

have succeeded, decreasing missed vaccination opportunities will help with further improvement.

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#### 1069. Human Papillomavirus (HPV) Knowledge, Vaccine Acceptability and Acceptability of Text Message Reminders for Vaccine Doses in Adolescents Presenting to an Urban Emergency Department (ED)

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**Session:** 140. Assorted Pediatric Vaccines

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**Background.** HPV vaccination has been shown to reduce the incidence of high grade cervical abnormalities in girls under 18 years old and the incidence of genital warts in young men and women under 21 years old. HPV vaccine uptake in the US is low. The 2012 National Immunization Survey–Teen indicated that of girls and boys aged 13–17 years, 33.4% and 6.8% respectively had completed the three dose HPV vaccine. It has been suggested that opportunities for HPV vaccination in less traditional health care settings and using reminder and recall systems may improve HPV vaccine uptake.

**Methods.** Adolescents aged 13–18 years old were recruited prospectively from two pediatric EDs in New York City. Recruited patients took part in a researcher-administered questionnaire based on the validated Carolina HPV Attitudes and Beliefs Scale. Demographic information was also collected. Patients were recruited between 8 am and 8 pm and approached consecutively within 4-hour time blocks. Standard descriptive statistics were used to summarize response data.

**Results.** Between September 21, 2016 and May 31, 2017, 117 adolescents were interviewed (70 females, 47 males). 76 (65%) had never had their parent or anyone else talk to them about the HPV vaccine. 71 (61%) of adolescents knew the HPV vaccine was not for girls only. 83 (71%) thought that the HPV vaccine was safe. Only 10 (8.5%) of participants thought they were too young to get the vaccine. 35 (30%) answered “yes” when asked if they had ever had sex but only 14 (12%) thought that the HPV vaccine was only for people who are sexually active. 83 (71%) of adolescents would agree, if their parent agreed, to have the HPV vaccine in the ED on the day they were interviewed. 104 (89%) of interviewed adolescents had a mobile phone and 88 (75%) stated they would have no problem with receiving a text message reminder for a vaccine shot.

**Conclusion.** Adolescents find it acceptable to receive HPV vaccination in these EDs and text message reminders for subsequent vaccine doses. Exploration of initial HPV vaccination of unvaccinated adolescents in the ED, with follow up doses in more traditional clinic settings aided by text message reminders warrants further investigation. Though a challenging care environment, the ED should not be ignored as a potential site for public health interventions such as HPV vaccination in adolescents.

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#### 1070. Perception of Japanese Physicians about Human Papillomavirus Vaccine

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**Background.** Current vaccination coverage of Human Papillomavirus vaccine (HPV) in Japan is less than 1% because the Ministry of Health, Labour and Welfare (MHLW) suspended its proactive recommendations for HPV in 2013 after some reports of possible adverse events following immunization. We evaluated the perception of Japanese physicians about HPV in order to consider the appropriate countermeasure to improve HPV coverage in Japan.

**Methods.** We conducted a cross-sectional study using a postal questionnaire targeting 330 Japanese physicians (78 pediatricians, 225 internists and 27 obstetricians-gynecologists (OB-GYNs)) in Kawasaki, Japan in 2016. The questionnaire comprised questions about education frequency, physicians’ perception and recommendation behavior related to adolescent vaccines (HPV, diphtheria tetanus toxoid (DT) and inactivated influenza vaccine (IIV)).

**Results.** Valid responses were obtained from 148 (44.9%) physicians (pediatricians 80.8%, internists 31.6% and OB-GYNs 51.9%). Very few (8.0%) of physicians provided HPV during the past month. Only 21.3% of physicians educated aggressively about HPV, which was significantly less frequently than DT (61.7%) and IIV (88.6%). Similarly, 53.1% of physicians recommended HPV aggressively, which was significantly less frequently than DT (83.1%) and IIV (80.3%). We found no significant differences in the frequency of HPV education or recommendation by pediatricians, internists and OB/GYNs (22.4% vs. 16.9% vs. 35.7% and 54.8% vs. 47.9% vs. 71.5%, respectively). However, 90.0% of physicians answered that if MHLW were to reinstate its HPV recommendation, they would more aggressively recommend HPV for adolescents.

**Conclusion.** Although Japanese physicians were cautious about HPV and infrequently provided education or made a recommendation for HPV compared with other adolescent vaccines, our survey suggested such a passive attitude could be improved by the MHLW resuming its proactive recommendation in Japan.

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#### 1071. Indications for Antibiotic Orders: How Accurate Are They?

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**Background.** Documentation of antibiotic indications at the time of ordering can provide helpful information for antimicrobial stewardship programs to track antibiotic utilization patterns and improve antibiotic prescribing. Yet accuracy of indications is not fully understood; antibiotics are often ordered empirically without a clear-cut indication, and orders are not often updated once a diagnosis has been made, or the first listed option may be chosen for convenience. As hospitals are implementing antibiotic indications at the time of order entry to meet stewardship standards, our study sought to assess the accuracy of indications in an antibiotic order compared with true indication for the drug.

**Methods.** Indications for antibiotics, selected from a standardized list, are a required field in the computerized order entry system at our institution. Study investigators, including at least one infectious diseases attending, performed an in-depth post-hoc review to assess antibiotic indication and appropriateness. The frequency that the true antibiotic indication, as assessed by study investigators, matched with the indication in the antibiotic order was analyzed.

**Results.** Of 396 antibiotic orders reviewed by the study team, 100 had discordant indications between what was written in the order and the investigator-assessed indication (25.3%). The highest rates of discordance were seen with GU-UTI (11/18 incorrect, 61.1%) followed by bacteremia/sepsis (44 of the 116 incorrect, 37.9%). For GU-UTI, the most common investigator assessed true indications were pulmonary including CAP, HAP and empyema. For bacteremia/sepsis, the discordance was often due to a more specific diagnosis or source being identified.

**Conclusion.** Discordant indications between what was entered at the time of initial order compared with an investigator assessed indication occurred frequently. This finding is of concern as evaluations of antibiotic appropriateness, utilization and benchmarking by the antimicrobial stewardship team rely on the accuracy of indications in the system. Entering a revised indication during an antibiotic time out could improve the accuracy of antibiotic indications and antimicrobial stewardship data.

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#### 1072. Fixed vs. Free-text Documentation of Indication for Antibiotic Orders

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**Background.** Requiring indications for antimicrobial orders can allow stewardship programs to evaluate adherence to guidelines and assess outcomes. We extracted indication data from our institution’s EPIC system and found that in a 29-month time frame there were 12,218 uniquely entered indications. Only 136 of these were standardized drop-down (fixed) menu options; the rest were entered manually (free-text). Enormous variation in these uniquely typed entries emphasizes the value and necessity of fixed indication options to allow for better evaluation of stewardship program outcomes.

**Methods.** We evaluated the 718 most commonly used indications accounting for a total of 113,741 unique antibiotic orders for 42,665 patients. We excluded indications used for less than 36 orders during the study period. We analyzed the characteristics of these orders to identify opportunities for improvement in indication documentation and developed a new list of less than 200 indications that could account for nearly all of the various indications entered.

**Results.** 66,404 (58%) orders were placed using fixed options available in the menu (Figure 1). 32,427 (29%) orders were placed with no indication listed. The remaining 14,910 (13%) orders were documented with free-text indications. Within these manual entries, 59% were identical or nearly identical to an option that was available in the drop down menu. 37% of free-text indications could not be appropriately placed with an option available in the menu. For example, the menu contained a fixed option for “Severe C. difficile infection” forcing all non-severe cases to be entered as varied free-text alternatives (Figures 2 and 3).

**Conclusion.** In our sample, use of fixed menu options was high but robust evaluation of proper antimicrobial use was substantially limited by failure to document indication and free-text entry by providers. Free-text entry and blank fields can be

