**TITLE:** COVID-19 Vaccine Hesitancy: Educational Intervention to Increase COVID-19 Vaccination Rates

**AUTHORS**: Riley Fisher, PharmD; Jamie Remines, PharmD; Pramit Nadpara, PhD, MBA, MS, BPharm; Jean-Venable Goode, PharmD, BCPS, FAPhA, FCCP

**PRACTICE SITE**: Kroger Pharmacy #401 - Roanoke, VA

**BACKGROUND:** There is a significant amount of hesitation surrounding the COVID-19 vaccinations in the general population. As one of the most accessible health professionals, pharmacists have some of the best opportunities to have a dialogue with patients regarding the COVID-19 vaccines. Pharmacists should attempt to tailor education to each type of patient depending on their cognitive style, and not use a one-size-fits-all approach. Motivational interviewing (MI) is a well-known tool to create a unique dialogue with each patient. MI aims to support educated decision-making in a joint effort between the patient and healthcare professional.

**OBJECTIVE:** The objectives are to determine if an educational intervention will increase COVID-19 vaccinations in participants receiving routine vaccinations in a community-based pharmacy and to evaluate reasons for not receiving a COVID-19 vaccine.

**METHODS:** A 2-month prospective interventional study was conducted at 2 pharmacies in a large national community pharmacy chain in southwestern Virginia. Individuals 18 years of age and older were eligible to participate if they were (1) receiving one of the following vaccines: influenza, Tetanus-diphtheria-pertussis, pneumococcal, zoster, or hepatitis A or hepatitis B and (2) not fully vaccinated against COVID-19 per the Center for Disease Control and Prevention guidelines. Individuals were excluded if they (1) were unable to provide informed consent or (2) had received 2 doses of the Pfizer or Moderna vaccine, or 1 dose of the Johnson & Johnson vaccine. The pharmacist identified these participants during their routine vaccination appointment and, if previously unvaccinated against COVID-19, provided a 22-question survey collecting demographic information and evaluating thoughts and beliefs toward the COVID-19 vaccines. The types of questions in the survey included multiple-choice questions. The survey was developed by the investigators based on the literature. Following the survey, the pharmacist educated the participant using a script with motivational interviewing techniques. The pharmacist recorded how many participants agreed to receive a COVID-19 vaccine following the intervention. Outcomes were analyzed using descriptive statistics to determine trends from the survey. The number of participants who received a COVID-19 vaccine following the intervention was compared as the percentage of the total group of participants.

**RESULTS:** Of the 5 participants who completed the intervention, 1 participant (20%) agreed to receive a COVID-19 vaccine. The survey results found that all participants felt that the COVID-19 vaccines were developed and approved too quickly. 4 of the 5 participants felt that healthcare providers had a small effect on their beliefs towards the COVID-19 vaccines and are concerned about potentially serious side effects. 2 of the 5 participants felt that social media and news from national TV had a very significant effect on their beliefs toward the COVID-19 vaccines. 3 participants felt that government agencies had a moderate effect on their beliefs toward the vaccine. Of the 5 participants, 3 (60%) were female. The mean age was 52 (SD +/- 25.5). Their political affiliation was 60% Republican (40% prefer not to say) and 100% of participants did not obtain a college degree. The race was 100% Caucasian.

**CONCLUSION:** While participants are willing to receive other routine vaccines, they may have increased hesitation toward COVID-19 vaccines because all participants believed the vaccines were developed and approved too quickly. Tailored MI was unsuccessful in this population, possibly due to participants ranking medical advice from healthcare professionals lowest among all information sources. Future research is necessary across a greater number of sites to pull in a larger percent of the population.