

Delivery of Internet Partner Services (IPS) to Improve Disease Intervention Outcomes among Anonymous Sex Partners

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Background

Use of the Internet is ubiquitous and serves as a powerful tool for communication. Social networking sites (SNS), such as Facebook and MySpace, provide opportunities for individuals to connect with others who share similar interests. Similar to SNS, sexual networking sites like Manhunt, Adam4Adam and Gay.com, provide opportunities for locating sexual partners. In 2000, outbreaks of primary and secondary syphilis occurred in several major cities in the U.S. and in 2001, overall cases of syphilis increased after nearly a decade of decline. The increase occurred primarily among men and was largely attributable to cases among men who have sex with men (MSM). Investigation of these outbreaks indicated that many MSM met their sexual partners in Internet chat rooms.

Sexual partners identified through the Internet are frequently anonymous therefore infected patients are unable to provide their partners' identifiers such as name, address and physical attributes, information most typically used to locate and notify sexual contacts. In response, the New York State Department of Health (NYSDOH) Bureau of STD Control (BSTDC), in collaboration with other DOH agencies, developed Internet Partner Services (IPS) Guidelines to establish protocols that adapted traditional disease intervention strategies for STD/HIV to this novel environment.

Prior to June 2008, one BSTDC disease intervention staff (DIS) was responsible for all IPS investigations in NYS outside New York City (NYC is a separate project area). In June 2008, additional DIS were trained to perform IPS with one IPS worker located in each of the five regions of NYS. These DIS serve as the BSTDC point person for local health departments for initiating partner notification through SNS such as websites, chat rooms, or instant messaging clients.

BSTDC established an Evidence Based Action Plan (EBAP) to assess the success of IPS investigations. One of the primary EBAP outcomes was to assess the number of IPS investigations that, upon completion, could be categorized using conventional disposition codes.

Methods

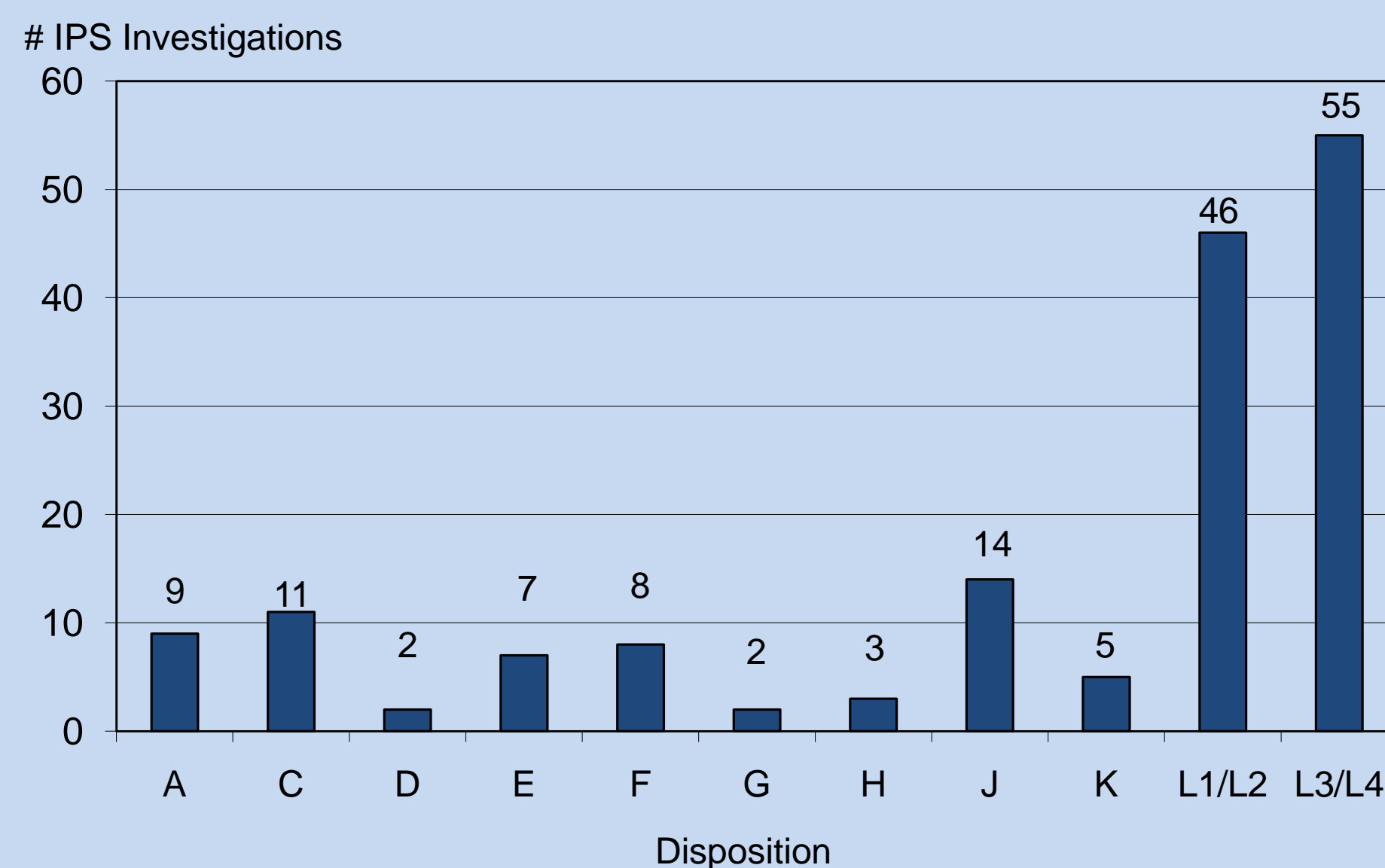
DIS conducted IPS for partners and clusters to STD and HIV for whom the only identifying information was a screen name or e-mail address. DIS used log sheets to collect data on number of assignments, exposure disease, frequency and date of notification, notification method, DIS worker number, disposition and disposition date. In addition to conventional disposition codes, the L-disposition code was adapted for local use in tracking Internet-only dispositions (see Appendix). Log sheets were submitted on a monthly basis for data entry. Data analysis was conducted using SAS version 9.1.3. All STD and HIV IPS investigations conducted in 2009 were included in the analysis.

Results

In 2009, a total of 162 IPS investigations were conducted, 115 (71%) for partners to STD and 47 (29%) for partners to HIV. Of the 162 investigations, 61 (38%) converted to a conventional disposition and 101 (62%) had an L (Internet) disposition (Figure 1). Among those 61 IPS investigations with a conventional disposition, 40 (66%) were medically evaluated (8 HIV and 32 STD); of the 32 STD partners with a medical evaluation, 20 (62%) had an 'A' (preventive treatment) or 'C' (infected, brought to treat) disposition.

The 101 L dispositions could be categorized into two groups, those who were informed of their exposure, accounting for 46 (46%) partners, and those who were not informed, accounting for 55 (54%) partners. Of the 46 who were informed, six (13%) claimed preventive treatment, two (4%) claimed to refuse preventive treatment, one (2%) claimed previous treatment, 11 (24%) claimed to be non-infected, and 26 (56%) acknowledged their exposure with no additional information provided. Of the 55 who were not informed, four (7%) blocked the DIS screen name, 11 (20%) logged in but did not read the DIS e-mail, four (7%) did not log in, five (9%) had an invalid screen name, for 16 (29%) it was unknown if e-mail was read, and 15 (27%) were not informed with no reason given for the failed contact.

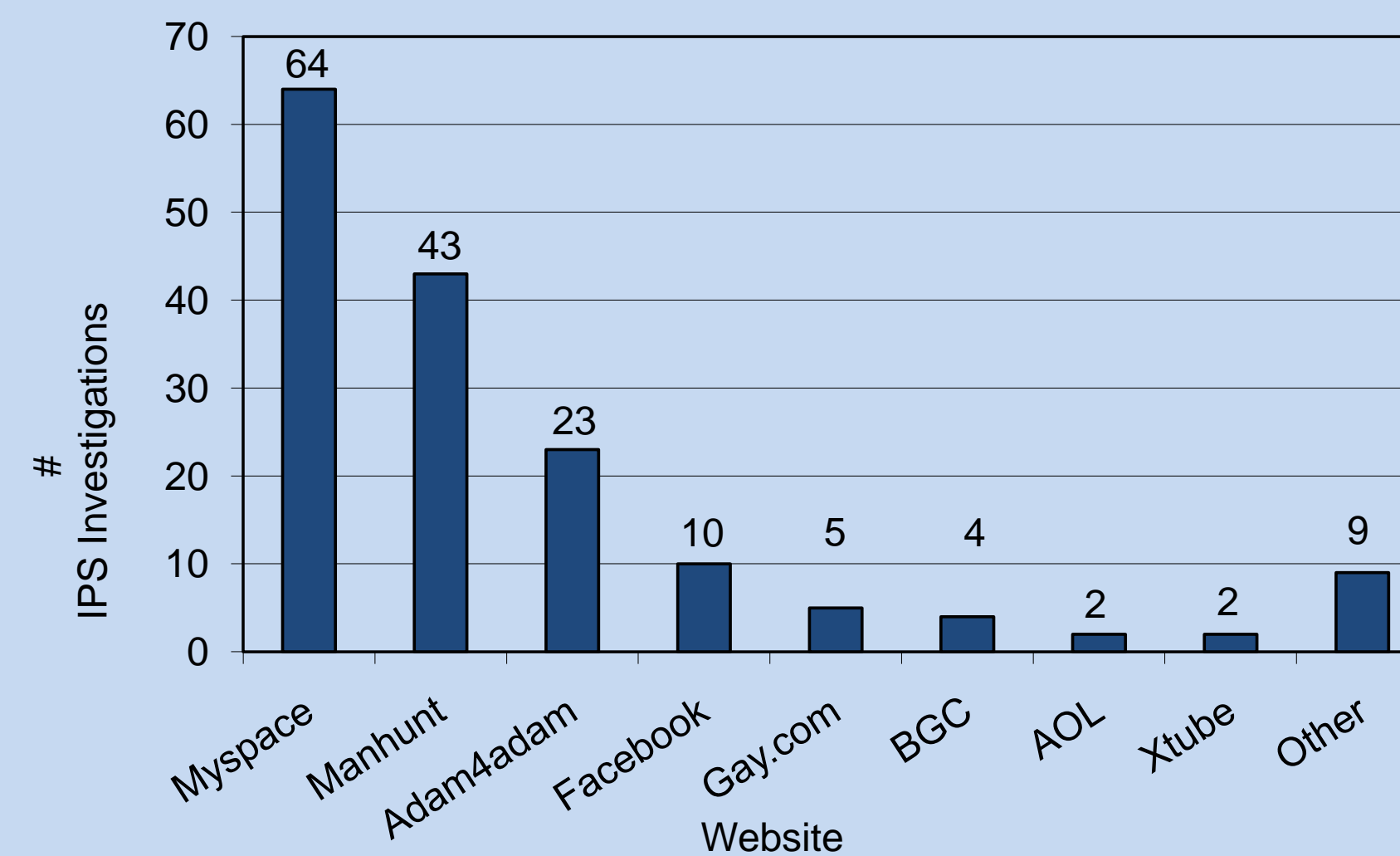
Figure 1: IPS Investigations by Disposition, New York State, 2009



Results cont'd

IPS involved the use of a number of different online venues. Figure 2 displays the number of IPS investigations by website. By disease, sexual networking sites such as Manhunt and Adam4adam accounted for 80% of HIV IPS investigations, nearly 50% of syphilis IPS and over 35% of gonorrhea IPS, whereas social networking sites such as Myspace and Facebook accounted for over 90% of Chlamydia IPS and over 50% of gonorrhea IPS (data not shown).

Figure 2: IPS Investigations by Website, New York State, 2009



Discussion

Adaptation of PS to include IPS has led to notification of partners who previously would not have been contacted. Based on our findings, 40 partners were medically evaluated and another 46 were informed of their specific STD/HIV exposure.

Ideally, the majority of IPS investigations would lead to medical evaluation of partners. Our findings indicate that fewer than half of the IPS investigations resulted in such an evaluation. In the absence of such documentation, the BSTDC created new L-disposition subcategories in order to document the outcome of IPS efforts to the fullest extent possible and attempt to correlate these outcomes with disease trends in the future

Discussion cont'd

Different sites attract different populations and consequently, IPS necessitates the use of a variety of online sites as has been demonstrated by our findings. It is important to understand the culture of these online sites in order to communicate effectively. This evaluation identified differences in venues by disease which could be useful for prioritizing disease intervention activities. One limitation is the absence of demographic information for those partners with an L-disposition as that information might facilitate additional targeting of IPS activities.

Appendix

Dispositions Codes:

Code	Description
A	Preventive treatment
B	Refused preventive treatment
C	Infected, brought to treatment
D	Infected, not treated
E	Previously treated for this infection
F	Not infected
G	Insufficient Information to begin investigation
J	Located, refused examination
K	Out of Jurisdiction
L	Other – Internet
L1	Informed of specific STD exposure (1st e-mail, phone call, in-person communication) <ul style="list-style-type: none"> a. Informed of specific STD exposure, claims preventive treatment b. Informed of specific STD exposure, refuses preventive treatment c. Informed of specific STD exposure, claims to be infected and treated d. Informed of specific STD exposure, claims to be infected and not treated e. Informed of specific STD exposure, claims to be previously treated f. Informed of specific STD exposure, claims to not be infected g. Informed of specific STD exposure, no further contact
L2	Informed of an STD exposure (2nd e-mail) <ul style="list-style-type: none"> a. Informed of specific STD exposure, claims preventive treatment b. Informed of specific STD exposure, refuses preventive treatment c. Informed of specific STD exposure, claims to be infected and treated d. Informed of specific STD exposure, claims to be infected and not treated e. Informed of specific STD exposure, claims to be previously treated f. Informed of specific STD exposure, claims to not be infected g. Informed of specific STD exposure, no further contact
L3	Not informed of STD exposure <ul style="list-style-type: none"> a. Refused—E-mails not read even though patient logs in b. Refused—Patient blocks IPN screen name. c. Not known if e-mails are read d. Unable to locate (patient has not logged in during Field Investigation period.)
L4	Insufficient information to begin investigation (screen name does not exist.)