

Supplementary Appendix

Table S1: Survey Questionnaire

Demographic Survey Questionnaire		
Category	Idea Behind Question	Framed Question
Consent	Consent form	<p>Question 1: If answer is (2) - participant will be unable to complete survey By beginning this research, I acknowledge that I am 18 years of age or older and have read and understand the information. I agree to take part in the research, with the knowledge that I am free to withdraw my participation in the research without penalty.</p> <p>(1) I Agree (2) I Do Not Agree</p>
Inclusion Criteria	Inclusion criteria	<p>Question 2: If answer is (1) - participant directed to question 3. If answer is (2) - participant will be unable to complete survey Are you currently a licensed or practicing pharmacist in the United States?</p> <p>(1) Yes (2) No</p>
		<p>Question 3: What state within the U.S. do you practice pharmacy in? If participants answered “I do not reside in the United States,” they were unable to complete survey</p> <p>(Drop down with all 50 states, District of Columbia, Puerto Rico, and “I do not reside in the United States”)</p>
Personal history	Gender/Sex	<p>Question 4: Which gender do you currently identify as?</p> <p>(1) Male (2) Female (3) Transgender man/female-to-male (4) Transgender woman/ male-to-female (5) Non-binary, genderqueer, or gender nonconforming (6) Other (specify) _____ (7) Prefer not to answer</p>
	Age	<p>Question 5 : What is your age? (Free text – numerical values only)</p>
	Race/Ethnicity	<p>Question 6: Which of the following categories describes your race?</p> <p>(1) White (2) Black (3) Hispanic or Latinx (4) American Indian (5) Alaska Native (6) Asian (7) Native Hawaiian (8) Pacific Islander (9) Other (specify) (10) Don't know (11) Prefer not to answer</p>
	Are they considered at increased risk of severe illness from COVID-19 (According to CDC)?	<p>Question 7: Which, if any, of the following medical conditions do you have? <i>(Please select all that apply)</i></p> <p>1) Cancer</p>

		2) Chronic kidney disease 3) Chronic obstructive pulmonary disease 4) Immunocompromised state from solid organ transplant 5) Obesity (BMI ≥ 30) 6) Serious heart condition, such as heart failure, coronary artery disease, or cardiomyopathies 7) Sickle cell disease 8) Type 2 diabetes mellitus 9) Asthma (moderate to severe) 10) Cerebrovascular disease 11) Cystic fibrosis 12) Immunocompromised state from bone marrow transplant, immune deficiencies, HIV, use of corticosteroids or other immune weakening medicines 13) Neurologic conditions, such as dementia 14) Liver disease 15) Pregnancy 16) Pulmonary fibrosis 17) Smoking 18) Thalassemia 19) Type 1 diabetes 20) None of the above
Pharmacy Practice	Years of practice	Question 8: How many years have you been a practicing pharmacist? (Free text – numerical values only)
	Pharmacy practice	Question 9: What pharmacy setting do you <u>primarily</u> work in? (1) Hospital pharmacy (2) Outpatient clinic (3) Community pharmacy (4) Pharmaceutical industry (5) Managed care (6) Academia (7) Other _____ Question 10: Do you work in a specialized therapeutic area? If so, what is it? (1) Ambulatory care (2) Infectious Disease/HIV (3) Transplant (4) Oncology (5) Neurology (6) Anticoagulation/Cardiology (7) Critical Care (8) Emergency Medicine (9) Pediatrics (10) Geriatrics (11) Internal medicine (12) Other _____ (13) Not applicable
	Post-doctoral training	Question 11: <i>If answered (1), (2), (3) are selected proceed to question 12. If answered (4), skip to question 13.</i> Which if the following post-doctoral training, if any, have you completed or are working on completing? (1) Residency (2) Fellowship (3) Both residency and fellowship (4) None Question 12:

		<p>If a postdoctoral training was complete, what was it completed in?</p> <p>(1) Ambulatory care (2) Infectious Disease/HIV (3) Transplant (4) Oncology (5) Neurology (6) Anticoagulation/Cardiology (7) Critical Care (8) Emergency Medicine (9) Pediatrics (10) Geriatrics (11) Internal medicine (12) Other _____</p>
<p>Comfortability/ Knowledge of COVID-19 /Perceived risk and severity</p>	<p>Adapted from CDC National Immunization Survey: 2009 H1N1 Knowledge, attitudes, practice- Question 13: Perceived risk (susceptibility)</p> <p>Does someone who has personally had COVID-19 feel that they are already protected and therefore do not need the vaccine?</p> <p>Adapted from H1N1 Alkuwari et. al Qatar survey study Question 15: Does the pharmacist perceive COVID-19 as a severe/serious disease that can impact their daily life.</p> <p>Question 16: Influenza study by Petek et. al showed that familiarity with influenza disease did not impact the decision to vaccinate for influenza - will the same hold true for COVID-19? Rapidly changing knowledge of the virus/disease state, will this influence the pharmacist's view of credibility of a new vaccine?</p>	<p>Please respond with how much you agree with the following statements.</p> <p>Question 13: <i>If (1) is selected, skip to question 16. If (2) is selected proceed to question 14.</i> Have you had a confirmed diagnosis of COVID-19? (1) Yes (2) No</p> <p>Please respond with how much you agree with the following statements.</p> <p>Question 14: I am concerned about becoming infected with SARS-CoV-2. (1) Strongly disagree (2) Disagree (3) Neutral/Don't know (4) Agree (5) Strongly agree</p> <p>Question 15: My daily work will be affected if I get COVID-19. (1) Strongly disagree (2) Disagree (3) Neutral/Don't know (4) Agree (5) Strongly agree</p> <p>Question 16: I have been following the news and scientific literature regarding current COVID-19 vaccine trials. (1) Strongly disagree (2) Disagree (3) Neither agree nor disagree (4) Agree (5) Strongly agree</p>

	<p>Based on a statement from the WHO That says COVID-19 pandemic is a wave, not seasonal (Released July 28th, 2020)</p> <p>Do pharmacists believe that COVID-19 is a temporary/seasonal problem or do they believe it is wave that can be controlled by human action - will this belief impact them to get the vaccine?</p> <p>https://www.reuters.com/article/us-health-coronavirus-who/who-says-covid-19-pandemic-is-one-big-wave-not-seasonal-idUSKCN24T16U</p>	<p>Question 17: I believe COVID-19 will be a seasonal virus.</p> <p>(1) Strongly disagree (2) Disagree (3) Neutral/Don't know (4) Agree (5) Strongly agree</p> <p>Question 18: COVID-19 can occur in any season and is dependent on human control to slow the spread.</p> <p>(1) Strongly disagree (2) Disagree (3) Neutral/Don't know (4) Agree (5) Strongly agree</p>
<p>Personal Experience with COVID-19</p>	<p>To see if pharmacist who care for COVID-19 vaccine patients are more or less likely to get the vaccine (include community pharmacy with covid-19 testing sites, clinical settings)</p> <p>CDC Interim Guidance for Critical Workers Who Have Had Exposure https://www.cdc.gov/coronavirus/2019-ncov/community/critical-workers/implementing-safety-practices.html</p> <p>https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/quarantine.html</p>	<p>Question 19: Have you worked in close contact or cared for a person who had COVID-19?</p> <p>(1) Yes (2) No (3) Unsure</p> <p>Question 20: The CDC defines COVID-19 exposure as having EITHER of the following</p> <ul style="list-style-type: none"> • Close contact within 6 feet for 15 minutes of an individual with confirmed or suspected COVID-19 • Close contact with the individual 48 hours prior to them becoming symptomatic <p>Based on this definition, have you been exposed to a person with COVID-19?</p> <p>(1) Yes (2) No (3) Unsure</p>
	<p>To gauge the impact of a personal loss on someone's willingness</p>	<p>Question 21: Has a loved one fallen critically ill or passed away due to COVID-19?</p> <p>(1) Yes (2) No</p>

Category	Idea behind the question	Framed Question
Decisions to receive and recommend <i>Includes</i> <i>Time from approval to vaccination</i> + <i>Barriers/Reasons to receive/recommend</i>	<u>Willingness to Receive</u> Question 22: Are pharmacist likely to receive the vaccine ≤ 1 year since approval Question 23: Are pharmacists likely to receive a vaccine >1 year from approval? Adapted from CDC National Immunization Survey: 2009 H1N1 Knowledge, attitudes, practice Question 24: Barriers to receive Question 25: Reasons to receive	Question 22: If a COVID-19 vaccine was deemed safe and effective by the FDA, how likely would you be to <u>get vaccinated</u> LESS THAN OR EQUAL to 1 year from the time of vaccine approval? (1) Extremely unlikely (2) Somewhat unlikely (3) Neither likely nor unlikely (4) Somewhat likely (5) Extremely likely Question 23: If a COVID-19 vaccine was deemed safe and effective by the FDA, how likely would you be to <u>get vaccinated</u> GREATER THAN 1 year after vaccine approval? (1) Extremely unlikely (2) Somewhat unlikely (3) Neither likely nor unlikely (4) Somewhat likely (5) Extremely likely Question 24: <i>Question will only appear to those who answer "extremely unlikely", "somewhat unlikely", "neither likely nor unlikely" to Question 22 OR 23 (revolved around decision about <u>getting</u> vaccinated regardless of time frame of vaccine approval).</i> Which of the following would be the reason for your decision to delay or refuse the vaccine for yourself? Please select all that apply. (1) Concerns about side effects or sickness (2) Think the vaccine does not work (3) Vaccination is not needed or not wanted (4) Because I already had COVID-19 (5) Not in a high-risk or priority group (6) Limited contact with high risk patients (7) COVID-19 is a non-severe or temporary issue (8) Rapidly changing real world data during pandemic (9) The ability to social distance and wear a mask provides sufficient protection (10) Other _____ Question 25: <i>Question will only appear for those who are "somewhat likely," or "extremely likely," to get vaccinated in Questions 22 OR 23 (revolved around decision about <u>getting</u> vaccinated regardless of timeframe of vaccine approval)</i> If you were to <u>receive</u> the COVID-19 vaccine for <u>yourself</u>, which of the following would be reasons for your decision? Please select all that apply. (1) Wish to protect self (2) Being a healthcare worker (3) Avoid transmitting COVID-19 to my family (4) Avoid transmitting COVID-19 to my patients (5) Workplace mandate (6) Have a medical condition that puts me at increased risk for COVID-19 (7) Recommendations of other medical professionals (8) Recommendations of friends and family (9) Recommendations of government health agencies (CDC, FDA, NIH, IDSA etc.) (10) Recommendations of political leaders (11) Other _____

	<p><u>Willingness to Recommend</u></p> <p>Question 26: Are pharmacist likely to recommend the vaccine \leq 1 year since approval</p> <p>Adapted from CDC National Immunization Survey: 2009 H1N1 Knowledge, attitudes, practice</p> <p>Question 27 Are pharmacist likely to recommend the vaccine > 1 year since approval:</p> <p>Question 28: Barriers to recommend</p> <p>Question 29: Reasons to recommend</p>	<p>Question 26: If a COVID-19 vaccine was deemed safe and effective by the FDA, how likely are you to <u>recommend</u> the COVID-19 vaccine to patients LESS THAN OR EQUAL 1 year from the time of vaccine approval?</p> <ol style="list-style-type: none"> (1) Extremely unlikely (2) Somewhat unlikely (3) Neither likely nor unlikely (4) Somewhat likely (5) Extremely likely <p>Question 27: If a COVID-19 vaccine was deemed safe and effective by the FDA, how likely are you to <u>recommend</u> the COVID-19 vaccine to your patients GREATER THAN 1 year after vaccine approval?</p> <ol style="list-style-type: none"> (1) Extremely unlikely (2) Somewhat unlikely (3) Neither likely nor unlikely (4) Somewhat likely (5) Extremely likely <p>Question 28: <i>Question will only appear to those who answer “extremely unlikely”, “somewhat unlikely”, “neither likely nor unlikely” to Question 26 OR 27 (revolved around decision about <u>recommending</u> vaccine regardless of time frame of vaccine approval).</i></p> <p>If you delay or refuse to <u>recommend</u> the COVID-19 vaccine for your patient, which of the following would be the reasons for your decision? Please select all that apply.</p> <ol style="list-style-type: none"> (1) I have concerns about side effects or sickness (2) I believe the vaccine does not work (3) I am hesitant about vaccine discussion with patients (4) Patient already had COVID-19 (5) Patient is not in a high-risk or a priority group (6) Patient has limited contact with high-risk population (7) I believe COVID-19 is a non-severe or temporary issue (8) Rapidly changing real world data during pandemic (9) I believe the ability to social distance and wear a mask provides sufficient protection (10) Other _____ <p>Question 29: <i>Question will only appear for those who are “somewhat likely,” or “extremely likely,” to get vaccinated in Questions 26 OR 27 (revolved around decision about <u>recommending</u> vaccine regardless of timeframe of vaccine approval)</i></p> <p>If you were to <u>recommend</u> the COVID-19 vaccine for your patients, which of the following would be reasons for your decision? Please select all that apply.</p> <ol style="list-style-type: none"> (1) Reduce the risk of contracting COVID-19 (2) Avoid transmitting COVID-19 to the patients’ family (3) Avoid transmitting COVID-19 to the community (4) Target patients that are at a higher risk for COVID-19 according to CDC criteria (5) Recommendations of government health agencies (CDC, FDA, NIH, IDSA etc.) (6) Recommendations of political leaders (7) Other _____
	General	Please answer Questions 30-33 with the assumption that a COVID-19 vaccine

Vaccine-specific Clinical information	<p>Perceived barriers to COVID-19 vaccine</p> <p>Adapted from H1N1 Alkuwari et. al Qatar survey study</p>	<p>had just been approved and deemed safe and effective by the FDA. Please answer with how strongly you agree or disagree with the following statements.</p> <p>Question 30: I would feel protected if I received COVID-19 vaccination</p> <ol style="list-style-type: none"> (1) Strongly disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree <p>Question 31: I would fear for serious side effects from the COVID-19 vaccine</p> <ol style="list-style-type: none"> (1) Strongly disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly agree <p>Question 32: I would doubt or be suspicious about the efficacy of a new COVID-19 vaccine</p> <ol style="list-style-type: none"> (1) Strongly disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly agree <p>Question 33: I would worry that the FDA overestimated the safety of the COVID-19 vaccine</p> <ol style="list-style-type: none"> (1) Strongly disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly agree
	<p>To gauge what clinical information within the package insert and phase 1/phase 3 clinical studies of a vaccine a pharmacist will prioritize when evaluating a new vaccine</p> <p>This focuses on what clinical data pharmacist will prioritize in their vaccine decision-making</p>	<p>Question 34: When asked to make a clinical decision to <u>RECIEVE</u> a new COVID-19 vaccine for <u>YOURSELF</u>, which of the following would you prioritize. Please select your <u>top 3 choices</u>.</p> <ol style="list-style-type: none"> (1) Indication & dosing schedule (2) Level of antibody titers produced (3) Reduced disease severity and/or transmissibility (4) Mortality reduced (5) Length of protection (6) Percentage of mild side effects (7) Percentage of Grade 2/3/4 side effects (8) Number of participants included in phase 3/4 clinical trials (9) Warnings, Precautions, and contraindications (10) Use in special populations (11) Clinical pharmacology (Mechanism of action) (12) How the vaccine is supplied, stored, and handled (13) Implementation and deployment strategy for mass immunization effort (14) The respective pharmaceutical company's reputation in vaccine development <p>Question 35: When asked to make a clinical decision to <u>RECOMMEND</u> a new COVID-19 vaccine for your <u>PATIENTS</u>, which of the following would you prioritize. Please select your <u>top 3 choices</u>.</p> <ol style="list-style-type: none"> (1) Indication & dosing schedule (2) Level of antibody titers produced

		<ul style="list-style-type: none"> (3) Reduced disease severity and/or transmissibility (4) Mortality reduced (5) Length of protection (6) Percentage of mild side effects (7) Percentage of Grade 2/3/4 side effects (8) Number of participants included in phase 3/4 clinical trials (9) Warnings, Precautions, and contraindications (10) Use in special populations (11) Mechanism of action (12) How the vaccine is supplied, stored, and handled (13) Implementation and deployment strategy for mass immunization effort (14) The respective pharmaceutical company's reputation in vaccine development
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