



# Middle School Students Design Text Messages to Raise Awareness of HPV Vaccine

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## STUDY RATIONALE

Human papillomavirus (HPV) is the most common sexually transmitted infection (STI) in the US. HPV is associated with cervical, vaginal, vulvar, anal, penile, and throat cancers. HPV vaccine reduces HPV-related disease.

HPV vaccine is routinely recommended for ages 11-12. However, HPV vaccine coverage in 2011 was only 30% in females and 1% in males ages 13-17. Text messaging could increase motivation to get vaccinated.

## RESULTS:

STUDENT PREFERENCES FOR TEXT MESSAGES ABOUT HPV AND HPV VACCINE (N=39)

Message greeting	Best N (%)	Worst N (%)
“Hey! What’s up?”	16 (44.4%)	9 (24.3%)
“You need to know this:”	16 (44.4%)	13 (35.1%)
“Hi there.”	4 (11.1%)	15 (40.5%)

Action statement	Best N (%)	Worst N (%)
“Go to the doctor to get the vaccine.”	2 (5.4%)	27 (73.0%)
“Talk to your doctor about the vaccine.”	18 (48.6%)	5 (13.5%)
“Talk to your parents about getting the vaccine.”	17 (45.9%)	5 (13.5%)

Body of message	Tone/Frame	Like* M (SD)	Want More Info* M (SD)	Trust* M (SD)	Composite <sup>1</sup> M (SD)
“HPV is a sexually transmitted infection. But there is a vaccine you can get to prevent it!”	Gain frame	2.31 (.80)	2.36 (.78)	2.33 (.77)	2.33 (.72)
“If you get the HPV vaccine, it will help keep you healthy.”	Gain frame	2.21 (.80)	2.26 (.72)	2.10 (.75)	2.19 (.67)
“Did you know that HPV vaccine can keep you from getting HPV one day?”	Non-directive/Soft tone	2.10 (.60)	1.97 (.58)	2.18 (.64)	2.09 (.47)
“Many boys and girls have already gotten the HPV vaccine.”	Social norm frame	1.92 (.77)	2.05 (.83)	1.97 (.74)	1.98 (.73)
“HPV is a sexually transmitted infection. You need to get the HPV vaccine or you might get it.”	Directive/Loss frame	1.82 (.76)	2.03 (.81)	2.03 (.74)	1.96 (.68)
“If you do not get the HPV vaccine before you are sexually active, it may be too late.”	Loss frame	1.74 (.72)	1.95 (.72)	1.97 (.63)	1.89 (.62)
“You need to get the HPV vaccine to keep from getting HPV one day.”	Directive/Hard tone	1.74 (.64)	1.79 (.70)	1.97 (.58)	1.84 (.55)

\*Note: Liking, wanting more information, and trustworthiness were measured on a three point scale, where 1 = not at all, 2 = a little, 3 = a lot.  
<sup>1</sup>The composite score is an average of the like, wanting more info, and trust scores for each respective message.

## METHODS

- Used Health Belief Model and message design concepts.
- Recruited 43 students (17 boys, 26 girls, average age 13, all white) through 2 middle schools in rural western North Carolina county.
- Visited schools 4 times to conduct 7 focus groups and 2 surveys with students.
- Used iterative process to design preferred text messages about susceptibility to HPV infection and benefits of HPV vaccine.
- Interviewed 4 parents and 4 school personnel.

**CONCLUSIONS:** The text message with the best composite score ( $M=2.33$ ,  $SD=.72$ ) for likeability, trustworthiness and making them want more information was a gain frame stating that the chance of getting HPV infection would be reduced if the student was vaccinated against HPV.

Students gave lower composite scores to loss frame messages with threats about not getting vaccinated. For preferred source of text message, 68% said their doctor.

**IMPLICATIONS:** Texting adolescents about HPV vaccine could raise awareness and motivation.

## ACKNOWLEDGEMENTS

This program is supported by Health-e-NC, an initiative of the University Cancer Research Fund at the University of North Carolina at Chapel Hill. The content is solely the responsibility of the authors and does not necessarily represent the official views of Health-e-NC.

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