Exploring Cell Phone Use for Extended HIV Care

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BACKGROUND

- Maintaining optimal adherence to HIV preventive (i.e., Pre-Exposure Prophylaxis, PrEP) and antiretroviral therapies (ART) can be difficult for youth ages 13-24 despite having the highest transmission rate of any age group (5.1%)
- Evidence-based practices to improve medication adherence have demonstrated improved outcomes among youth prescribed ART
- Technology-based interventions have improved medication adherence among youth prescribed ART, but research has not explored the barriers and facilitators associated with implementation of such interventions in clinical settings

OBJECTIVE

- To understand stakeholder's perceptions of the current role of cell phones and barriers to cell phone-based interventions in HIV prevention and treatment centers

PARENT STUDY

Figure 1. The Scale It Up Project and the Four Interventions
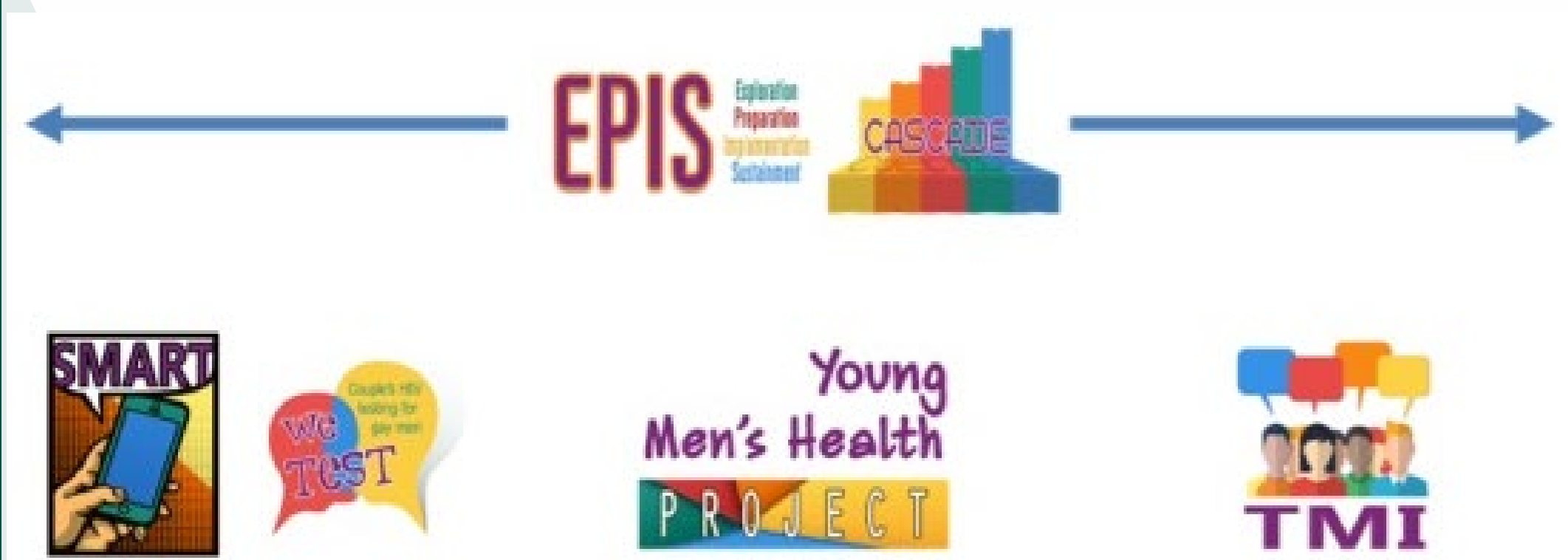

- **SMART:** cell phone-based intervention to improve HIV medication adherence
- **YMHP:** risk reduction intervention for HIV-negative YMSMs
- **We Test:** couples HIV testing and counseling adapted for YMSMs
- **TMI:** Targeted Motivational Interviewing training for clinicians in HIV prevention and treatment

EPIS MODEL

- A framework to examine the implementation of evidence-based interventions into real-world settings
- Four implementation phases
  1. *Exploration* - Identifying EBP to address a public health need
  2. *Preparation* - Determining barriers and facilitators affecting EBP implementation
  3. *Implementation* - Adopting organization utilizes EBP
  4. *Sustainment* - EBP adoption is ongoing and may be adapted further
- Four implementation domains
  1. Outer context - Environment external to adopting organization
  2. Inner context - Characteristics within adopting organization
  3. Bridging factors - Connections between inner and outer contexts
  4. Innovation factors - Aspects of EBP and its improvement

Figure 2. An Overview of the Four Phases and Domains of EPIS
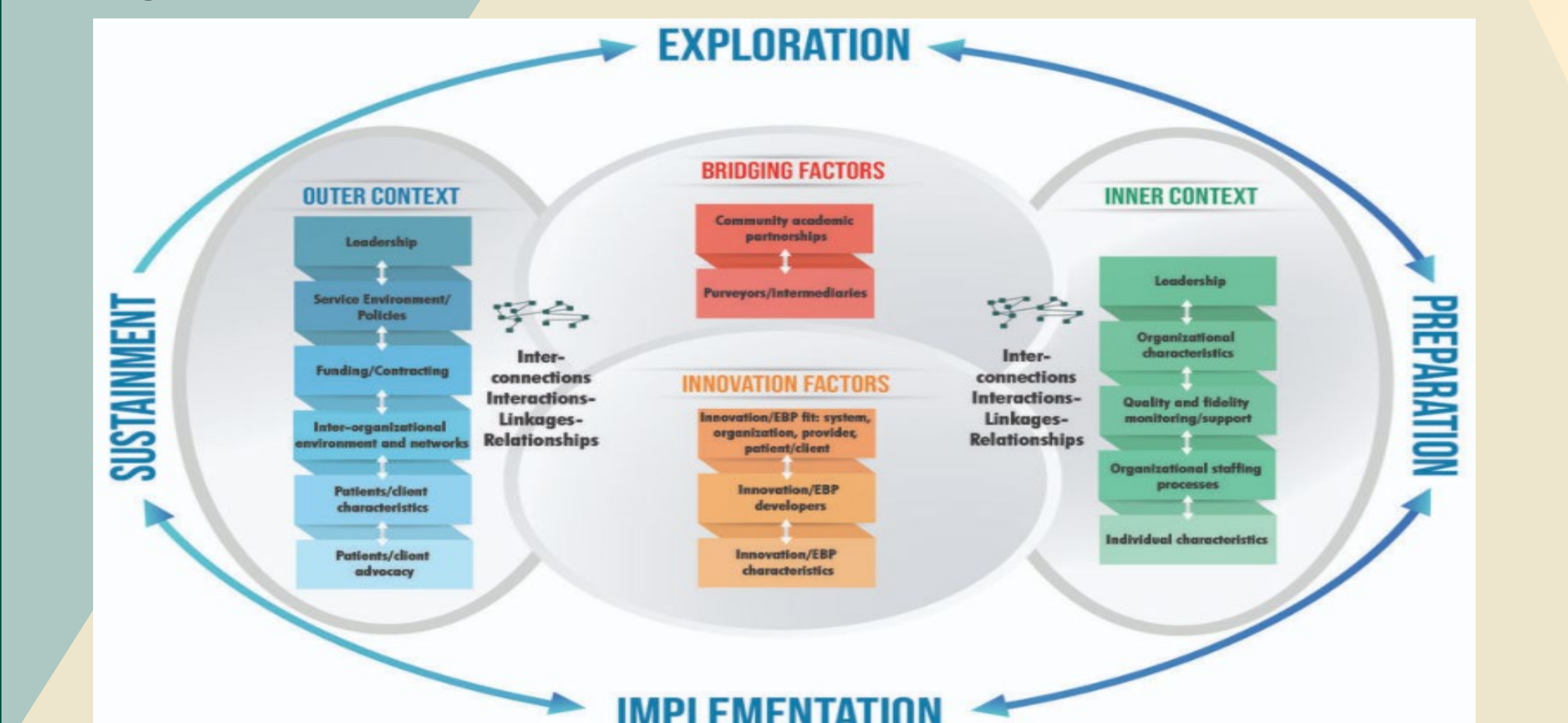
METHODS

Setting
- 12 HIV prevention and treatment centers across the US
- Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN)

Participants
- 77 of 128 (60%) implementation stakeholders completed interviews
  - Site PIs
  - Medical providers: physicians, nurse practitioners, nurses
  - Psychosocial workers: case managers, linkage and retention coordinators, outreach workers
  - Administrative staff

Data Collection
- Occurred during implementation phase
- Semi-structured, qualitative interviews
- Interviews were professional transcribed verbatim

Data Analysis
- Directed content analysis
- Initial coding scheme based on EPIS framework and EPIS empirical literature
  - Consumer and community needs code analyzed for feedback on barriers and facilitators to cell phone and technology use
- 2 coders with 30% overlap
  - Cohen's Kappa = .62

Figure 3. Consumer and Community Needs Code Description

1.1.1. Consumer/ Community needs	Consumer needs include the type, frequency, and/or purpose of appointments and/or services provided by the site/clinic; services that are valued by the patient population; services that are needed by (either currently provided or lacking) the patient population.
	Community needs include psychosocial, economic, and other factors affecting the entire community. For example, community-wide issues such as low employment, homelessness, high crime rates, high substance use rates, etc.
	Note: Community includes HIV community, which includes clinic patients and people living in community living with or being affected by HIV. Community also includes broader population of geographical area.

Table 1. Stakeholder Demographics

Gender		Average age	44.3
	Female 49	Average years in position	9.9
	Male 8	Average years in HIV care	14.6
	Transgender/ nonconforming 1		
Position at Clinic		**Highest Level of Education**	
Clinical Care Provider	17	High School Diploma or Equivalent/2-year Degree	5
Psychosocial Provider	21	4-year Degree	9
Clinical Support	11	Masters/Doctorate Degree	44
Administrator	9		
Current Career Level		**Stakeholder Caseload**	
Entry level	2	No case load	19
Professional level (2yrs plus)	31	< 20 patients	2
Management	12	20 – 39 patients	7
Senior Management or Director	11	40 – 59 patients	9
Other	2	60 – 89 patients	8
		90 ≤ patients	13

Note: Demographics are derived from a quantitative survey to which not all stakeholders responded.

RESULTS

- Two themes relating to cell phone use in clinics were identified: 'Extended Support' and 'Limitations'
- Other Ideas or Concerns of Stakeholders
  - Stakeholders noted many patients preferred texting over phone calls due to social media and technology use being interconnected with popular culture

Table 2. Themes Relating to Cell Phone Use

| Theme	Description
Extended Support	Stakeholders' current use of cell phones for clinical service. Primary forms of cell phone use for extended service included reminders and check-ins to strengthen rapport and assist patients with medication adherence.
Limitations	Stakeholders noted organizational barriers preventing them from incorporating cell phones for clinical services, including concerns about liability, confidentiality, and lack of staff.

Extended Support

"For anybody with poor adherence… [follow-up] would be escalated where the nurse case manager would start calling the patient or texting, they do either."

Limitations

"In the head space [patients] are at, especially when newly-diagnosed will text you at midnight and drop a bomb and if you're not answering, you know, that might leave you liable."

"Confidentiality can be a big issue for a lot of our patients and they may not always want, or feel comfortable, with somebody contacting them [using cell phones]."
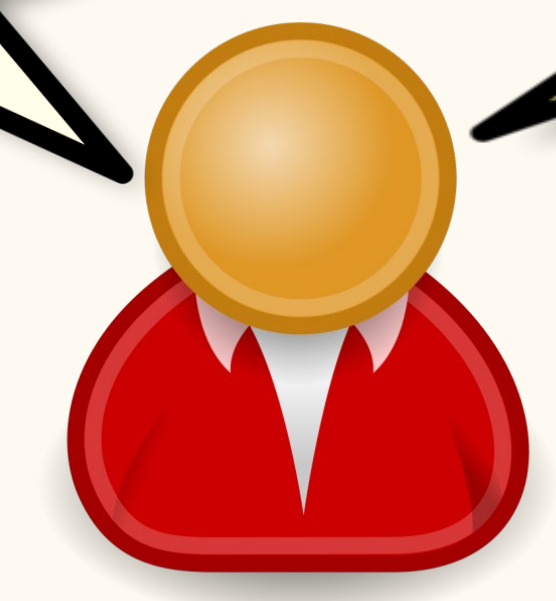
CONCLUSION

- Cell phones are currently used in clinics to enhance support but stakeholders highlighted staffing, liability and confidentiality concerns that limit their use
- Guidelines to protect patients and aid staff in delivering support by cell-phone are needed:
  - Strategies to maintain patient confidentiality
  - Strategies to reduce liability

PUBLIC HEALTH IMPLICATIONS

- Cell phones are a low-cost method to extend the reach of clinical support to high-risk populations
- Given the pervasive use of cell phones among teens and young adults, implementing extended support through cell phones may improve ART adherence in youth ages 13-25

ACKNOWLEDGEMENTS