Enhanced Recall of Sexual Partners through Access to Smartphone Apps

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Background

The internet and smartphone applications (apps) are increasingly used to facilitate casual sexual relationships. These casual relationships can increase the risk of sexually transmitted diseases (STDs). In STD investigations, traditional contact elicitation methods can be enhanced with smartphone technology during field interviews.

Methods

From February to May, 2013 a large, multi-infection investigation among mostly men who have sex with men (MSM) was conducted by Monroe County Department of Public Health (MCDPH) Disease Intervention Specialists (DISs) using both traditional case interviews and cluster interviews. When interviewing index patients who indicated meeting sexual partners online, DISs had real-time access to smartphone apps and were able to elicit more partners through access to inboxes and partner profiles where traditional contact information was lacking.

Results

- 7 index patient interviews, 7 re-interviews of people previously known HIV-positive (PKP), and 2 cluster interviews were conducted. 97 individuals were identified among 117 sexual dyads.
- On average 8 partners were elicited per interview.
- 7 new STD cases were identified; 29 members of the network were previously known HIV-positive.
- 7 individuals used apps or the internet to find partners (average: 3 internet partners per interview when internet is used).
- 21 of the sexual dyads originated online or with an app.
  - 6 partners were located using the smartphone.
  - 2 were notified of their exposure online.
  - 3 of the new STDs in the network were among partners who met online.

Demographics of individuals in network

Sex	N	%
Male	95	98%
Female	2	2%
Age (years)		
16-19	11	11%
20-24	17	18%
25-29	24	25%
30-34	11	11%
≥35	22	23%
Unknown	12	12%
Race/Ethnicity		
Black	79	81%
White	7	7%
Hispanic	4	4%
Unknown	8	8%

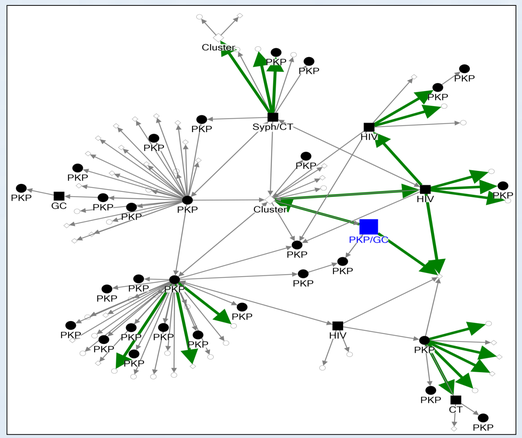
STDs/HIV in network, newly diagnosed and previously known positive (PKP)

Infection status	N	%
Newly diagnosed	7	7%
HIV	2	
HIV-gonorrhea co-infected	1	
Syphilis-Chlamydia co-infected	1	
Gonorrhea	1	
Chlamydia	1	
Gonorrhea in PKP	1	
Previously known HIV-positive	29	30%

Partners elicited and testing positive for HIV/STD by interview type

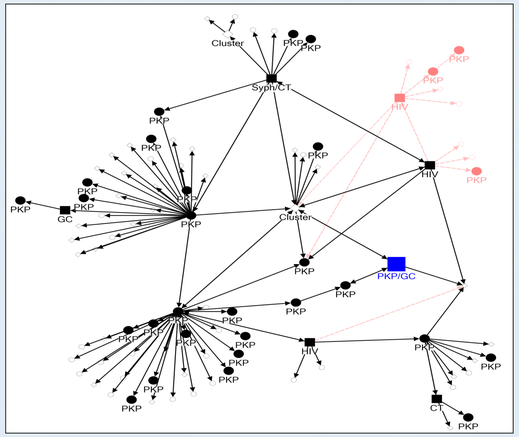
Interview type	N	Partners elicited	Partners testing positive
Index Patient	7	36	3
PKP re-interview	7	71	3
Cluster	2	10	1
Total	**16**	**117**	**7**

Social network by infection status and partners who met online or an app



Shape	STD/HIV status	N
■	Newly diagnosed. STD labeled on map.	7
●	Previously known HIV-positive (PKP).	29
◇	Tested negative for all STDs/HIV.	31
○	Unknown.	30
■	Original patient. Gonorrhea in a person previously known to by HIV-positive (PKP).	1
Cluster	Partners tested negative who were cluster interviewed.	2
→	Partners met traditionally (not online).	95
→	Partners met on a website or an app.	21
→	Partner information provided to DIS as a result of smartphone access in the field.	12

Social network by infection; partners identified with smartphone in the field



Conclusions/Next Steps

- Use of smartphone technology by DISs in the field improved contact elicitation, and resulted in successful partner notification and case finding.
- Monroe County DIS continue to track partner screen names and link them to real identities as they become known. Screen names are entered into the Electronic Health Record and will allow staff to reverse search by screen name in future investigations.
- Guidance is needed for conducting partner notification on dating apps.

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Network maps created with NodeXL. http://nodexl.codeplex.com