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UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF NEW YORK
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STATES OF NEW YORK, COLORADO, CONNECTICUT, DELAWARE, ILLINOIS, IOWA, MARYLAND, MINNESOTA, NEW JERSEY, NEW MEXICO, NORTH CAROLINA, OREGON, RHODE ISLAND, VERMONT, and WASHINGTON, et al.,

Plaintiffs,
V.

UNITED STATES DEPARTMENT OF COMMERCE, et al.,

Defendants.
----------------------------------x
NEW YORK IMMIGRATION
COALITION,et al.,
Consolidated Plaintiffs,
v. 18 Civ. 5025 (JMF)

UNITED STATES DEPARTMENT OF COMMERCE, et al.,

Defendants.

New York, N.Y.
November 7, 2018 9:10 a.m.

Before:
HON. JESSE M. FURMAN, District Judge

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(Trial resumed)

THE COURT: You may be seated.
Good morning. Welcome back. I hope everyone is well and well rested.

A couple housekeeping matters.
I entered an order last night with respect to the two remaining fact witness affidavits, so that should all be taken care of at this point. I don't know if there are any exhibits that should be admitted pursuant to any of the affidavits of witnesses who are not going to be appearing in person. Perhaps those are all being addressed in the revised letter that I assume is coming at some point with respect to exhibits that are being admitted by agreement and/or subject to certain objections. But if there are any that are subject to dispute, you should certainly let me know so that we can address those.

Second, I saw the filing indicating that certain depositions were filed erroneously, without redactions, and requesting that they be stricken. I did immediately place those on the Court view only, so in that regard they're no longer available to the public, but I can't speak to whether anyone -- there's certainly one reporter who seems to be as on top of this as anybody in the world. I can't speak to whether he or others already had those things, but it is what it is and I've done what $I$ can do at this point.

Third, I got a corrected affidavit of Dr. O'Hare, so I
do have that. My understanding is that the only changes on that front are with respect to certain figures in the affidavit.

Is that correct?
MR. HO: Yes, your Honor.
THE COURT: All right. Great. I assume defendants have that, and they can do with it what they want, I suppose.

Anything else that we need to deal with this morning?
MR. COLANGELO: Just a couple of short updates for the plaintiffs, your Honor. On the exhibits front, the parties have been conferring and we do expect to have updated lists to file at some point today, we hope, and we will make sure that we address in those updates any exhibits that were included in the affidavits that the Court has entered.

Second, with regard to the three fact witnesses, plaintiffs' fact witnesses, as to which the Court sustained some of the defendants' objection, the plaintiffs have decided not to call those witnesses to cure any of those objections, and so we are prepared to go ahead and file that testimony.

Is it the Court's practice to have that filed as it was prepared and the parties all understand it's subject to the objections the Court sustained, or would you like us to strike or redact?

THE COURT: You don't need to strike it. You can file it as is, particularly so that the record is clear what I
sustained and what I didn't.
MR. COLANGELO: OK.
THE COURT: But, obviously, I won't consider the testimony as to which I sustained an objection.

MR. COLANGELO: Thank you, your Honor.
MR. HO: One other brief item, your Honor, with respect to deposition designations.

THE COURT: Apparently we're having technical difficulties this morning.

MR. HO: Maybe I'll try a different microphone.
One other issue, your Honor, with respect to
deposition designations that have been filed.
We discovered last night a small formatting error with respect to the deposition designations that have been filed for John Gore. All of the pages are correct, your Honor, but there is one page that, for some reason, when we were redacting the highlighting, vanished from the page. It's page 19. There's no highlighting that appears on the page, but the entire page should have been highlighted in yellow as a plaintiffs' designation.

If your Honor would like us to, we can file a notice so that the record is clear, or we can refile the transcript, but I just wanted to bring it to the Court's attention.

THE COURT: What color should the highlighting be on that page?

MR. HO: The color of the highlighting should be in yellow to signify that it was by the plaintiffs, and it is page 19 of John Gore's deposition.

THE COURT: All right. And I assume the copy that was submitted to me separately is correctly highlighted.

MR. HO: I believe the copy that was submitted to you separately was correctly highlighted, your Honor.

THE COURT: All right. I think we can leave it as is with that correction on the record.

MR. HO: Thank you, your Honor.
THE COURT: Speaking of the Gore deposition, have the parties resolved any issues with respect to the videos of that deposition and the Comstock deposition?

MR. COYLE: We hope to be able to get back to the plaintiffs today and give the Court an update afterwards.

THE COURT: All right. I'd really like to get that done and resolved so that those are in the record and we can move on to other, better things. Please take care of that.

Anything from defendants before we get started?
MS. FEDERIGHI: No, your Honor.
THE COURT: All right. In that case, plaintiffs, please call your first witness.

MR. ROSBOROUGH: Good morning. Plaintiffs call as their first witness today Dr. Andrew Reamer. ANDREW DAVID REAMER,

THE COURT: You may proceed.
DIRECT EXAMINATION
BY MR. ROSBOROUGH:
Q. Good morning, Dr. Reamer.
A. Good morning.

MR. ROSBOROUGH: Your Honor, may I approach?
THE COURT: You may.
Q. Dr. Reamer, I just handed you a document. Do you recognize this document?
A. I do.
Q. Make sure you speak into the microphone.
A. I do.
Q. And what is the document?
A. It's my declaration, submitted for this case.
Q. Does this appear to be a complete and accurate version of the original?
A. Yes.

MR. ROSBOROUGH: Your Honor, at this time I'm offering the affidavit of Dr. Reamer into evidence as his direct testimony in this case.

THE COURT: All right.
Dr. Reamer, are there any corrections that you would
need to make to the affidavit?

THE WITNESS: No.
THE COURT: All right.
Any objections?
MR. TOMLINSON: Not to the testimony, your Honor.
THE COURT: It is admitted.
Any exhibits to be entered in conjunction with this?
MR. ROSBOROUGH: Yes, your Honor. There are two exhibits. The two exhibits I'd like to enter into evidence are PX 329 and PX 330.

THE COURT: And are there any objections to those?
MR. TOMLINSON: Your Honor, the government has no objection to 329.

330, if somebody could pull it up. We don't see the evidentiary value of that. Obviously that's a chart that Dr. Reamer has created, but it's essentially just kind of a graphical summary of the subject of his testimony. We don't see how it possibly adds any evidentiary value such that it should be entered into evidence.

THE COURT: The affidavit is not text searchable, unfortunately. Can somebody direct me to the paragraph where this exhibit is referenced?

MR. ROSBOROUGH: Yes, your Honor. It is referenced at --

MR. TOMLINSON: I believe it's paragraph 24, your
Honor.

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Reamer - Cross

MR. ROSBOROUGH: 24, that's right.
Thank you.
THE COURT: All right. I'm not going to admit this, but I will consider it as a demonstrative exhibit.

MR. TOMLINSON: No objection, your Honor.
THE COURT: All right. Very good. Plaintiffs'
Exhibit 329 is admitted into evidence.
(Plaintiffs' Exhibit 329 received in evidence)
MR. TOMLINSON: Sorry, your Honor.
Just one brief clarification. I believe the
testimony, Dr. Reamer's expert report, is identified as an exhibit. We weren't sure if they were attempting to move that into evidence, but we would object if they are.

MR. ROSBOROUGH: I think based on your Honor's prior statements, we're not trying to move that into evidence.

THE COURT: Good idea.
All right. Cross-examination.
CROSS-EXAMINATION
BY MR. TOMLINSON:
Q. Good morning, Dr. Reamer.
A. Good morning.
Q. Dr. Reamer, all of your calculations in this litigation are based upon different undercount scenarios created by

Dr. Christopher Warshaw, is that correct?
A. Yes.
Q. And you're not aware of how Professor Warshaw actually calculated those scenarios, are you?
A. I did not read his methodology.
Q. Right.
A. Yes.
Q. So that's a no; you're not aware?
A. Correct.

THE COURT: Counsel and the witness, please make sure you don't speak at the same time.

And if you could make sure you speak loudly and clearly and into the microphone. Two to three inches away is sort of the ideal striking distance.

Thank you.
BY MR. TOMLINSON:
Q. And sir, just to clarify, because I'm not sure we got a verbal answer, you're not aware how he calculated those undercounts --
A. No.
Q. -- correct?
A. No.
Q. And you have not taken any steps to determine the validity of Professor Warshaw's methodology or projections, have you?
A. Correct.
Q. And you're not here today offering any opinion as to whether those projections are valid, correct?
A. Correct.
Q. Dr. Reamer, all of the government funding formulas for the five programs used in your calculations are based on the final census numbers, not the initial self-response rates, correct? A. Correct -- well, if $I$ can clarify?

They are based on numbers derived from the final count.
They're not based on the final count, but they're derived from things like the American Community Survey of population estimates that are in turn based on the final count.
Q. Right. Thank you for that clarification, but all of those, the way the decennial numbers are used in those data sets uses the final count from the decennial, not the initial self-response rates, correct?
A. Correct.
Q. And you concede that the Census Bureau's nonresponse follow-up, which I will call NRFU, efforts served to reduce the nonresponse rates between the initial self-responses and the final enumeration, correct?

MR. ROSBOROUGH: I'm going to object to that. That's well beyond the scope of Dr. Reamer's affidavit. NRFU is not even mentioned.

THE COURT: You can just say objection.
MR. ROSBOROUGH: Thank you.

THE COURT: Sustained.

BY MR. TOMLINSON:
Q. Dr. Reamer, do you have any idea how or even whether Professor Warshaw took the Census Bureau's NRFU estimates into account in formulating his undercount scenarios?
A. I do not.
Q. Dr. Reamer, you stated that there is some sort of differential undercount in every decennial census, correct?
A. Not exactly; that there is uneven census coverage measurement in every census. There could be undercount in some areas and overcounts in others, so there's a differential, there's differential census coverage measurement, not necessarily a differential in undercount.
Q. OK, but there's an differential census measurement in every census, correct?
A. That's what the Census Bureau says, yes.
Q. And that includes decennial censuses that did not include a citizenship question on the short form, correct?
A. Yes.
Q. Do you know if there's a net differential undercount of noncitizens or Hispanics in 2010?
A. I don't -- I'm not aware of the -- the Census Bureau produces very extensive measures of census coverage -- of census coverage by multiple -- by geography and by multiple demographic characteristics. It's certainly possible that they looked at noncitizens. I don't know, though.
Q. Well, it's possible, but it's fair to say you don't know if
there was a --
A. Correct.
Q. -- in the 2010 census?
A. Well, I don't know if it was measured. I don't know if it was measured or not.
Q. And you don't know if Professor Warshaw accounted for any possible differential undercounts of noncitizens or Hispanics in the 2010 decennial census in those scenarios that were provided to you, correct?
A. I guess I'm not aware that he used the 2010 numbers, but maybe he did. I'm not aware of that, though.
Q. Dr. Reamer, you've done calculations for five different government funding programs for this litigation, correct?
A. Yes.
Q. I'd like to look at some of these tables that you've calculated and included in your declaration.

MR. TOMLINSON: First, if we could pull up the table from page 16 of your declaration. If we could blow that up, thank you.
Q. Dr. Reamer, I'm sure this looks familiar. This table calculates the estimated loss for fiscal year 2016 for all seven different undercount scenarios generated by Dr. Warshaw for the supplemental nutrition program for women, infants, and children, is that correct?
A. Yes, for the supplemental food grants part of the WIC
program, yes.
Q. OK. And so going forward, I'll just be talking about the supplemental grants. And is it OK if I refer to that program as WIC --
A. Yes.
Q. -- for short?
A. Yes.

THE COURT: Dr. Reamer, just to remind you, please wait for him to finish even if you know where the question is heading. It just makes the court reporter's job impossible if you speak over Mr. Tomlinson.

THE WITNESS: I will do my best.
THE COURT: Thank you.
BY MR. TOMLINSON:
Q. Dr. Reamer, looking at this table, this table only includes certain states, correct?
A. Yes.
Q. And does include all 50 states plus the District of

Columbia? Does not, correct?
A. Does not include all 50 states.
Q. Plus the District of Columbia?
A. Yes.
Q. Why is that?
A. I was asked by -- the idea was to show the states that experienced a loss under this analysis.
Q. OK. So if a state is not included on this table, that means your calculations do not show it losing federal funding for the WIC program under any of these seven undercount scenarios, correct?
A. Correct.
Q. Dr. Reamer, the state of Delaware appears on this table, correct? I think it's fourth from the bottom.
A. Yes.
Q. If I'm reading this correctly, all of the numbers in that row for Delaware are positive, which means that under your calculations, Delaware would actually receive more money in WIC funding as a result of all seven of these differential undercount scenarios, correct?
A. Yes.
Q. And looking one line above Delaware is Rhode Island, correct?
A. Yes.
Q. And all of those numbers in the Rhode Island row are also positive, correct?
A. Yes.
Q. So under your calculations, Rhode Island would also receive more money in WIC funding as a result of all seven of these differential undercount scenarios, correct?
A. Yes.
Q. And one line above Rhode Island is Washington State,
correct?
A. Yes.
Q. And all of the numbers in that row for Washington State are positive, correct?
A. Yes.
Q. And so under your calculations, Washington State would also receive more money in WIC funding as a result of all seven of these differential undercount scenarios, is that correct?
A. Yes.
Q. Now, looking three lines above Washington is the District of Columbia, correct?
A. Yes.
Q. And all of the numbers in that row for the District of Columbia are also positive, correct?
A. Yes.
Q. So under your calculations, the District of Columbia would also receive more money in WIC funding as a result of any of these seven differential undercount scenarios, correct?
A. Yes.
Q. And so just to confirm what I think you said earlier, you testified that if a state does not appear on this table, that means it sees an increase in WIC funding as a result of all seven of these differential undercount scenarios, correct?
A. Yes.

MR. TOMLINSON: OK. We can take that down.
Q. Dr. Reamer, next I'm going to pull up a table from page 17 of the declaration.

THE COURT: Before you do that, can you explain, then, why the states that Mr. Tomlinson just highlighted are on this chart, since they don't reflect any loss under any of the scenarios?

THE WITNESS: Yes. Can you bring the chart back up, please.

You can see, your Honor, on the bottom line is New Mexico, which has a loss, so I sought in this chart to include every state that had, that experienced a loss under the analysis, and -- but to keep the rank order, the rank order is by the third column, noncitizens 2 percent. So I did not want to exclude states that -- from the ranking, because that would give the misimpression that New Mexico was higher on the list than, in fact, it was.

THE COURT: I'm confused, because New Mexico, in the third column, seems to have --

THE WITNESS: Right, but in the fourth column it has a loss, in the sixth column it has a loss, in the eighth and the ninth columns it has a loss. I wanted to include them.

THE COURT: The third counting the states is one column.

THE WITNESS: Yes.
THE COURT: All right.

THE WITNESS: I wanted to include New Mexico in this chart because it experienced a loss, and even those states above it, several states did not experience a loss. Given that I chose this rank order of that third column, the noncitizens column, I kept the other ones.

THE COURT: So --
THE WITNESS: But the idea was -- I'm sorry, sir.
THE COURT: Go ahead.
THE WITNESS: The idea was to show in this chart each of the states that experienced a loss.

THE COURT: So New Mexico is sort of the last state in rank order that experienced a loss?

THE WITNESS: Correct.
THE COURT: And you chose to include any state that appeared above New Mexico in that third column even if it didn't reflect a loss.

THE WITNESS: Yes, your Honor.
THE COURT: OK. Thank you.
MR. TOMLINSON: We can take that down and pull up the table from page 17.
Q. Dr. Reamer, I'm sure this also looks familiar. This table contains your calculations for the social services block grants program for the fiscal year 2016, is that correct?
A. Yes.
Q. And this is also based on these same seven undercount
scenarios provided by Dr. Warshaw, correct?
A. Yes.
Q. And is it OK if I refer to the program as SSBG for short?
A. Yes.
Q. This table also does not include calculations for every state, correct?
A. Correct.
Q. And if a state is not included here, that means that under your calculations for these seven -- withdraw that question. If a state is not included here, that means that under your calculations a state is calculated to see an increase in SSBG funding under all seven of these undercount scenarios, is that correct?
A. Yes.
Q. And state of Rhode Island also appears on this table, is that correct?
A. Yes.
Q. And again, looking across that row for Rhode Island, all of the entries for all seven of those undercount scenarios are positive, correct?
A. Correct.
Q. So that means that under your calculations, for all seven of these undercount scenarios, the state of Rhode Island is actually calculated to see an increase in SSBG funding as a result of the undercount, correct?
A. Correct.
Q. And again, just to confirm, if a state does not appear on this table, that means under your calculations that state would see an increase in SSBG funding as a result of any of those seven differential undercount scenarios, correct?

THE COURT: Sustained.
A. Yes.

THE COURT: If I say sustained, you don't say anything.

THE WITNESS: Oh, OK.
THE COURT: No worries.
THE WITNESS: I missed the objection part.
THE COURT: There was no objection. There was a
ruling, though.
THE WITNESS: OK.
MR. TOMLINSON: You can take that down.
Q. Dr. Reamer, next I'm going to ask you to take a look at the table you include on page 20 of your declaration.

THE COURT: Dr. Reamer, did you organize this in rank order of the third column --

THE WITNESS: Yes.
THE COURT: -- on each of the tables?
THE WITNESS: Yes.
BY MR. TOMLINSON:
Q. Dr. Reamer, this table contains your calculations for all
seven differential undercount scenarios for Title I grants to local education agencies, is that correct?
A. Yes.
Q. And is it OK if $I$ refer to this program as LEA grants?
A. Yes.
Q. And similar to the two tables we just talked about, this table also does not include calculations for all 50 states, does it?
A. Correct.
Q. And if a state is not included here, that means that under your calculations for all seven of these differential undercount scenarios, a state would actually see an increase in Title I LEA grants funding, correct?
A. It's possible for each of these that someone, there would be a zero somewhere, but $I$ would say it's almost -- it is almost always the case that there's an increase, yes. Q. OK. Or at least it would be technically correct to say that if a state does not appear on this table, it would not experience a decrease in Title I LEA grants funding under of these seven differential undercount scenarios, correct?
A. Correct.
Q. And again, the state of Rhode Island also appears on this chart, or table. Excuse me. And looking across this row, it's correct that all -- the figures for all seven of these differential undercount scenarios for the state of Rhode Island
are positive, correct?
A. Correct.
Q. Which means that under your calculations, the state of Rhode Island would actually see an increase under all seven of the differential undercount scenarios for LEA grants funding, correct?
A. Correct.

MR. TOMLINSON: OK. We can take that down.
Q. Dr. Reamer, I next want to move on to the table you include at the bottom of page 23 of your declaration.

Dr. Reamer, this table contains your calculations for these same seven differential undercount scenarios for traditional Medicaid funding in fiscal year 2015, is that correct?
A. Yes.
Q. And traditional Medicaid is distinguishable from Medicaid expansion, which uses a different funding formula, correct?
A. Yes.
Q. For our purposes here today, is it OK if I just say, when I say Medicaid, I'm referring to traditional Medicaid? Is that OK?
A. Yes.
Q. And this table also does not include calculations for all 50 states, correct?
A. Correct.
Q. If a state or the District of Columbia does not appear on
this table, that means that under your calculations, the state would not have lost Medicaid funding under any of these seven undercount scenarios, is that correct?
A. Correct.

MR. TOMLINSON: OK. We can take that down.
And can we pull up the table on page 27 of your declaration.
Q. Dr. Reamer, this table contains your calculations for all seven differential undercount scenarios for the children's health insurance program for fiscal year 2015, is that correct? A. Yes.
Q. Is it OK, going forward, if I just refer to this program as CHIP?
A. Yes.
Q. And similar to the other four tables we looked at, this table also does not include calculations for all 50 states, does it?
A. Correct.
Q. And if a state or the District of Columbia does not appear on this table, that means that under your calculations that state would not lose -- would not have lost CHIP funding under any of these seven differential undercount scenarios, correct? A. I want to add a nuance here. It is correct -- there are 13 states both for traditional Medicaid and for CHIP that are at the floor of the FMAP, federal medical assistance percentage,
and so they can't -- they don't lose money because they can't go any -- below that, so some states, the FMAP changes; some states it doesn't.
Q. Right. So that's distinguishable from the first three programs you talked about and there's not that same floor, but it is true that if a state is not on this chart -- on this table, excuse me, or the table for Medicaid we just looked at, it would not lose funding for those programs, is that correct?
A. Correct, under this scenario.
Q. Or under any of the seven --
A. Under any -- sorry. Under any of the seven scenarios, yes.

MR. TOMLINSON: OK. We can take that down.
Q. Dr. Reamer, I want to talk about your methodology for a second. Of the census-derived funding formulas you discuss in your testimony and your expert report, you only identified one data set that you call foundational data set, which is the urban-rural classification that relies exclusively on the decennial census numbers, is that correct?
A. Correct. Yes.
Q. And that's because, as you state in your declaration, Congress, "recognizes that the decennial members on their own are inadequate to guide the fair, equitable distribution of federal financial assistance," correct?
A. Correct.
Q. So every other federal funding formula, other than this
urban-rural classification, uses at least some information other than the decennial census, correct?
A. Yes, that's correct.
Q. And in your declaration, you identified or you state that there's about 320 federal domestic assistance programs that include census-derived data as part of their funding formulas, is that right?
A. Yes.
Q. But Dr. Reamer, you acknowledge that there are many federal benefits programs that do not use the decennial census data in any way as a basis for their distribution of funds, correct? A. Yes.
Q. In fact, in your report, you stated that as of November 2017, there were 2,249 total domestic assistance funding programs, correct?
A. Yes.
Q. To your knowledge, has that number changed significantly in the past year?
A. Not to my knowledge.
Q. And you would agree that those programs represent a significant majority of federal funding programs, correct?
A. Majority in number, not -- I would need, I would need to look at the numbers regarding -- in terms of majority of funding.
Q. Right, but in terms of the actual number of programs, the
vast majority do not use decennial census data. You would agree with that, correct?
A. Yes.

THE COURT: Mr. Tomlinson, maybe I'm missing something, but I don't see the point of these questions. The fact that there are states that may not be harmed by an undercount, the fact that there are some funding sources that don't use the census data seems to me irrelevant to the issues here. I assume that the relevance of this testimony is to show that some of the plaintiffs here actually did suffer some sort of injury. Beyond that, I don't understand the point of these questions.

MR. TOMLINSON: Yes, your Honor.
As to going through the charts, which I'm done with, that was going to standing. We do have 19 different state plaintiffs in this case, and certainly our position is that each one has the burden of establishing standing. Here, we have the plaintiffs' own expert testifying that at least some of these state plaintiffs --

THE COURT: OK. I understand the questions as to the tables, perhaps, although I'm not sure your statement as to the law there is accurate. But regardless, what's the relevance of the fact that there are federal funds that don't rely on the census?

MR. TOMLINSON: Your Honor, we're showing that what is
happening here is a very, very narrow look at five programs out of over 2,000 total federal funding programs. And this is not sort of a holistic opinion as to the total impact of the loss of federal funding as to any state; that he's looking at only a few specific programs.

THE COURT: But do you dispute that if the plaintiffs are able to prove that a state -- one of the plaintiffs, or as to any particular plaintiff -- if they can demonstrate a loss of federal funding as a result of defendants' conduct in this case, that would demonstrate injury?

MR. TOMLINSON: I don't know that we have a firm position on that, but at least I believe we would take the position that they need show some sort of net loss.

THE COURT: Net loss of federal funding total?
MR. TOMLINSON: If a loss in federal funding is offset by a gain in federal funding, I believe we would take the position that that's not an injury sufficient to form standing.

THE COURT: That seems like a remarkable position to take, but with that caveat, you may proceed. BY MR. TOMLINSON:
Q. Dr. Reamer, just to reset, we talked -- there are roughly 2,249 total domestic funding programs, correct?
A. Yes.
Q. And other than the approximately 325 that you identified that use census-derived data, those other programs don't rely
on census data in their funding, correct?
A. That's my perception, yes.
Q. And so a differential undercount would not impact funding to states under those, under any of those other programs, correct?
A. That's my perception, correct.
Q. Dr. Reamer, your calculations are based on the most recent funding amounts, correct?
A. The most recent available to me, which were FY16 and '15, depending on the program, yes.
Q. And Congress could change those funding amounts at any time, correct?
A. Yes.
Q. And your calculations are also based on using the current allocation formula for those five programs, correct?
A. The formulas that were in effect in the years that --
for -- the spending took place, yes.
Q. And Congress could also change any of those allocation formulas, correct?
A. Correct.
Q. And in fact, for one of the programs you performed calculations for, the CHIP program, Congress has changed the allocation formula several times in the last few years, haven't they?
A. They've changed it at least once that $I$ know of.
Q. Dr. Reamer, you would agree that the smaller the magnitude of the differential undercount the smaller the impact it has on the amount of federal funding states receive under the programs you analyzed, correct?
A. Yes.
Q. And Dr. Reamer, your calculations are not offering a prediction about what will happen to these programs after the 2020 decennial census, correct?
A. Correct. They are intended to be illustrations of the magnitude and the direction of changes in funding for certain states under -- if -- under certain scenarios, showing -they're really like retrojections. They're looking backwards to demonstrate what could happen going forward.
Q. I want to make sure I understand this. You are taking Professor Warshaw's seven different undercount scenarios which are -- those are projecting 2020 census outcomes, correct?
A. Yes.
Q. And then you're taking those differential outcome percentages that he calculated for the 2020 census and you're applying them to the actual number count for the 2010 census, is that right?
A. To demonstrate the impact of Professor Warshaw's scenarios on the distribution of federal funding, I'm required to use real numbers, so the work I did says let's assume that his scenarios apply to the 2010 population count, that the 2010
population count is his baseline; and let's adjust the 2010 population count on the basis of his seven different scenarios. Now let's look ahead five or six years, depending on the program, to see what the impact would have been if those scenarios, in fact, had taken place in 2010 on spending for the FMAP programs in 2015 and on the state share programs in 2016. And the idea is to demonstrate what the magnitude and the nature and the particular states that are affect -- that would be affected by a differential undercount under these scenarios in the 2020s. And you can see that there's a similar set of states that appear in -- who are losers across the various programs.
Q. OK, so you're taking the undercount scenarios from the 2020, the percentages, applying them to the full count numbers from the 2010 census?
A. Correct.
Q. And then moving forward in time, five or six years, to fiscal year 2015 or 2016, depending on the program, to calculate what would have happened if those differential undercount scenarios for 2020 occurred in 2010, correct?
A. Yes.

THE COURT: That was a yes?
THE WITNESS: Yes.
Q. And you only performed calculations as to how a differential undercount would impact how much federal funding
states received on these five specific programs, correct?
A. Yes.
Q. And all five of these programs used geographic allocation formulas?
A. Yes.
Q. And you stated in your expert report that geographic allocation formulas are particularly sensitive to fluctuations in census data, correct?
A. Yes.
Q. And you have not performed any calculations as to how a differential undercount would impact how much federal funding any city or municipal government receives, correct?
A. Correct.
Q. And you have not performed any calculations as to how a differential undercount would impact how much federal funding that any county government receives, correct?
A. Correct.
Q. And none of those five programs that you performed calculations for provide funding directly to any nonprofit organization, do they?
A. Not directly. The WIC program -- the states get the money and they then transmit it to nonprofits. And also for SSBG.
Q. Dr. Reamer, you're not offering a calculation or estimate as to the overall gain or loss in federal funding for any particular state, are you?
A. No.

MR. TOMLINSON: No further questions.
THE COURT: Redirect.

REDIRECT EXAMINATION
BY MR. ROSBOROUGH:
Q. Dr. Reamer, do you recall in your questioning on cross-examination there were some questions that went to programs that were described as FMAP programs?
A. Yes.
Q. What is FMAP?
A. FMAP stands for federal medical assistance percentage.

The -- for Medicaid and for five other federal programs, it is the -- it calculates the reimbursement rate that states will be reimbursed by the federal government for each dollar that they spend. In some cases, it determines how much money a state needs to pay back to the federal government. Q. And -- sorry. Continue.
A. The calculation is produced each year by the Department of Health and Human Services. It is calculated based on a formula that's provided by Congress. The key variable in the formula is per capita income, which is produced by the U.S. Bureau of Economic Analysis, and is a ratio of personal income, also calculated by bureau of economic analysis, with -- divided by population, which is the census number from the population estimates program.
Q. And of the five programs which you performed calculations about, are any of those programs FMAP programs?
A. The -- two. The traditional Medicaid program and the children's health insurance program, CHIP.
Q. And do you recall questions as to those two programs about whether states that were not shown would not lose money under your scenarios?
A. Yes.
Q. And do you recall an answer you gave about certain states that would not lose but would also not gain any money under those scenarios?
A. Yes.
Q. What states fall into those buckets for the CHIP and Medicaid programs?
A. Under the scenarios that I calculated, there are -Florida, Texas, Nevada and Hawaii consistently lose money across the scenarios for the two FMAP programs. And then they -- New Mexico and Arizona lose in some instances. Q. And are there states that neither lose nor gain money under the scenarios?
A. There are 13 states. The way the FMAP works is that -- I described the formula. Congress also says that there's a floor to the formula of 50 , that a state cannot fall below 50 cents on the dollar in terms of reimbursement. Essentially the higher the per capita income of a state relative to the nation,
the lower the FMAP, but it cannot fall below 50.
There are 13 -- in 2015 there were 13 states that were wealthy enough in terms of per capita income -- states like New York and California, and Connecticut -- to be at the floor. So even if, even if the FMAP calculation for them fell, they can't go below 50, so they would not lose.
Q. And what are those states?
A. The -- I don't remember all -- so, New York, California, Maryland, New Jersey, Connecticut. I'm not remembering the others.
Q. That's fine.

Switching gears a little bit, do you recall questions from defense counsel about how you -- strike that.

Do you recall questions from defense counsel about whether there are particular data sets that rely directly on decennial census results?
A. Yes.

MR. ROSBOROUGH: Could you please put up PX 330, please.
Q. Dr. Reamer, do you see on this chart, 330 -- first of all, what does this chart represent?
A. This chart represents a schematic of 32 data sets that are derived, directly or indirectly, from the decennial census, organized by the flow of how one is transformed into another. Q. And you were asked a question -- were you asked a question
about the geographic classifications during your cross-examination?
A. Yes.
Q. And looking over to the right side of that chart, what are the population estimates?
A. The population estimates are the annual data set produced by the Census Bureau that takes the numbers collected in the decennial census and updates them annually based on administrative records, to a large extent -- births, deaths, add births, subtract deaths -- and then the Census Bureau makes estimates for net domestic migration and net international migration.
Q. And to what extent, if any, do the population estimates rely on the decennial census results?
A. Very much so. The basis for the population estimates is the decennial census, and then the administrative data and other data sources are -- augment that count each year, to keep it up, to keep the population estimate up to date.

MR. ROSBOROUGH: Actually, could we pull up PX 329, please.
Q. Dr. Reamer, what does this chart represent?
A. The chart represents federal funding programs that rely on census-derived data to -- for use in an allocation formula that -- of two kinds. One is, the first group of programs that use the FMAP, I mentioned there are six programs that rely on
the FMAP. And the second set of programs relies on census data for an allocation formula, where the money's allocated to states or cities, depending on who the recipient is, on the basis of some aspect of shared population. It could be the state's -- I'm sorry, share of population. It could be the state's share of the national population. It could be the state's share of poor children, the national total, the state's share of the national total of poor children.

But everything below the top third of the chart relies on census-derived data to allocate money on the basis of state or local share of population.
Q. And is there a second page to that chart as well?
A. Yes.
Q. OK. And are any of these programs' funding determined, in whole or in part, by population estimates, data sets that you just mentioned?
A. They all are, either directly or indirectly. They will either take the data from population estimates -- many of them rely on the American Community Survey, which is the current incarnation of what was once called the long form. And the population estimates are the controls for the American Community Survey.

American Community Survey is set up to do a, a continuous survey of a small sample of the population to calculate the distribution of characteristics, like the percentage of people
that have a bachelor's degree or the percentage of people in poverty or the percentage of people that work in manufacturing. Then those percentages are matched up with the population controls, which are based on population estimates, to actually get estimates of how many people in New York City have a bachelor's degree or how many people work in manufacturing. Q. OK. And quickly, you mentioned the American Community Survey. How does that, if at all, rely on the decennial census?
A. In two ways; the first I just mentioned, which is it uses population estimates which are derived from decennial census as controls. And then in terms of the actual design and implementation of the American Community Survey, the decennial census provides the foundation for -- the universe, the sampling frame in which the sample is chosen provides information needed for designing these American Community Survey samples, in terms of stratification, to make sure each segment of the population is appropriately represented in the sample. It's used to determine the weights to give to each response to the American Community Survey. If a survey comes back, the Census Bureau has to figure out, OK, what proportion of the population does this sample, this response represent? And it's also used to calculate variance -- to help calculate variance. And very importantly, for imputation, that if someone does not fill out American Community Survey and refuses
to talk to the Census Bureau field agent, that the -- and the Census Bureau will impute; they will make a guess based on information that it has particularly from the decennial census to impute.
Q. Thank you.

Switching gears again, do you recall questions from defense counsel about how you performed your calculations in regards to what year's funding and what year's population you were looking at?
A. Yes.
Q. And did you reference performing calculations as if they applied in the year 2010?
A. Yes.
Q. And then can you explain how you then -- how did those opinions -- I'm sorry.

How do those calculations relate to your opinions about the effect of a differential undercount in the 2020s?
A. The -- as I said in my declaration, the core of my opinion is that a differential undercount caused by the introduction of the citizenship question would lead to differential impacts on federal funding to -- particularly for programs that rely on FMAP and rely on state share or local share of national population. So to -- the choice -- using 2010 and choosing five programs was to demonstrate the principle, because those data are available. The 2020 data and the funding in 2026 are
not available, so the idea is to demonstrate what would have happened if those scenarios took place in 2010, with the understanding that -- the idea is to show a differential undercount, the impact of the differential undercount on particular states, and that the implication is that if there's a differential undercount in 2020, that similar kinds of impacts would happen in that decade.
Q. And do you recall defense counsel asking you specific questions about states' gains or loss under five programs for which you performed calculations?
A. Yes.

MR. ROSBOROUGH: Could you pull up PX 329, please. Q. Dr. Reamer, is your overall opinion limited to the five programs for which you performed this calculation?
A. No.
Q. What other programs does it address, if any?
A. The ones in these charts, the five programs that $I$ chose to do the calculations for, are representative of this group of programs, and this group of programs is actually representative of an even larger group in that 320 that was mentioned earlier. These are larger programs. All but one are over a billion dollars a year. There are many smaller programs that rely on state share, or share of population to determine the allocation of federal money.
Q. Thank you.

And what is your overall opinion in this case?
A. That programs on this list, if there were a differential undercount caused by the introduction of a citizenship question in the 2020 census, that because different states have different proportions of populations that would not respond to the citizenship question under the scenarios provided by Professor Warshaw, that the five programs I did the analysis for, these programs and other programs not on this list would all be affected similarly -- or the distribution of funding to states would be affected similarly, the same set of states.

There was a consistent set of states that were harmed across the five programs that I analyzed, and I would expect to see the same states appear if I did analyses with these other 19 programs and ones not on this list.
Q. Thank you.

MR. ROSBOROUGH: No further questions from me, your
Honor.
THE COURT: Any recross?
MR. TOMLINSON: Very briefly, your Honor.
RECROSS-EXAMINATION
BY MR. TOMLINSON:
Q. Dr. Reamer, plaintiffs' counsel just pulled up Exhibit 329, which is the spreadsheet you created of the funding formulas. Do you remember that?
A. Yes.
Q. You have not performed any calculations on any of the programs identified in that spreadsheet other than the five we talked about earlier, correct?
A. Correct.
Q. And I believe you stated earlier that you would expect similar results as to what you have in your calculations if there was a differential undercount in 2020. Is that correct?
A. Can you explain the question further? I'm not understanding it.
Q. Well, let me ask it this way. You are not offering a prediction as to what will happen after the 2020 decennial census, correct?
A. My opinion is that if there is a differential undercount in the 2020 census due to the introduction of citizenship question in which different states are affected differently, that there will be an impact on the distribution of federal funding either based on FMAP or based on the share of population that will cause some states to lose money in the 2020 s.
Q. But your actual calculations were only about what would have happened if these undercount scenarios had happened in 2010, correct?
A. Yes, and to demonstrate what could happen in the 2020 s. MR. TOMLINSON: No further questions. THE COURT: All right. I assume we can let Dr. Reamer go.

MR. ROSBOROUGH: Yes, your Honor.
THE COURT: All right. He's already going. You're free to go, Dr. Reamer. Thank you.
(Witness excused)
THE COURT: I am sensing we're going to have a short trial day today.

Next witness.
Does somebody want to call the next witness?
MS. BRANNON: Yes, your Honor. The plaintiffs call
Dr. William O'Hare.
Your Honor, may I approach?
THE COURT: Not just yet.
WILLIAM P. O'HARE,
called as a witness by the plaintiffs,
having been duly sworn, testified as follows:
THE COURT: Now you may approach.
DIRECT EXAMINATION
BY MS. BRANNON:
Q. Dr. O'Hare, what have I just handed you?
A. It's the corrected affidavit of Dr. William P. O'Hare.
Q. Are there any differences between that affidavit and the affidavit that you previously provided in this case?
A. There are a few changes, yes, you're correct.
Q. Can you turn to page 20 and figure 1.6?
A. Yes.
Q. Is that figure different than the figure that was provided in your original affidavit in this case?
A. Yes, it is different.
Q. Is the figure in the corrected affidavit the correct figure?
A. Yes, it is.
Q. Is the figure in the corrected affidavit the same as the figure that was provided in your expert report produced earlier in this case?
A. Yes, it is.
Q. Then can you turn to page 22, and figure 1.7. Was this figure 1.7 in the original affidavit that you provided in this case?
A. This figure was not in the affidavit.
Q. Is that figure 1.7 in the corrected affidavit the correct figure?
A. Yes, it is.
Q. Is that figure 1.7 in the corrected affidavit the same as the figure that was provided in your expert report in this case earlier?
A. Yes, it is.
Q. Are there any other changes to that corrected affidavit from the original affidavit that you provided earlier in this case?
A. I don't believe so, but could I have one minute to look
through it?
Q. Of course.
A. It appears to be complete, yes.
Q. Is that a true and accurate statement of your opinions in this case?
A. Yes, it is.

MS. BRANNON: Plaintiffs would move Dr. O'Hare's corrected affidavit into evidence in this case as his direct testimony.

THE COURT: All right. Defendants had previously pressed objections to portions of paragraphs 9 and 13. Are you standing by those? Any other objections?

MS. FEDERIGHI: Yes, we stand by the objections to paragraphs 9 and 13.

THE COURT: All right.
MS. BRANNON: Your Honor, we dispute those objections. We feel like the testimony in both paragraph 9 and paragraph 13 are, in fact, previously disclosed opinions of Dr. O'Hare.

THE COURT: And can you point me to support for that.
MS. BRANNON: Sure. In terms of his opinion provided in paragraph 9, if you can turn to his expert report in this case --

$$
\text { If we can call up plaintiffs' } 320 \text {, and turn to page }
$$

31. 

If you'll read the highlighted, underlined portion on
page 31 that says, "Nonresponse follow-up has not worked to perfection in the past, and there is no reason to believe that it will solve the issues identified in this report."

And if you turn back to page 30 and look to the entire second paragraph, where Dr. O'Hare is opining about the flaws with the assumption that NRFU operations are going to correct the problem.

And then if we go to the first paragraph under the conclusion, where Dr. O'Hare is opining that the preponderance of the evidence from 2010, 2000 and 1990 census show that a lower nonresponse rate will lead to higher net undercounts and omission rates.

I believe the combination of all of those different statements articulate the same opinion that is articulated in paragraph 9 of Dr. O'Hare's corrected declaration and affidavit in this case.

THE COURT: All right. I agree, so that objection is overruled.

Paragraph 13.
MS. BRANNON: For paragraph 13, your Honor, the opinion about the impact that Internet self-response might or might not have on the self-response rate was not articulated in Dr. O'Hare's report, but it was discussed at his deposition in this case. And unfortunately, I discovered yesterday that the deposition that was produced by the court reporter in this case
Ib7Wnys1
O'Hare - Direct
for Dr. O'Hare does not have page numbers on it, so I think the only way to refer the Court to the correct discussion is to provide hard copies of the relevant pages. I have a copy for the Court and for defense counsel, or I can just read into the record.

What does the Court prefer?
THE COURT: I have a text-searchable version of it, so that might do the trick.

MS. BRANNON: If you want to look for the word
"Internet," and I think it's approximately page 62 of the PDF copy.

THE COURT: It's not approximately; it is page 62.
MS. BRANNON: OK. Your Honor, can I give defense counsel the copy that I have, because she may not have text searchable?

MS. FEDERIGHI: Actually, the copy I have does have page numbers, so I'm able to find it. It might be possible for my tech person to pull it up, page 62 of the deposition.

THE COURT: I have it, which is, I think, the most important thing.

MS. FEDERIGHI: OK.
THE COURT: And the record is made that it's on page 62.

MS. BRANNON: Yes.
(Continued on next page)

MS. BRANNON: At line 12 at page 62, Dr. O'Hare testified that, I think it would be based on my analysis, I think -- I don't think it would be based on -- my analysis focuses on -- because my analysis focuses on a broader concept of self-response and the Internet is just one more component of the ways that people can self-respond. Some groups respond at higher rates and some groups respond at lower rates. Self-response to -- so the self-response concept would not change.

Then if your Honor would turn to the next page and read starting at line five.

They could, but apparently when you put the other option there, it discharges them from responding by paper. Groups that had a lower self-response in the 2013 to the groups that had lower self-response in 2013 to the ACS compared to 2012 were largely those from lower income and lower socioeconomic status. So it seems to hurt people who were most likely to be missed in the census already.

Those two statements together, I think, are consistent with the opinion articulated in paragraph 13 of Dr. O'Hare's expert affidavit, in this case that Internet and telephone response rates will not affect the effective in approving self-response as compared to last censuses.

THE COURT: Let me ask Dr. O'Hare a question with respect to the first portion of the sentence at issue.

The statement in your affidavit is that the Census Bureau has estimated that the self-response rate in the 2020 census will be lower than the self-response rate in previous censuses.

What is the basis of that testimony?
THE WITNESS: The presentation by the Census Bureau recently over the last year, that they expect about a 60 percent self-response rate in the 2020 census, and it was higher in 2010.

THE COURT: I am going to sustain the objection with respect to the latter portion of the sentence beginning "suggesting that" and overrule the objection with respect to the first portion.

With that, we will proceed.
I'm sorry, any exhibits to be offered?
MS. BRANNON: Yes, your Honor. There are actually quite a few.

I believe there are a number of them that we have agreement on. Can I run through those and admit them, and defense counsel can correct me if I'm incorrect?

THE COURT: Sure. If you would do so slowly, but yes. MS. FEDERIGHI: If these are the same ones in the e-mail I received last night, we have no objection to any of them.

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MS. BRANNON: So none of the exhibits?
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MS. FEDERIGHI: Both categories.
MS. BRANNON: Then, your Honor, I'll just go through each one and move them into evidence.

THE COURT: Great.

MS . BRANNON: OK.

THE COURT: Do it slowly so the court reporter can keep up, please.

MS. BRANNON: Sure.
Plaintiffs offer into evidence PX 342. Plaintiffs offer into evidence PX 43 -- let me correct that.

THE COURT: Lets start that over.

Plaintiffs' Exhibit 342 .
MS. BRANNON: Plaintiffs' Exhibit 343 .

THE COURT: Lets start that again.
MS . BRANNON: OK.

THE COURT: 342 and 343.

MS. BRANNON: Yes. Sorry.

PX 345, PX 349, PX 351, PX 338, PX 341, PX 346, PX 348, PX 350, PX 352.

THE COURT: All right. I think at least one of those is already in evidence, but regardless, they are admitted without objection.

MS. BRANNON: Thank you, your Honor.

THE COURT: Cross-examination.

CROSS-EXAMINATION

## IB7sNYS2

O'Hare - Cross

BY MS. FEDERIGHI:
Q. Good morning, Dr. O'Hare. Thank you for coming here today.
A. Good morning.
Q. Now, the opinion you're offering in this case is that the Census Bureau's expected decrease of at least 5.1 percentage points in the self-response rates for households with at least one noncitizen because of the citizenship question will increase the net undercount and omission rates for people living in those households.

Is that your opinion in this case?
A. Yes, that's correct.

THE COURT: Dr. O'Hare, if you can just move the microphone or yourself to be a couple inches away from the microphone, that is sort of the best practice.

Counsel, you may proceed.
MS. FEDERIGHI: Thank you.
Q. First, I want to just agree on some terminology here.

When I talk about self-response, you understand that to mean the process by which a respondent provides his or her household information without a visit by an enumerator, such as by mail, or as will be able to do in 2020 , over the phone or by Internet, correct?
A. I'm sorry. Was there a question I missed?
Q. Yes.
A. Can you state it again?
Q. Is that the definition of self-response that you understand?
A. Self-response that I use were people sending back their mail questionnaire.
Q. And would you agree, in 2020, they will be able to respond by phone or by Internet as well?
A. I would agree that is an option in 2020.
Q. Omissions are people who were missed in the census, those who should have been enumerated but were not.

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Is that the definition you've been using?
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A. Yes.
Q. OK. You define undercount as the difference between those admitted and erroneous enumerations -- and the total of erroneous enumerations and imputations, correct?
A. I believe the term I would use is net undercount, which is the balance between omissions on the one hand and whole person imputations and erroneous enumerations on the other.
Q. Thank you.

That is a number that is calculated by the Census
Bureau, is that correct?
A. That's correct.
Q. Now, I'll be talking about your corrected trial affidavit, and I just want to recap your submissions in this case. You provided your report on October 1, 2018, correct?
A. That sounds about right, yes.
Q. And you submitted an errata to this report on October 8, 2018, correct?
A. I don't remember the dates, but $I$ know there was an errata.
Q. Then you submitted your trial affidavit, the original one, on October 26, 2018, correct?
A. That sounds correct.
Q. And then just last night, November 6, you submitted a corrected trial affidavit, correct?
A. That's correct.
Q. And we went over those direct, that the corrected affidavit replaces two of the figures in your original affidavit, figures 1.6 and 1.7 , correct?
A. That's correct.
Q. So I would like to look at the figures you changed in your affidavit.

If I could see figure 1.6 from both -- from page 20
from both reports, please. Thank you.
So those tables are quite different, aren't they?
A. They are not tables, first of all. They are called figures.

They are not that different. If you look at the trend line, it is very similar.
Q. Right.

But if you look at the axis, for example, the dots -well, they are different configuration for the dots and they
are quite shifted. The axis, these are more in the 75 to 85 range and the other table was in the 65 to 70 range, correct?

THE COURT: Sustained as to form.
A. The question? I'm sorry.
Q. Yes.

Those tables are quite different, correct?
A. They are somewhat different. Well, they are figures, not tables. They are somewhat different.
Q. For example, the axis on the original table, the dots are clustered around the 60 to 70 range, correct?
A. That is correct.
Q. And in the corrected table, the dots are more scattered or clustered around the 75 to 85 range, correct?
A. That's correct.
Q. OK. Now, can I see page 22 of the two affidavits with the table side by side. These tables, well, you actually just repeated figure 1.6 in your original affidavit. That's, of course, quite different from figure 1.7 that's in your corrected affidavit, correct?
A. The two figures I have, 1.6 and 1.7 , are quite different.
Q. In fact, in 1.7 you just have six dots, and figure 1.6 has enough dots for all the states, correct?
A. Actually, there is seven points in figure 1.7 and probably

51 in 1,6 because they were all the states and the District of

Columbia.
Q. Thanks for correcting me about there are seven in 1.7. That's correct.

Now, can I see Exhibit PX 334. This is the errata you submitted for your original rebuttal report.

I wanted to look at the first item there, which says that on page 12, table 1.1 , the total self-response rates, 75.8 should be 79.3 , is that correct?
A. That's what it says, yes.
Q. Now, can I use on page -- look at page 12 of your corrected affidavit.

The total, the line for the total there is -- you still have the 75.8 number in that table, correct?
A. Yes, I do.
Q. Is that the correct number?
A. I believe it should have been changed to the name that was in the errata. I think that is mistake. I meant that the total doesn't matter in calculating correlations.
Q. OK. Thank you.

Now, lets look at page 14 of your corrected affidavit and the table on that page.

I'm sorry, did I do the wrong order?
OK. This one, the total at the bottom there, at the very bottom of the table, you have the total self-response rate at 75.8, correct?
A. That shows the total self-response is 75.8 in this table 1.3.
Q. Is that the correct number?
A. I would have to go back and check.
Q. OK. Lets look at your errata again, PX 334.

The second item there talks about table 1.2, and it says, again, the total self-response rates should be 79.3.

So is that the correct number for the table we just
looked at?
A. Could we go back to that table?
Q. Sure. Lets go back to page 14, table 1.2.
A. From which report?
Q. This is the corrected affidavit.

THE COURT: Counsel, it says table 1.3.
MS. FEDERIGHI: OK.
Q. Lets go back to the errata. The second item says on page 14, table 1.2.

Now, that referred to your original affidavit. So
lets look at the original affidavit, if we could. I realize --
THE COURT: Counsel, doesn't this refer to the expert
report?
MS. FEDERIGHI: That's correct, yes. I'm sorry. I'm confusing myself here with all the tables.
Q. Yes. Lets go back to page 12, page 14 of the original report. The errata -- well, lets move on. I think we've
covered that.
Going back to your opinion, you provided an opinion on whether the increased self-response rates correlate with increased undercount and omission rates, correct?
A. That's correct.
Q. Most specifically, you analyzed the correlation between two variables, self-response rates and either undercount rates or omission rates, correct?
A. That's correct.
Q. In table 1.9 of your report, that summarizes your results as to correlation, correct?
A. Which report are we talking about now?
Q. That's the table on page 25 of your corrected affidavit, table 1.9.
A. Table 1.9 on 25 , is that the table we're talking about?
Q. Yes.
A. OK. Excuse me.
Q. That summarizes your results as to correlation, correct?
A. Yes.
Q. Now, in your corrected affidavit, you testified that four elements must be satisfied for causation to be established, correct?
A. I said either the four key elements that social scientists look at to establish causation.
Q. Thank you.

Lets look at what you said in your corrected affidavit about causation on page 25.

THE COURT: Do we have a question?
MS. FEDERIGHI: I'm waiting for the visual, your
Honor.
THE COURT: He has it. You have it. I have it. Lets proceed.

MS. FEDERIGHI: Let me actually -- then I need to turn to the page myself.

BY MS. FEDERIGHI:
Q. In describing causation, what's required for causation typically is the causal agent referred to as the independent variable by scientists occurs prior in time to the thing that it is causing, referred to the dependent variable by scientists.

That is the first element, correct?
A. That is one element, yes.
Q. One element, another element is there an association and correlation between the causal agent and the thing being caused, correct.
A. That's the second element, yes.
Q. And the third, that the intervening mechanisms linking the independent variable and the dependent variable can be clearly specified?
A. That is another element, yes.
Q. And finally, the last one is that other potential explanations have been controlled?
A. Yes. That's another element, yes.
Q. So correlation is just one of those four elements that established causation, correct?
A. It is one of the key elements, but it is only one.
Q. In other words, correlation by itself does not establish causation, correct?
A. You're correct that correlation by itself does not establish causation, and some of the other elements have to be satisfied as $I$ have specified here.
Q. In fact, in this case, only three out of the four elements to show causation are met with regard to the variables you were looking at, correct?
A. I did not -- I was not able to satisfy the fourth element of causation that all factors are controlled, and that can only be done by a randomized controlled trial. As far as $I$ know, the Census Bureau has not done that, so it is not possible to satisfy that criteria.
Q. Thank you.

Now, in your affidavit, you also cite a statement from a Census Bureau paper by Word, by Dr. Word, stating that response rates -- this is on page 24 , paragraph 53 -- you quote that a statement from that paper that response rates in that undercount rates may be causally linked?
A. You say it is on page 24?
Q. 27, paragraph 53.
A. As you just read, what is in my affidavit says that David Word writing says response rates and that net undercount rates may be causally linked.
Q. Thank you.

You testified at your deposition that you don't know the basis for this statement, correct?
A. Well, I think David worked at the Census Bureau for 40 years. This is one of the last papers he wrote during his tenure there. I suspect it is related to his experience working at the Census Bureau for many, many years.
Q. But you don't know that for a fact, what the basis for his statement was?
A. I don't know that for a fact.
Q. In fact, didn't you testify that an undercount can have multiple causes?
A. I don't remember testifying to that.
Q. You do recall giving a deposition in this case?
A. I did give a deposition.
Q. And at the beginning of the deposition you swore to tell the truth, correct?
A. I believe I did.
Q. And you did tell the truth, correct?
A. Yes. I'm certain about that part.
Q. If I can see page 65, line six through 12 of the deposition.

So I asked: You say that the task force is convinced there is no single cause for this undercount, so there will be no single solution.

MS. BRANNON: Your Honor, I object. She is not supposed to read the deposition. She is supposed to use it to refresh the witness's memory, recollection.

THE COURT: I think she is trying to use it to impeach with an inconsistent statement, but $I$ don't think it is inconsistent.

The objection is sustained.
MS. FEDERIGHI: OK.
BY MS. FEDERIGHI:
Q. Does this refresh your recollection as to what you said in the deposition?

THE COURT: Sustained.
MS. FEDERIGHI: OK.
THE WITNESS: Am I supposed to answer?
THE COURT: No.
Lets move on, please.
Q. You don't consider yourself an expert in apportionment or allocation of house seats, correct?
A. I would not consider myself an expert in those areas.
Q. OK. I would like to go back, if it is possible, to the
errata, because $I$ think $I$ can make a more clear presentation. Exhibit 334. I'm sorry.

Both of the changes on this page were to tables where you said the total self-response rates should be -- instead of 75.8, should be 79.3, and that was the same change to two different tables, correct?
A. This errata sheet specifies the same change to two different tables, yes.
Q. OK. Now, if we can go back to the corrected affidavit, page 10.

So the total listed on here of 75.8 , is that the correct number?
A. I believe that should have been changed to 79 something, but let me just specify that the total has no impact on the correlation coefficient. There may have been a clerical error, but it had no impact on the analysis.
Q. Thank you. I appreciate that.

On page 12, that total should also be the 79.3 -- again, I am referring to the first row in the table where it says self-response rates are 75.8 -- is that correct?
A. Could I go back and see the errata again?
Q. Sure.

Back to 334, please.
A. They should have been changed to 79.3.

Is that your question?
Q. Yes, that's my question.
A. Correct.
Q. Thank you.

Now, in doing your analysis for this case, you didn't
quantify the exact increase in the net undercount that would be produced by a particular decrease in the self-response rate, did you?
A. I didn't qualify it to a point estimate, which is, I think, what you're asking. I did quantify it in terms of a general range, and all of the correlation coefficients suggest a statistically significant strong negative correlation, so they are all pretty highly clustered, but not entirely consistent in terms of exactly what the prediction will be.
Q. Lets go back to your trial affidavit, please, on page 26.

You said there in paragraph 41 that you did not attempt to use this analysis to produce the exact increase in net under counts and omissions for the 2020 census.

Is that what you were just explaining?
A. Just to make sure we're correct, I thought I heard you say paragraph 41.

## Did I misunderstand?

Q. I'm sorry, paragraph 51.
A. The question again? I'm sorry.
Q. You said there, I did not attempt to use this analysis to predict that exact increase in net undercounts and omissions
for the 2020 census.
Is that what you were just explaining?
A. Yes. That exact estimate is not the point. The point is there would be differential detrimental impact to some groups. Q. Thank you.

You also did not quantify the impact of any undercount on the count for particular states, correct?
A. I did not calculate a point estimate for those, yes.
Q. And you didn't quantify the effect of any decrease in self-response rates on a state's share of financial resources, did you?
A. I did not analyze or predict the consequences of an undercount on financial resources for states.
Q. OK.

MS. FEDERIGHI: Thank you. No further questions.
THE COURT: Let me ask you a couple questions before I proceed to redirect.

Let me just go in order with your affidavit.
If you look at your affidavit, your corrected
affidavit, on page four, in paragraph 11, at the end there it says that there are other census operations, like update leave and update enumerate, that are outside of either self-response or the NRFU operations.

Can you tell me what those refer to?
THE WITNESS: First of all, they are very minor
operations. For example, in Nome, Alaska, where they don't have addresses, they will go out and collect the data without sending a mailed questionnaire. That is an example of one of those operations.

THE COURT: Got you. OK.
I take it those are relatively negligible overall?
THE WITNESS: Yes.

THE COURT: Next, on page ten of your affidavit. Can you just -- well, two questions.

First, you mentioned that the correction to the total self-response rate didn't affect your conclusions, I think you testified?

THE WITNESS: That's correct.

THE COURT: Can you just explain that?
THE WITNESS: Well, the correlations that $I$ analyzed look at the difference in groups. So it looks at the difference of self-response rates for all these groups listed in the table in comparison to the differences in net undercount rates for those same groups. So the total rates don't have any impact.

THE COURT: Wouldn't it affect the relative rates, changing one of them?

THE WITNESS: No. You know, you can make any number up there you want. These are still -- the group rates would still be the same. They would be compared to each other, not
compared to the total.

THE COURT: I see.

THE WITNESS: You're looking at the relative order in each of these two different dimensions, self-response and census accuracy.

THE COURT: I see.

Then looking further down in that table, self-response rates for black alone and American Indian and Alaskan natives alone are pretty close, but the net undercount rates seem to be pretty different.

Is that a fair statement?

THE WITNESS: That's a fair statement.

THE COURT: Can you comment on that, or does that have any implications for your analysis?

THE WITNESS: The implications are that the
correlations are not perfect. If they were perfect, the correlation would be point one. So there are uncertainties within that. The fact that it is a very strong and high and live statistic correlation says those small differences are not that critical.

THE COURT: Slow down a little bit.

THE WITNESS: I'm sorry.
THE COURT: Both for my sake as well as the court reporter's.

THE WITNESS: Sorry.

THE COURT: Lets try that again.
It is not a perfect correlation?
THE WITNESS: That's right.
THE COURT: Which explained why there would be --
THE WITNESS: If whether the observation you just made, that two groups that have very similar self-response rates have somewhat different net undercount rates, and there are a variety of factors involved that might explain that. I don't know exactly what they are, but the point is there is a correlation across all groups, not just trying to explain the connection between a couple groups, and if I'm looking correctly, all groups by demographic groups and by states.

Does that help?
THE COURT: Yes.
I take it the conclusion you would draw from that is that while there may be a causal relationship between self-response and net undercount, they are presumably other causes for the ultimate count that may affect between the groups?

THE WITNESS: There probably are other factors involved. This is clearly one the most important ones, given the size of the correlations.

THE COURT: All right. Let me find, on page 19, paragraph 40, the second to last sentence says groups with low self-response rates have high net undercount rates.

Am I right that should read states because this table refers to states?

THE WITNESS: You're correct.
I used groups in a very expansive term there, both by states and demographic groups.

THE COURT: Just wanted to clarify.
THE WITNESS: Good point.
THE COURT: I think I had one more, if you would bear with me for one second.

THE WITNESS: Sure.
THE COURT: If you turn to paragraph 57, which is part of your conclusion, you testify concerning that the NRFU does not address people who are left off the census questionnaires for households that do self-respond. In other words, that the self-response is somehow incomplete and doesn't reflect every member of the household.

I didn't see that elsewhere in your affidavit, although you have a reference to a source for that in this paragraph, is that correct?

Is that something you looked at beyond what you testified to in this paragraph?

THE WITNESS: I have looked at that in other contexts that I know that people are left off, return census questionnaires, and that is a different problem than the NRFU problems.

Does that clarify that?
THE COURT: I think so.
Lets do redirect, and then obviously if defense counsel wants to pick up on any of my questions, I'll allow that as well.

MS. BRANNON: Thank you, your Honor.
REDIRECT EXAMINATION
BY MS. BRANNON:
Q. Dr. O'Hare, to speak to the court's last question about people who are left out of the census and the sources that you cite in your corrected affidavit, can you just expand a little bit more on the research that you have done and the opinions that you have about those individuals?
A. I'm not sure I understand exactly the question you're asking.
Q. So you cite in paragraph 57 -- the court just asked you about individuals who are not included, omissions in the census enumeration that are just left out. They are not involved in the NRFU operations because their households don't incorporate that, don't get incorporated into NRFU operations.

That is what you were referring to in paragraph 57, correct?
A. Just my own words, I guess what I was referring to is the fact that some people are missed because they are not included on census questionnaires that are returned. Other people are
missed because they are not captured in the NRFU operation. Both of those are errors in the NRFU operation. If it worked to perfection, it would not correct the problem of people being left off questionnaires that were returned.
Q. Then can you just expand a little bit on the first part of the statement you just provided about people who are left off census questionnaires that are returned and some of the research that you have done and your opinions about that? A. The primary area of my research in that is the undercount of the young children in the census that has the highest net undercount of any age group in the census, 2010 census and earlier ones.

We find that when you look at why young children are missed in the census, about a third of them were left off forms that were returned, and about two thirds are missed in the NRFU operation. That gives you a little quantification of the two sources of error.

THE COURT: And that data appears in the report that is cited in this paragraph, Plaintiffs' Exhibit 339?

THE WITNESS: Let me tell you where it comes from. I'm not sure if it is a report that the Census Bureau issued in January of 2017. It is authored by Scott Konicki, and I think some other coauthors. It is in the 2020 census memorandum series, and it uses a post-enumeration survey data compared to the 2010 census records to make that analysis.

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THE COURT: Counsel, could you pull up Plaintiffs' Exhibit 339, please.

Do you recognize that?
THE WITNESS: That looks to be the record, I believe, yes.

THE COURT: Any objection if I --
THE WITNESS: I would refer you to table nine in that report, I believe.

THE COURT: Counsel, can you turn to page 19?
THE WITNESS: Nine. Table nine, I'm sorry.
THE COURT: I think it is on page 19.
Well, first, any objection to this being admitted into evidence?

It is a government report.
MS. FEDERIGHI: I think it is already been admitted, your Honor.

MS. BRANNON: Your Honor, I think it was on the list
from this morning, or it was --
THE COURT: It was not among those that you --
MS. BRANNON: It was not on the list from this
morning?
MS. FEDERIGHI: We have no objection. I thought it
was on the list. No objection.
THE COURT: All right.
MS. BRANNON: It may have been. I thought it was
admitted.

We move for admission of 339.

THE COURT: All right. It is admitted without objection.
(Plaintiffs' Exhibit 339 received in evidence)

I did not have it on that list, so in the checking of what exhibits should be in, you should make sure you triple check.

THE WITNESS: Are you referring to the second column in that table that shows first one percent of young children who are missed were in self-response and the remainder in some form of $N R F U$, and is very similar are to the in-movers and non-movers. They are very similar results.

Later in that report, they translate those numbers into non-match rates or missed rates and the difference between self-response and NRFU is even higher. The point is, young children and presumably lots of others are missed in both of those census operations.

THE COURT: And that is based on the post-enumeration survey against which the Census Bureau measures the accuracy of the census?

THE WITNESS: Yes, it is.
THE COURT: All right. Have you done additional
research in connection with that testimony about people being left off the self-response, or is this the basis for that
testimony?
THE WITNESS: This is the main basis. I have to think through. I think there may be other research that I have seen. This, I think, is the most on-point research.

THE COURT: All right. Thank you.
Ms. Brannon.
MS. BRANNON: Yes.
BY MS. BRANNON:
Q. Can we see page ten of Dr. O'Hare's corrected affidavit.

Dr. O'Hare, at the top of that, defense counsel was asking you about the total, the 7.58 that you testified should have been corrected.

Can you turn to figure 1.1, which is on page 11 of Dr. O'Hare's expert -- I mean affidavit submitted in this case. Is that total point on this graph?
A. It is not.
Q. Why not?
A. As I have stated a couple times earlier, the total is not used in calculating the correlation coefficient, so there is no point in putting it on the graph.
Q. Why isn't the total used in calculating the correlation coefficient?
A. The correlation exactly looking at relationships between two different variables, and in this case, self-response and census accuracy. So the total amount, total, did the total for
all -- the total population -- I'm sorry -- doesn't really impact the differences across groups.
Q. Then can we see again table 1.9.

Defense counsel asked you about this, correct?
A. Yes.
Q. Is this a summary of the coalition coefficients that formed the basis of your opinion in this case?
A. Yes, it is. It is a summary of all the different eight correlations that I did. I thought it would be useful to put them all in one place to not have to remember all of them, and this shows that the preponderance of the evidence, seven out of the eight, analyses I did shows a strong negative statistically significant correlation between self-response rates and census accuracy. And the only one that doesn't show that, I think there was a methodological reason why you wouldn't expect to find it in that dataset.
Q. And how much confidence do you have in the correlation coefficients shown on this chart?
A. I'm extremely confident about each of the correlation coefficients. I'm even more confident about the overall pattern that this shows. I, frankly, was a little bit surprised at how strong this relationship came through in all these datasets.

MS. BRANNON: Thank you, your Honor. I have no further questions.

THE COURT: Any recross?
MS. FEDERIGHI: No, your Honor.
THE COURT: All right. Dr. O'Hare, you may step down. (Witness excused)

THE WITNESS: What am I supposed to do with this?
THE COURT: You can leave it there and counsel will come retrieve it shortly.

All right. Is that it for the day?
MR. COANGELO: Yes, your Honor.
Unfortunately, we have not been able to rearrange the schedule to bring another witness live today. We do expect to have full trial days, obviously, pending the duration of any cross-examination. We're still planning to call Dr. Barreto and Mr. Thompson on Friday, and on Tuesday we'll have Professor Warshaw, Dr. Handley, and Dr. Abowd.

THE COURT: That's it for your witnesses, is that correct?

MR. COANGELO: Yes, your Honor, in terms of our case in chief.

THE COURT: All right. When you say that, do you anticipate some sort of rebuttal case, given that Dr. Abowd is the only witness they are calling?

MR. COANGELO: It is possible we may have a rebuttal case, but we need to see Dr. Abowd's testimony.

THE COURT: All right. We can, I suppose, take it a

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step at a time.
Is there anything else that we can do with our unexpected time today, aside from you guys can work on your briefing?

I see that you have briefing not only for this court, but for a higher court as well to take care of.

MR. COANGELO: Nothing else for the plaintiffs right now, your Honor.

MS. FEDERIGHI: Nothing for defendants either.
THE COURT: All right. You have almost a full day today and you do have a full day tomorrow, since we won't be sitting. I would use it wisely and well.

I will see you on Friday morning. Thank you.
(Adjourned to November 9, 2018, at 9:00 a.m.)

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