

# Improving Patient-Centered Medical Home Coordination in a Safety Net Healthcare System Among Adults Living with HIV

John Schrom, MPH; Scott Shimotsu, PhD MPH CPHQ; Sara Poplau, BA; Kevin Larsen, MD

Funded by a grant from the MN Department of Human Services, Care Delivery Reform

I HAVE NO DISCLOSURES

This study has been approved by the Hennepin County Medical Center IRB: 11-3306

# Positive Care Center

- Part of Hennepin County Medical Center
- Serves >1600 Patients in >8000 encounters
- Funded by Ryan White
  - Outpatient Medical Services
  - Case Management
  - Health Education/Risk Reduction
  - Benefits Counseling
  - Transportation Services
  - Chemical Dependency
- Certified Minnesota Health Care Home



# Patient-Centered Medical Home

- AKA Health Care Homes
- Passed in 2008
- Certifies clinics that meet criteria:
  - Patient- and Family- Friendly
  - Quality Improvement Teams
  - Learning Collaborations
  - Aligned Financial Incentives
  - Outcomes-Based Recertification

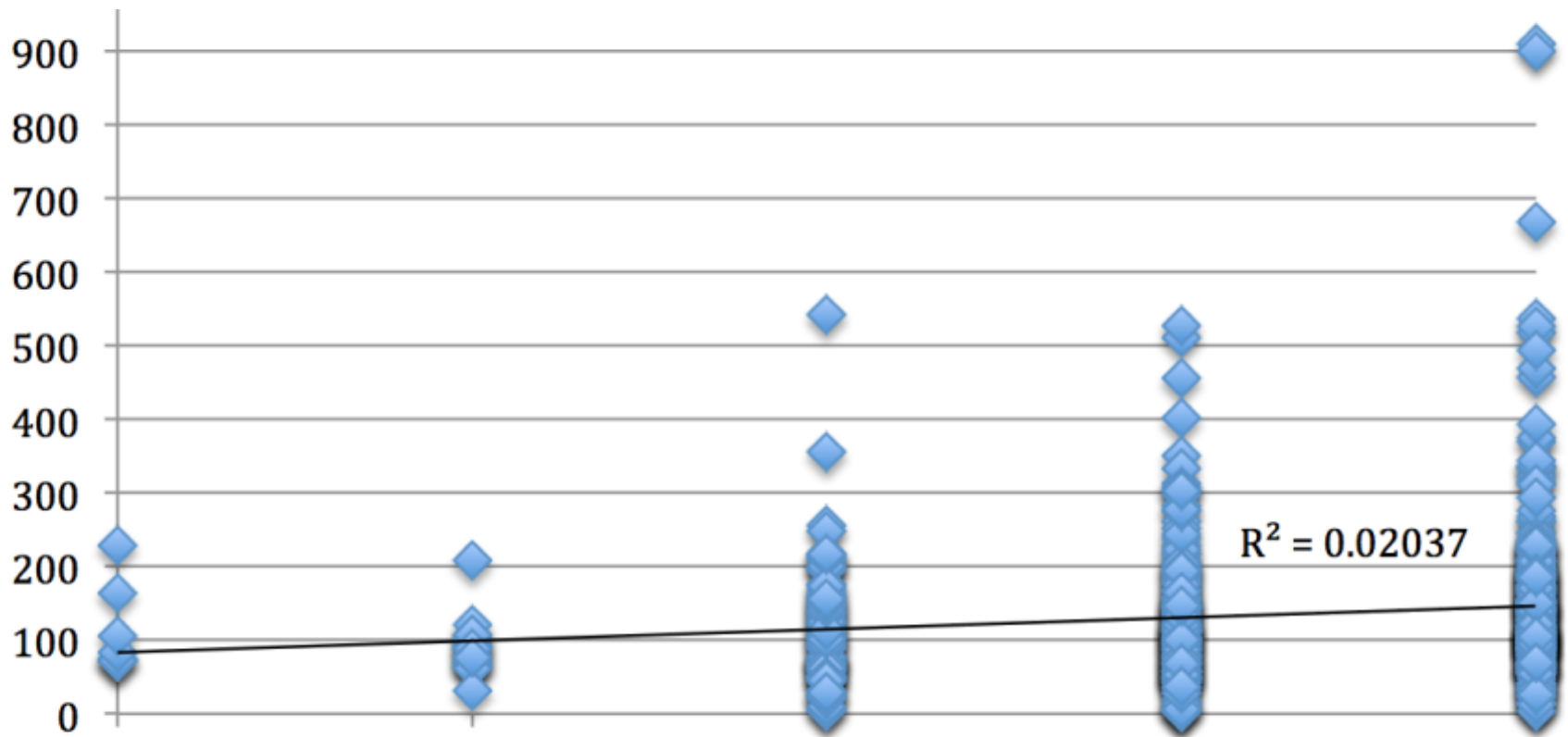
# PCMH Payment Methodology

Care Coordination Tier Assignment Tool Health Care Home Initiative				
Patient ID: _____				Date: ____/____/____ <small>month day year</small>
Does this patient present with these conditions.....	Condition Is Severe <sup>1</sup>	Condition Is Chronic <sup>2</sup>	Condition Requires A Care Team <sup>3</sup>	SCORE <sup>4</sup>
<input type="checkbox"/> Allergy, Asthma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Cardiovascular	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Respiratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Gastrointestinal/Hepatic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Musculoskeletal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Renal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Endocrine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Neurologic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Mental Health/Psychosocial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Hematologic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Rheumatologic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Malignancies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Genito-urinary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Female Reproductive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Genetic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Toxic Effects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Ear, nose, and throat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Eye	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Dental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Infections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Skin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Nutrition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# PCMH Payment Methodology

Systems	Tier	Minutes	Payment
0	0	0	\$0
1-3	1	15	\$10.14
4-6	2	30	\$20.27
7-9	3	45	\$40.54
10+	4	60	\$60.81

# Medical Tier Versus Actual Coordination Time



HOW CAN WE BETTER UNDERSTAND CARE  
COORDINATION REQUIREMENTS OF PEOPLE LIVING  
WITH HIV?



# Methods

- Collected data from 2008 – 2011:
  - Medical data (HIV VL, Weight Loss, Complexity Tier)
  - Social data (Housing, Employment, Income, Literacy, Interpreter Needs)
  - Case Management utilization (Activity, Minutes)
- Statistical Analysis:
  - Linear regression
  - Students t-test

# Results

- 610 patients
- Average: 141 min/mo
- Range: 2 – 910 min/mo

Gender	
Male	69.0%
Female	31.0%

---

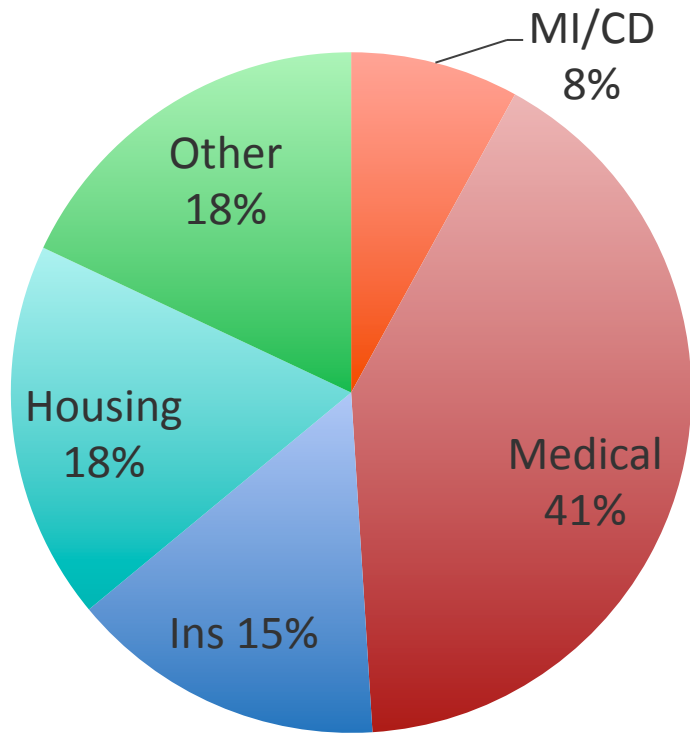
Age	
18-34	19.7%
35-44	28.2%
45-54	36.5%
55+	15.5%

---

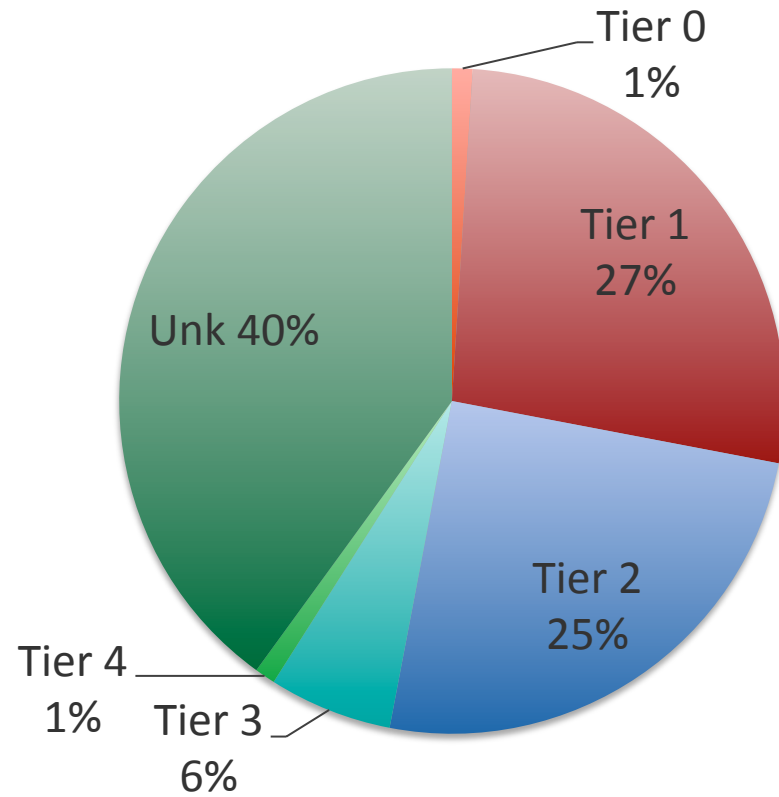
Race/Ethnicity	
White	20.7%
Black	61.0%
Hispanic	5.3%
AI	2.6%
Asian	1.1%
Multi	1.6%
Other	5.1%
Unk	2.5%

---

# Results



Care Coordination Activity



Medical Complexity Tier

## Results – Linear Model

	Patients	Estimate
Unemployed or Disabled	83.5%	35.78**
In Poverty	84.3%	20.81
Uncontrolled Weight Loss	4.6%	23.04
Requires Interpreter	9.9%	59.50***
>= 100 Miles From Clinic	2.4%	-40.14

\*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.0001

## Results – Linear Model

	Patients	Estimate
Literacy – Learning Disabled	6.5%	5.32
Literacy – Not	6.6%	43.27*
Housing Status – With Friend	23.4%	19.21
Housing Status – Homeless	19.0%	6.29
Housing Status – Institutional	10.2%	75.51***

\*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.0001

## Results – Linear Model

	Parameter Estimate
Medical Complexity Tier	12.59*

\*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.0001

## Summary of Findings

- Current payment methodology has limited correlation with actual care coordination utilization.
- Social Conditions have larger impact than Medical Conditions:
  - Institutionally Housed
  - Requiring Interpreter
  - Unemployed
  - Literacy

## Limitations and Further Study

- Limited to HIV population
  - Already receiving services through Ryan White
- Use of billing data
- Variable quality of social data



# Thank You!

- Scott Shimotsu
- Sara Poplau
- Kevin Larsen
- Molly Jacques
- Rob Krieger
- Rachel Tschida
- Muree Larson-Bright
- PCC Staff