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**Title**

*Understanding Patterns of Primary Care In-Person & Telemedicine Use in Veterans Health Administration: Latent Class Analysis*

**Priority 1 (Research Category)**

Healthcare Services, Delivery, and Financing

**Presenters**

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**Abstract**

Context: During the COVID-19 pandemic, synchronous telemedicine (real time video and phone visits) scaled to support primary care in the Veteran's Health Administration (VHA). Telemedicine's persistence created an opportunity to observe how Veterans use a mix of in-person and synchronous telemedicine for primary care.

Objective: To determine the patterns of Veteran use of the mix of in-person and telemedicine for primary care services, and to assess patient characteristics associations with modality mix.

Study Design: Latent Class Analysis and multivariable logistic regression.

Setting or Dataset: Primary Care in the VHA, covariates 6/1/20-5/31/21, outcomes 6/30/21-7/1/22.

Population Studied: 10% cohort of all Veterans assigned to a primary care clinic in the VHA nationally.

Intervention/Instrument: The mix of in-person and telemedicine use for primary care services.

Outcomes: Latent class membership.

Results: There were 564,580 Veterans in the cohort. The mean age was 64 years-old (SD 17); Sex was 70% M (30 % F); reported race/ethnicity was 67% White, 18% Black, 8% Hispanic, 7% Other or Missing. The mean number of annual in-person primary care visits were 1.6 (SD 2.3); video visits were 0.2 (SD 0.6); and phone visits were 2.4 (SD 4.1).

The optimal latent class analysis demonstrated three patterns of mix of in-person, phone, and video primary care visit use: those with few primary care visits of any modality (40%), those with many primary care visits of all modalities (5%), and those with an intermediate amount of primary care visits of all modalities (55%). Compared to the odds of being in the intermediate group, characteristics associated with higher odds of being in the few primary care visits cohort were Male sex, White race, further driving distance from PCP, higher Gagne, optimal internet speed, unmarried status (OR 1.4, 1.08, 1.004, 1.04, 1.06, 1.05 respectively;  $p < .05$ ). Compared to the intermediate group, characteristics

associated with higher odds of being in the many visits group were Hispanic race, higher JFI and Gagne (OR 1.14, 1.13, 1.02, respectively;  $p < .05$ ) and higher CAN score (Q2 1.9, Q3 3.2, Q4 4.9 ;  $p < 0.05$ ).

Conclusions: Veterans who have few, intermediate, or many in-person primary care visits have similar use patterns of phone and video primary care, with intermediate use being the most common. This shows that telemedicine in primary care mostly served as a complement to Veterans' in-person primary care, rather than as a substitute.