
Abstract

Care Continuity, Telehealth Use, and Quality of Diabetes and Hypertension Care in Community Health Centers Before and During the COVID-19 Pandemic: Repeated Cross-sectional Study

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Abstract

Background: Community health centers (CHCs) pivoted to remote chronic care services during the COVID-19 pandemic. While care continuity is associated with improved care quality and patients' experiences, telehealth's impact on these relationships is unclear.

Objective: We aimed to examine the association among care continuity, telehealth use, and quality of diabetes or hypertension care in CHCs before and during the COVID-19 pandemic.

Methods: We collected electronic health record data from a cohort of 20,792 patients with diabetes or hypertension with ≥ 2 visits per year from March to December 2019 and 2020 among 166 California CHCs in the OCHIN Accelerating Data Value Across a National Community Health Center Network Collaborative. Logistic regression models estimated the association between care continuity (modified, modified continuity index [MMCI]) and telehealth adoption and blood pressure or hemoglobin A1c (HbA1c) testing. Generalized linear regression models for 2019 and 2020 estimated the association between MMCI and blood pressure or HbA1c, exploring telehealth as a mediator.

Results: Patients experienced reduced care continuity (2019: MMCI=0.71, SD 0.28; 2020: MMCI=0.63, SD 0.36; $P<.001$) and more blood pressure (99.99% vs 99.75%) and HbA1c (53.38% vs 48.99%) assessments in 2019 vs 2020. Telehealth accounted for 0.33% of 2019's visits and 9.55% of 2020's visits. MMCI scores were associated with higher odds of telehealth use in 2020 (odds ratio [OR] 1.96; $P<.001$). MMCI (2019: OR 1.72, $P<.001$; 2020: OR 1.66, $P<.001$) and telehealth use (2019: OR 2.44, $P<.001$; 2020: OR 6.82, $P<.001$) were associated with greater HbA1c testing. MMCI was associated with lower HbA1c values in 2020 (-0.40 , $P=.01$) and lower systolic (2019: -1.64 , $P=.045$; 2020: -2.40 , $P=.001$) and diastolic (2019: -1.24 , $P=.007$; 2020: -1.33 , $P=.001$) blood pressure. MMCI and telehealth were not associated with HbA1c values in 2019. In 2020, telehealth mediated the relationship between MMCI and HbA1c testing (percent mediated 59%), but not between MMCI and other study outcomes.

Conclusions: Care continuity facilitates telehealth use and enables resilient performance on process measures. Elucidating how care continuity influences telehealth adoption may provide insights about implementing patient-centered innovations.

Conflicts of Interest: None declared.

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KEYWORDS

telehealth; care continuity; community health centers; diabetes; hypertension

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