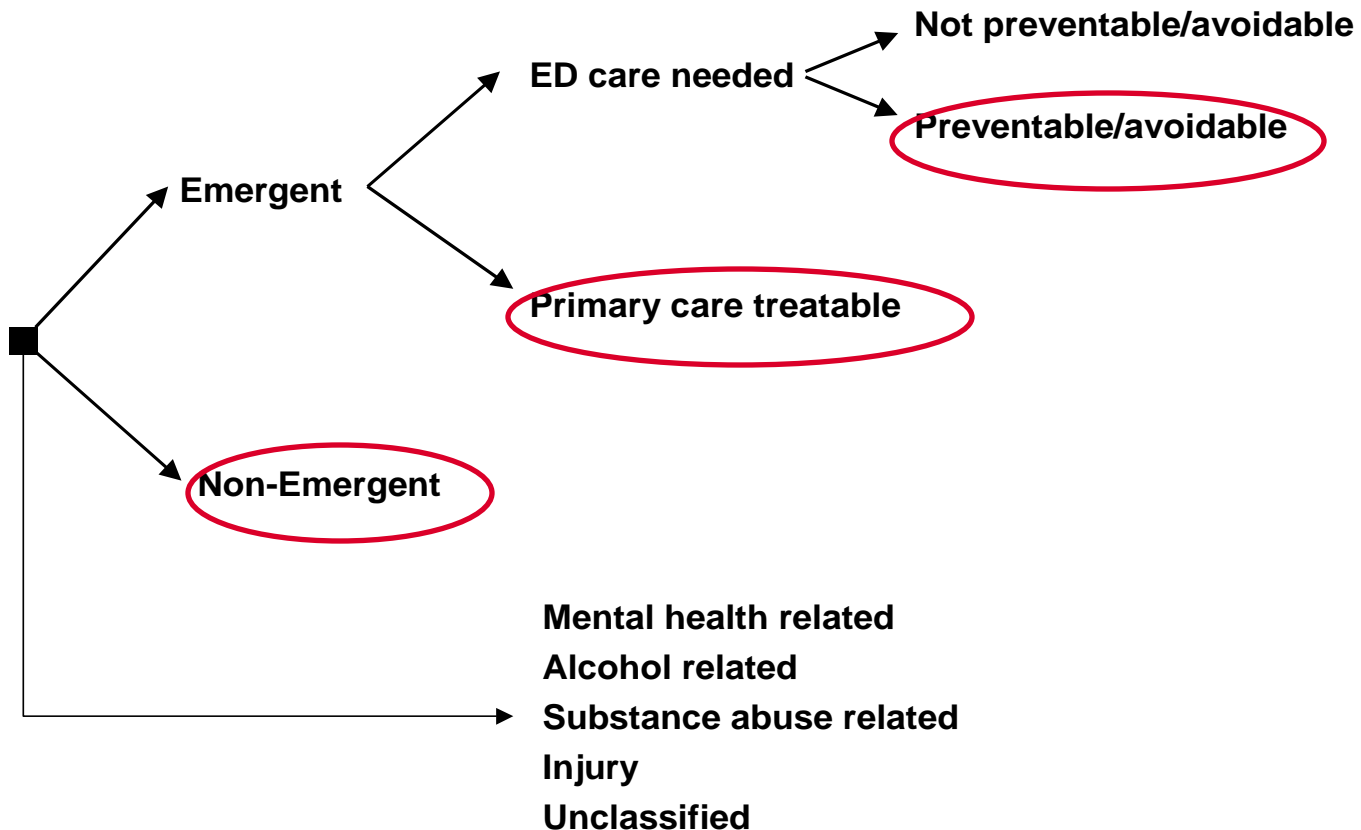
- Emergency Department (ED) visits
 - Ambulatory Care Sensitive (ACS) ED visits (Billings et al., 2009)
- Hospitalizations
 - ACS Hospitalizations: AHRQ (2010) Prevention Quality Indicators (PQIs)
 - “Conditions for which good outpatient care can potentially prevent the need for hospitalization, or for which early intervention can prevent complications or more severe disease”
- Outpatient visits
 - Primary , Preventive, Episodic, Therapeutic, and Specialist, Care: total, by provider type

ACS ED Visits

- Non-emergent - immediate medical care was not required
- Emergent/Primary Care Treatable - care could have been provided in a primary care setting
- Emergent - ED Care Needed - Preventable/Avoidable - the emergent nature of the condition was potentially preventable/avoidable
- Emergent - ED Care Needed - Not Preventable/Avoidable
- Injuries, mental health, alcohol, drug

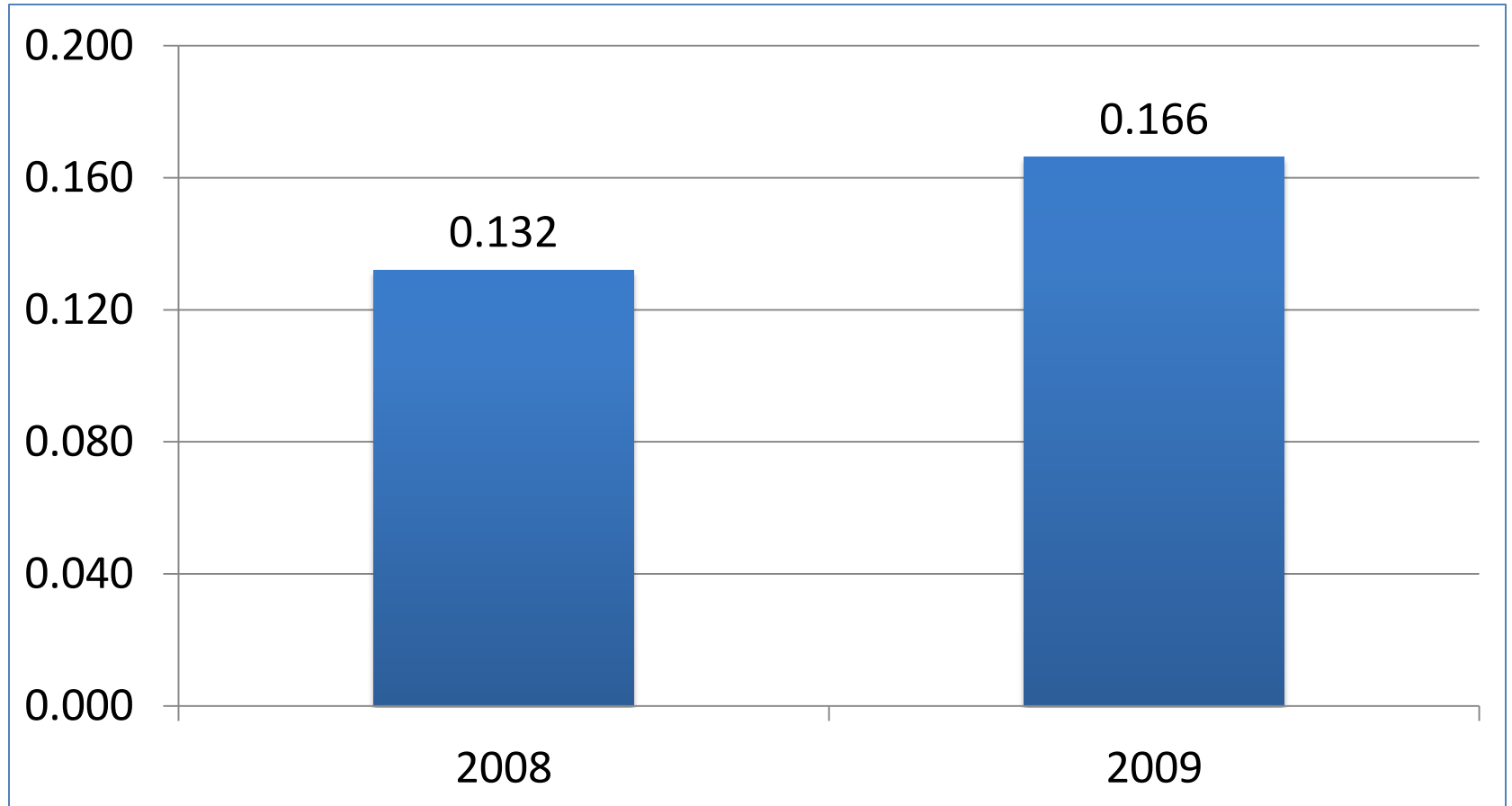
Classification of ED Visits

NYU EMERGENCY DEPARTMENT
CLASSIFICATION ALGORITHM [V2.0]

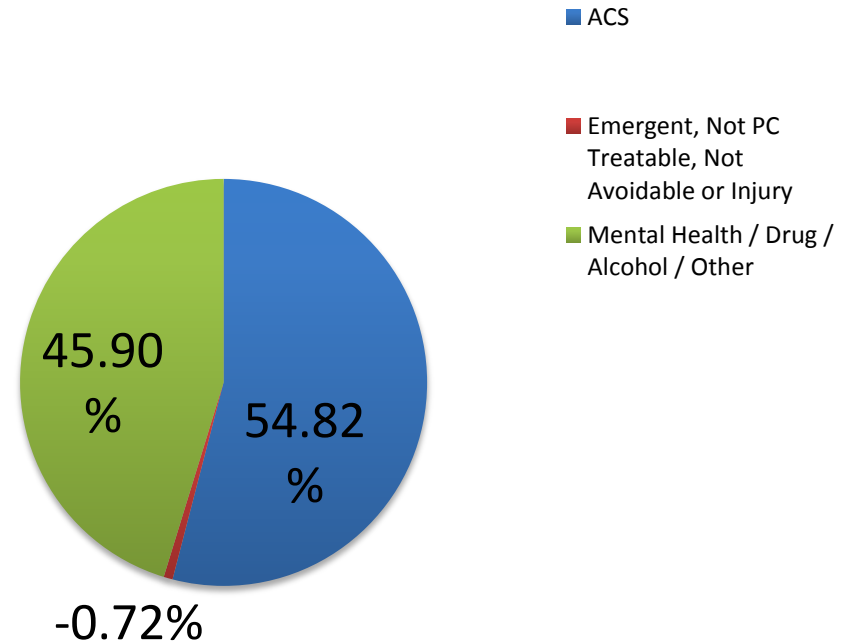
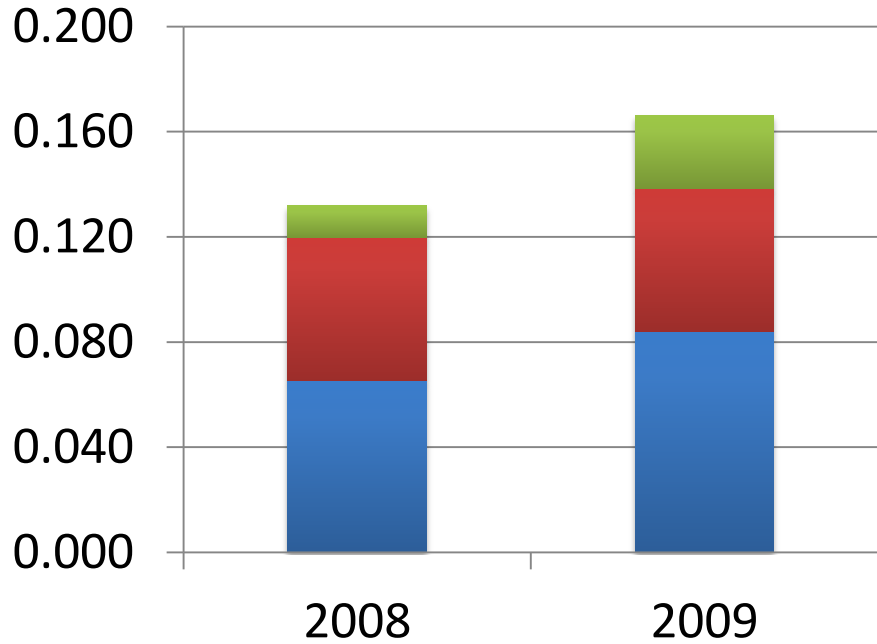


Results

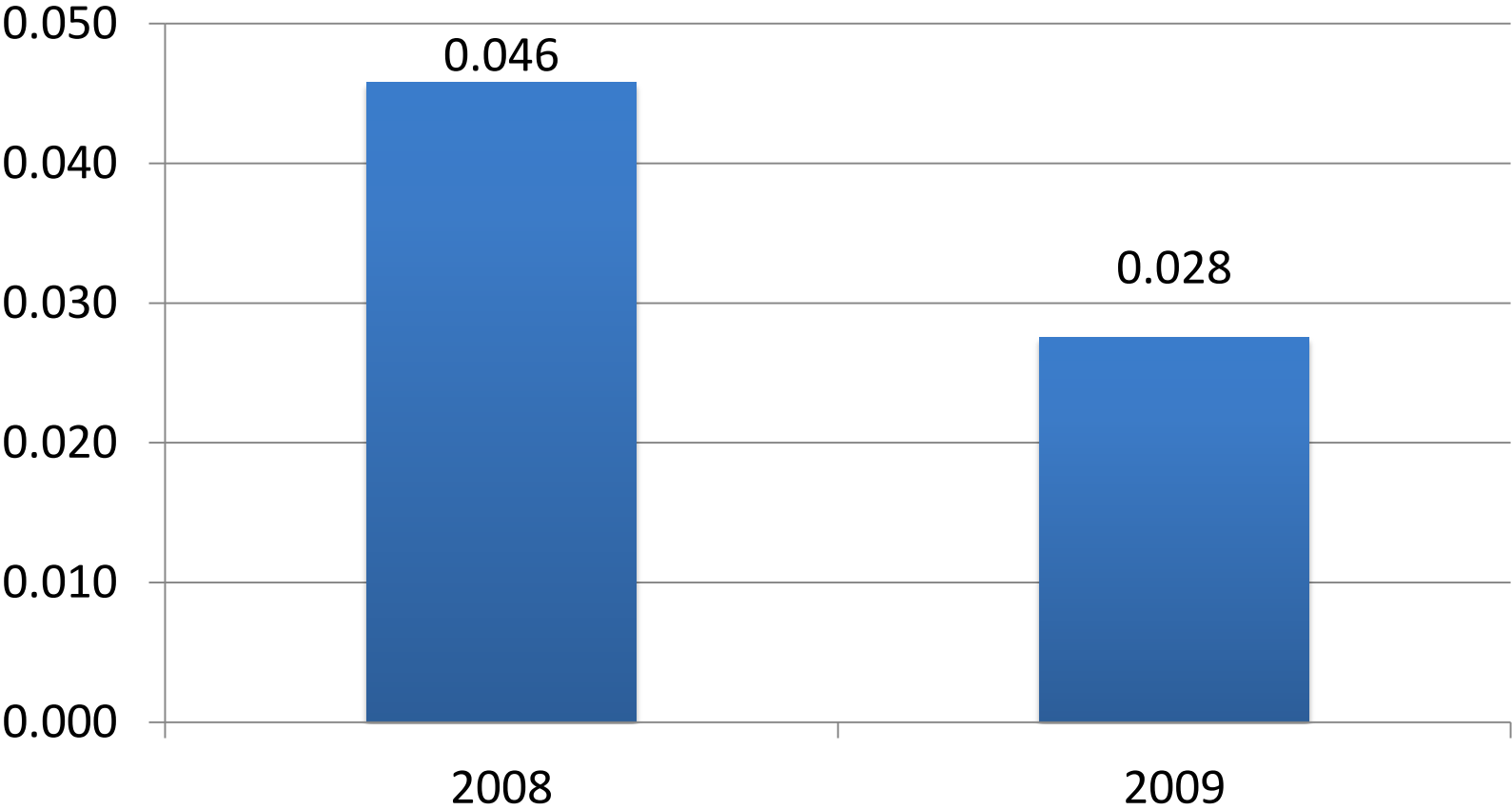
ED Visits per Month Increase 26%



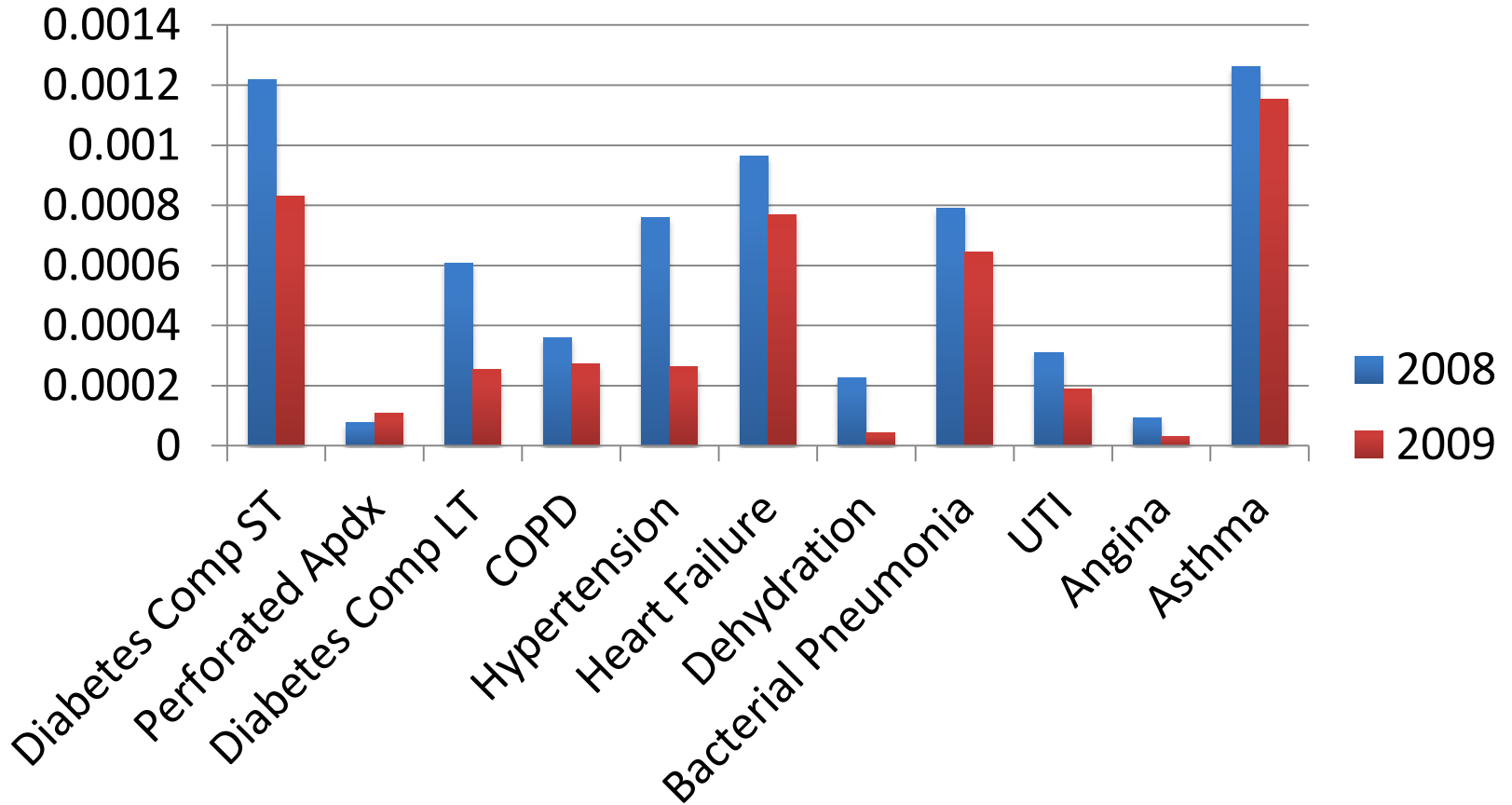
Increase Driven by ACS and Behavioral Health Visits



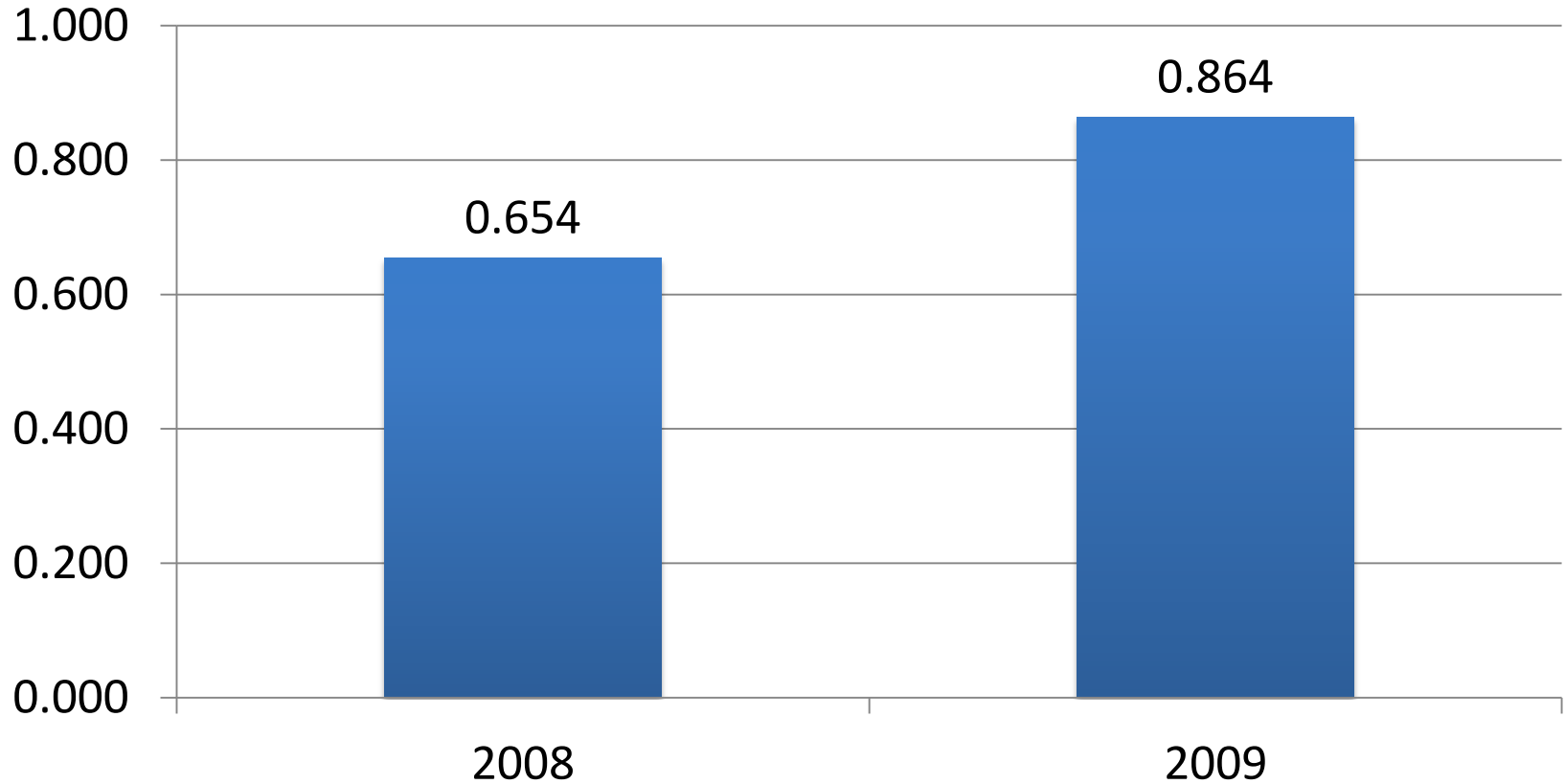
Monthly Hospitalization Rate Declines 40%



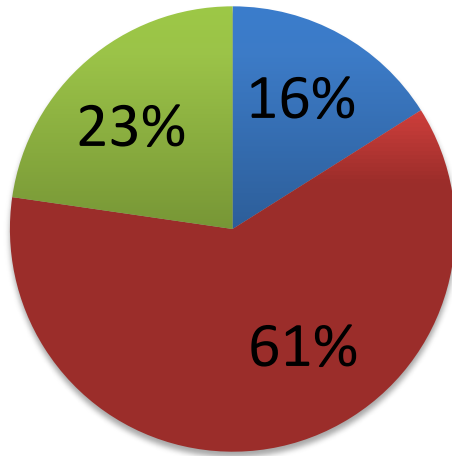
Declines in ACS Hospitalization Rates



Total Outpatient Visits per Month Increase 32%

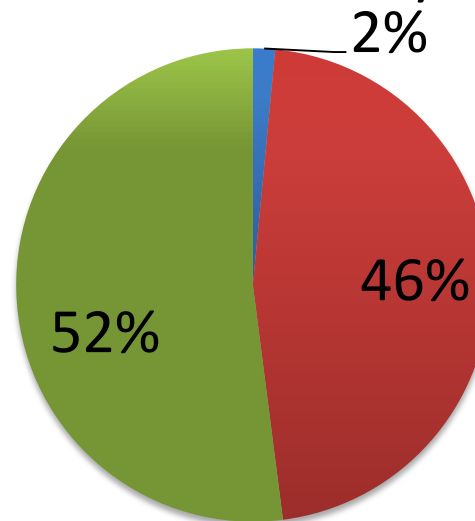


Increase Driven by Specialty Care



- Primary Care Provider
- Specialist
- Unknown / Missing

Increase Driven by Episodic / Therapeutic Care



- Preventive
- Episodic
- Therapeutic

Summary

- Increase in ED visits
 - Driven by increase in ACS visits
- Decline in hospitalizations
 - Corresponding decline in PQIs
- Increase in outpatient visits
 - Driven by increases in the use of specialty care, behavioral health services, and PT/OT not by increased use of preventive or primary care
- Strong research design; non-representative (but still relevant) population

Policy Implications: Access and Quality

- Good news: declines in total hospitalizations and in hospitalizations related to preventable disease
 - Almost certainly indicates an improvement in the health in this poor and previously uninsured population
- Bad news: ambulatory care is increasingly happening in the ED, rather than in a primary care/community setting
- Despite expanding public insurance, we still need to resolve the problem of lack of access to and/or use of primary care

Policy Implications: Cost

- In progress: we are creating a Laspeyres cost index using Medicaid FFS fees as weights
 - Will allow us to assess whether this policy, on net, reduced costs
- Today: back of the envelope
 - Assume each type of service (ED, hospitalization, outpatient) has the average cost for that type
 - Costs would have been 3.3% higher in 2009 than in 2008
 - Reductions in hospitalizations partially offset increases in ED visits and outpatient visits
- Completing analysis of “pent-up demand” response

Informing Medicaid Program Design: The Promise of Self-Reported Health Measures

Research Questions:

- How useful are self-reported health measures in informing benefit design for Medicaid?
- How well does the model prospectively classify “at risk” individuals and support risk adjustment and case management?
- What is the HNA utility for predictive modeling of future health care costs and utilization?

Health Needs Assessment

Childless adults enrolling in BadgerCare Plus will be required as a condition of enrollment to complete a Health Needs Assessment (HNA). The HNA is a short survey of basic health conditions and health history that the State will use to help match enrollees with HMOs and providers that meet the individual's specific needs. The HNA is designed for individuals to self-report basic health information and to capture the immediate health needs of members. The HNA data is important for three reasons:

1. The childless adult population is a new coverage population for BadgerCare Plus and we lack sufficient information about their health needs. The HNA (and the physical examination) will allow us to begin to fill in the blanks in this knowledge.
2. We will be using information provided in the HNA to recommend an HMO to the individual or couple applying for BadgerCare Plus for childless adults and will use HNA data as part of our automatic assignment of an HMO when the individual or couple does not select one on their own. For example, if an individual says that he has been diagnosed with diabetes, we will want to alert the individual if one of the HMOs in his service area has an excellent track record for providing quality health care for diabetic patients.
3. By using the HNA data, combined with encounter and claims data that we might have on file, we can alert the HMO to serious health conditions that require immediate intervention.

Please check the box for any medical condition that John has right now.

- | | |
|--|--|
| <input type="checkbox"/> Asthma | <input type="checkbox"/> Emphysema |
| <input type="checkbox"/> Cancer | <input type="checkbox"/> Heart Problems |
| <input type="checkbox"/> COPD (Chronic Obstructive
Pulmonary Disease) | <input type="checkbox"/> High Blood Pressure |
| <input type="checkbox"/> Depression | <input type="checkbox"/> Stroke |
| <input type="checkbox"/> Diabetes | |

- * Does John feel that he/she has a problem with his/her use of alcohol or drugs? Yes No
- * In the last two years, has John been hospitalized or had other medical care for emotional or psychiatric reasons? Yes No
- * Does John take more than 5 prescription medications? Yes No
- * Does John use tobacco? Yes No
- * Does John have a regular doctor? Yes No
- * Does John have a regular clinic or hospital? Yes No

You told us that John has asthma.

- * Has John been to the emergency room in the past 12 months because of asthma? Yes No
- * Has John been hospitalized in the past 12 months because of asthma? Yes No

Hypotheses

- H_1 : The use of self-reported health measures at the time of Medicaid application appreciably increases predictive ability over the use of sociodemographic measures alone
- H_2 : In using a combination of self-reported health and sociodemographic measures collected at application, Medicaid programs could build their own models that perform at the level of accepted quality thresholds

Data

- Merged records from CARES and InterChange
- Study sample
 - 35,910 Core Plan members who entered coverage between July – October 2009
 - 64% of all Core Plan members (excluding former general assistance members)
 - Not complete coverage, but better than most comparable pilot study in the literature
 - Working with agency officials to understand who lacks HNA; have a few answers, we are seeking more

Measures

- Key predictors of interest = HNA measures
 - Categorical variable of # of conditions (0, 1, 2, 3+)
 - Any ER or hospitalization due to condition in past twelve months
 - Tobacco use
 - Alcohol/other drug problem
- Outcomes = membership in top utilization deciles during the first year in Core Plan
 - ER utilization
 - Hospitalization
- Sociodemographic predictors from CARES
 - Base specification: age, age ², sex
 - Additional variables: race, income, Hispanic ethnicity

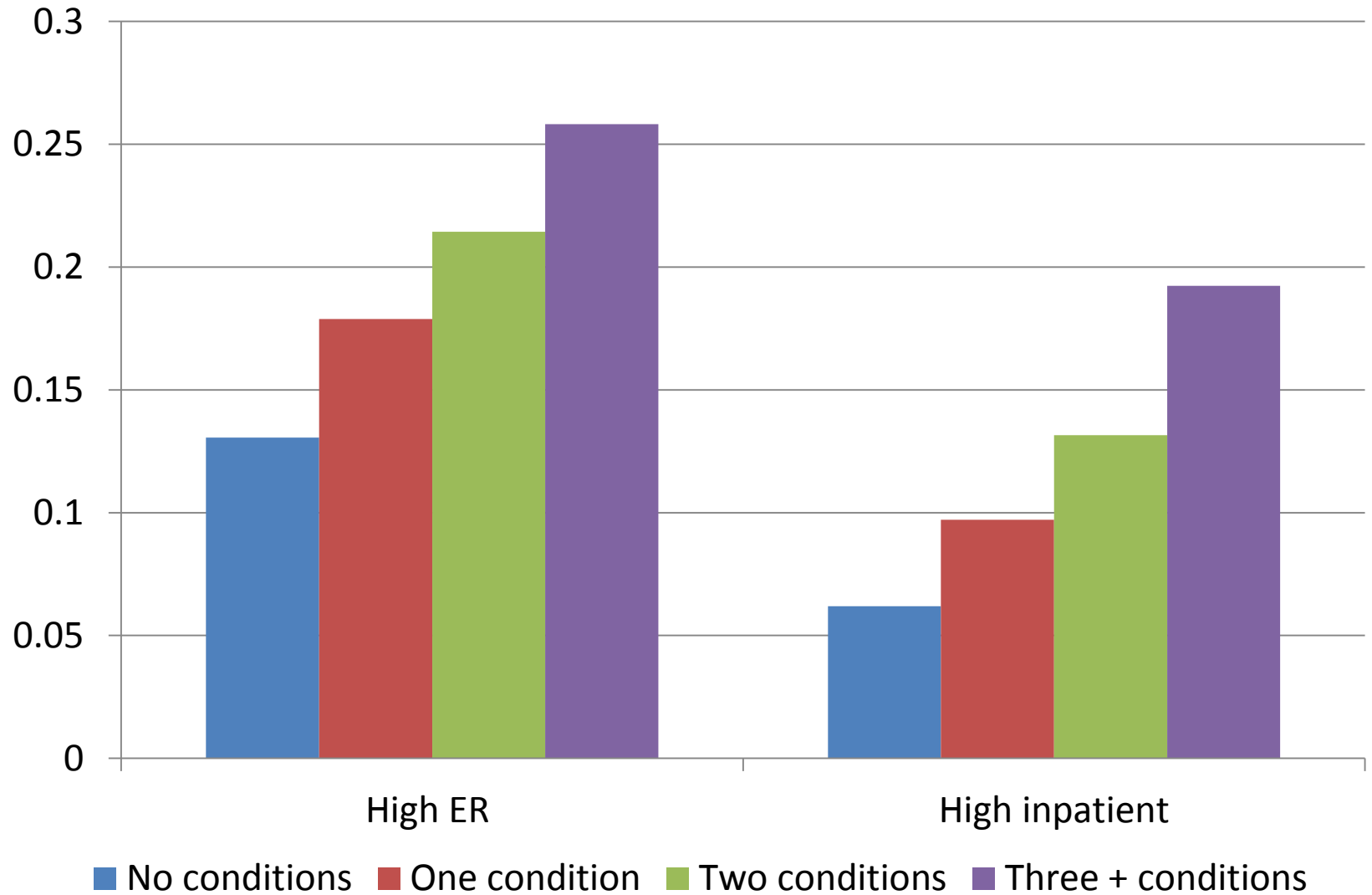
Methodology

- Multivariate logistic regression
- Split-sample approach
- Test of discriminative ability: c – statistic

MODELS:

1. Age, age², male
2. Model 1 + race + Hispanic ethnicity + income
3. Model 2 + HNA conditions
4. Model 3 + HNA utilization
5. Model 4 + tobacco + alcohol/drug

Crosstabs



Discriminative Ability

		<u>High hosp.</u>	<u>High ER</u>
<u>Model Number</u>	<u>Specification</u>	<u>c</u>	<u>c</u>
(1)	Age + Sex	0.58	0.60
(2)	(1) + Race + Hispanic Eth. + Income	0.59	0.65
(3)	(2) + Conditions	0.64	0.68
(4)	(3) + Previous Year's Utilization	0.65	0.69
(5)	(4) + Smoking + Alcohol/Drug Abuse	0.66	0.70

Future Directions

- Additional HNA predictors
 - Usual source of care
 - 5+ scrips at application
- Additional outcomes
 - Expenditures
 - PQI hospitalizations
 - Condition-specific hospitalizations (esp. psychiatric)
- Test different treatments of HNA conditions (simple sum, Charlson-like index)
- More thorough Goodness-of-Fit testing

Conclusion

- Preliminary results suggestive of predictive ability on par with the literature
- Richest model predicting high ER utilization “meets” H-L criterion
- Ultimately usefulness will depend upon likely cost-effectiveness of application

Medical Homes for High-Risk Pregnant Women in SE Wisconsin: Do They Improve Birth Outcomes?

Goal: To determine the effectiveness of the medical home model in improving birth outcomes among publicly insured, high-risk pregnant women in SE Wisconsin.

Intervention: The Basics

- DHS contract for health services in SE WI— Kenosha, Milwaukee, Racine, Ozaukee, Washington and Waukesha.
- Contracted HMOs (4) required to implement a medical home pilot for high-risk pregnant women.
- High-risk Definition: living in a targeted zip code; having a chronic condition; being under 18 years of age; and/or being on or eligible to be on the DHS HMO High-Risk Registry.

Provider Incentive Payments

- BadgerCare Plus will pay participating providers:
 - an additional \$1,000 for each birth to a woman enrolled in a medical home pilot.
 - bonus amount of an additional \$1,000 for a positive birth outcome.
- This is a substantial increase over the current global payment for pregnancy and delivery of approximately \$3,500.

Timelines and Enrollment

- Pilots began on January 1, 2011.
- Operational through December 2013.
- As of April 30, the HMOs have contracted with more than a dozen clinics.
- Sites will collectively enroll a minimum of 400 high-risk BadgerCare Plus (Medicaid) members in year one, 800 in year two and 1,200 in year three.

Outcome Measures

- Primary outcomes: birth weight and gestational age.
- Potential mediator: adequacy of pre-natal care receipt.
- Other outcome: inpatient stay associated with the birth.
- Power analysis (conducted for primary outcomes):
 - Lower bound of 665 women will have been enrolled in the pilot and have had a birth by February 15, 2013, allowing for a six month delay in administrative data availability between the birth and the final proposed data pull, on August 15, 2013.
 - The study is sufficiently powered to detect small changes in continuous measures of the primary outcomes of interest
 - Likely detectable effect size of ~3% in both mean birth weight and mean gestational age.

Evaluation Methodology:

Within-Group, Pre-Post Design

- Treatment group: Patients receiving care in the medical home pilot clinics.
- Comparison group: Similar patients receiving care in the pilot clinics in the two years (2009 & 2010) prior to the intervention's launch.
- Strengths of design: no unobserved confounding resulting from clinic-level heterogeneity or within-clinic treatment spillover effects.
- Major threats to validity: unobserved confounding resulting from patient-level heterogeneity; secular trends.

Implementation Study

- Assess fidelity of implementation (a process measure).
- Using a survey instrument adapted from the Commonwealth Fund's Safety Net Medical Home Initiative.
- Assess pre-program clinic care features and then compare them to post-implementation care features.
- Assess the degree to which providers meet the medical home parameters as specified in their contracts with DHS and in their response to the SE WI HMO RFP.

Stay Tuned!