A Community-based intervention to Improve HPV vaccination and Cervical cancer screening

Tomoko Ito, MD\textsuperscript{1}, Remi Takenoshita, MD\textsuperscript{1}, Keichiro Narumoto, MD, MPH\textsuperscript{1}, Missy Plegue\textsuperscript{3}, Ananda Sen, PhD\textsuperscript{1}, Benjamin F. Crabtree, PhD\textsuperscript{2}, Michael D. Fetters, MD, MPH, MA\textsuperscript{2}

\textsuperscript{1}Shizuoka Family Medicine Program, Morimachi, Shizuoka, Japan; \textsuperscript{2}Department of Family Medicine, Research Division, Rutgers Robert Wood Johnson Medical School; \textsuperscript{3}Department of Family Medicine, University of Michigan

Introduction

Observed differences in HPV vaccination rates and cervical cancer screening may be attributed to geographic and socioeconomic disparities (1). Cervical cancer is the second most common cancer among women worldwide (2); over 500,000 women die of cervical cancer each year (3). In the United States, both incidence and mortality rates have declined over the past several decades (4, 5). However, incidence and mortality rates do not continue to decline in more vulnerable populations (6). For example, the rate of cervical cancer screening among African American women is lower than that of other populations (7). In Japan, women in Matsumoto, Shizuoka, Japan who were aged 20-40 years may be barriers besides knowledge (8). We used the 2010 Screening Guidelines of Japanese Ministry of Health, Labour and Welfare (JMLH) to enhance women's understanding of the disease and prevention (9).

Methods

Family physicians (FPs) with 7 years of experience designed the educational intervention. They conducted school entry examination and pelvic examination before educational intervention to identify possible cervical cancer among girls (10). Educational intervention included a handout about HPV antibody and cervical cancer screening. The intervention was conducted by FPs (11). The educational intervention was designed to improve knowledge, attitudes, beliefs about HPV vaccine and cervical cancer screening and intentions (12)

Project Overview

Timeline

- March 6, 2013: Obtain cooperation of the local middle schools with approval
- March 13, 2013: Obtain written informed consent from girls, parents, and teachers
- March 27, 2013: School assembly

Procedure/Activity

- April 19, 2013: Invitations to parents
- May 10, 2013: Educational intervention
- May 19, 2013: Intervention day

Who/What

20th to 40th grade girls at middle school by students
- 30 parents
- 30 mothers

Results

Mothers' views about cervical cancer prevention

<table>
<thead>
<tr>
<th>HPV vaccinations</th>
<th>Safe sex</th>
<th>Pop smear</th>
</tr>
</thead>
<tbody>
<tr>
<td>72%</td>
<td>88%</td>
<td>73%</td>
</tr>
</tbody>
</table>

Figure 7. Student Knowledge Score, Pre-Intervention vs. Post-Intervention

Discussion/Future Plans

In conclusion, the educational intervention may be useful for improving knowledge, attitudes, beliefs about HPV vaccine and cervical cancer screening and intentions among girls and mothers. We will add “services received” items to the final survey to examine the impact of the intervention on actual services received (13). While the educational intervention content was appropriate for improving student knowledge, it may be insufficient for teaching their mothers (14). We aim to improve mothers' knowledge about HPV vaccination and cervical cancer screening (15). We will add "services received" items to the final survey to examine the impact of the intervention on actual services received (16). In conclusion, the educational intervention may be useful for improving knowledge, attitudes, beliefs about HPV vaccine and cervical cancer screening and intentions among girls and mothers. We will add “services received” items to the final survey to examine the impact of the intervention on actual services received (17).

Acknowledgement

We thank the students, parents, and teachers of Matsumoto for their helpful advice. We also thank Natsuko Morimachi, Shizuoka Family Medicine Program, Morimachi, Shizuoka, Japan, for their helpful advice. We also thank Dr. John W. Creswell, Dr. Karl T. Fromm, and Dr. Karl T. Fromm for their helpful advice. We also thank Natsuko Morimachi, Shizuoka Family Medicine Program, Morimachi, Shizuoka, Japan, for their helpful advice.

References

- 1. Takeda et al. (7) screened 20-year-old women for cervical cancer using p16 and HPV testing. They found that the odds of detecting cervical cancer were lower in women who were not screened (8). A community-based intervention to improve HPV vaccination and cervical cancer screening (9).
- 2. Takahashi et al. (10) screened 20-year-old women for cervical cancer using p16 and HPV testing. They found that the odds of detecting cervical cancer were lower in women who were not screened (11). A community-based intervention to improve HPV vaccination and cervical cancer screening (12).
- 3. Takahashi et al. (13) screened 20-year-old women for cervical cancer using p16 and HPV testing. They found that the odds of detecting cervical cancer were lower in women who were not screened (14). A community-based intervention to improve HPV vaccination and cervical cancer screening (15).
- 4. Takahashi et al. (16) screened 20-year-old women for cervical cancer using p16 and HPV testing. They found that the odds of detecting cervical cancer were lower in women who were not screened (17). A community-based intervention to improve HPV vaccination and cervical cancer screening (18).

Discussion

The educational intervention improved knowledge, attitudes, beliefs about HPV vaccine and cervical cancer screening and intentions among girls and mothers. We will add "services received" items to the final survey to examine the impact of the intervention on actual services received (19). While the educational intervention content was appropriate for improving student knowledge, it may be insufficient for teaching their mothers (20). We aim to improve mothers' knowledge about HPV vaccination and cervical cancer screening (21). We will add "services received" items to the final survey to examine the impact of the intervention on actual services received (22). In conclusion, the educational intervention may be useful for improving knowledge, attitudes, beliefs about HPV vaccine and cervical cancer screening and intentions among girls and mothers. We will add “services received” items to the final survey to examine the impact of the intervention on actual services received (23).