

## Patient Preferences for Message Content in a Mobile Health (mHealth) HIV Testing Campaign

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### Under-testing for HIV

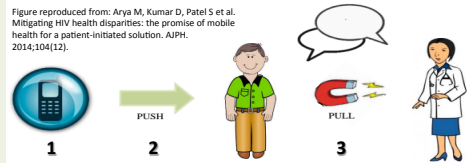
- 50,000 new HIV infections occur in the U.S. yearly<sup>1,2</sup>
- Racial and ethnic minorities are under-tested for HIV<sup>3</sup>
- When finally tested, racial and ethnic minorities are tested late<sup>4</sup>

### HIV Communication Disconnect

- Patients expect to be HIV tested<sup>5</sup>
- Providers are unsure how to broach subject of HIV testing, and would prefer patients to ask for themselves<sup>6</sup>
- Patients would be comfortable requesting test, but want strategies to help discuss testing with their provider<sup>7</sup>

### Addressing the Disconnect: The Push-Pull Model

Figure reproduced from: Arya M, Kumar D, Patel S et al. Mitigating HIV health disparities: the promise of mobile health for a patient-initiated solution. *AJPH*. 2014;104(12).



The Push-Pull Model<sup>8</sup> could overcome the disconnect:

- 1) Cell phones are nearly ubiquitous
- 2) A timed, targeted, and tailored text message could cue patients to initiate HIV testing conversation with their provider
- 3) This pulls their provider into an HIV testing conversation

### STUDY OBJECTIVES

- 1) Develop text messages compatible with Push-Pull Model
- 2) Determine preferred messages for an HIV testing text message campaign
- 3) Evaluate participant reactions to text message content within an HIV testing text message campaign

### METHODS

#### Interviews with representative patient population

- Present 11 draft messages to a convenience sample of patients age 35-55 at the study site: record comments and assess patients' preferred messages.
- The message most preferred within each message type (awareness, instruction, positive persuasive, negative persuasive) was selected for pilot testing.

#### Pilot testing the campaign

- Eligibility Criteria: 35-55 y.o. English speaking cell phone owners with upcoming appointment.
- Participants were recruited over the phone, texted 1 hour before appointment, called one day after appointment, and surveyed for reaction to message content.

### Message Construction and Selection

#### Message Types

##### Awareness (A)

Present new information to audience related to the target health problem.

##### Instruction (I)

Present information as to how the audience might accomplish your target behavior.

##### Positive Persuasive (P)

Present health consequence of following target behavior

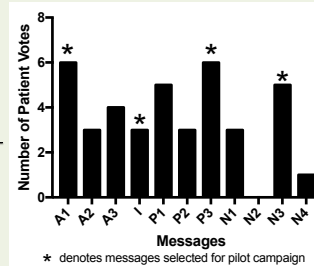
##### Negative Persuasive (N)

Present health consequence of not following target behavior

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#### Cue to Action

*"Remind Dr. Jones to test you for HIV today"*



### Content of Final Campaign Messages

Message ID	Message Content	Patient Reactions to Message Content
A1	Mrs. X – Did you know that we test all adult patients for HIV at Harris Health? Remind Dr. Jones to test you for HIV today.	<ul style="list-style-type: none"> <li>• "Some might not know this information"</li> <li>• "It was a nice reminder"</li> <li>• "[I liked] you...explaining it in a short message"</li> </ul>
I	Mrs. X - when you see Dr. Jones, say: "Please test me for HIV today".	<ul style="list-style-type: none"> <li>• "It's a disease that everyone should be on top of"</li> </ul>
P3	You can have HIV and still feel healthy. The only way to know that you don't have HIV is to get tested. Remind Dr. Jones to test you for HIV today.	<ul style="list-style-type: none"> <li>• "You may not realize, but you can hurt others"</li> <li>• It was very [educational]"</li> </ul>
N3	John (Jane) didn't know he (she) had HIV, and he(he) gave it to his(her) girl(boy)friend. To make sure this doesn't happen to you, remind Dr. Jones to test you for HIV.	<ul style="list-style-type: none"> <li>• "[I liked]...a reminder"</li> <li>• "Alarming"</li> <li>• "A little disturbing"</li> </ul>

### DISCUSSION

- Patients preferred short messages framed as reminders
- Threatening, fear-inducing appeals were disliked by patients
- Messages which normalize HIV testing as a part of routine healthcare might be effective in initiating an HIV testing discussion
- Future work will demonstrate whether HIV testing prevalence increases as a result of a campaign text message in a randomized trial

### REFERENCES

1. CDC. HIV in the United States. At A Glance. CDC. 2013;7:3-4. 2. CDC. HIV and AIDS in America. A Snapshot. 2013;3:2-3. 3. Campsmith ML, Rhodes PH, Hall HI, Green TA. Undiagnosed HIV Prevalence Among Adults and Adolescents in the United States at the End of 2008. *J Acquir Immune Defic Syndr*. 2010; 33(3):618-624. 4. CDC. Late HIV Testing in States, 1996-2005. *MMWR*. 2009; 58(24):683-685. 5. McAnulty L, Yang C, Espinoza-Soto Y, et al. A Survey of a Small Sample of Emergency Department and Admitted Patients Asking Whether They Expect to be Tested for HIV Routinely. *J Int Assoc Provid AIDS Care*. 2013; 12(4): 247-252. 6. Arya M, Kallen MA, Elzein H, Kwanath K, Giordano TP. African-American Patients' Preference for a Health Center Campaign Promoting HIV Testing: An Exploratory Study and Future Directions. *J Int Assoc Provid AIDS Care*. 2014; 13(6): 488-491. 7. 8. 9. 10. 7. CDC. Today's HIV/AIDS Epidemic. 2011; 2011-2014. 8. Arya M, Kumar D, Patel S et al. Mitigating HIV health disparities: the promise of mobile health for a patient-initiated solution. *AJPH*. 2014;104(12).

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