Title

Effectiveness of Telemedicine Based Multimodal HIV Care in Rural and Remote Western Australia.

Background:
Despite major advances in HIV treatment, health inequities persist. This is particularly true among individuals in rural and remote areas where limited specialist access, financial hardship, stigma, and substance use can undermine engagement with care. Since the COVID-19 pandemic, telemedicine has expanded rapidly, offering new opportunities to bridge these disparities. This study reviewed outcomes for people living with HIV (PLWH) under the Royal Perth Hospital Rural and Remote service following widespread implementation of telemedicine.

Methods:
We conducted a retrospective review of all active PLWH managed by the Rural and Remote service between September and December 2025. Participants lived more than 100 km from the Perth central business district. Primary data were obtained from departmental clinic letters, the laboratory information system, and the Western Australia state health record.

Results:
A total of 196 active patients were included: 133 (68%) identified as male and 63 (32%) as female. Ethnic distribution was as follows: 93 (47%) Caucasian, 41 (21%) Aboriginal, 30 (15%) Asian, 28 (14%) African, 3 (1%) Oceanian, and 1 (1%) Middle Eastern. Viral suppression (<200 copies/mL) was achieved in 177 (90%) patients, and 194 (98%) had a CD4 count above 200 cells/μL. Treatment adherence was documented in 88% of patients. Sixty (30%) engaged exclusively in telehealth clinics, and 83 (42%) in a hybrid model of telehealth and rural clinics. Most recent reviews were conducted via telephone in 124 (63%) cases, with only one patient using video consultation. Sixteen (8%) attended rural clinics only, and twelve (6%) metropolitan clinics only. Regular methamphetamine use was reported in 16 (8%) patients, accounting for 33% of those who were non-adherent.

Conclusion:
This review supports emerging evidence that telemedicine-based care models can deliver high-quality, complex HIV management to patients in some of the most geographically isolated settings in the world.