Which telehealth features matter most? Ranking results from HIV care providers and patients living with HIV in South Carolina

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Background

- During the COVID-19 pandemic, telehealth was rapidly implemented to mitigate disruptions in HIV care services
  - However, participation in and benefits from telehealth were not distributed equally among people living with HIV (PLWH)[1]
- In South Carolina, an Ending the HIV Epidemic (EHE) priority jurisdiction, only 53% of PLWH are virally suppressed exemplifying regional challenges[2]
- Additionally, the COVID-19 pandemic negatively affected HIV care in SC with high levels of service disruptions, with the majority of HIV clinics facing either a partial or total closure[3]
- The acceptability of alternative telehealth options in HIV care remains understudied.
- **Goals and objectives**: This study aims to assess the relative importance of telehealth features among HIV care providers and PLWH

Methods

- We compiled a comprehensive list of 21 telehealth features from the literature and formative research and grouped them into four domains: administrative, technology, visit-related, and other features
- **Data collection**:
  - Patients and providers were recruited from the largest HIV care facility in South Carolina
    - Patients were eligible to participate in the study if they were 18 years or older, living with HIV, had been prescribed antiretroviral therapy (ART) medication, and received HIV care at the HIV care facility in the year prior to and during the COVID-19 pandemic; patients were recruited using stratified purposeful and snowball sampling
    - Providers were eligible if they were non-trainee healthcare providers, and care for PWH on a regular basis; providers were recruited using purposive sampling
  - 10 HIV care providers and 12 PLWH were asked to rank the 21 features within domains and the domains themselves according to their perceived relative importance as part of qualitative in-depth interviews
- **Analysis**:
  - Ranking data was analyzed through count analysis
  - Differences in ranking between providers and patients were assessed using Mann-Whitney U tests
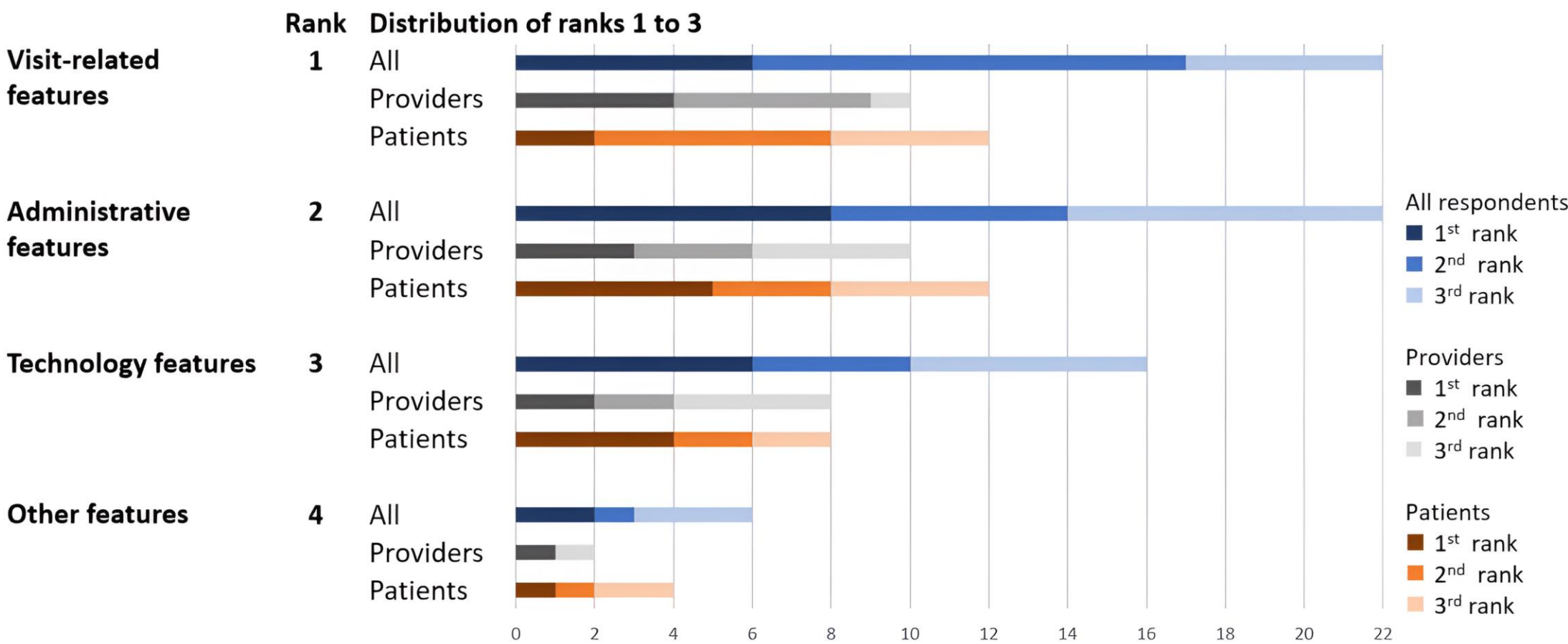
Results

Figure 1. HIV care providers' (N=10) and patients' (N=12) rankings of telehealth features domains

- **Visit-related features**
  - Domain rankings indicated that visit-related features were most important to patients and providers
  - Multidisciplinary telehealth visits, though ranked second overall within the visit-related domain, were more important to patients than providers
  - Providers felt that the type of services provided, and having labs checked at the clinic, a local lab or at home were more important than multidisciplinary visits
- **Administrative features**
  - Administrative features were the second most important amongst other domains
  - Scheduling was ranked as the most important feature within the domain though providers alone actually ranked out-of-pocket cost as most important
  - Waiting time for appointment was the second most important feature overall, as well as within patient and provider groups separately
- **Technology features**
  - Features related to technology were ranked as third most important
  - Artificial intelligence (AI) was ranked as most the most important feature within the technology domain though it was perceived negatively by most providers and patients
    - AI is not trusted with healthcare due to potential mistakes, and inability to establish rapport
  - Type of telehealth, though overall second most important feature, was more important to providers who ranked it as most important than patients who ranked it fourth
    - Video was strongly preferred by providers over other modalities

Table 1. HIV care providers' (N=10) and patients' (N=12) rankings of telehealth features within domains

Domain	Features	Overall	Patients	Providers	Domain	Features	Overall	Patients	Providers
			Rank					Rank	
Administration	Scheduling	1	2	1	Visit-related features	Relationship to provider	1	1	1
	Waiting time for appointment	2	2	2		Multidisciplinary virtual visits	2	5	2
	Out-of-pocket cost of telehealth	3	1	3		Services provided/consultation purpose	3	2	3
	Waiting time before consultation	4	4	3		Lab work	4	3	6
	Total visit time	5	5	5		Prescription services	5	4	4
Technology	Type of provider	1	2	1		Remote patient monitoring devices	6	6	4
	Type of telehealth	2	1	4	Others	Guidance/support	1	1	2
	Hardware used	3	4	3		Location of virtual visits	2	2	2
	Ownership of device*	4	6	2		Waiting room experience	3	3	1
	Nature of telehealth**	5	3	6		Support	4	4	4
	Software used	6	5	5					

Mann-Whitney U test: * p<0.05, ** p<0.01

- Significant differences in importance between patients and providers were observed for ownership of devices and timing of telehealth appointments
- Patients preferred owning their own device rather than having it provided by the clinic or insurance
- Providers strongly preferred synchronous telehealth visits rather than asynchronous
  - Less ability to solve health problems efficiently and large volume of messages
- **Other features**
  - Other features such as the availability of technical support and the location where telehealth visits take place were least important to our participants
  - Technological guidance/support was ranked as the most important feature overall within the other features domain, though patients ranked waiting room experience, a controversial feature, as most important
- Across telehealth features, relationship to the provider was most often ranked first (14/22 participants) followed by out-of-pocket cost (9/22 participants)

Conclusions

- Our findings highlight the importance of visit-related and administrative features of telehealth
- A pre-existing relationship with the telehealth provider was particularly important to many providers and patient participants
  - Findings may inform telehealth HIV care options to meet the needs of PLWH and HIV care providers.

References
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