Telemedicine and HIV Care Quality Measures During the COVID-19 Pandemic

Poster #0937

Mary C. Masters[1], Juan Rivera[2], Mia Calamari[1], Katherine Wright[2], Patrick Janulius[1], Laura Ruise[2], Shannon Galvin[1], Elena Molina[2], Lisa Hirschhorn[1], Frank J. Palella[1], Rebecca Kumar[3], Cory Brown[2], Claudia Hawkins[1]

[1]Northwestern University Feinberg School of Medicine, Chicago, IL, USA; [2]Howard Brown Health, Chicago, IL USA; [3]Georgetown University, Washington, DC USA.

BACKGROUND

- **HIV care providers urgently adopted telemedicine as an alternative to routine in-person person visits to ensure continuity of care during the COVID-19 pandemic.**
- **The goal of this study was to examine how introducing televisits at a community and an academic outpatient HIV clinic during the COVID-19 pandemic affected technical quality of care for persons with HIV (PWH).**

METHODS

Study Participants

- **All non-pregnant adult PWH who had at least two visits for HIV care in the 18 months prior to 3/13/2020 at the Howard Brown Health Centers (HB) and Northwestern University Infectious Disease Center (NU-IDC) and in Chicago, Illinois**

Evaluations and Definitions

- **HIV care quality indicators were calculated using data extracted from electronic medical records**
- **Indicators were assessed during 4 different time periods:**
  1. **pre-pandemic (1/1/19-3/1/2020)**
  2. **early pandemic (7/1/2019-9/1/2020)**
  3. **mid-pandemic (1/1/2020-3/1/2021)**
  4. **current (7/1/2020-9/1/2021)**

Data Analysis

- **Measures were compared between intervals 2-4 and interval 1 (pre-pandemic) using generalized linear mixed models to estimate differences in indicators across intervals within each site.**
- **Differences by age group, race, and sex at birth were also compared.**

During the COVID-19 pandemic and rapid adoption of telemedicine, indicators of care utilization and disease monitoring decreased among PWH. Despite these reductions, proportions with virologic, BP, and glycemic control remained stable.

RESULTS

- **6,447 PWH were included in the analysis.**
- **The proportion of televisits peaked between April-June 2020 (71-75% at HB 53-89% at NU-IDC) then declined by July-September (33-35% at HB, 10-15% at NU).**
- **Changes in quality care measures are shown in Table 1.**
- **There were significant declines in care utilization and disease monitoring measures in intervals 2,3 &4 compared to interval 1. The largest declines were observed in STI screening.**
- **Measures of HIV virologic suppression, BP control, and HbA1C <7% (in both persons with and without diabetes) were stable with no significant differences noted in these measures between interval 4 and 1.**
- **Similar trends were observed across all age, race and sex subgroups.**

Table 1. Indicators (%) by site and intervals

	Howard Brown Health				Northwestern			
	1	2	3	4	1	2	3	4
Utilization								
Provider encounter in the last 8 months	89.0	***74.6***	***69.8***	***68.1***	94.3	***85.1***	***81.7***	***78.8***
Monitoring								
HIV VL measurement	90.7	***82.2***	***72.1***	***73.8***	92.1	***85.4***	***73.4***	***74.5***
BP measurement	92.9	***80.4***	***52.7***	***59.9***	97.5	***70.6***	***74.2***	***78.2***
HbA1C measurement (persons with DM)	65.5	***45.3***	60.2	***58.8***	57.8	***46.7***	53.8	51.8
HbA1C measurement (persons without DM)	11.8	***8.0***	***16.6***	***19.3***	34.1	32.6	***30.1***	***29.4***
Mammogram	11.0	***4.6***	***3.7***	7.3	32.7	29.7	30.7	0.0
STI screening	91.2	***82.1***	***70.8***	***72.6***	61.9	***55.9***	***51.6***	***47.9***
Disease Control								
HIV VL <50	82.9	83.8	***85.0***	***86.1***	90.6	92.3	***88.6***	90.8
BP at goal	83.3	***81.8***	***80.0***	83.3	61.6	61.9	***59.3***	63.8
HbA1C <7% (persons with DM)	47.3	47.6	48.2	48.3	61.7	61.3	68.2	65.1
HbA1C <7% (persons without DM)	78.8	78.2	86.0	87.8	88.0	87.9	***90.0***	86.8

Items in bold < 0.05 in comparison to interval 1 (pre-pandemic)

HIV viral load (VL) measurement, suppressed VL, blood pressure (BP), controlled BP (<140/90), and STI screening (≥1 of syphilis serology, urine, rectal or oro-pharyngeal chlamydia/Gonorrhea PCR) were included for prior 12 months. Hemoglobin A1C (HbA1C) level measurement and control (<7%) were included in the last 12 months for persons without diabetes and the last 6 months for persons with diabetes. Mammogram was included the last 12 months for women >50.

CONCLUSIONS

- **During the COVID-19 pandemic and rapid implementation of televisits, indicators of care utilization and disease monitoring decreased compared to pre-pandemic levels.**
- **Despite these reductions, proportions with virologic, BP, and glycemic control remained stable among PWH.**
- **The effect of televisits as well as other patient factors on HIV quality indicators and their changes over time during COVID-19 need to be further examined.**

ACKNOWLEDGEMENTS

- **We thank the clinic staff at Howard Brown Health and Northwestern.**
- **The study was supported by the NIH: NIAID P30AI117943, NIA R03AG067980 to MCM**