Sammy Chao: hi everybody, we are here today i'd like to welcome everyone to today's the coordinate CDC coven 19 electronic healthcare data initiative webinar.

Sammy Chao: i'm Sammy chow and i'm with the public health informatics institute a task force of the program of the task force for global health.

Sammy Chao: And i'd like to thank you all for taking time out of your busy schedules to join us today we'll be kicking off today's call with message from nature Garrett, our project sponsor from the CDC will be welcome, welcoming us into today's webinar.

Nedra Garrett: Hello everyone, this is the drunk Aaron I am as sensitive the lead for this particular project and the response and I would like to.

Nedra Garrett: Welcome, and also thank you all for participating in the queries we've been we've had some really great meetings over time where we've been able to look at some some new questions that arise in the response of being able to.
Nedra Garrett: You know, see how people in that can support those we have had a pretty significant engagement on chronic diseases and really interesting to see how.

00:01:21.720 --> 00:01:40.020
Nedra Garrett: The questions have you know have changed over time and really in terms of the chronic space and also looking at how hope it is actually impact of diseases all at times we're looking at you know, the number of cases and stratified in different groups and so forth, and.

00:01:41.040 --> 00:01:43.860
Nedra Garrett: I think the chronic work is what he provided are really great.

00:01:44.910 --> 00:01:54.630
Nedra Garrett: Use of the peak or data, we also have some interest in telehealth and, as you know, we've been talking a little bit more about.

00:01:55.740 --> 00:01:59.430
Nedra Garrett: Looking at blood disorders and the most recent.

00:02:00.630 --> 00:02:19.770
Nedra Garrett: Wake of james's vaccine is something it's just a very important there so lots of great stuff we're very, very engaged and it's been I think a really great partnership so just want to thank you all for your support and helping us in answering some of those really critical questions.

00:02:20.870 --> 00:02:23.040
Sammy Chao: Thank you so much need DRAM.
Sammy Chao: So, today, to go over the agenda of what we'll be discussing.

Sammy Chao: The rest of the webinar will start with a few operational updates from the public health informatics Institute.

Sammy Chao: And then Jason block from Harvard pilgrim healthcare and Tom carton from Louisiana Public Health Institute.

Sammy Chao: will go over an overview of the project timeline accomplishments some discussion of next year's funding results of some specific queries and a plan for future dissemination.

Sammy Chao: At the end of the webinar will have a question and answer session so feel free to put your questions in the Q amp a box within the zoom webinar APP.

Sammy Chao: And we'll address them as they come in, or answer them out loud at the end during Q amp a session.
Sammy Chao: So if you have any questions put them in the Q&A box and if you have any comments along the way feel free to put them in the chat window and we will be keeping those boxes monitor.

Sammy Chao: So just to get started with a few operational updates.

Sammy Chao: A brief update on the funding for the upcoming grant year will be going into more depth in this and the later part of the session, but just to let you know that we have applied for funding continuation for the next grant year which will be.

Sammy Chao: August 2021 through July 2022 and we will be, we will be finding out the funding level at the end of July this year.

Sammy Chao: And Jason will be presenting during his slides about what that means for you all, as the coordinate sites and what the changes might look like for the next year’s project.

Sammy Chao: Just as a reminder this recording and presentation materials they will be made available after we close the session today.
Sammy Chao: And we will send that link out to where we'll have the recordings and the notes and the transcript to all of the participants of this webinar.

Sammy Chao: The next newsletter and webinar for this project will take place in June we're following a schedule of doing a webinar and a newsletter every other month, and so the next one will happen in June so keep an eye on your emails when those are about to come out.

Sammy Chao: And so now alley passing it along to Jason and Tom for the updates and the rest of the webinar.

Jason Block: Thanks Sammy and i'll and you draw and i'll be presenting the slides and then we'll call on Tom to sort of weigh in at at periods and Tom will.

Jason Block: Be monitoring some of the chat so that we can get a jumpstart on your questions, but we wanted to go through sort of the project accomplishments to date, what our general timeline is for the rest of this.

Jason Block: This funded year which goes through the end of July.
Jason Block: we'll touch on.

The likelihood and.

Our hopes for year to a funding for this project which Sammy just referred to, and give you a general sense of what we think the scope of that will look like and the funding levels.

And this is all preliminary so we want to just make a clear about the second year funding is that there's no guarantee that this is going to happen, though.

We are, we are very hopeful that it will, and in the signs are pointing in the right direction, but we can't be certain until the funding is actually awarded and decided on.

i'll talk through some of our most recent queries and that includes the this shift in the general direction of the queries that's occurring hopefully starting next month from descriptive to more analytic queries and then i’ll close a bit by talking about dissemination next slide.
Jason Block: So we just released our 11th query and I always lose a little bit of track of the exact count, but I believe this is our 11th query that we released, and this is.

Jason Block: A query that sort of our standard query that has been consistent throughout the project period, which is what we've been calling our cumulative query.

Jason Block: And that is really doing a full scale descriptive assessment of patients who have tested positive for SARS coby to we also look at some patients who.

Jason Block: have had diagnoses for Cuba 19 throughout the entire pandemic and the best data that we have really starts in March of 2020.

Jason Block: Because that's when we started to get some data on stars could be to infections, as opposed to just diagnoses i'll go through some of the changes that we're making for that cumulative query but it's relatively consistent with what we've done before, with some additions.

Jason Block: that this will close out our query for April we're making a shift in May to what we've been calling advanced analytics i'll talk about that shortly.
Jason Block: Our anticipation, is to do that, first, on post acute quality of covent or long coven carrying forward from some of the descriptive work that we've done.

And then to build on that, by looking at the relationship between control or severity of chronic disease in severe coven outcomes as well in an analytic query.

In June, one of the interest of the CDC has been not only to look at the relationship between level or control or severity of chronic disease included outcomes, but rather also to look at coven.

As a predictor of chronic disease outcomes and so in June we're going to try to start putting together some queries that will look at that.

In July we haven't made some final decisions about exactly what we'll do in July, but there has been an interest to re up a query that we did on readmissions, and admissions.

and also to perhaps carry forward on that chronic disease up couldn't work in to do a third advanced analytic query to close out the funded year.
Jason Block: Excellent.

So, as I mentioned now's the time where we're launching into this shift to some work that we're calling advanced analytics which is really looking at associations of different factors that have emerged as really important.

The ones that we're going to focus on for this our post acute quality of coven in chronic disease and chronic disease in both directions like I just talked about.

As part of the statement of work for this project we had mentioned that we would do three to five advanced analytic queries.

In these are the ones that have emerged as the ones that we think are going to be the most important and provide the most useful complimentary information to the CDC beyond what they've already been able to produce with some of the other data that they have access to.

Our intention is to develop a process to do this through distributed logistic regression.
Jason Block: In combining results across sites through Meta analyses so we're building or the programmers that we work with are building an extension on our modular programs to allow for the execution of multi variable logistic regression.

Jason Block: And with that, as part of that there's the ability to actually integrate Meta analyses in that process, so the modeling will be executed at the site level.

Jason Block: But then we'll bring it all together with the Meta analyses, so this, this is our intention we're working on this actively with the programmers right now and hope to have a plan put in place over the next few weeks in order to do this.

Jason Block: Next slide.

Jason Block: So Sammy had already referred to the second year of funding, as you know, this project period ends at the end of July, and so this would be carrying us forward.

Jason Block: From July 2021 and CDC has an interest in this, we have talked with various folks across the levels of a cornet and there seems to be shared interest in pursuing this as well.
Jason Block: What we know is that there wouldn't be level funding for year two and the expectation would be that there would be a 10% reduction in direct costs, and so what that would mean is that sites for this first year have been funded with direct cost of 50,000.

And so the anticipation, is that site direct costs would be 45,000 in your to with also a similar reduction in some of the operating expenses.

That we have for this project overall so we’re going to try to have a reduction that is consistent across all sites that have been contracted for this project.

We know that, with a reduction in cost that we also have to reduce the scope and we also want to shift the scope, a little bit that we think would fit the needs of what we expect for the second year, so the expectation is that there will be fewer queries.

And that would be maybe one to two per month, rather than two, which is what standard lead we've been doing.

there been a few months in this first year, where we've only done one query and that's been because we have spent more time developing queries.
Jason Block: than then sending out queries and so, in some cases we needed more time actually to pull those together, and so we might use that model of the kind of one to two.

Jason Block: For the second year, to reduce the scope less frequent refreshes are probably required as well, certainly as case counts start declining can we focus more on.

Jason Block: predictive modeling and those types of things were association regression modeling.

Jason Block: In so that the refreshers could cut down to one per month some sites more.

Jason Block: choose to reduce the the timing of their refreshes because they already have it built into their operations and it might be more work, in fact, for them to decrease the frequency of refreshes but we certainly will allow for that.

Jason Block: we've talked about whether a working group members, we have a working group that is made up of one representative per clinical research network.
Jason Block: And we have a number from one of the health plan research networks as well, and so sites might choose to use some of the funds that we have.

00:13:00.960 --> 00:13:19.290

Jason Block: Committed indirect costs to fund their working group members, if a site has a working remember that's participating in that entity, so that might be one option and then one of the things that we want to explore and I have another slide on this is the possibility of doing.

00:13:20.970 --> 00:13:30.510

Jason Block: Some work to compile patient level data from sites and I'll explain a bit what we're talking about and what the scope and the reasons for that our.

00:13:31.200 --> 00:13:40.770

Jason Block: Sites might need to put in some iron IRB exemptions for that this project is funded as a public public health surveillance project by a public health authority.

00:13:41.490 --> 00:13:56.790

Jason Block: And so we believe it meets all of the exemption criteria required for that exemplary category under the common rule and so sites might actually need to carry through if they haven't already to get those site levels exemptions if we're going to be pulling patient level the.

00:13:57.960 --> 00:13:58.440

Jason Block: Next slide.
Jason Block: So, as I mentioned previously and I'll stop and see if Tom has any additional comments after this slide.

Jason Block: But you know our advanced analytics at least the early phase of this is going to be through distributed regression, we believe that that will give us robust results.

Jason Block: We feel confident in that technique we've used similar processes before in but cornet projects.

Jason Block: And the way that the programmers are building this regression component is they're building it as a reusable components are modular programs.

Jason Block: And that will be one of the things that we hope to leave behind from this project is some infrastructure to help facilitate other projects like this in the future, we expect that that component will be ready in May.

Jason Block: So we're confident in that approach, but we also know that patient level data provides some efficiency that could help us as we move forward on this phase of the project in general.
Jason Block: So patient level data, obviously, is more flexible when you code a distributed logistic regression it's sort of a one shot deal obviously you can repeat it if the results.

00:15:17.280 --> 00:15:25.230

Jason Block: are not as expected, or something went wrong in the process, and we do thorough testing of it, but when you have the patient level data it's more flexible.

00:15:25.950 --> 00:15:40.560

Jason Block: But we also could have the ability to combine multiple analyses in one data poll, so that sites wouldn't have to execute one query per analytic process that we're that we're pursuing.

00:15:42.210 --> 00:15:50.220

Jason Block: Some with distributed regression, one of the challenges is that sites that have relatively smaller sample sizes.

00:15:51.000 --> 00:15:56.460

Jason Block: will not really be able to participate in that component won't affect their overall participation in the project.

00:15:57.210 --> 00:16:08.880

Jason Block: But they're not going to be able to have a logistic model that will converge if they have a small sample size, and so we could easily incorporate those sites into analyses.

00:16:09.540 --> 00:16:21.240
Jason Block: If we pull patient level data of course there's trade offs, which is that there, as I mentioned there's some additional possible regulatory burden that sites would need to probably get exemptions.

00:16:20.080 --> 00:16:27.360

Jason Block: under their IRB for this just to feel confident that they are allowed to share this data.

00:16:28.020 --> 00:16:37.620

Jason Block: We already have a process for sharing patient level data with the peconic coordinating Center, which is where this data would be shared, it would go to the coordinating Center and we would analyze it there.

00:16:38.760 --> 00:16:45.720

Jason Block: But those that will have to discuss processes for sharing that data and so that might require some additional discussions.

00:16:46.740 --> 00:17:02.250

Jason Block: And so that's the that's the balance that we need to strike.

00:17:02.880 --> 00:17:12.960

Jason Block: One of the things that is clear is that we would that whatever analyses that we would plan to conduct in advance those would be stated and metadata we'd be very clear about how we would be using this data.
Jason Block: To achieve the aims that we are setting forward with our colleagues at the CDC and on the working group and all of you.

98
00:17:13.710 --> 00:17:23.010

Jason Block: So we wouldn't it wouldn't be a carte blanche to do whatever analyses we wanted, we would designate them in advance so that site wouldn't know what we're up to.

99
00:17:23.730 --> 00:17:31.830

Jason Block: So let me stop there for a second see if Tom has any additional thoughts about this and I don't know if there any questions that have popped up in the chat that we can answer as well now.

100
00:17:34.260 --> 00:17:43.650

Thomas Carton: Thanks Jason nothing in the chat just yet you did an excellent job, just describing and I think the only thing that I would add is that.

101
00:17:44.520 --> 00:17:56.940

Thomas Carton: Both of the two slides this and the previous that talk about the funding in the scope for year two, as well as the considerations of patient level data.

102
00:17:57.570 --> 00:18:14.670

Thomas Carton: is just the early stages of both of these conversations and there will be more clarity in the coming weeks and we'll reach out directly to sites with information with more detailed information on both both of the concepts of the year to.

103
00:18:15.720 --> 00:18:32.550
Thomas Carton: Scope change, as well as the patient level data has been shared with the working group and Jason described, you know what the working group is and who, the members of the working group are and then also with members of coordinate Steering Committee, and so, in both cases.

00:18:33.600 --> 00:18:56.670

Thomas Carton: folks we're open to to both and interested in in further conversations and laying out the the trade offs of the patient level data so really early stages of the discussion we've been floated the idea get getting gathering feedback and in more details to come.

00:18:58.200 --> 00:18:58.680

Jason Block: Next time.

00:18:59.910 --> 00:19:10.980

Jason Block: As you can see here in the title where were mentioning a possible pilot of patient level data polls in year one we're still thinking about this, that this might be an opportunity to hone in some of the processes.

00:19:11.550 --> 00:19:28.320

Jason Block: Before we expand this to the entire collection of sites in your to some more head on that, as I mentioned.
Jason Block: So now what i'll do is i'll walk through some of the results from the recent queries that we've conducted.

110
00:19:29.430 --> 00:19:33.780
Jason Block: The first one that i'll mention is a data curation query that we did.

111
00:19:35.070 --> 00:19:43.890
Jason Block: At the end of March and into the beginning of April, and we want to thank all of you that contributed to this effort.

112
00:19:44.640 --> 00:20:07.620
Jason Block: This came right before the full scale full cdn data curation process, and I know sites had some burden by having to execute these and series.

113
00:19:56.040 --> 00:20:07.620
Jason Block: So we really appreciate all the work that folks did for this and the reasons that we did the coven cdn data curation is that obviously the Cobra team is different than the full cdn.

114
00:20:08.550 --> 00:20:25.140
Jason Block: In that it's more frequently refreshed and so we wanted to make sure that in that process there weren't any major errors that were emerging just because it's a slightly different process and what sites usually do for their emails and their data refreshes on a quarterly basis.

115
00:20:26.190 --> 00:20:33.480
Jason Block: And we had 100% participation for this and and almost all of the sites.
Jason Block: We were able to execute this with no problems whatsoever, we did have a couple of sites and we've been in communication with those sites and we're still exploring some of the details of this.

But three sites had some errors, all of which, in our initial assessment seem pretty small.

A few of the sites in, I'm not sure if it was all three of these had not yet updated their code cdn to see DM six like they had for their full cdn until we believe that some of the errors that emerged from this were a result of that.

From what we've observed so far none of the errors prevent sites from continuing to respond to the queries.

But we're just doing some further kind of deep dive into the metadata of the results, you know, in order to confirm that that's the case.

So we should have that sometime in the next couple of weeks and we'll be communicating with sites if we find any issues.
Jason Block: For those of you who are familiar with the data curation process, there are major errors or read errors that emerge in some of the curation.

Jason Block: That require remediation we did not require that for this process because we really just this was exploratory.

Jason Block: assessment, and then there are other errors that are blue errors that are smaller ones.

Jason Block: that's what the metadata is going to give us a full processing of all of these that will be looking at and reviewing the sites if it's important to remediate anything so I appreciate all the work that folks did on this.

Jason Block: Excellent.

Jason Block: So the query that we just got result on about a week ago is a query, which was a descriptive query of chronic disease control in severity specifically looking at obesity by stage and hypertension and diabetes by level of control during the period, just before.
Jason Block: A SARS could be to positive test, and I say just before we extended the baseline period of assessment of severity control to up to 18 months before.

Jason Block: Because we know that one of the challenges of the pandemic has been that patients have not been coming into the office as much as they had prior.

Jason Block: And so measures of blood pressure in hemoglobin a one C and BMI have been harder to come by so we wanted to at least allow for the possibility that patients didn't have data.

Jason Block: In a period immediately preceding this we only did this for adults, because we expected reasonable small reasonably small numbers for kids.

Jason Block: There were, as we went through the data Mart specific results from this query we found some sites that had either know a relatively small numbers of patients.

Jason Block: That had objective information for blood pressure in email global anyone see.
Jason Block: we've reached out to all of those sites.

135
00:23:33.270 --> 00:23:46.590
Jason Block: Some of them have issues related to how they pull data from their source institutions that make this difficult to capture, but most of the sites might have had a small error to.

136
00:23:47.370 --> 00:23:56.910
Jason Block: An example of which is that we required for hemoglobin a one see to have the unit of percent and a modifier of an eq which is equal to.

137
00:23:57.540 --> 00:24:06.630
Jason Block: So some sites have found that they may not have had those clear units or modify errors and so, most of the sites that we've talked to so far have been able to fix this.

138
00:24:07.560 --> 00:24:13.380
Jason Block: So we're moving forward on this, this was really as our plan has been throughout the course of this project.

139
00:24:13.740 --> 00:24:29.490
Jason Block: Whenever we're thinking about an advanced analytic query we do a descriptive one first that almost serves as a prep to research, and so our anticipation, is this is now allowing us to set for the technical specifications for what an advanced analytic query this would look like.

140
00:24:31.140 --> 00:24:34.110
Jason Block: Next slide have a few data slides and I just wanted to show you.
Jason Block: So for each of the conditions, diabetes, obesity, hypertension and then some combinations of hypertension and diabetes.

Jason Block: We looked at descriptive characteristics of patients, based on either the severity of the chronic disease at baseline, for example with obesity by stage.

Jason Block: or control for hypertension and diabetes and we have slides like this for each of them I'm just going to show you a couple of them just to give you a flavor of the types of information that we produced.

Jason Block: And this is looking at the proportions by race within each category that's listed here on the X axis, and you can see the y axis is out of 70%.

Jason Block: So among all patients with stars could be to irrespective of whether they had diabetes, you can see the proportions by race white black other race missing race in Asian.

Jason Block: And then among those patients with diabetes, the prevalence of diabetes is about 13% using a pretty broad computer phenotype for diabetes, this is both Type one and Type two.
Jason Block: And then, about two thirds of patients who had diabetes could be categorized into a straight up, based on.

Jason Block: Their a one see their most recent recent a Wednesday prior to their positive test in some of the user quite a bit before because we didn't have data and the period immediately preceding but this so this goes back about 18 months and what you can see, as i'll just.

Jason Block: point out the rise in the green bar here, which is the percent or the proportion of patients within each group.

Jason Block: That are black or African American and you can see it's about 14% of the total population of patients with stars could be two.

Jason Block: In it's almost 30% of patients who have a one sees that are 9% or greater So you can see that rise among patients who have diabetes and then have less well controlled diabetes.

Jason Block: Next slide.
Jason Block: We also, for the first time, started to look at 60 day mortality and most of this is hospital mortality because that's the best data that sites have.

Jason Block: And then, as we have before we looked at percent of patients who were on mechanical ventilators and percent of patients who had billing codes.

Jason Block: That indicated, they received some critical care during the course of their stay, this is again broken down in the same way as the prior slide.

Jason Block: The y axis is here, out of 10% so just want to point you to that, but there's a different y axis here.

Jason Block: In among all patients mortality are 60 day mortalities about 2% you can see it's 8% that's in the blue bars are for those patients who have diabetes.

Jason Block: And among patients based on control, we don't see really see much of a difference in mortality rates as far as we could glean.
Jason Block: Based on levels of control of diabetes at baseline and you can see, also the proportion of patients who received mechanical ventilators it's about 2% overall but 6% of those.

Jason Block: with diabetes, not much difference across the three categories and then critical care codes is about 3% overall but 10% of patients who have diabetes.

Jason Block: So some interesting findings that track with generally, what we have perceived based on other data about the severity of Kobe with patients who have diabetes next line.

Jason Block: So this is another way that we looked at the data which is just a look at whether or not patients were treated in the Inpatient setting or not this is one for hypertension.

Jason Block: And the blue is a patients who were treated in the Inpatient setting in the green as those who are not in patient and, overall, the hospitalization rate.

Jason Block: is about 16% or so it's a little higher for those who have hypertension, which you can see, as the next group over where it's 20%.
Jason Block: And then the highest rate, at least in this group is patients who have what we deemed as the worst level of control preceding their stars could be to positive test.

00:28:52.170 --> 00:29:11.940
Jason Block: And that's either having a systolic blood pressure of 160 or above or diastolic of 100 or above and hospitalization rate for that group of patients is 24% So you can see some differences, based on hypertension it again, we have similar ones like this for diabetes and obesity next line.

00:29:13.860 --> 00:29:18.660
Jason Block: We also broke down the rate of other chronic illnesses among patients.

00:29:19.170 --> 00:29:30.270
Jason Block: who have hypertension, diabetes and obesity, this is just the hypertension one showing underlying conditions in the three years prior to their positive tests, these were the most common ones.

00:29:31.080 --> 00:29:40.920
Jason Block: And you can see this for all patients for those with hypertension and then the levels of control that we computed based on their most recent blood pressures that were available.

00:29:42.780 --> 00:29:54.120
Jason Block: and the first thing that I'll just point out, in the light blue bars, which is the first ones that even among those patients who have poor control of hypertension, the coding for hypertension.

00:29:55.170 --> 00:30:01.200
Jason Block: Which these underlying conditions are based completely on icd 10 and nine codes.
Jason Block: Only about 80% of patients with the worst control of hypertension, have an icd 10 or nine code for hypertension, which showed you that that code.

Jason Block: As we have suspected is is not adequate for really being able to diagnose hypertension, you can see, the numbers for obesity.

Jason Block: Which is expected kind of rise among patients who have chronic disease compared to all patients and then you can see the range of other conditions as well, whereas diabetes is upwards of almost 40% that's in the purple bar of patients who have reasonably.

Jason Block: Uncontrolled hypertension at baseline these other ones are, the more common conditions that we observe chronic pulmonary disease chronic kidney disease anemia mental health disorders, arrhythmia coronary disease and severe obesity.

Jason Block: Next line.

Jason Block: So that's it for the descriptive information that we have been able to glean from the chronic disease query.
Jason Block: We have a lot of slides similar to the ones that we just produced that we've been engaging with CDC on.

Jason Block: and trying to get their perceptions of that and moving forward with the next step in that process, we also since our last meeting we completed a a second post acute quality of code query this query.

Jason Block: was an iteration on our first attempt that categorizing post acute kweli.

Jason Block: And what we were able to do with this query is change the the way that we categorize the different periods of time that we felt were important to assess.

Jason Block: relative to the index date so our baseline period in our first query actually included information, up to the day of the positive test which we expected might have.

Jason Block: Increased the prevalence of some underlying conditions or symptoms, so we cut off that baseline period seven days prior to the positive tests.
Jason Block: Are acute phase of the illness was negative seven to 30 days and we extended what we call it all long coven period to 150 days previously, we had to cut that off at 120 days.

Jason Block: We did this because we had longer time period because our first query was executed in January, and this one, was executed in March.

Jason Block: And this also included all patients who were stars could be too positive through the end of 2021 of the most important things that we were able to do with this query that we didn't do with the first.

Jason Block: is to also look at the prevalence incidents of the conditions that we designated as opposed to keep too quickly for those patients who are coven negative, as well as coded positive.

Jason Block: This data also provided some important data for the NIH past applications that many of you probably weren't engaged with in there was a pediatric and adult application that went out for recording it.

Jason Block: So i'll show you some of the results that we have of this just to give you a flavor of the type of information that we produced with this query that we sent the CDC next slide.
Jason Block: So this is a slide looking only among children who were treated.

Jason Block: For SARS coby to in the Inpatient setting.

Jason Block: And this is looking at prevalence during that long coven phase, so the phase of time, that is from 31 to 150 days post positive test.

Jason Block: In blue you see covered positive in green you see coven negative.

Jason Block: What we mean by coven negative, these are patients who always tested negative for coven and we based the timing of her assessment of post acute sequentially.

Jason Block: Based on their first negative test, but these are patients that never had a positive test for the entire query period.
Jason Block: And you can see the y axis here is out of 80%, and these are the most common conditions that we assessed.

197
00:34:12.900 --> 00:34:15.540
Jason Block: and the first thing that you can see, is in blue.

198
00:34:16.680 --> 00:34:21.150
Jason Block: upwards of about 55% or so of patients had some.

199
00:34:22.290 --> 00:34:33.420
Jason Block: diagnosis that was documented in the period of time from 31 to 150 days post positive test, so this includes any of the many diagnostic codes that we looked at.

200
00:34:34.200 --> 00:34:38.220
Jason Block: And the coven negative patients have a slightly lower prevalence in that phase.

201
00:34:39.000 --> 00:34:49.170
Jason Block: One other caveat i'll mention here is that this includes patients only patients who had both both a prior relationship with the health system prior to their stars could be to test.

202
00:34:49.860 --> 00:35:02.550
Jason Block: As well as they had some type of follow up in that 31 to 115 day period so it's the patients who had the most engagement with the health care system, both before and after colon.
Jason Block: You can see some of the more common conditions among kids changes and bowel habits nausea vomiting abnormal imaging anxiety and depression.

Jason Block: nonspecific heart rate have no Melis fatigue weight loss shortness of breath my algis in arthralgia has some type of abnormality of sensory perception perception.

Jason Block: That doesn't include taste and smell because we looked at that separately, but other sensory perception abnormalities and then some type of ear, nose and throat abnormality.

Jason Block: In the thing i'll just point out here and i'll show you the same for adults is that.

Jason Block: The patients who were stars could be to positive have a higher prevalence of pretty much all of these conditions, except maybe anxiety and depression.

Jason Block: And some of the ones that were less frequent but they're pretty similar that the differences are fairly subtle between those who are covered, positive and negative X life.
Jason Block: same slide but for adults treated in the Inpatient setting and you can see that any past diagnosis was higher than for kids more like 75% for those who were stars can be too positive.

And a little over 60% for those who are coven negative most of the conditions are the same here similar patterns, where stars can be to positive is slightly higher prevalence and stars could be too negative.

But we see some different conditions here, such as sleep abnormalities.

cognitive abnormalities these are patients who reported amnesia or other deficits of cognition.

Non cardiac chest pain, which is the CP there and the others are the same as what I mentioned with children, except arrhythmias I think arrhythmias is also one that's different here.

Jason Block: Next slide.
Jason Block: In addition to looking at prevalence we also looked at incidents.

00:37:02.670 --> 00:37:10.680

Jason Block: So again, this includes patients who had both baseline connections to the health system and follow up to 31 to 150 days.

00:37:12.030 --> 00:37:18.240

Jason Block: And these percentages on the y axis here which you can see, is a lot lower than for the earlier slides.

00:37:18.840 --> 00:37:28.980

Jason Block: represents patients who had these diagnoses in that long coven period of 31 250 days, but did not have them in base at baseline.

00:37:29.580 --> 00:38:01.680

Jason Block: So it essentially nets out patient who had some prevalent, but some presence of some of these conditions at baseline.

00:37:38.880 --> 00:37:50.010

Jason Block: They could have had the first occurrence of a diagnostic code for these during the acute phase of their stars coby to illness, but it could not have had it during the baseline.
Jason Block: And you see the most common ones that we observed, both for adults and children for coven negative and Coleman positive, you can see, the incidence attire for adults and children across all of these.

And the incidence tends to be higher for those who are coven positive compared to the negative but, again, the y axis is only out of 10% these differences are fairly small.

The most common one for adults with shortness of breath with an incident and about 8% compared to 5% for those who are poet negative and changes in bowel habits.

Is.

I think it was 5% I just lost the the slides here, but I think was 5% for.

Children who are stars could be too positive and 3% for those who were stars can be too negative.

matt I can talk through the slides or or share mine if if the slides are still not up and maybe it's just not there for me.
Matt (IT Support): yeah I think semi dropped off if you could share your slides that'd be great Thank you.

Absolutely.

Jason Block: Let me just get to the right slide here.

And we only have a few left anyway.

Okay.

Jason Block: Okay, can you see what i’m showing here.

yeah.
Jason Block: All right, and I'll just proceed from here, so this was the slide I was just showing you now he's talking about changes, bowel habits which are 5%.

For those who are stars could be to positive in 4% for negative, but the biggest difference here for kids that we saw was fatigue 5% first 2% but, again, these are very subtle differences and when we end up doing the advanced analytics some of the stuff may end up.

Coming out in the wash because we know that there are other abner the other differences between patients who are quote coven positive and negative.

So in the remaining slides, I just want to describe what the current query that's out to site right now and we released that on Friday sites will have until Friday to respond to this.

Is our cumulative query, and I say April 29 it actually went out on the 23rd and it was meant to be the week of April 19.

And we have adjusted as we have throughout the course of the project period we have adjusted how we're capturing data and then types of information that we're capturing.
Jason Block: So we're adding one new monoclonal antibody that has been approved, since we last assessed this this was approved in February it's The combination of these two treatments.

And previously Bam lavender lavender ma'am I cannot always pronounce this correctly was approved as a model therapy, but now it's available as a dual therapy and so we're assessing that as well.

We had previously assessed our data capture and information on the Internet finds her vaccines and a high level we're going to also look at information.

Related to use of the j&j vaccine and the immunization tables in for the first time we're going to create some cohorts and do some descriptive assessment of the three different vaccines that are available in the US, we have a couple of limitations in order to assess this.

And that's because our reusable tools can't yet.

Jason Block: pull data directly for data characterization purposes from the immunization table.
Jason Block: So, instead, we have to rely on procedure codes for those vaccines in order to characterize those patients, we will be working on adjustments to the reusable tools.

Jason Block: So that it can hit against immunization table we we just can't do that debt based on our assessment in February, we think that procedure codes captures about 90% of the vaccines.

Jason Block: That we had information on yet obviously would not capture vaccines that were administered outside of the health system that were pulled into that the site common data models for various reasons.

Jason Block: We have been looking at pregnancy as an underlying condition, but we have not really done a very good job of defining patients who are pregnant, at the time of their positive test or if they're negative fast.

Jason Block: And so that's something that we have done some work on using some recommendations and information from some of the folks at cross cornet and so will be better to finding those patients who are actively pregnant at the time of their test.

Jason Block: And then, as we have done with subsequent queries we really want to get a sense of how different patients are that have this longer term.
Jason Block: connection to the health care system that have baseline connection and follow up.

And so we're going to be categorizing that cohorts separately from all patients, for example, we're testing positive, so we can look at differences and understand what type of biases are introduced, when we end up focusing on that population compared to the overall.

So one of the things that we have been actively working on is dissemination of this work, as you know, we share this data with CDC as soon as we receive it.

They disseminate it pretty extensively internally but we wanted to start producing some manuscripts that are based on results and so we're actively working on this now.

And our general approach to manuscript writing is that were possible, we expect to include site authors one representative per site as a part of a collaborative authorship group, as we have done with prior work in the cornet.

There are some instances where that's not possible, there are some brief reports that might not be very extensive papers that don't allow for that, but where ever possible, we can do it.
Jason Block: We plan to use side authors as well, we did this for the first paper that we produced for this project that didn't ended up getting published, but was a pre print.

Jason Block: we're taking that pre print work in turning it into two separate trend papers on adult.

Jason Block: And pediatric patients over the course of time, and we have a draft of the adult paper that were circulating.

Jason Block: With our writing group that will send out to the collaborative site authors relatively soon as well, and the pediatric one will fall on the heels of that.

Jason Block: we're working with CDC on some work related to post acute kweli and chronic disease as well, and so expect to hear more from that, over the course of time.

Jason Block: We also now that we are making decisions about the type of information that we're going to include in these papers We also plan to do some infographics and blog posts and will be communicating about what we decide to focus on for that for that as well.
Jason Block: Next slide I think this might be my last slide to give us some time for questions.

Jason Block: Sorry i'm the one controlling sites now.

Jason Block: And so you know we have been pleased with how we've been able to carry this out, I mean the the participation from all of you at the sites has been amazing.

Jason Block: Almost all of the queries have had 100% participation, where there wasn't 100% there were some major issues that sites were dealing with at the time, and that was few and far between.

Jason Block: That we had issues with sites responding to queries so we could not be more happy with the engagement that sites have had.

Jason Block: We described our shift to this kind of analytic focus we described some of what our plans are for your two.
Jason Block: And we that the writing groups for the trend papers, this was really a carry forward from the Steering Committee, the Steering Committee is going to be the writing group.

00:45:59.910 --> 00:46:16.800
Jason Block: For the trend paper so we've been working with them to have volunteers, we have a list of names for our collaborative authorship groups we've been working with steering committee members in CRM leads to identify those in so we think we have a good list of names.

00:46:17.850 --> 00:46:25.980
Jason Block: And will be circulating that again because the last time we did this was quite some time ago, there might also be collaborative authors from each site.

00:46:26.760 --> 00:46:38.970
Jason Block: That are slightly different for each of the papers and so you don't have to email us with anything about this, this will be more communication directly within the CRM about this.

00:46:40.080 --> 00:46:41.910
Jason Block: And that is all I had.

00:46:43.080 --> 00:46:50.460
Jason Block: And so i'm going to stop sharing my screen, so that we can talk if there any questions or are things that people wanted to bring up.
Thomas Carton: This is Tom we got one question from Alan call, but I was going to ask, ask you to address it is he's asking about how we handled the co-morbidities between the hypertension and the diabetes classifications, for the chronic disease work.

00:47:13.620 --> 00:47:28.050

Jason Block: yeah so in general, the way that we did it for and I don't know if the question was about whether we did it separately and differently for hypertension and diabetes, or just a general question about how we handled it across all of them.

00:47:28.590 --> 00:47:34.110

Thomas Carton: yeah it was it was it was more about if someone was both it was both.

00:47:34.140 --> 00:47:35.070

hypertensive okay.

00:47:36.120 --> 00:47:36.390

Thomas Carton: yeah.

00:47:36.540 --> 00:47:53.760

Jason Block: Now that that's a good question Alan so we did a couple things so that the first is that we looked at them completely separately, we had a computer goal phenotype for diabetes, which included diagnostic codes use of medications a one sea levels.

00:47:54.810 --> 00:48:06.570
Jason Block: And for that group we just identified, who had diabetes and then among those who had diabetes what their level of control was during the baseline period, and then we looked at underlying conditions.

00:48:07.140 --> 00:48:16.560

Jason Block: In those in each of those groups separately and the underlying condition assessment went back three years so kind of the way that we've been looking at underlying conditions in general.

00:48:17.460 --> 00:48:28.020

Jason Block: We then did it separately for those who had hypertension or comfortable phenotype for hypertension use some codes some medications some levels of blood pressure.

00:48:29.040 --> 00:48:35.460

Jason Block: And then, again we categorize people based on level of control at baseline and then looked at underlying conditions same for obesity.

00:48:36.030 --> 00:48:43.650

Jason Block: We then looked at some patients based on combinations of control at baseline for hypertension diabetes.

00:48:44.010 --> 00:48:57.600

Jason Block: So, for example, patients who had a one sees under seven and had systolic blood pressures and diastolic blood pressures under 130 and 80 respectively, which would be the ideal control for a patient to have hypertension.

00:48:58.290 --> 00:49:01.980
Jason Block: And then we looked at the combination of those who had a one sees over nine and those who had.

290
00:49:03.570 --> 00:49:19.440

Jason Block: blood pressure, levels of systolic over 160 or diastolic over 100 and then we separately categorize those groups based on their underlying conditions, so it was really separately assessed across each of the different categories that we captured for the data.

291
00:49:27.480 --> 00:49:32.790

Sammy Chao: Thank you so much, and Jason, thank you for taking over driving the slides while I was having some technical difficulties there.

292
00:49:33.300 --> 00:49:35.850

Jason Block: nope no problem, no problem good at backups.

293
00:49:37.350 --> 00:49:46.590

Sammy Chao: Definitely is so I don't see any other questions in the Q amp a and I don't see any other comments in the chat.

294
00:49:48.330 --> 00:49:51.810

Sammy Chao: eleanor's one of the things that sounds like we answer that question there.

295
00:49:52.890 --> 00:49:58.200

Sammy Chao: we'll just give it another minute or so, so if anybody has any other questions, please put them in the Q amp a box.
Sammy Chao: But while we wait on that I just want to again thank everybody who participated in today's webinar. Thank you to CDC for being our leads and product sponsors on this.

Sammy Chao: A big things to both Jason and Tom for your expertise and guidance in this project and sharing all of the query results, and all this information.

Sammy Chao: And so after the slides are after the presentation is over, we will be sending the slides out and the notes and we'll have it published in the pH I website.

Sammy Chao: I don't believe we have any other questions coming in, so I'll let everybody go unless there are any other comments Jason Tom anything else or nature anything else you wanted to share today.

Jason Block: At nothing on my end I just again grateful for everyone's participation and work on the project and look forward to continuing this engagement if if everything falls in place for your to as we expected well.

Nedra Garrett: yeah I don't have anything further to add to that I'll Thank you all for all the data that has been provided us with some of our critical research questions and look forward to working with you anymore, thank you.
Sammy Chao: Thank you all so much, and I hope that everybody has a great rest of your day and a great rest of your week.

Jason Block: Thanks everyone.