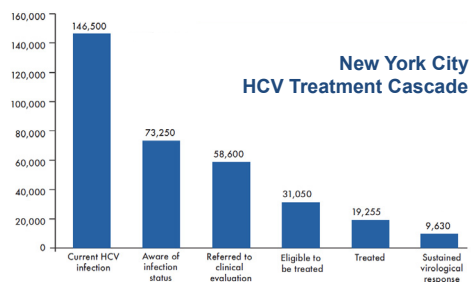


Using Text Messaging (SMS) to Promote Hepatitis C Testing and Linkage to Care

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BACKGROUND

- Nearly 4 million Americans and 150,000 New York City (NYC) residents may have chronic hepatitis C (HCV).
- The number of HCV-related deaths now exceeds HIV-related deaths in the US.



- Of 7,000 NYC residents newly reported with a positive HCV antibody test each year, a third lack the HCV RNA confirmatory test and are likely not in HCV medical care.
- Since 2004, New York City Department of Health and Mental Hygiene (DOHMH) has mailed educational materials—recently including a medical care referral list—to persons reported with a positive HCV test. The cost of mailings is high, and it is unknown how many letters are received, opened or followed up on.
- HCV funding is limited; new, more cost-efficient practices to promote HCV testing and linkage to care are needed.

Opportunity for Outreach

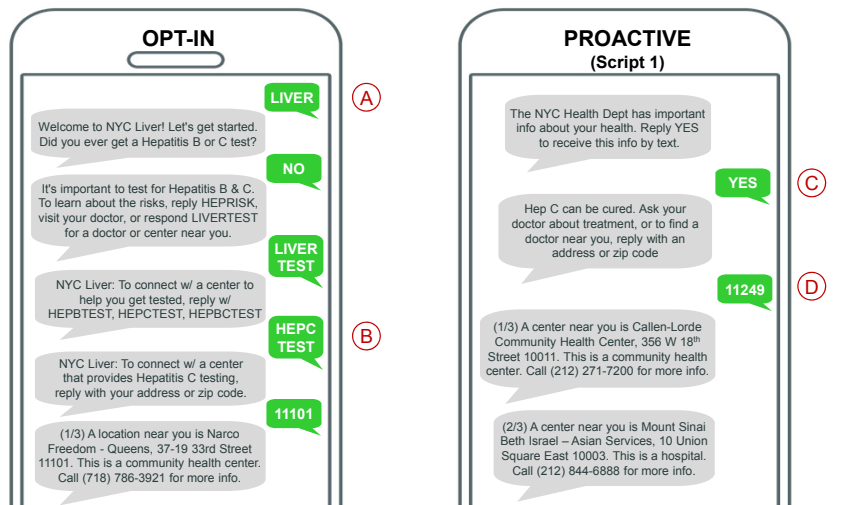
- 90% of US adults own a cellphone and 99% of SMS messages are opened.^{1,2}
- Health text messaging can improve treatment adherence and health outcomes.³
- Text messages are used more often by non-whites and people with lower levels of income and education, offering a promising avenue for reaching vulnerable populations.⁴

METHODS

In 2014-2015, DOHMH developed and implemented two SMS services to promote HCV testing and linkage to care:

- Opt-In Text Service (Text LIVER to 877977):** Offers HCV risk assessment, as well as testing and medical care location information, and is available in English and Spanish.
- Proactive Texting Service:** A study exploring sending a text message to persons recently reported to DOHMH surveillance registry with a positive HCV antibody test to promote HCV RNA confirmatory testing and linkage to care. Persons reported with a valid home address, valid cellphone number and positive HCV antibody test (dated 5 months to 6 weeks before the first text message is sent) were identified for this service. DOHMH legal reviewed and approved protocol. Three text script options were piloted in July to August 2015.

Sample Text Scripts



RESULTS

OPT-IN

July 2014 to Aug 2015 (n=83)

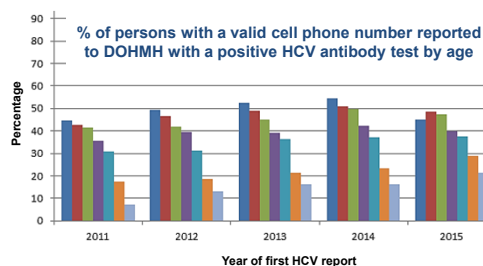
- 83 persons opted into the service (A)
- 12 (14%) replied "HepRisk" to learn risk factors
- 10 (12%) replied "HepCCare" for HCV medical care sites
- 7 (8%) replied "HepCTest" (B) for HCV testing sites

PROACTIVE

July 2015 pilot results (n=105)

- 22 (21%) of messages failed to deliver
- 20 (24%) recipients that received the first message consented to receiving additional text messages by responding "Yes" (C)
- 3 (15%) recipients that consented replied "HepCare" or texted a zip code (D) to obtain HCV-related service information
- 2 (10%) recipients that consented replied "Help"
- 1 (1%) person called DOHMH for clarification regarding their test result

RESULTS: Proactive Campaign



Mean/median age of pilot participants that consented to the initial text message (C)

	Consented	
	Yes	No
N	20	63
Mean (sd)	45.5 (15.2)	50.3 (16.7)
Median (IQR)	42 (33.5-56.0)	53 (35-63)
Range	27-82	21-82

DISCUSSION

Text messaging is a promising mode of communication to promote linkage to care among HCV-infected individuals. However, as an emerging mode of communication with patients about health information, best practices have yet to be established.

Challenges

- SMS campaigns have start-up and monthly maintenance fees. But they may be cheaper than materials disseminated by postal mail.
- Electronic delivery of health information should be carefully considered for legal, privacy, and ethical issues.
- Based on our data, the desirability of health communication via text messages versus print, online, or in-person communications is in question.
 - Paid online advertisements to promote the opt-in text service resulted in limited uptake of the service.
 - Paid online advertisement to promote the DOHMH HCV webpages resulted in an 15,800% increase in webpage visits.

Recommendations

- Conduct formative research on the desirability and/or utility of a text message service for your target population. Consider tailoring health communications campaigns by age, e.g. text services for younger adult populations more likely to own a cellphone or respond to text messages.
- Plan for a thorough risk assessment and text script development phase before implementing SMS-based communications campaigns.
- Minimize the number of text messages in the text stream. If users do not respond or engage in the beginning, they will not receive the key messages if offered later in the text stream.

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