UNIVERSITY of MARYLAND
SCHOOL OF SOCIAL WORK

Longitudinal Outcomes for Community Mental Health System Clients Diagnosed with Schizophrenia

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Public Mental Health Clinics

- The majority of mental health care is financed by public mental health services
- We have little understanding of the effectiveness of services in public mental health settings
- Most mental health services research is on new services but of this research examines public mental health clients

Data Problem

- Historically mental health systems have not systematically collected outcomes data in useable forms.
- Current health reform and other system reforms are leading to more focus on collecting outcomes data
- Several states (Ohio, Maryland, others) have instituted outcome management systems to monitor client progress.

Research Questions

- What are the characteristics of clients that receive treatment in the public mental health system (in Maryland)?
- What are the longitudinal outcomes for those receiving services?
- What characteristics describe heterogeneity in individual trajectories?
- Do Programs differ by outcome

Data Sources

- State of Maryland Outcome Management System data from January 2006 to June 2009
  - Medicaid Behavioral Carveout Administrative data
  - Interviews by clinicians
  - Required every 6 months for Medicaid service reauthorization
- State Medicaid Billing Data

Sampling Frame

- All individual are in the Maryland community mental health system
- Medicaid only and uninsured (no Medicare or dual eligible)
- No ACT or supported employment program participation
- Individuals with a primary (most frequent) diagnosis of schizophrenia or other psychotic disorder (Psychosis NOS, schizoaffective)
- Individuals first interview in the dataset was also an intake interview
  - Attempt to get individuals at the initiation of service episode.

Variables

- Maryland OMS includes variables on …
  - Age, race/ethnicity, gender, diagnosis
  - Questions about current substance use, housing, criminal justice interaction, employment
  - BASIS: Reliable and valid scale with 6 subdomains
    - Depression
    - Psychosis
    - Substance use
    - Social interaction
    - Self harm
    - Emotional Liability
  - Functioning Questions
- Medicaid Billing Data include service use patterns
  - Outpatient intensity (number of months with a visit in the 6 months before an interview)

Typical Basis Question

- **<u>How often in the past week did you</u> have thoughts racing through your head?**
  - Never - 0
  - Rarely
  - Sometimes
  - Often
  - Always - 4

Lower values associated with fewer symptoms

Data Issues

- Regression to the Mean: Individuals self-select to participate in services
- Attrition: Individuals leave if they get better or if they don't think services are working for them.
- Clinicians can self administer the instrument
  - Does not happen often but does happen
- NO Causal inferences about treatment effectiveness

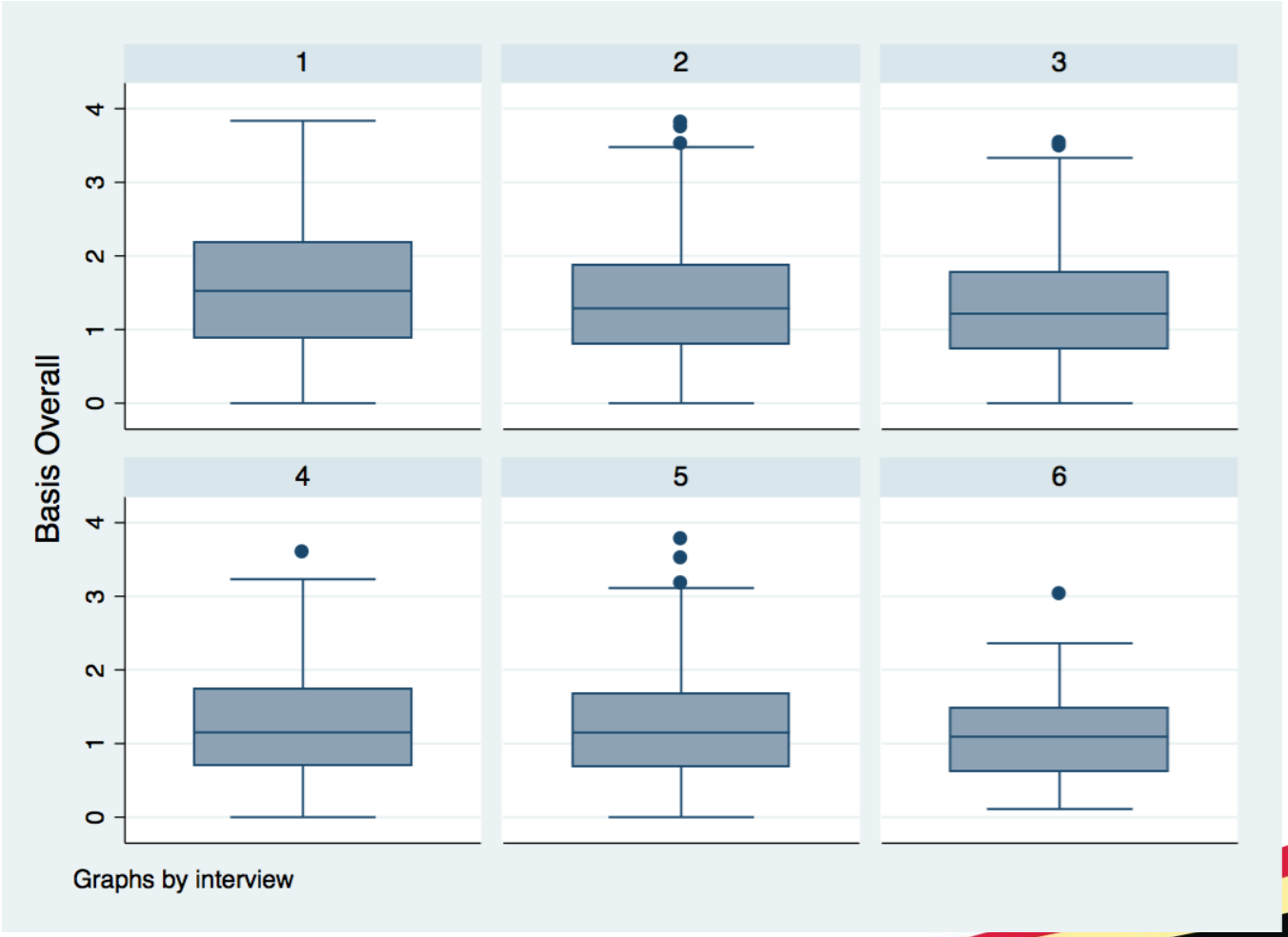
Analytic Strategy

- Descriptive Statistics
  - frequencies and means at baseline to describe the population
- Multilevel Models (Persons in time and provider)
  - Predict Basis
  - Interactions with time to predict trajectories
- Growth Mixture Model

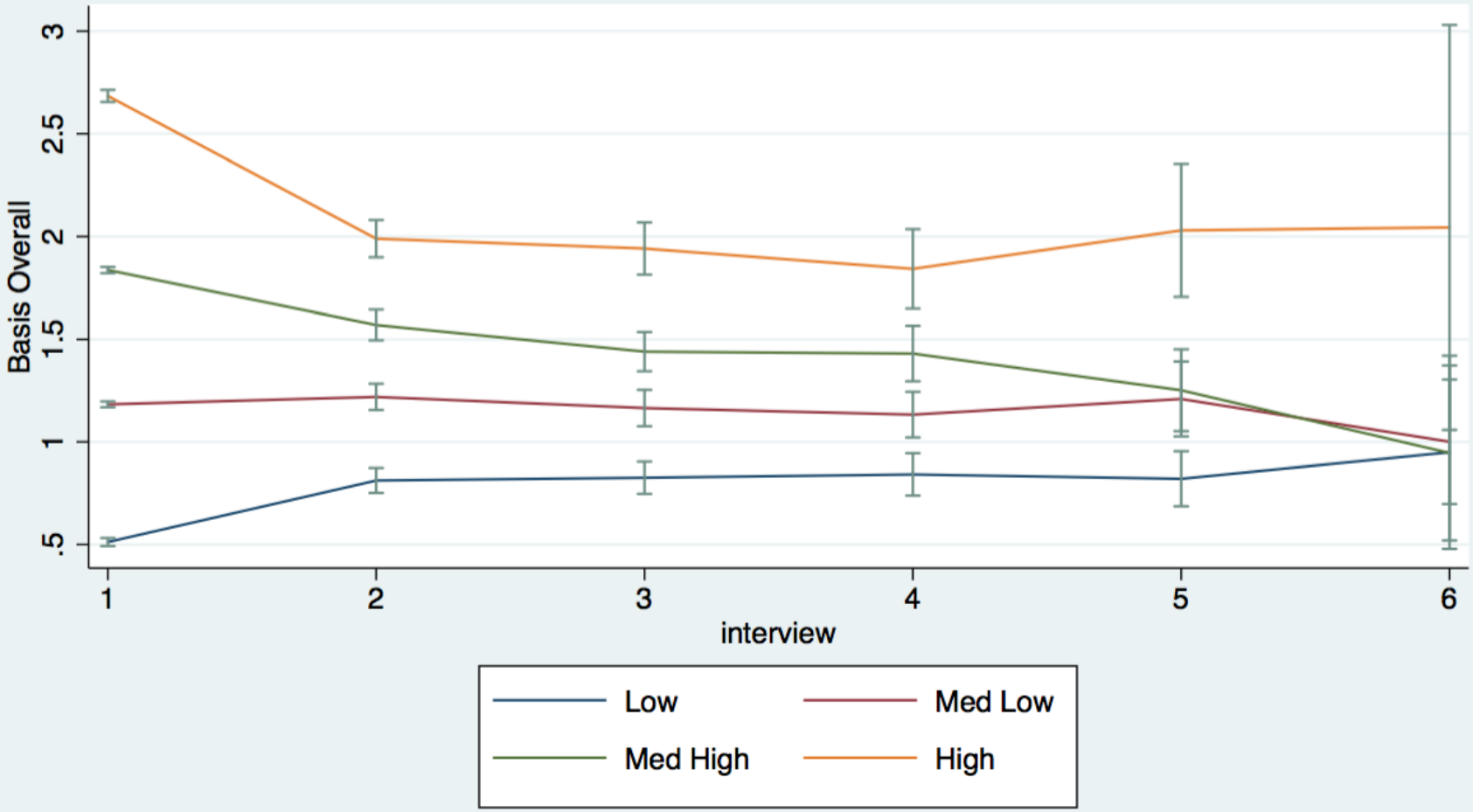
Study Sample

Baseline Interview N	2420
Black	62%
White	34%
Latino/a	4%
Male	58%
Alcohol Use Drug Use	6% 14%
Depression Dx	8%
Homeless at intake	24%
Ever Arrested	22%
Employed at Intake	12%

Basis Scores



Basis Trajectories



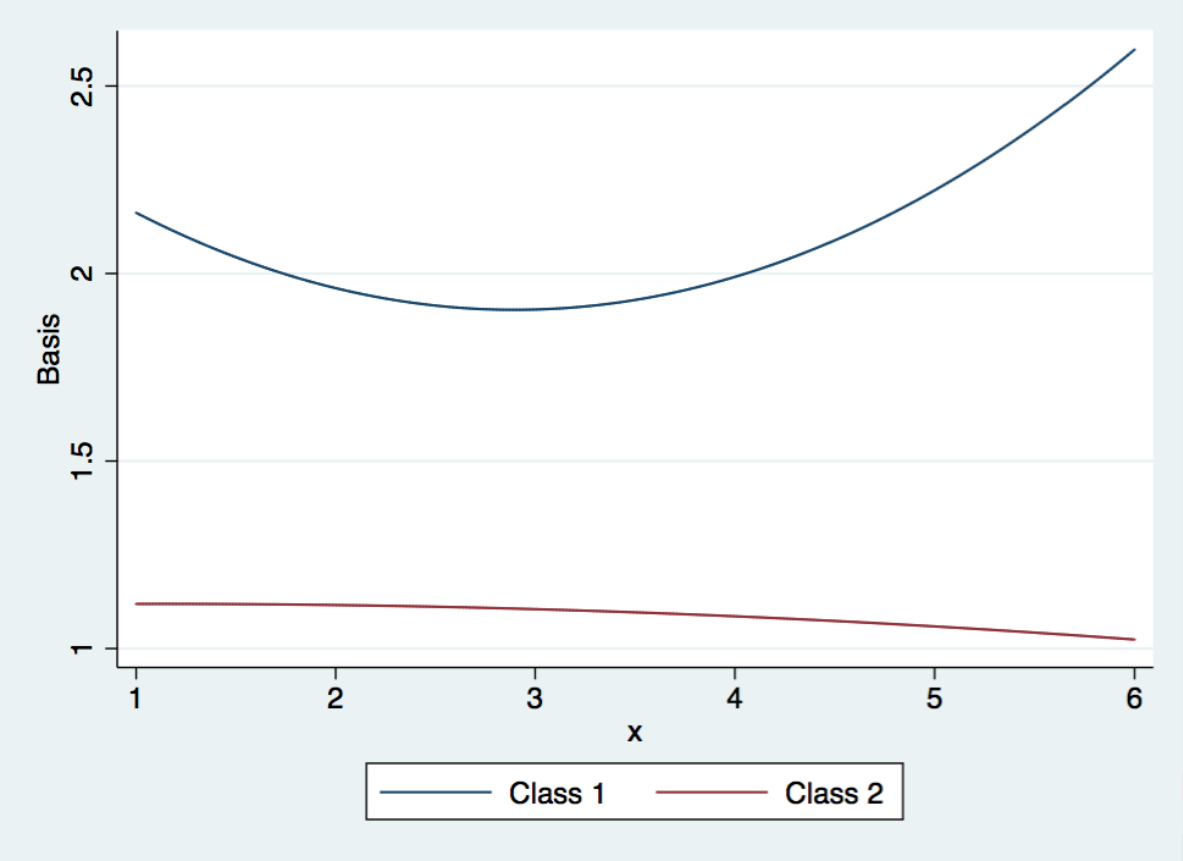
Basis Model Variables

- Time and Time2
- Age
- Ethnicity
- Substance use
- Depression
- Homelessness
- Any arrests
- Being employed at intake
- Outpatient service use intensity

Basis Model

- Individuals improve over time (0.15, $p < 0.001$), but that improvement diminishes over time (0.02 $p=0.002$)
- Men, African Americans compared to whites, and people employed at intake have lower symptom severity on the Basis.
- Substance use, arrests, homelessness, and depression are associated with higher symptom severity on the Basis
- Outpatient service use intensity was not associated with Basis scores
- Significant unexplained variation between providers and within persons and person trajectories
  - 43% of the remaining variance is within clients and 25% within clients over time
  - 19% of the remaining variance between clients
  - 10% of the unexplained variance is between providers
- Negative correlation (-.80) between intercept and time slope

Growth Mixture Model



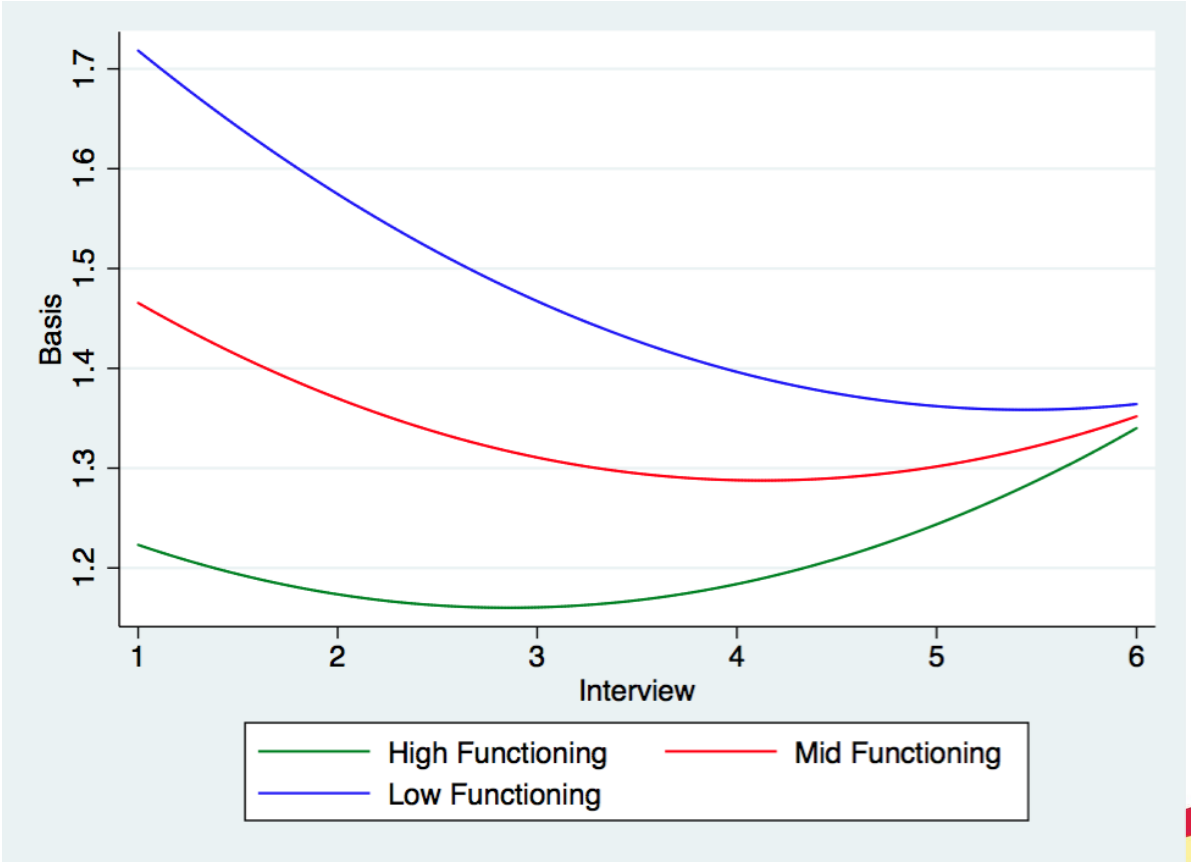
Basis Trajectory Model Variables

- Time and Time2
- Age *time
- Ethnicity *time
- Substance use * time
- Homelessness at baseline * time
- Any arrests at baseline * time
- Being employed at intake * time
- Functioning at baseline * time

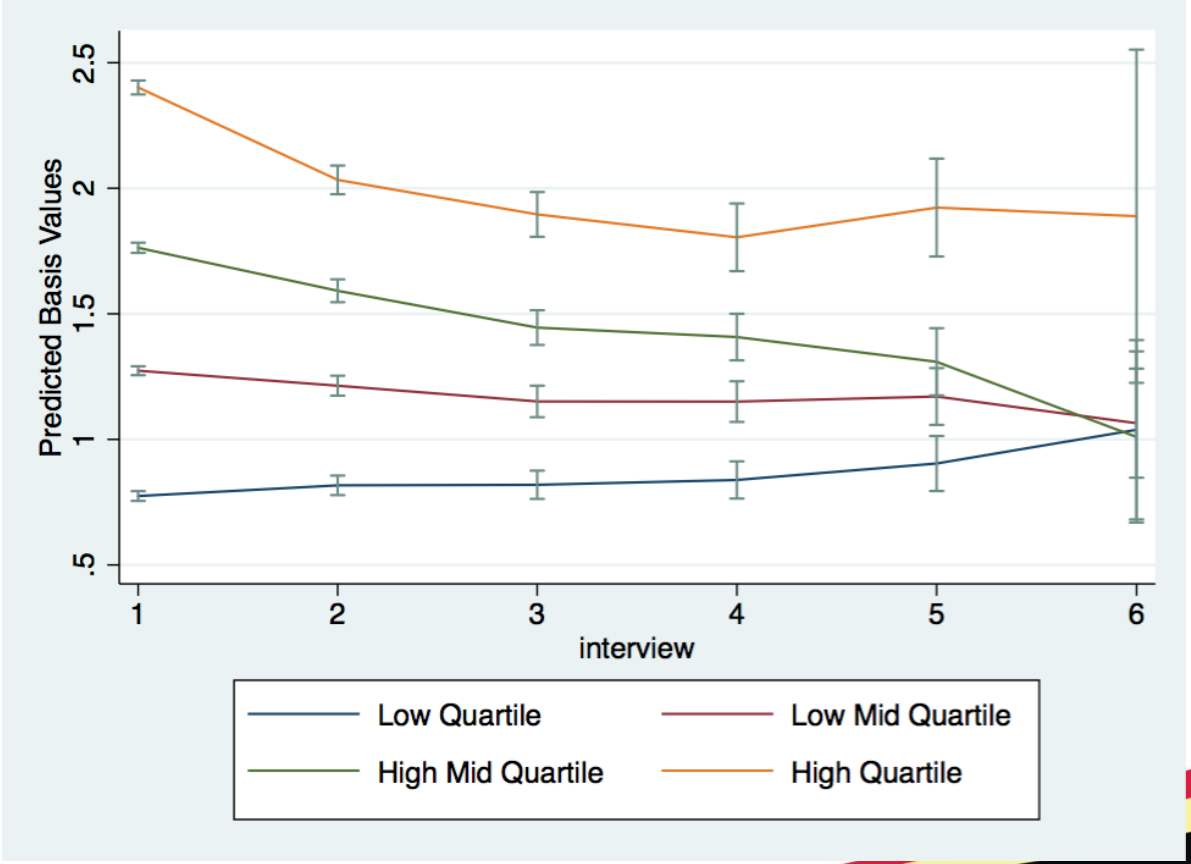
Basis Trajectories Model

- Individuals still improve over time but at a decreasing rate
- Being male and employed are associated with lower basis scores
- Being homeless at intake and and having more intake diagnoses was associated with higher basis scores
- The only interaction with time is for the functioning at baseline variable
  - Differing levels of functioning converge, low functioning individuals improve and high functioning individuals get worse

Functioning Time Interaction



Final Model Trajectories



Limitations

- OMS Data collection is variable
- Individuals self-select to treatment
- Lots of unexplained variation

Conclusions

- Most individuals become less symptomatic over time or remain at low symptoms.
- Functioning at baseline rather than other characteristics seems to predict outcome over time
- Unexplained differences between providers

Discussion

- Room for expansion of ACT and other programs for highly symptomatic folks
- Providers differ in client outcome. How much of this is because of differences in what type of clients they serve and how much of this is in what that do and who they are.
- Individuals seem to get better: That's better than the alternative