Intro

Welcome! We appreciate your continued support. Please take a moment to read the below information and then click the arrow at the bottom of the page to begin.

Our research

We are conducting a study of critical care physicians in an effort to understand the factors that affect clinical decision making over time. The project is led by Dr. Jeremy Kahn at the University of Pittsburgh and is funded by the National Institutes of Health.

Your role

We are asking you to complete this survey because you completed our first survey during the spring of 2020. Most people complete this survey in between 4 and 11 minutes and we will compensate you $75 for your time. Your participation is voluntary and you may withdraw at any time.

Risks & benefits

There are no foreseeable risks or benefits associated with your participation in this study.

Data & privacy

All data will be housed on a secure server located at the University of Pittsburgh. Identifiable responses will only be available to the research team. If

data are shared with other researchers, they will be stripped of identifiers in accordance with our IRB's regulations.

Contact
You may contact the principal investigator Jeremy Kahn (jeremykahn@pitt.edu; 412-383-0839) or the co-investigator, Joel Levin (joel.levin@pitt.edu; 412-260-5714).

Thank you!
We are excited about the potential of this work to lead to improved patient outcomes, and we are grateful to you for helping us towards that end.

In this survey, we will first ask for your professional judgments about the use of medications for treating COVID-19, followed by a short series of additional questions.

Then we will ask for your opinions about two research abstracts.

COVID-19

A previously healthy ${e://Field/covid_age} year old ${e://Field/covid_gender} is admitted to the ICU from the emergency department after presenting with fever, dry cough, and shortness of breath. Yesterday, ${e://Field/covid_heshe} was seen in an outpatient clinic where ${e://Field/covid_heshe} tested positive for the SARS-CoV-2 infection (i.e. COVID-19) and was told to self-quarantine.

In the emergency department, ${e://Field/covid_heshe} experienced progressive dyspnea and was intubated for respiratory failure. A chest x-ray is consistent with viral pneumonia. The patient takes no medications at home, there are no contraindications to any specific medicines, and the EKG is normal. Enrolling ${e://Field/covid_himher} in a clinical trial is not an option.

Based on the above information, please answer the following questions about treating this patient. Assume that all drugs are on your hospital's formulary and are available to give.

Would you treat this patient with an **interleukin-6 receptor antagonist** (e.g. tocilizumab or sarilumab)?

Definitely would not	Probably would not	Probably would	Definitely would
○	○	○	○

Would you treat this patient with **ivermectin**?

Definitely would not	Probably would not	Probably would	Definitely would
○	○	○	○

Would you treat this patient with a **quinine-based anti-malarial** (e.g., chloroquine or hydroxychloroquine)?

Definitely would not	Probably would not	Probably would	Definitely would
○	○	○	○

Next, we are going to ask you two follow up questions about some of these treatments.

COVID-19 Measures Ivermectin

These questions are about **ivermectin**.

In your opinion, is ivermectin an effective treatment for COVID-19?

Definitely not effective	Probably not effective	Probably effective	Definitely effective
○	○	○	○

In your opinion, what is the **quality of the empirical evidence** about whether or not ivermectin is effective for COVID-19?

Lowest quality	Low quality	Moderate quality	High quality	Highest quality
○	○	○	○	○

For this next question, we'll pay you for accuracy. The two physicians with the most accurate estimates will each receive an additional $100 in compensation. So give us your best guess!

You can learn more about how we will score this estimation by clicking here.

You indicated that you would not treat the COVID patient with ivermectin.

What percentage of other physicians taking this survey do you think made the same choice?

None of them — All of them

0 25 50 75 100

You indicated that you would treat the COVID patient with ivermectin.

What percentage of other physicians taking this survey do you think made the same choice?

None of them — All of them

0	25 None of them	50	75 All of them	100
0	25	50	75	100

COVID-19 Measures Quinine

These questions are about **quinine-based anti-malarials.**

In your opinion, are quinine-based anti-malarials (e.g., chloroquine or hydroxychloroquine) effective for treating COVID-19?

Definitely not effective	Probably not effective	Probably effective	Definitely effective
○	○	○	○

In your opinion, what is the **quality of the empirical evidence** about whether or not quinine-based anti-malarials (e.g., chloroquine or hydroxychloroquine) are effective for COVID-19?

Lowest quality	Low quality	Moderate quality	High quality	Highest quality
○	○	○	○	○

For this next question, we'll pay you for accuracy. The two physicians with the most accurate estimates will each receive an additional $100 in compensation. So give us your best guess!

You can learn more about how we will score this estimation by clicking here.

You indicated that you would not treat the COVID patient with quinine-based anti-malarials (e.g., chloroquine or hydroxychloroquine).

What percentage of other physicians taking this survey do you think made the same choice?

None of them — All of them

0 25 50 75 100

You indicated that you would treat the COVID patient with quinine-based anti-malarials (e.g., chloroquine or hydroxychloroquine).

What percentage of other physicians taking this survey do you think made the same choice?

None of them — All of them

0 25 50 75 100

Vaccination

Please indicate the extent to which you agree with each of the following statements.

COVID-19 vaccines are generally safe and effective for preventing severe illness.

Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
○	○	○	○	○

Public authorities should seriously consider mandating vaccination against COVID-19 for adults who do not have a medical or religious exemption.

Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
○	○	○	○	○

Media consumption

In a typical week, how often do you get news from...

	Never	Rarely	Sometimes	Often
Television	○	○	○	○
Social media	○	○	○	○
Print publications, including newspaper websites	○	○	○	○
Radio	○	○	○	○

In a typical week, how often do you use each of the following social media platforms for any purpose?

	Never	Rarely	Sometimes	Often
YouTube	○	○	○	○
Twitter	○	○	○	○
Facebook	○	○	○	○
Reddit	○	○	○	○

Which cable news network do you most prefer?

MSNBC	CNN	Fox News	Other cable news network	No preference
○	○	○		○

IPC

Please read and evaluate the following abbreviated abstract.

Methods: As part of an ongoing platform trial, patients with a recent positive test for COVID-19 were randomized 1:1 to receive either ${e://Field/ipc_drug} (400mcg/kg daily for 3 days) or placebo. The primary endpoint was hospitalization within 28 days of randomization.

Results: Assignment to the ${e://Field/ipc_drug} arm was stopped for futility after enrolling 1355 patients. At 28 days, 12.8% of patients in the ${e://Field/ipc_drug} group had been hospitalized (95% CI, 10.4% to 15.4%) compared to 14.1% in the placebo group (95% CI, 11.6% to 16.8%). The relative risk of hospitalization for patients in the ${e://Field/ipc_drug} group was 0.91 (95% CI, 0.69 to 1.19; posterior probability of superiority = .76).

Please rate your agreement with the following statements.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
This trial is methodologically rigorous.	○	○	○	○	○
There is reason to suspect that the investigators were motivated to find a particular result.	○	○	○	○	○

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
This trial provides compelling evidence that ${e://Field/ipc_drug} is **not** effective for COVID-19.	○	○	○	○	○

COUNTRS

You're more than halfway done! Thanks for hanging with us.

In the last section, we'll ask you to evaluate a hypothetical research abstract and answer a few questions.

Title: **AB-37 for vasopressor dependent septic shock: a Bayesian adaptive trial**

Background: AB-37 is a novel ${e://Field/drug} for patients with vasopressor dependent septic shock.

Methods: Within an ongoing multicenter adaptive platform trial, adult ICU patients with vasopressor dependent septic shock were randomized to receive either intravenous AB-37 or a placebo. Randomization was initially in a 1:1 ratio with the option for response adaptive randomization according to prespecified criteria at monthly intervals. The primary outcome was 28-day mortality. Stopping criteria based on posterior probabilities of superiority, inferiority, and futility were determined in advance. Groups were compared using a Bayesian logistic model incorporating age, gender, SOFA score at randomization, and comorbidity index.

Results: The trial was stopped after randomizing 1098 patients when AB-37 met the predefined stopping criterion for superiority. Overall, 170 of 551 patients in the treatment group (30.9%) and 202 of 547 patients in the placebo group (36.9%) had died at 28 days. In the primary logistic regression model, the adjusted odds ratio for 28 day mortality for patients treated with AB-37 was 0.76, (95% credible interval, 0.59 to 0.98; posterior probability of superiority = 98.1%).

Title: AB-37 for vasopressor dependent septic shock: a randomized controlled trial

Background: AB-37 is a novel ${e://Field/drug} for patients with vasopressor dependent septic shock.

Methods: Adult ICU patients with vasopressor dependent septic shock were randomized to receive either intravenous AB-37 or a placebo. Randomization was performed in a 1:1 ratio. The primary outcome was 28-day mortality. The sample size was determined in advance based on estimates of the potential effect size. Groups were compared using a pre-specified logistic regression model adjusting for age, gender, SOFA score at randomization, and comorbidity index.

Results: The trial was stopped after completing the planned enrollment of 1098 patients. Overall, 170 of 551 patients in the treatment group (30.9%) and 202 of 547 patients in the placebo group (36.9%) had died at 28 days. In the primary logistic regression model, the adjusted odds ratio for 28 day mortality for patients treated with AB-37 was 0.76, (95% confidence interval, 0.59 to 0.98; p = 0.034).

How likely is it that AB-37 is **meaningfully more effective** than placebo?

Very unlikely	Unlikely	Not sure / neutral	Likely	Very likely
○	○	○	○	○

How would you rate the **quality of evidence** in this abstract?

Very low	Low	Moderate	High	Very high
○	○	○	○	○

How well did you understand the **methods** in this abstract?

Not at all	Slightly	Moderately	Very
○	○	○	○

How well did you understand the **results** in this abstract?

Not at all	Slightly	Moderately	Very
○	○	○	○

Please indicate your level of agreement with the following statements about the abstract that you just read.

There is a significant risk of a false positive result (type I error) due to the trial's design.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

The randomization method permitted investigators to influence whether individual patients were assigned to AB-37 or placebo.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

For the following two questions, you may refer to another copy of the abstract, below.

Please indicate whether each statement is true or false.

The investigators decided to stop enrollment in the trial early.

Definitely false	Probably false	Probably true	Definitely true
○	○	○	○

There was a 98.1% chance given the observed mortality difference between groups that AB-37 reduced mortality compared to placebo.

Definitely false	Probably false	Probably true	Definitely true
○	○	○	○

There was a 3.4% chance of finding the observed mortality difference between groups (or a greater difference) even if AB-37 did not actually reduce mortality compared to placebo.

Definitely false	Probably false	Probably true	Definitely true
○	○	○	○

Here is the same abstract again, for your review:

AB-37 for vasopressor dependent septic shock: a Bayesian adaptive trial

Background: AB-37 is a novel intravenous ${e://Field/drug} for patients with vasopressor dependent septic shock.

Methods: Within an ongoing multicenter adaptive platform trial, adult ICU

patients with vasopressor dependent septic shock were randomized to receive either open-label treatment with AB-37 (2 grams every 12 hours for 7 days) in addition to usual care or usual care alone. Randomization was initially in a 1:1 ratio with the option for response adaptive randomization according to prespecified criteria at monthly intervals. The primary outcome was 28-day mortality. Stopping criteria were predetermined for superiority (posterior probability of 98% for an odds ratio 1), and futility (posterior probability >=90% for an odds ratio between 0.8 and 1.2). Groups were compared using a Bayesian logistic model incorporating age, gender, SOFA score at randomization, and comorbidity index.

Results: The trial was stopped after randomizing 1098 patients when AB-37 met the predefined stopping criterion for superiority. Overall, 170 of 551 patients in the treatment group (30.9%) and 202 of 547 patients in the usual care group (36.9%) had died at 28 days. In the primary logistic regression model, the adjusted odds ratio for 28 day mortality for patients treated with AB-37 was 0.76, (95% credible interval, 0.59 to 0.98; posterior probability of superiority = 98.1%). There were no differences in secondary outcomes between groups.

Here is the same abstract again, for your review:

AB-37 for vasopressor dependent septic shock: a randomized controlled trial

Background: AB-37 is a novel intravenous ${e://Field/drug} for patients with vasopressor dependent septic shock.

Methods: Adult ICU patients with vasopressor dependent septic shock were randomized to receive either open-label treatment with AB-37 (2 grams every 12 hours for 7 days) in addition to usual care or usual care alone. The primary outcome was 28-day mortality. Randomization was performed in a 1:1 ratio. The sample size was determined in advance based on power analysis. Groups were

compared using a pre-specified logistic regression model adjusting for age, gender, SOFA score at randomization, and comorbidity index.

Results: The trial enrolled 1098 patients. Overall, 170 of 551 patients in the treatment group (30.9%) and 202 of 547 patients in the usual care group (36.9%) had died at 28 days. In the primary logistic regression model, the adjusted odds ratio for 28 day mortality for patients treated with AB-37 was 0.76, (95% confidence interval, 0.59 to 0.98; p = 0.034). There were no differences in secondary outcomes between groups.

An increasing proportion of clinical trials are using Bayesian adaptive methods instead of traditional methods. In your opinion, is this a good thing or a bad thing?

Definitely bad ○ Probably bad ○ Neither good nor bad ○ Probably good ○ Definitely good ○ ○ ○

Closing

You're all done with the survey, now we just need to make sure that we have up to date information about you.

This will be brief.

We last surveyed you in 2020. Have you changed jobs since then?

No ○ Yes ○

Congratulations on the new job!

Which of these best describes your practice setting?

- ◯ Academic, university affiliated
- ◯ Academic, not university affiliated
- ◯ Community
- ◯ Other

Over the past year, what proportion of your professional time was spent in direct practice of critical care?

- ◯ All or almost all (95% or more)
- ◯ More than 50% but less than 95%
- ◯ Less than 50%
- ◯ None

In your effort to keep up with the medical literature, which of the following activities did you do in the last week? (**Select all that apply.**)

We realize that you may do all of these at different times — we are interested in which of these you did only in the last week.

- ☐ Followed a discussion of a new paper on social media (e.g. Twitter)
- ☐ Read a summary of an original research article (e.g. Journal Watch)
- ☐ Read the table of contents of a medical journal
- ☐ Read the abstract of an original
- ☐ Looked through the full text of an original research article in a medical journal
- ☐ Closely read the full text of an original research article in a medical journal
- ☐ Discussed the results of an original research article with a friend or colleague
- ☐ None of the above

research article in a medical journal

How would you describe your political ideology?

- Very liberal
- Somewhat liberal
- Slightly liberal
- Middle of the road
- Slightly conservative
- Somewhat conservative
- Very conservative

That's it for the survey questions!

Now we owe you $65. Note that we'll need to collect some personal information (including: name, address, date of birth) in order to pay you.

What would you like to do?

I'd like the money. Take me to the payment form.

I don't want the money. Get me out of here.

Great! Did you receive a payment card in exchange for completing a previous survey with us in the spring or fall of 2020?

- Yes, and I still have the card
- Yes, but I no longer have the card
- No
- I'm not sure

Thanks for holding on to the card. **Please provide us with the last four digits of your card number, below.**

To make sure that we have the correct information on file, please enter your **full name** below.

Note: Please do not use your card for now. We will send you an update as soon as the additional $75 has been added to your card.

Please advance to the next page to complete the survey.

You will receive a new card in a few weeks, along with instructions on how to use it.

Please advance to the next page to complete the survey.

Participant payment information

Please provide the following information so that we can reimburse you with a University of Pittsburgh Vincent Payment Card. Vincent Payment Cards are anonymous MasterCard branded, store-value debit cards.

Please note, you may choose to stop answering questions and exit this form at any point, but **providing incomplete information will affect our ability to process your payment.**

You will receive your new card in a few weeks, along with instructions on how to use it.

Since you're not sure whether we paid you in the past, we're going to ask you to provide some information that will allow us to reimburse you with a new University of Pittsburgh Vincent Payment Card. Vincent Payment Cards are anonymous MasterCard branded, store-value debit cards.

Please note, you may choose to stop answering questions and exit this form at any point, but **providing incomplete information will affect our ability to process your payment.**

You will receive a new card in a few weeks, along with instructions on how to use it.

What is your first name?

What is your last name?

What is your phone number?

What is your address?

Address Line 1

Address Line 2

City

State

Zip Code

What is your date of birth?

Month

Date

Year

Fairness

Media outlets have been mostly fair in their coverage of Joe Biden's presidency.

Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
○	○	○	○	○

Media outlets have been mostly fair in their coverage of Donald Trump's presidency.

Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
○	○	○	○	○

COVID-19 Measures Toci

These questions are about **interleukin-6 receptor antagonists** (e.g. tocilizumab or sarilumab).

How effective are interleukin-6 receptor antagonists (e.g. tocilizumab or sarilumab) for COVID-19?

Ineffective and dangerous	Ineffective but **not** dangerous	Possibly effective	Very effective
○	○	○	○

In your opinion, what is the **quality of the empirical evidence** about whether or not interleukin-6 receptor antagonists (e.g. tocilizumab or sarilumab) are effective for COVID-19?

Lowest quality	Low quality	Moderate quality	High quality	Highest quality
○	○	○	○	○

For this prediction, we'll pay you for accuracy. The two physicians with the most accurate estimates will each receive an additional $100 in compensation. So give us your best guess!

You can learn more about how we will score this estimation by clicking here.

You indicated that you would not treat the COVID patient with interleukin-6 receptor antagonists (e.g. tocilizumab or sarilumab).

What percentage of other physicians taking this survey do you think made the same choice?

None of them — All of them

0 25 50 75 100

You indicated that you would treat the COVID patient with interleukin-6 receptor antagonists (e.g. tocilizumab or sarilumab).

What percentage of other physicians taking this survey do you think made the same choice?