Texas Targeting Strategies

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Texas State-level Targeting Strategies

Introducing Texas

Speakers:

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Topic:

- Part I State-Level Targeting Strategies

  – How TX is developing a targeting methodology based on research
    and lessons learned about impactable BCN populations

- Part II MCO-Level and Provider-Level Targeting Strategies

  – The State's performance improvement focus in working with MCOs as part of a
    statewide Performance Improvement Project

  – The State's three BCN initiative goals to further strengthen data analytics,
    develop payment models, and identify and replicate effective BCN efforts
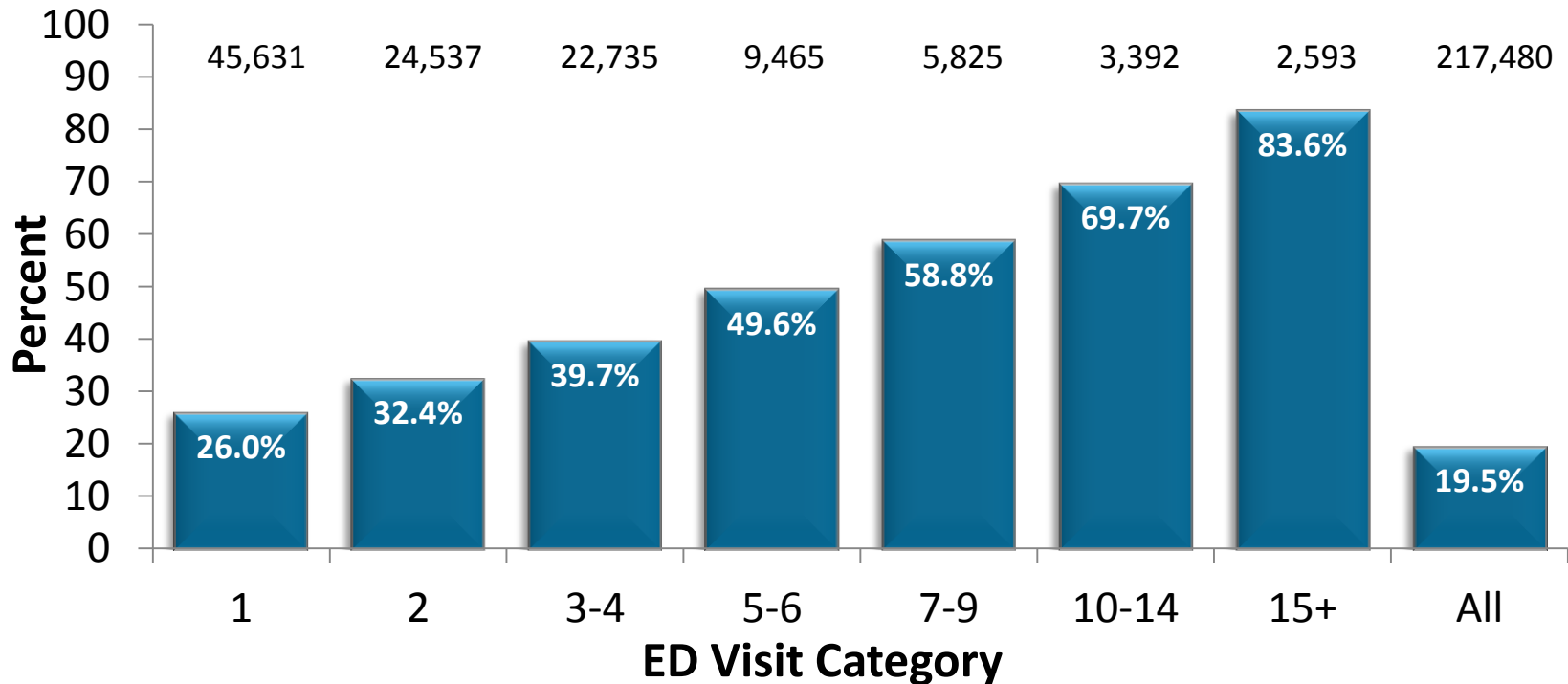
TX HHSC Super-utilizer Efforts

- Integration into Medicaid quality management policy and initiatives
- Dedicated resources within the organizational structure
  - Health Policy & Clinical Services
- Multi-year super-utilizer research and supports for program development by the external quality review organization (EQRO)
  - Predictive model work for super-utilizers to target earlier interventions
  - Data project with New York and Florida explored for predictive work
  - Analysis of Texas super-utilizer projects to ascertain Medicaid impact on quality and cost
- Super-utilizer requirements incorporated into Medicaid Managed Care Organization contracts in 2013
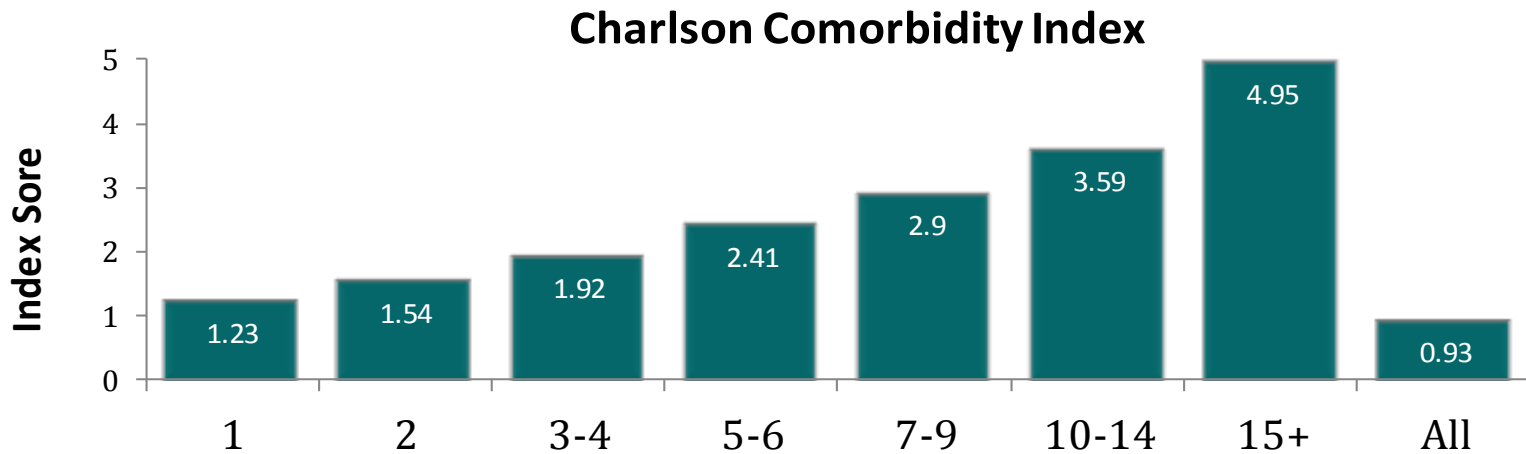- Numerous DSRIP projects are part of provider super-utilizer efforts

Characteristics of
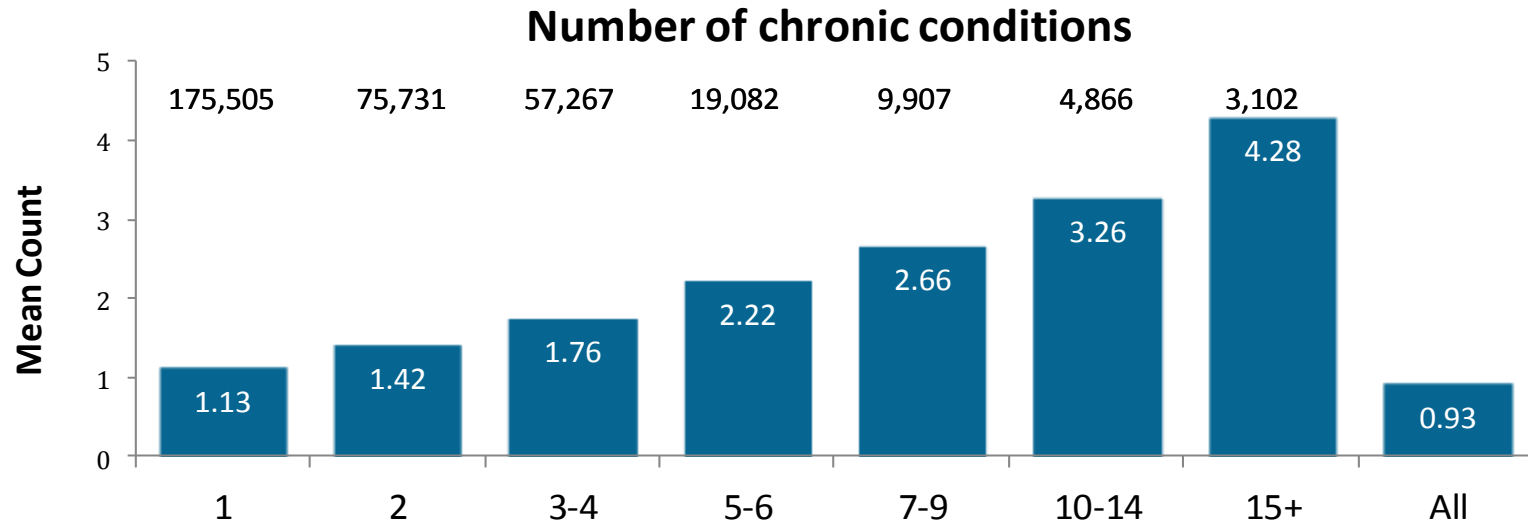# Adult Super-Utilizers in Texas Medicaid

- Data source(s): Calendar year (CY) 2014 Texas Medicaid claims and encounter data

- Adult Texas Medicaid super-utilizers, enrollees are limited to age 18-62

- This analysis excludes dual-eligible enrollees

- Super-utilizers examined according to the frequency of emergency department (ED) utilization

- ED visits categorized from Billings and Maven (2013)

Multiple Chronic Conditions (2 or more) using CY 2014

Burden of Chronic Conditions CY 2014

Number of chronic conditions

	1	2	3-4	5-6	7-9	10-14	15+	All
Count	175,505	75,731	57,267	19,082	9,907	4,866	3,102	
Mean Count	1.13	1.42	1.76	2.22	2.66	3.26	4.28	0.93

Charlson Comorbidity Index

	1	2	3-4	5-6	7-9	10-14	15+	All
Index Sore	1.23	1.54	1.92	2.41	2.9	3.59	4.95	0.93

Substance Use Disorders and Mental Health Conditions CY 2014

Substance use disorders

	55,635	31,428	28,977	11,678	6,826	3,805	2,621	247,035

Percent

- 1: 31.7%
- 2: 41.5%
- 3-4: 50.6%
- 5-6: 61.2%
- 7-9: 68.9%
- 10-14: 78.2%
- 15+: 84.5%
- All: 22.2%

Mental Health Conditions

	69,869	37,138	33,467	13,369	7,724	4,176	2,772	344,622

Percent

- 1: 39.8%
- 2: 49.0%
- 3-4: 58.4%
- 5-6: 70.1%
- 7-9: 78.0%
- 10-14: 85.8%
- 15+: 89.4%
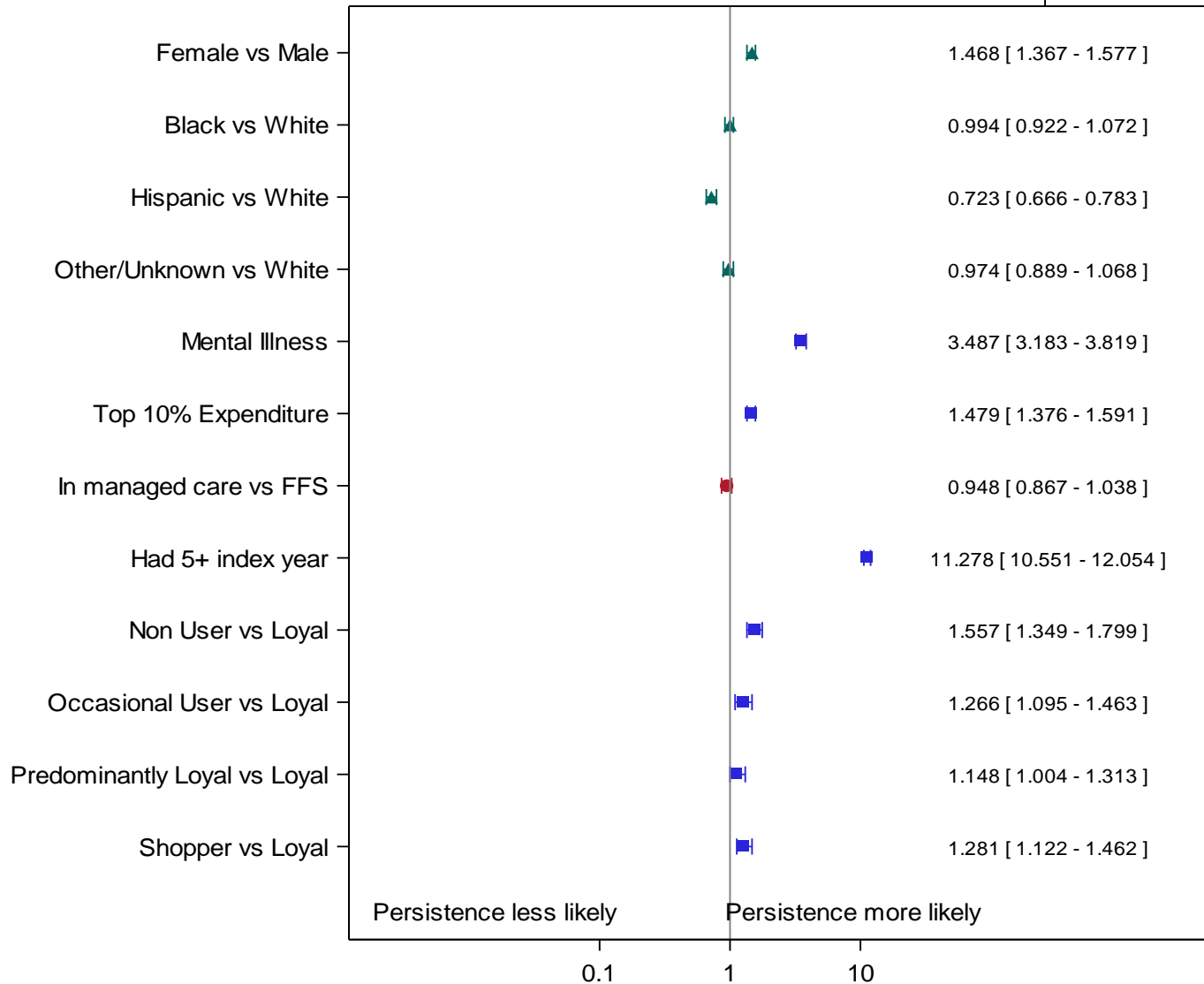- All: 30.9%
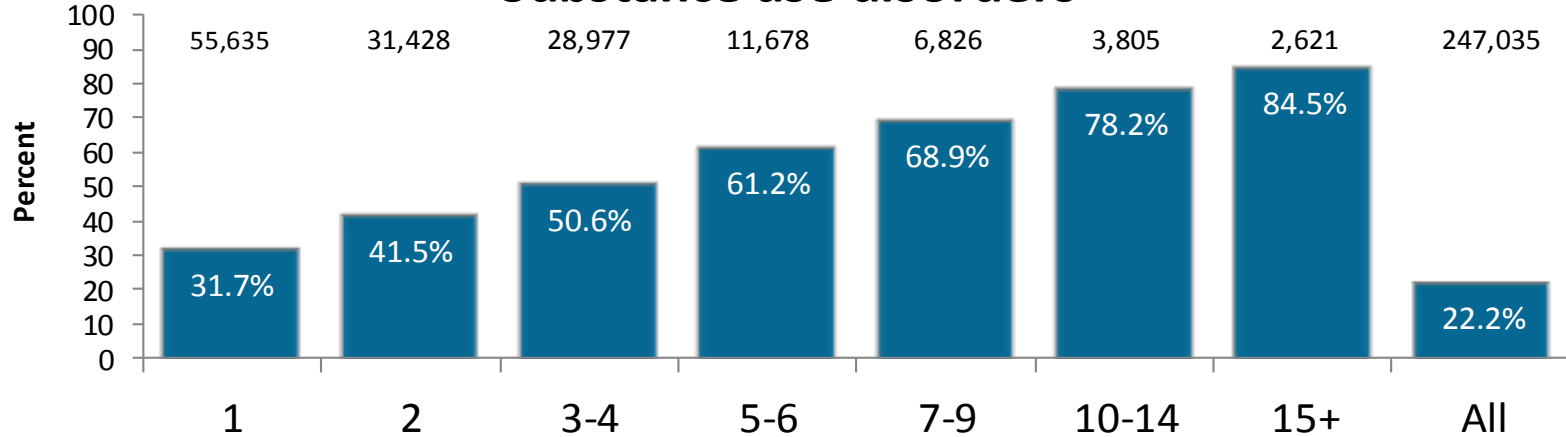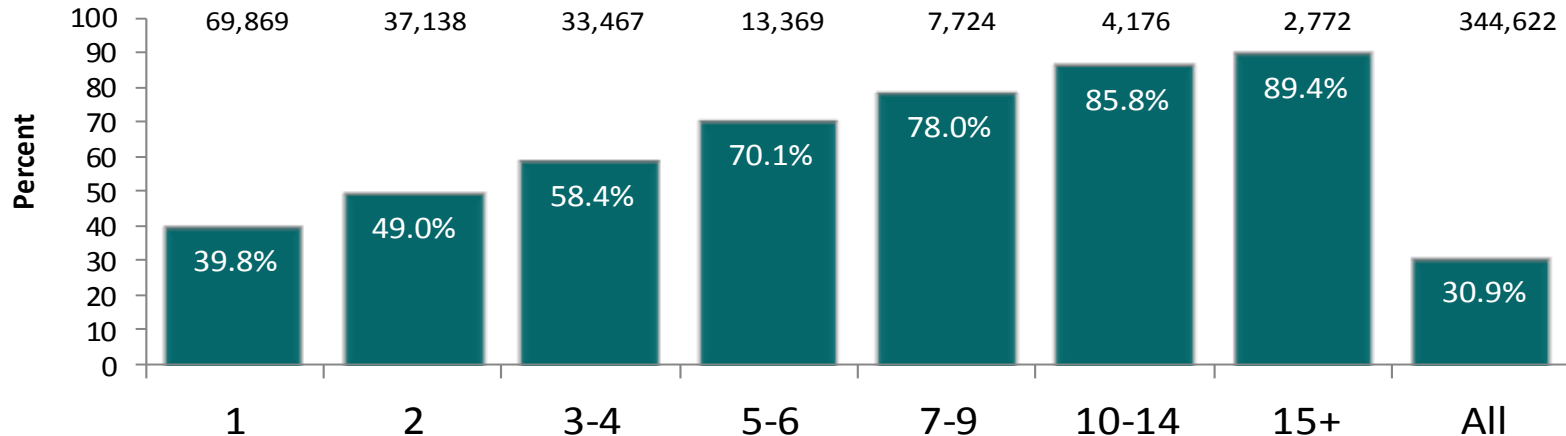
Predicting Super-Utilizers

- Conceptual Framework: Andersen Behavioral Model of Healthcare Services Use

  - Utilization dependent on three factors: Predisposing Factors, Enabling Factors, Need

Predisposing Factors	Enabling Factors	Need
1. Race/ethnicity 2. Age 3. Sex	1. Access to Managed Care Programs	1. Disability Status 2. History of chronic conditions 3. History of Mental Illness 4. Charlson comorbidity index 5. Prior use 6. Outpatient services loyalty

Predicting Super-Utilizers
Model 1: Persistent 5+ Visits

Adjusted Odds Ratios and 95% Confidence Intervals

Female vs Male	1.468 [1.367 - 1.577]
Black vs White	0.994 [0.922 - 1.072]
Hispanic vs White	0.723 [0.666 - 0.783]
Other/Unknown vs White	0.974 [0.889 - 1.068]
Mental Illness	3.487 [3.183 - 3.819]
Top 10% Expenditure	1.479 [1.376 - 1.591]
In managed care vs FFS	0.948 [0.867 - 1.038]
Had 5+ index year	11.278 [10.551 - 12.054]
Non User vs Loyal	1.557 [1.349 - 1.799]
Occasional User vs Loyal	1.266 [1.095 - 1.463]
Predominantly Loyal vs Loyal	1.148 [1.004 - 1.313]
Shopper vs Loyal	1.281 [1.122 - 1.462]

Persistence less likely   Persistence more likely

0.1   1   10

Contextual Domains:
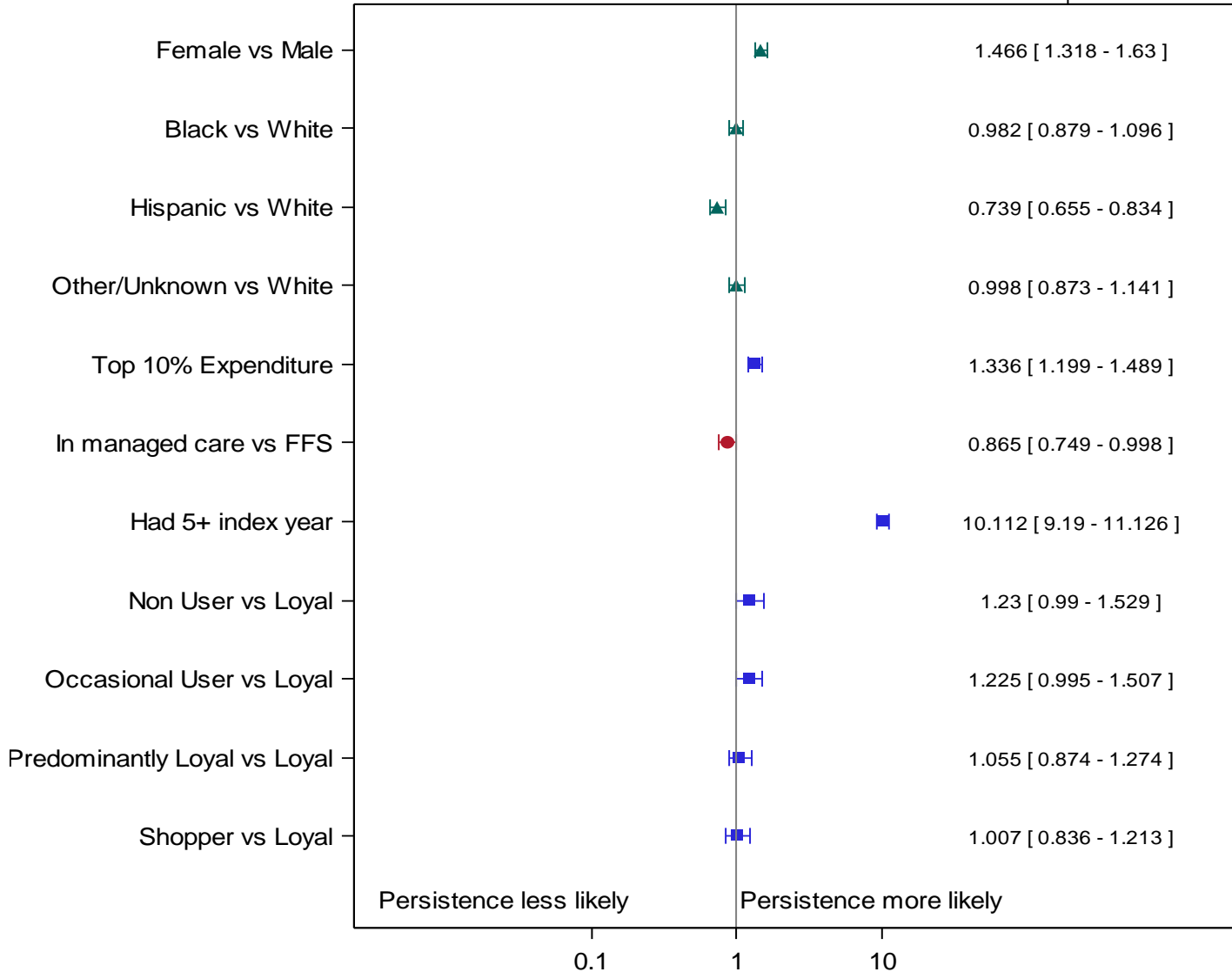- ■ Need
- ● Enabling
- ▲ Predisposing

Adjusted by:
1. Age***
2. Charlson Comorbidity Index**
3. Disability indicator***
4. Inpatient stays**

*** = p<0.005, ** = p<0.05

Predicting Super-Utilizers
Model 1: Persistent 5+ Visits, no mental health ED visits

Adjusted Odds Ratios and 95% Confidence Intervals

Female vs Male	1.466 [1.318 - 1.63]
Black vs White	0.982 [0.879 - 1.096]
Hispanic vs White	0.739 [0.655 - 0.834]
Other/Unknown vs White	0.998 [0.873 - 1.141]
Top 10% Expenditure	1.336 [1.199 - 1.489]
In managed care vs FFS	0.865 [0.749 - 0.998]
Had 5+ index year	10.112 [9.19 - 11.126]
Non User vs Loyal	1.23 [0.99 - 1.529]
Occasional User vs Loyal	1.225 [0.995 - 1.507]
Predominantly Loyal vs Loyal	1.055 [0.874 - 1.274]
Shopper vs Loyal	1.007 [0.836 - 1.213]

Persistence less likely   Persistence more likely

0.1   1   10

Contextual Domains:
- Need
- Enabling
- Predisposing

Adjusted by:
1. Age***
2. Charlson Comorbidity Index**
3. Disability indicator***
4. Inpatient stays**

*** = p<0.005, ** = p<0.05

Model Formulation

Model	Ordinary Linear Regression
Dependent Variable	**Per Member Month Expenditure**
Baseline Model Predictors	**Disease Categories:** ICD9 codes grouped into Clinical Classification Software Categories (CCS) from AHRQ
	Basic Demographics: Age, Gender, Race, and Disabled Status
	Geographical Pricing Difference: CMS Wage Index
Additional Predictors	**Geographical Information**: Residence County, Service Area
	Health Programs and Plans

Linear regression based model to adjust all of the above factors.
(Current model does not account for contractual factors)

Residuals = Real Value – Predicted Value
(Positive residuals means overspending while negative means underspending)

Incorporating Disease Burden and Other Attributes
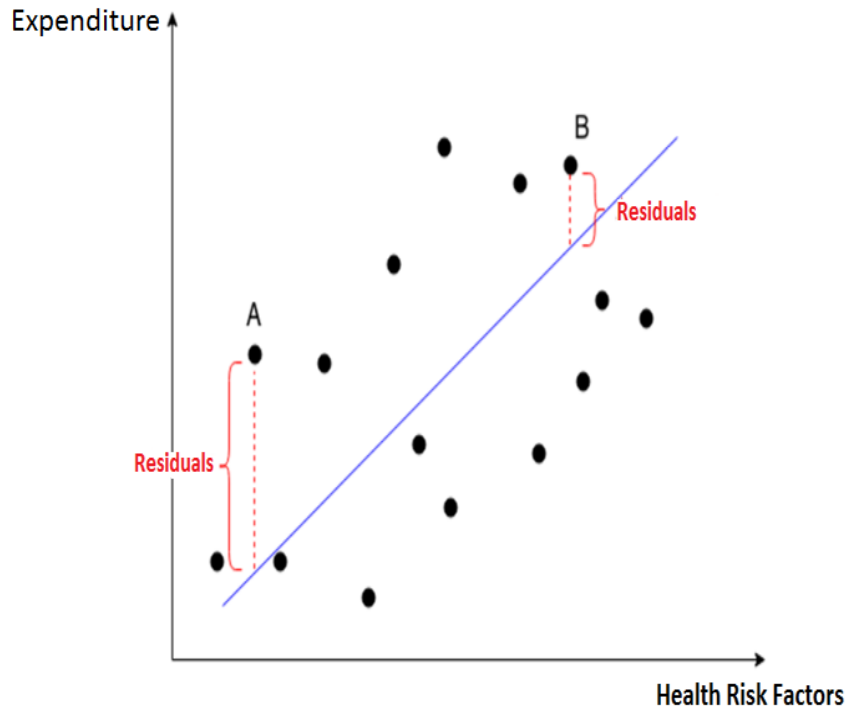
Residuals – Unexplained expenditures based on disease burden and other attributes

	Patient A	Patient B
Disease Burden	Diabetes Schizophrenia	Diabetes Hypertension COPD
Actual Per Member Month Expenditure	$4000	$5000
Predicted Per Member Month Expenditure	$1000	$5000
Residuals	$3000	$0

Residuals correspond to genetic, environmental or other factors that were not observed.

Large cohorts (with similar risk factors) with high average residuals may reflect potentially impactable focus areas.

Preliminary Conclusions

- All models provided high discrimination (c-statistics > 0.75) even when prior super-utilization excluded. ***Prediction capability is promising!***

- Important demographic differences emerged.

- Prior utilization a powerful predictor but models are still effective when examining patients that are not yet super-utilizers

Conclusions

1. Choosing high thresholds of ER visits and IP stays for defining Super-utilizers may significantly reduce the dollars that can be targeted.

2. Utilization based measures may not accurately reflect the actual expenditures.

3. Expenditures are temporally consistent over quarters and years (Prediction models can be built that use historical information to predict future expenditures).

4. Residuals may be helpful in deriving potentially impactable cohorts.

Texas MCO-level Targeting Strategies

TX Super-Utilizer Strategy:
MCOs, Providers and Performance Improvement

- Phase I
  - Leverage MCO contracts; foster shared learning/development of MCO approaches working with providers

- Phase II
  - Analysis to identify the most effective population-based S/U efforts among providers; knowledge transfer to MCOs to standardize, strengthen and expand S/U efforts
  - HHSC efforts to facilitate replication and link to payment approaches

- Long Range
  - Sustainable funding and payment models for effective MCO-supported BCN efforts

HHSC Working with Medicaid-CHIP MCOs

Special Populations/Super-utilizers Health Plan Contract Provision (UMCM Section 8.1.14.1) (PDF)

The state's contract with health plans requires each plan to have a program for targeting, outreach, education and intervention for members who have high utilization patterns that indicate typical disease management approaches are not effective. **A summary of 2014 special populations plans received (PDF).**

- **May 27, 2014 webinar: How Can Health Plans Be Effective Partners on Super-Utilizer Management?**
- **May 27 webinar slides (PDF)**
- **August 6, 2014 webinar: Behavioral Health Super-Utilizers Program in Bexar County (WMV)**
- **August 6 webinar slides (PDF)**
- **December 2, 2014 webinar: Specialized Program for High Utilizers in One Hospital Network (WMV)**
- **December 2 webinar slides (PDF)**
- **July 10, 2015 webinar (PDF):** Restoring Lives and Cutting Costs, The Cigna-HealthSpring Intensive Behavioral Health Program

Note: For an accessible version, please email your request to **HHSC Quality.**

http://www.hhsc.state.tx.us/hhsc_projects/ECI/super-utilizers.shtml

HHSC DSRIP Projects
Target Super-utilizers

- 47 DSRIP projects that directly target frequent utilizers of Emergency Departments

  - 31 of the projects provide navigation services to patients to get services at the most appropriate place and time

  - 13 projects address enhancing care for patients with complex behavioral health needs, such as serious mental illness

- Medicaid-CHIP MCOs are working on collaborative efforts with DSRIP projects

TX BCN Milestones

1. Refine targeting methodology (i.e., predictive modeling) by incorporating additional types of data about BCN factors/characteristics and expanded data analysis

2. Improve S/U efforts by MCOs via shared knowledge, payment reform efforts, and a QI focus; this may include a statewide S/U Performance Improvement Project

3. Develop and apply a methodology to analyze the effectiveness of provider level S/U efforts as part of MCO payment reform efforts; goal is sustain projects that work

Milestone #1: Build on the early predictive modeling to incorporate additional data

- How to obtain additional data to refine the predictive models, such as with social determinants data
  - Data sharing with other agencies to expand datasets
  - Data sharing among providers via health information exchange i.e., ADT feeds
- How to better use existing data for additional levels of targeting i.e., hot-spotting analysis by both HHSC and MCOs

Planned HHSC Initiative

- EDEN: Emergency Department (ED) Event Notification System
  - Proposed system to detect Medicaid patients at ED
  - Alerts sent to Health Plans for coordination of care, forwarded to care team members
  - Desired benefits:
    - Lower ED over-utilization, as seen in other states
    - Improve patient care e.g., alerting primary care physician to a need for follow-up with patient to prevent readmission to ED

Milestone #2: Improve BCN Targeting by MCOs

- Follow-up with the MCOs that had interest in replicating the EQRO analysis

- As part of a statewide performance improvement project (PIP project), work with MCOs interested in applying the predictive modeling methodology to further standardize targeting.

Developing Standard Definitions and Approach

- Current MCOs targeting:
  - 68% use predictive modeling
  - 95% use claims data
  - 53% use behavioral health claims
  - 47% use all three methods

Developing Standard Definitions and Approach (cont'd)

- Current criteria used by MCOs
  - ER visits (89%)
    - Minimum to maximum threshold: 2 – 6 visits
    - Minimum to maximum timeframe: 3 – 12 months
  - Inpatient admissions (58%)
    - Minimum to maximum threshold: 2 – 3 admissions
    - Minimum to maximum timeframe: 1 – 12 months
  - Pharmaceutical use (74%)
  - Healthcare expenditures (53%)
    - Minimum to maximum threshold: $50,000 - $100,000
    - Minimum to maximum timeframe: 6 – 12 months
  - All four methods (32%)

Milestone #3: Analyze BCN interventions & inform payment models and replicability

- A payment pilot is underway with one MCO and a small Houston based BCN provider with a care/intervention model that appears to be effective

- HHSC and EQRO want to conduct analysis to identify the impact attributable to the BCN approach

- Starting small, the hope is to identify a sound analytic approach that can be used to examine the ROI from BCN projects as a basis for payment reforms and replicability of effective BCN interventions

Developing Sustainable
BCN Payment Models

Challenges

- Many projects are grants, DSRIP, pilots, or local; uncertainty on future funding

- MCOs need to understand the outcomes/ROI to pursue viable provider payment options

- Medicaid/HHSC need to understand overall costs and impact on MCO rates; wraparound model that may include social needs to be effective