Sociodemographic differences in U.S. adults’ knowledge of vaccine recommendations, vaccine safety perceptions, and beliefs about vaccine effectiveness, 2016
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Background:
U.S. adults have low vaccination coverage, despite high levels of morbidity and mortality attributable to vaccine-preventable diseases. There is limited research regarding the association between sociodemographic characteristics and knowledge about vaccine recommendations, vaccine safety perceptions, and beliefs about vaccine effectiveness.

Objectives:
We evaluated associations between sociodemographic characteristics and vaccine knowledge, safety perceptions, and vaccine effectiveness perceptions among U.S. adults.

Methods:
A weighted survey of U.S. adult participants from a probability-based internet panel was conducted February-March 2016. Respondents reported sociodemographic information, knowledge of vaccine recommendations, safety perceptions (very safe, safe, unsafe, very unsafe), and vaccine effectiveness perceptions (very effective, effective, ineffective, very ineffective) for 6 commonly administered adult vaccines (hepatitis B, human papilloma virus, herpes zoster, influenza, pneumococcal, tetanus). We ran logistic regression models for each combination of vaccine and outcome (knowledge, safety, and effectiveness) to calculate the adjusted associations. Results are presented by outcome, and include only sociodemographic characteristics with significant (p<0.05) associations for ≥3 vaccines.

Results:
Of 1905 respondents, those aged ≥65 years had higher knowledge of vaccine recommendations compared with respondents aged 19-49 years. Self-reported Hispanics, non-Hispanic blacks, and non-Hispanic other races had lower knowledge of vaccine recommendations than non-Hispanic whites. Respondents without a chronic condition or weakened immune system reported higher confidence that vaccines were safe compared with respondents with chronic medical conditions. Respondents with no health insurance reported less confidence that vaccines were safe and less confidence that vaccines were effective compared with respondents with private insurance. Self-reported Hispanics had higher confidence in vaccine effectiveness than non-Hispanic whites. Respondents from the West had less confidence in vaccine effectiveness than respondents from the Northeast.

Conclusion:
Knowledge of vaccine recommendations and perceptions of safety and effectiveness varied across demographic groups. Healthcare providers can tailor messages to at-risk groups to address concerns or misperceptions which might help improve adult vaccination coverage.
Oral Presentation
North Dakota Immunization and Ryan White Collaboration
Andy Noble

Background:
Immunizations are a key prevention strategy in limiting the risk of severe disease among persons living with HIV (PLWH). Immunization coverage rates among North Dakota’s Ryan White clients range from 6.25% - 60.85%, leaving most at increased risk for vaccine-preventable diseases and complications associated with vaccine-preventable diseases.

Setting:
Collaborative effort between the North Dakota Immunization Program, the North Dakota Ryan White Program, local public health, and private healthcare providers throughout North Dakota.

Population:
North Dakota Ryan White Part B clients include PLWHIV at 400% of the federal poverty guideline.

Project Description:
The North Dakota Immunization Program and the North Dakota Ryan White Program are partnering to provide immunization reminder/recall, education, and access or referrals to immunization services during the Ryan White reenrollment and six-month recertification process.

The North Dakota Immunization Program provides Ryan White case managers immunization education and reminder/recall letters forecasting recommended immunizations for each Ryan White client utilizing the North Dakota Immunization Information System (NDIIS). During the enrollment and reenrollment process, Ryan White case managers provide reminder/recall letters outlining recommended immunizations based on the client’s history and diagnosis, immunization education, and immunization services or referrals to their primary care provider.

Immunization coverage rates are then assessed using the NDIIS at 30, 60, and 90 days after immunization letters are distributed.

Results/Lessons Learned:
Immunization rates among North Dakota Ryan White clients have increased due to immunization reminder/recall, healthcare worker education, and increased awareness of high-risk immunization recommendations through program collaboration. After one round of reminder/recall and education, the largest percentage point changes in coverage rates after 90 days were for pneumococcal conjugate (+10.01%), pneumococcal polysaccharide (+12.7%) and meningococcal vaccines (+23.3%).

This collaboration has led to a statewide immunization reminder/recall project for all individuals diagnosed with HIV in North Dakota.
Oral Presentation
Vaccine Refusal Among Pregnant Women: A National Survey of Obstetrician-Gynecologists
Sean O'Leary, Laura Riley, Megan Lindley, Lori Crane, Laura Hurley, Brenda Beaty, Michaela Brtnikova, Alison Albert, Alison Fisher, Angela Jiles, Allison Kempe

Background:
Little is known about vaccine refusal among pregnant women.

Objectives:
To describe, among a national sample of obstetrician-gynecologists (ob-gyns): 1) perception of frequency of and reasons for vaccine refusal among pregnant women; and 2) strategies used to address vaccine refusal and perceived effectiveness of those strategies.

Methods:
E-mail and mail survey among ob-gyns conducted 3-6/2016.

Results:
The response rate was 69% (331/477). Pregnant women more commonly refused influenza vaccine (flu) compared to tetanus-diphtheria-acellular pertussis vaccine (Tdap): 69% reported a <10% refusal rate for Tdap versus 38% reporting this for flu (p<0.001). Conversely, 29% of ob-gyns reported more than 20% of their population refused flu versus 12% for Tdap (p<0.001). The reasons most commonly reported as contributing to refusal of vaccines 'a lot' were “Belief that flu vaccine makes them sick” (48%), “Belief they are unlikely to get a vaccine-preventable disease” (38%), “General worries about vaccines” (32%), “Desire to maintain a 'natural' pregnancy” (31%), and “Concern their child could develop autism because of maternal vaccination” (25%). Strategies for addressing refusal most often reported as being used “always” included: “State that you are confident the vaccine is safe” (74%), “Explain that not getting the vaccine puts her fetus/newborn's life at risk” (58%), and “Explain that not getting the vaccine puts her own health at risk (46%). By far, the strategy perceived most often by ob-gyns as “very effective” was “Explain that not getting the vaccine puts her fetus/newborn’s life at risk” (40%), with all other strategies perceived as “very effective” by <20% of ob-gyns.

Conclusion:
Ob-gyns perceive refusal of influenza vaccine is more common among their pregnant patients than refusal of Tdap. Emphasizing the risk of disease to the fetus may be an effective strategy to increase uptake. It will be important to validate these findings in a patient sample.