

Stimulant use, housing instability, and depressive symptoms: Comorbid conditions and viral trajectories in the context of coordinated HIV care in Los Angeles County



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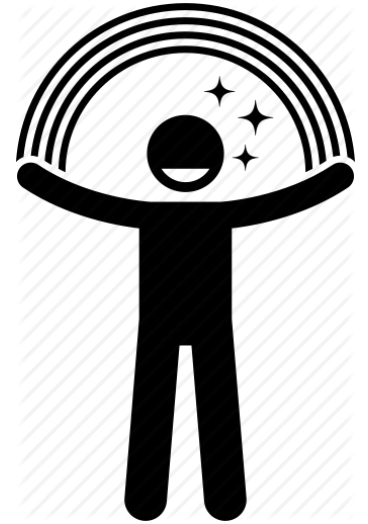
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Medical Care Coordination (MCC)

- In 2013, LAC Division of HIV and STD Program (DHSP) developed the MCC Program to provide coordinated medical and psychosocial services of people living with HIV (PLWH)
- Targets PLWH with the greatest challenges managing HIV and other comorbidities.
- Coordinated case management services include:
 - Comprehensive assessments of service needs
 - Brief interventions targeting ARV adherence, engagement in HIV care, and sexual health.
 - Linkage of support services for housing, mental health, and substance use



Objectives

- To assess MCC patients' trajectories of VS from 12-months prior to MCC enrollment to 36 months following MCC enrollment
- And to assess whether these trajectories differed by stimulant use, housing instability, and depressive symptom severity as reported by participants at MCC enrollment



Study Design

- Longitudinal analysis of 130,460 observations on 6,408 participants in the LAC Medical Care Coordination (MCC) program
 - 2 months prior to MCC enrollment through 36 months post-MCC enrollment
- Participants were eligible for MCC if they:
 - 1) were newly diagnosed with HIV in the past 6 months;
 - 2) had not seen an HIV medical provider in 7 months or more;
 - 3) lacked access to antiretroviral therapy (ART) despite meeting current clinical guidelines for treatment;
 - 4) were on ARV but did not have suppressed viral load (>200 copies/mL);
 - 5) or were recently diagnosed with an STI in the past 6 months



Study variables

- **Dependent variable:**
 - Viral suppression (< 200 c/mL)
- **Main independent variables:**
 - Stimulant use (past 6 mo.)
 - Housing instability (past 6 mo.)
 - PHQ-9 (past 2 wk.)
 - Time
- **Other covariates:**
 - Gender
 - Race
 - Income
 - Education
 - Born outside U.S.
 - Time since HIV diagnosis
 - Incarceration (past 6 mo.)
 - Experience violence
 - STI
 - Cannabis use



Analysis

- Analyses were generalized linear mixed models fit in Stata 15 using the mixed command (StataCorp, 2017). We fit mixed effects logistic regressions with a random intercept to estimate the trajectory of VS over time with MCC enrollment set as the zero points and time continuous.
- The time trend was modeled as a piecewise linear trend from 12 months before MCC enrollment to 36 months after enrollment with slope change points at enrollment and at 6 months post-enrollment.



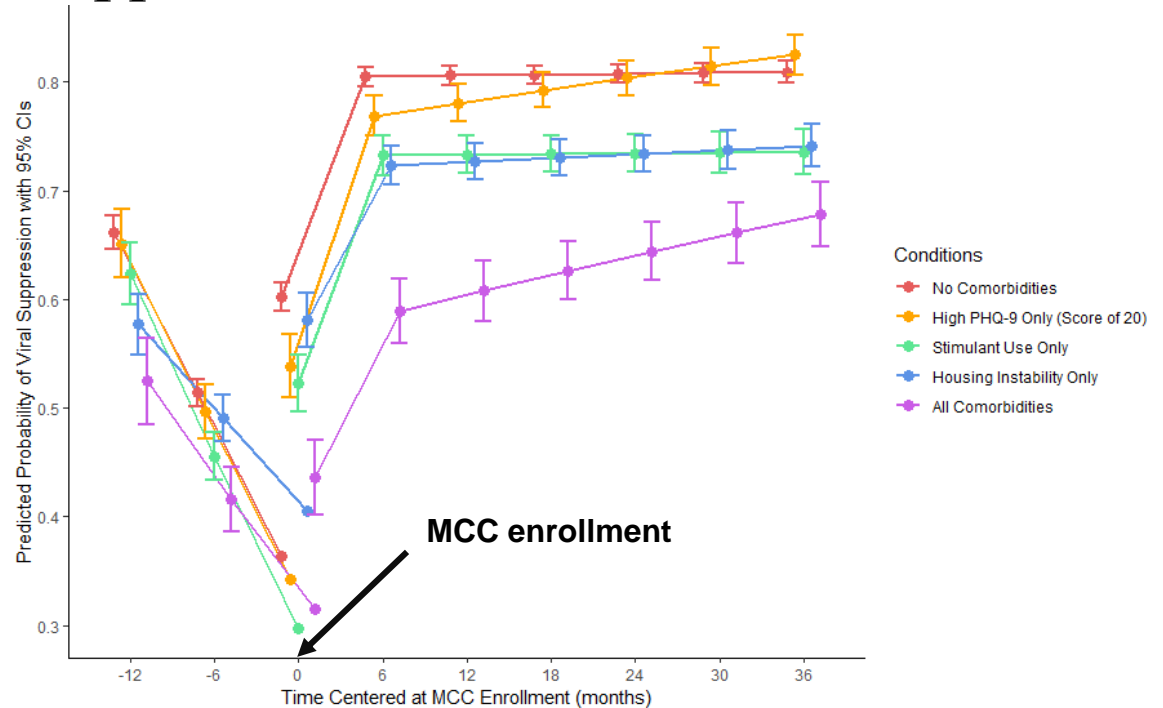
Participant characteristics at enrollment

- 57.3% were virally unsuppressed (≥ 200 c/mL)
- Mean age of 40.5 years
- 84% male
- 48% Latino/a, 28% Black
- 24% reported housing instability (past 6 months)
- 29% had a PHQ-9 score >10
- 20% reported methamphetamine use (past 6 months)
- 8% reported cocaine/crack use (past 6 months)



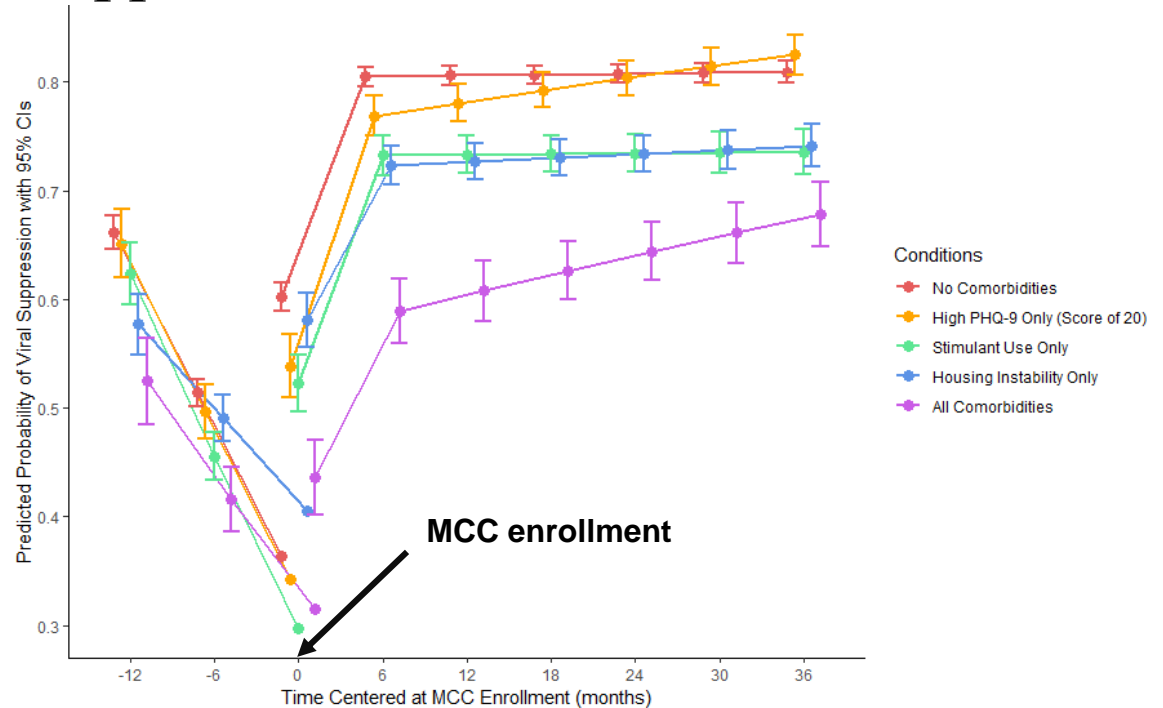
Trajectories of viral suppression: First 6 months in MCC

On average, participants increased in probability of VS by 0.42 within the first 6 months of MCC.



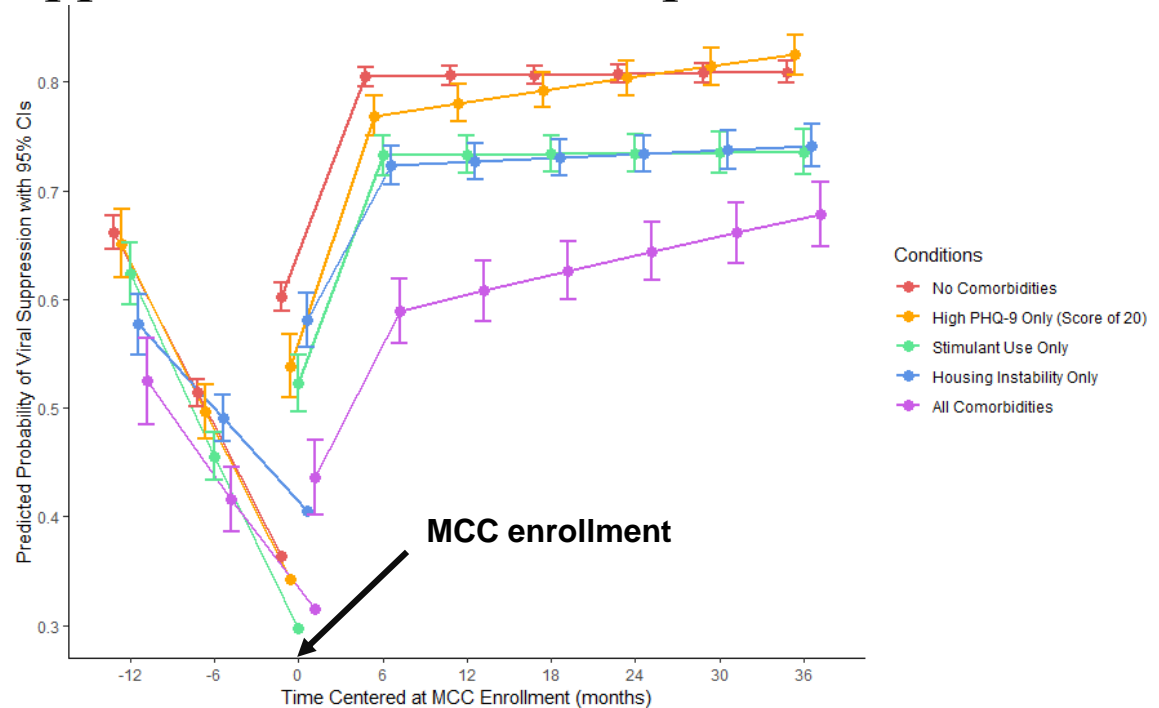
Trajectories of viral suppression: First 6 months in MCC

Compared to those with no comorbidities, those with any or all comorbidities had significantly lower probabilities of VS by 6 months post-enrollment.



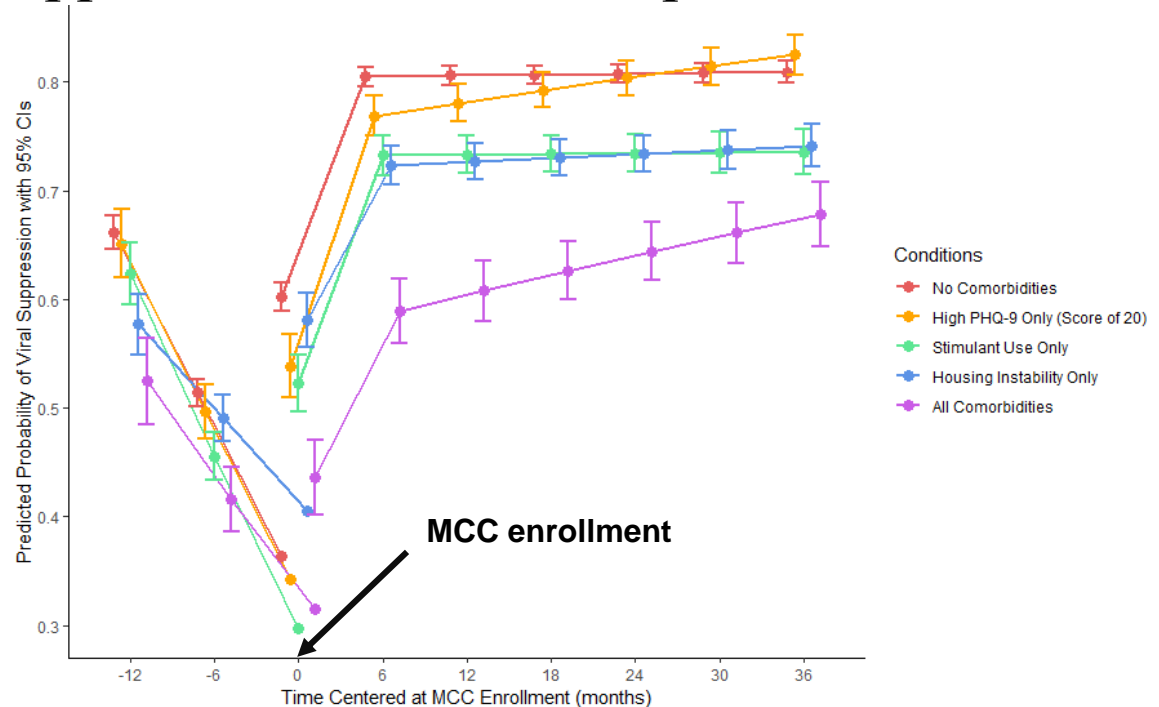
Trajectories of viral suppression: 6-36 months post-enrollment

Those with high PHQ-9 scores and all comorbid conditions continued to improve 6-36 months post-enrollment.



Trajectories of viral suppression: 6-36 months post-enrollment

Those who only reported stimulant use and those who only reported housing instability did not significantly increase in probability of VS 6-36 months post-enrollment.



Discussion

- Across all groups, most improvement occurred within the first 6 months following MCC enrollment.
- By 36 months after MCC enrollment, those who reported stimulant use and those who reported unstable housing:
 - did not significantly improve after 6 months
 - and were less likely than those with no comorbidities to achieve viral suppression.
- Interestingly, those with depressive symptoms were as likely to achieve viral suppression as those with no comorbidities by 36 months after MCC enrollment.



Discussion

- Data suggest that:
 - MCC significantly improved VS among all patients groups.
 - However, it took longer among those with all comorbidities to achieve VS than patients with no comorbidities.
 - These improvements in VS sustained for the 36 months following enrollment.
- Improving and strengthening programs for PLWH who have complex comorbidities is critical to reaching local and national HIV strategy targets.



Discussion

- Next research questions:
 - Do people with comorbid conditions improve in those conditions during and after MCC participation?
 - Which comorbid conditions show the greatest improvement?
 - What additional program components are needed to improve comorbid conditions, retention, and in turn viral suppression?



Questions?

