

## **Abstract**

### **Background**

Vaccination rates for Shingles are comparatively low, despite easy availability of the Herpes zoster (Shingles) vaccine. Information about the Shingles vaccine is commonly presented to the public in a variety of formats such as TV ads, magazine ads, website links, etc. It is not clear which of these different formats have an impact on patients encouraging them to obtain the vaccine.

### **Objectives**

The aim of this study is to compare different formats by which shingles information is commonly presented, referred to as shingles information formats (SIF), to the public to encourage them to obtain the shingles vaccine. The different formats were compared by determining their effect on: 1) knowledge about shingles, 2) ease of readability and understanding, 3) consumer preferences for different formats, and 4) intention to obtain vaccination.

### **Setting**

Online community from Amazon Mechanical Turk (MTurk).

### **Participants**

443 participants were included in this study and were recruited through MTurk to take an online survey.

### **Methods**

A survey was designed to assess pre- and post-knowledge scores about shingles and shingles vaccination, perceptions about ease of readability and satisfaction with the presented format, and intention to obtain the shingles vaccine. The survey was pilot tested by 5 volunteers. Study inclusion criteria were: a) age 45 years or over, b) being a US resident, c) having access to an MTurk account. The survey was administered online to participants via MTurk if they met study criteria. Participants were incentivized (paid \$0.50 to \$0.75) to take a 10 minute survey through MTurk. After completing the shingles knowledge pretest, participants were randomly assigned to view either a TV ad (n=130), an infographic (n=170), or a web-based text (n=143) about shingles. This was followed by completing the remainder of the survey assessing post knowledge of shingles, perception about readability and preferences, and intention to receive the vaccine.

### **Results**

The three formats were compared with respect to their impact on knowledge. Mean difference in knowledge score from pre- and post-knowledge surveys were 1.39 (95% CI: 1.07 to 1.71) for the TV ad, 1.92 (95% CI: 1.58-2.26) for the infographic, and 1.17 (95% CI: 0.85-1.49) for web-based text which was found to be a statistically significant difference (P=0.003). Comparison of study participants' perceptions of the SIF were also statistically different within the groups among 5 of the 11 questions. For the first question, "The SIF that I viewed was easy to read (or listen for video format)", average scores for the TV ad, infographic, and web-based text were

1.41, 1.56, and 1.71 respectively ( $P=0.004$ ). For the second question, "The SIF that I viewed was difficult to understand", the average scores for the TV ad, infographic, and web-based text were 4.52, 4.24, and 4.12 respectively ( $P=0.004$ ). For the third question, "The SIF that I viewed made it easy to remember the information", the average scores for the TV ad, infographic, and web-based text were 1.88, 1.88, and 2.13 respectively ( $P=0.015$ ). For the fourth question, "For my information needs, I am satisfied with how the information was displayed in the SIF provided above", the average scores for the TV ad, infographic, and web-based text were 1.71, 1.75, and 1.94 respectively ( $P=0.030$ ). And for the fifth question, "I like this format better than other ways of sharing information about shingles vaccinations", the average scores for the TV ad, infographic, and web-based text were 1.98, 2.07, and 2.29 respectively ( $P=0.014$ ). No significant difference in the three formats were present with respect to intention to obtain the shingles vaccine ( $P=0.394$ ).

## **Conclusion**

The infographic displayed the most comprehension and retention of knowledge; however, participants preferred the TV ad compared to the other two formats, with the web-based text being least favored. Participants reported that the TV ad was the easiest to comprehend while the web-based text was the most difficult to understand and retain the information. None of the three formats had an impact on intention to obtain the shingles vaccine. Although statistical significance was found, clinical significance is lacking. Prospective studies or observations should consider measuring the impact of different information formats on vaccination rates.

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