

The Effectiveness of an Interprofessional Ambulatory Care Health System Redesign on Patient Outcomes

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Aim

The aim of this study was to determine if a nurse-led, interprofessional, collaborative, care coordinated model of care (ICCCM) in primary care affected patient engagement, health care utilization and clinical indicators for a Type II diabetes population compared to pre-intervention and in comparison to a propensity matched sample (HRSA #UD7HP26040, PI Vlasses).

Study Design

Design:

- Retrospective
- Longitudinal
- Propensity Score Matched
- Secondary data from Epic health record (EHR)
- 2 arms:
 - Pre/post (N=204)
 - Propensity Matched (N=171 matched pairs)

	T2	T1	Intervention	T3
N _I	○	○	X	○
N _M	○	○		○

N_I = Patients at Intervention Clinic who received care coordination for at least one year.

N_M = Patients at Ambulatory Care Site at same institution propensity score matched

T1 = Baseline (BL); Closest data when Care Coordination added to problem list from 6 months prior to 6 months after

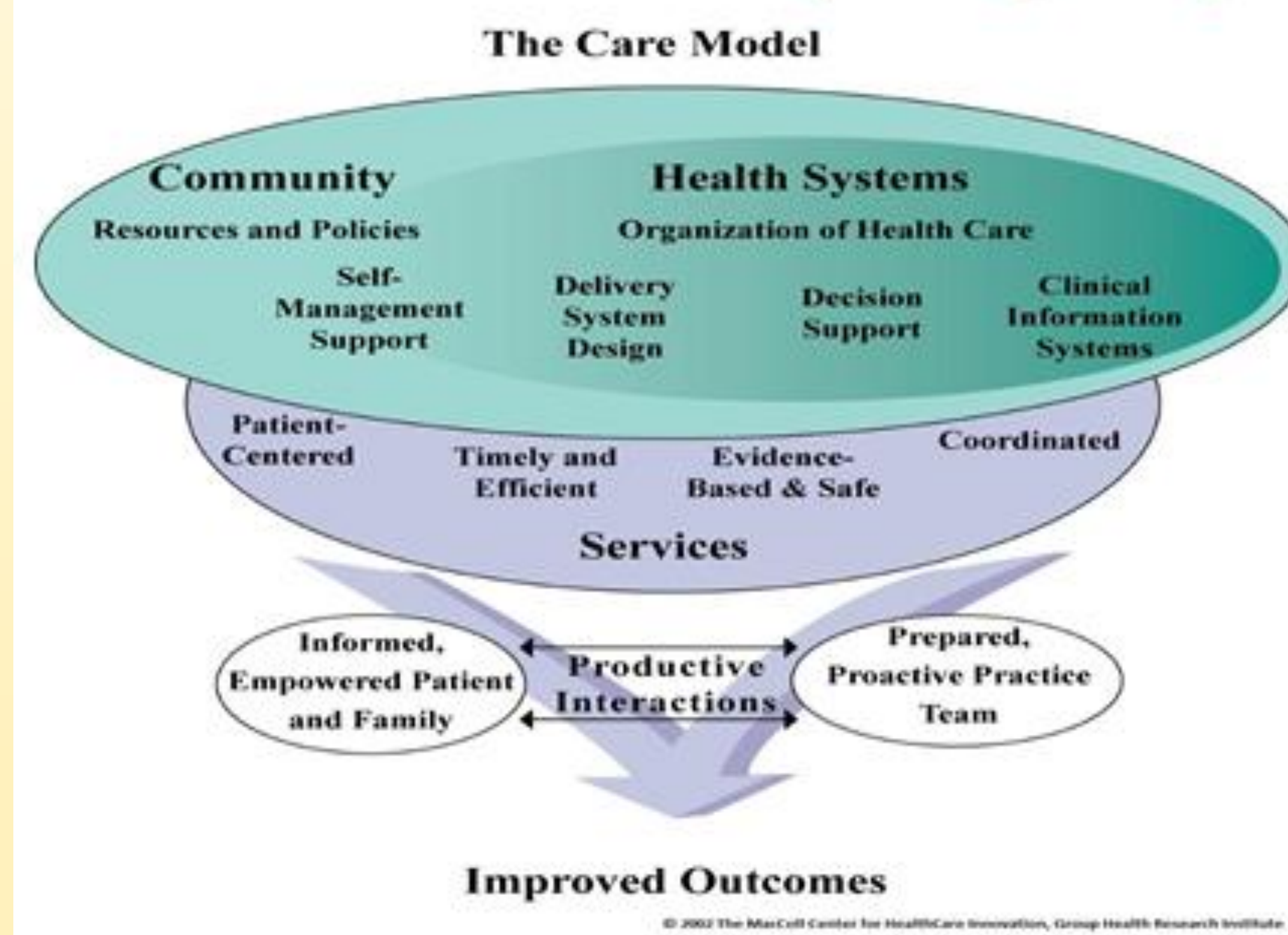
T2 = 1 year prior to BL

T3 = 1 year after BL



Theoretical Framework

The Care Model (Wagner)



Variables

Independent Variable: ICCCM intervention

Dependent Variables:

- Patient Engagement
 - Missed visits
 - Influenza immunizations
 - Dilated eye examination
- Healthcare Utilization
 - Number of hospitalizations
 - Number of emergency room visits
 - Number of days hospitalized
- Clinical Indicators
 - A1C
 - Weight
 - Blood pressure (systolic & diastolic)



Findings

Patient Engagement

Variable	Pre-Post	Matched Comparison
Total # missed visits	p = 0.28	Unadjusted p - .02 , Adjusted p = .22
# Annual influenza immunizations	p = 0.90	p = 0.10, 95% CI [-0.798, 0.064]
# Annual dilated eye examinations	p = 0.63	p = 0.01, 95% CI [-1.058, -0.133]

Healthcare Utilization

Variable	Pre-Post	Matched Comparison
# hospitalizations	p = 0.86	p = 0.59
# ER visits	p = 0.27	p = 0.24
# days hospitalized	p = 0.64	p = 0.48

Findings

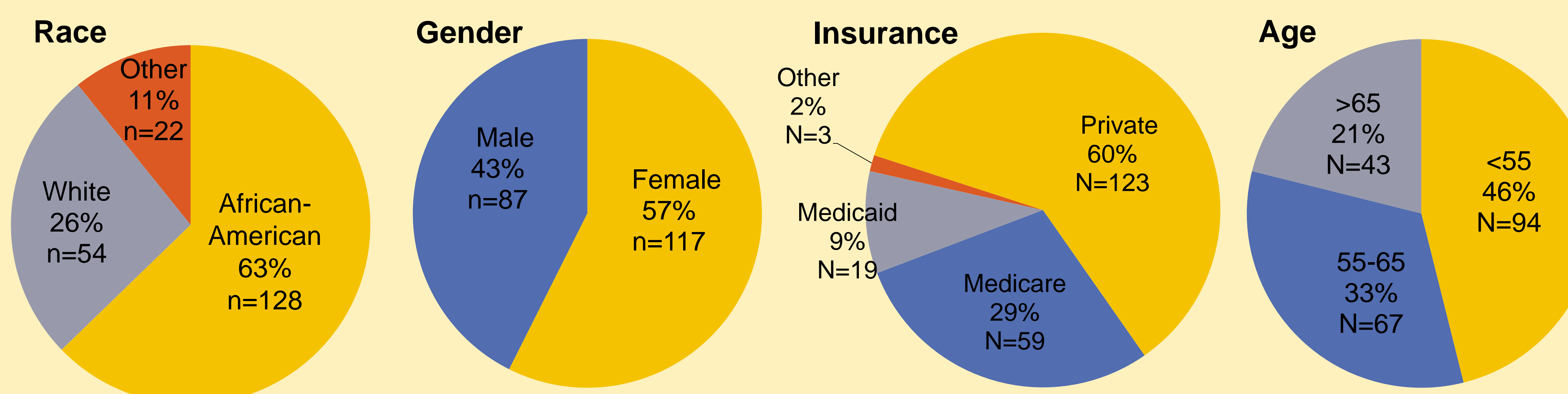
Clinical Indicators

Variable	Pre/Post	Matched Comparison
% pts with HGB A1C > 9 (T1-T3)	p = 0.001	Unadj. p < 0.001, CI [0.631, 1.609] p=0.09, CI [-1.279, 0.101]
Δ HGB A1C (T1-T3)	p < 0.001 (↓0.8%)	p = 0.003 (↓ 0.53%)
Δ weight (T1-T3)	p = 0.02 (↓2.2)	p = 0.14
Δ systolic b/p (T1-T3)	p = 0.48	p = 0.26
# Systolic b/p at goal (< 140) (T1-T3)	p = 1.00	p = 0.39, CI [-0.734, 0.285]
Δ diastolic b/p (T1-T3)	p = 0.66	p = 0.45
# Diastolic b/p at goal (< 90) (T1-T3)	p = 0.04	p = 0.71, CI [-0.579, 0.854]

Conclusion

ICCCM significantly improved clinical indicators (A1C, weight and diastolic blood pressure at goal) and had no effect on healthcare utilization and patient engagement of the type 2 diabetes population in a primary care clinic within a high-need geographical community

Sample



Acknowledgements

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