IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF FLORIDA
WEST PALM BEACH DIVISION

CASE NO. 9:25-CV-80526-DMM

GOOD SAMARITAN MEDICAL CENTER, INC., et al.,

Plaintiffs,

v.

THE LEAPFROG GROUP,

Defendant.

LEAPFROG'S REVISED DEPOSITION DESIGNATIONS

The Leapfrog Group, by and through their undersigned counsel, hereby submit the following updated written deposition designations and objections.

1. Table 1: Leapfrog's Revised Designations, Plaintiffs' Counter-designations, Leapfrog's objections to Plaintiffs' Counter-designations, Leapfrog's Reply-designations, and Plaintiffs' objections to Leapfrog's Reply-designations of Matt Austin as played on January 22, 2026, during the trial in this matter.

Leapfrog reserves the right to us all designated testimony, either designed affirmatively or by the Plaintiff Hospitals, in any post-trial submissions. Leapfrog's affirmative designations are highlighted in yellow, Plaintiff's counter-designations are highlighted in blue, and Leapfrog's reply-designations are highlighted in pink.

Key to Objections	
AA	Asked & Answered/Duplicative
C	Compound
CU	Cumulative
H	Hearsay
IH	Improper Hypothetical
L	Leading
LF or F	Lacks Foundation
M	Mischaracterizes Testimony
MD	Mischaracterizes Document
N	Non-Responsive
O	Inadmissible Opinion or Conclusion
PK	No Personal Knowledge/Lacks foundation
R	Relevance
S	Calls for Speculation
T	Time Wasting
UP	Unfair Prejudice
V	Vague & Ambiguous

Table 1: Leapfrog's Deposition Designations of Matt Austin - 9/25/2025								
Leapfrog's Affirmative Designations		**Objections to Leapfrog's Designations**	**Plaintiffs' Counter-Designations**		**Objections to Plaintiffs' Counter-Designations**	**Leapfrog's Reply Designations**		**Objections to Reply Designations**
From: Page:Line	**To: Page:Line**		**From: Page:Line**	**To: Page:Line**		**From: Page:Line**	**To: Page:Line**	
39:9	40:7	No Objection						
52:12	53:10	No Objection						
60:5	60:21	No Objection						
61:2	63:4							
64:15	65:10	No objection.						
74:2	74:6	No Objection						
81:10	83:16	No Objection						
85:4	85:21	No Objection						
93:21	95:7	No Objection						
96:5	97:12	No Objection						
101:20	102:13							
105:7	107:10	No Objection						
108:10	110:7	No Objection						
110:18	111:21	No Objection						
112:11	114:13	Clarification. Propose cutting non-substantive discussion at 113:1316 for time						
115:6	121:5	No Objection						
125:5	127:12	No Objection						

Table 1: Leapfrog's Deposition Designations of Matt Austin - 9/25/2025								
Leapfrog's Affirmative Designations		**Objections to Leapfrog's Designations**	**Plaintiffs' Counter-Designations**		**Objections to Plaintiffs' Counter-Designations**	**Leapfrog's Reply Designations**		**Objections to Reply Designations**
From: Page:Line	**To: Page:Line**		**From: Page:Line**	**To: Page:Line**		**From: Page:Line**	**To: Page:Line**	
159:7	159:12	No Objection						
176:4	176:11	No Objection	176:12	176:21	R			
177:19	178:1	No Objection						
181:3	181:20	No Objection						
192:17	193:12	No Objection						
		No Objection						
202:5	203:2		203:3	203:5	No objec-tion.			
204:18	205:4	No Objection						
208:1	209:4	Objection. Ms. Lawson's objec-tion is waived by non-appearance.						

Table 1: Leapfrog's Deposition Designations of Matt Austin - 9/25/2025								
Leapfrog's Affirmative Designations		**Objections to Leapfrog's Designations**	**Plaintiffs' Counter-Designations**		**Objections to Plaintiffs' Counter-Designations**	**Leapfrog's Reply Designations**		**Objections to Reply Designations**
From: Page:Line	**To: Page:Line**		**From: Page:Line**	**To: Page:Line**		**From: Page:Line**	**To: Page:Line**	
209:9	210:8	Clarification. Propose cutting 209:21-210:7 for timing. Objection: Ms. Lawson's objection at 209:21-210:2 is waived by non-appearance & clarification question is not proper						
212:5	212:17							
214:10	216:19	No Objection						
224:9	224:16	No Objection						
238:2	238:16	No Objection						
240:2	240:9	No Objection						
241:16	241:19	No Objection	241:9 241:20	241:15 241:21	No objection.			
243:16	245:16	Objection. Ms. Lawson's objection at 243:19-244:2 is waived by non-appearance.						

Table 1: Leapfrog's Deposition Designations of Matt Austin - 9/25/2025								
Leapfrog's Affirmative Designations		**Objections to Leapfrog's Designations**	**Plaintiffs' Counter-Designations**		**Objections to Plaintiffs' Counter-Designations**	**Leapfrog's Reply Designations**		**Objections to Reply Designations**
From: Page:Line	**To: Page:Line**		**From: Page:Line**	**To: Page:Line**		**From: Page:Line**	**To: Page:Line**	
247:3	247:14	No Objection	248:5	248:7	No objection.			
248:8	249:9	No Objection						
250:10	250:16	Objection. Incomplete designation / no question designated.	249:10	250:9	No objection.			
			250:17	250:20	No objection.			
268:1	268:10	No Objection						
275:16	277:19	No Objection						
281:2	281:10	Objection. N.						
282:2	282:7	No Objection						
284:11	285:6	No Objection						
298:2	298:8	No Objection						
353:11	353:20	No Objection	352:4	352:18				
354:1	354:9	No Objection						
370:10	370:20	Objection IH, LF, AF, L, S, V						
384:14	384:21	No Objection						

Table 1: Leapfrog's Deposition Designations of Matt Austin - 9/25/2025								
Leapfrog's Affirmative Designations		**Objections to Leapfrog's Designations**	**Plaintiffs' Counter-Designations**		**Objections to Plaintiffs' Counter-Designations**	**Leapfrog's Reply Designations**		**Objections to Reply Designations**
From: Page:Line	**To: Page:Line**		**From: Page:Line**	**To: Page:Line**		**From: Page:Line**	**To: Page:Line**	
388:3	389:8	Objection. N, V.						
390:6	390:21	Objection V, S.						
392:9	392:19	No Objection						

Respectfully submitted,

Wilson Elser Moskowitz Edelman & Dicker LLP
/s/ Jura C. Zibas
Jura C. Zibas, Esq.
Florida Bar No. 124571
2063 Main Street, Suite 100
Sarasota, Florida 34237
(941) 866-8561 (Main)
(212) 915-5756 (Direct)
jura.zibas@wilsonelser.com

Kimberly E. Blair, Esq.
Illinois Bar ID # 6272934
Courtney L. Wood, Esq.
Illinois Bar ID #6344385
161 N. Clark, Ste. 4500
Chicago, IL 60601
312.821.6139 (Direct)
312.704.0550 (Main)
(312) 259-6414 (Cell)
kimberly.blair@wilsonelser.com
courtney.wood@wilsonelser.com

Attorneys for Defendant, The Leapfrog Group

CERTIFICATE OF SERVICE

I hereby certify that on February 2, 2026, a true and correct copy of the foregoing was served on all counsel or parties of record via the ECF filing system.

By: /s/ *Jura C. Zibas*
JURA C. ZIBAS

EXHIBIT A

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF FLORIDA
WEST PALM BEACH DIVISION

GOOD SAMARITAN MEDICAL CENTER, et al.,	)	
Plaintiffs,	)	CASE NO.
v.	)	9:25-CV-80526-DMM
THE LEAPFROG GROUP,	)	
Defendant.	)	

The in-person, video-recorded deposition of Matthew Austin, taken pursuant to Federal Rule of Civil Procedure 45 and Southern District of Florida Local Rule 26.1, at the offices of Zuckerman Spaeder, LLP, 100 E. Pratt Street, Suite 2440, Baltimore, Maryland 21202, by Plaintiffs in the above-referenced action, beginning at 9:09 a.m. The deposition was taken before Marlene Kerr, a Certified Shorthand Reporter, Registered Professional Reporter, Registered Merit Reporter, Certified Realtime Reporter, Federal Certified Realtime Reporter, Notary Public.

Job No. 7616361

A P P E A R A N C E S:

Attorneys Representing Plaintiffs:

GIBSON, DUNN & CRUTCHER, LLP
BY: LEE R. CRAIN, ESQUIRE
BY: IASON TOGIAS, ESQUIRE
200 Park Avenue
New York, New York 10166-0193
212.351.2454
lcrain@gibsondunn.com
itogias@gibsondunn.com

Attorney Representing Deponent Dr. Matthew Austin and The Armstrong Institute:

ZUCKERMAN SPAEDER
BY: SARA LAWSON, ESQUIRE
100 EAST PRATT STREET, SUITE 2440
BALTIMORE, MARYLAND 21202
410.949.1181
slawson@zuckerman.com

A P P E A R A N C E S (continued):

Attorneys Representing Defendant:

WILSON ELSER
BY: COURTNEY L. WOOD, ESQUIRE
161 North Clark Street, Suite 4500
Chicago, Illinois 60601
312.821.6139
courtney.wood@wilsonelser.com

ALSO PRESENT:

CURTIS ROGINSKI - Videographer

INDEX OF EXAMINATION
WITNESS: MATTHEW AUSTIN
Good Samaritan, et al., The Leapfrog Group
Thursday, September 25, 2025

EXAMINATION	PAGE
By Mr. Crain	11
By Ms. Wood	362
By Mr. Crain	397
Certificate of Reporter	417
Certificate of Deponent	418
Errata	419

INDEX OF EXHIBITS
WITNESS: MATTHEW AUSTIN
Good Samaritan, et al., The Leapfrog Group
Thursday, September 25, 2025

EXHIBIT NUMBER	DESCRIPTION	PAGE
Exhibit 1	Email from Ms. Binder	20
Exhibit 2	from Mr. Austin to Ms. Danforth dated May 1	23
Exhibit 3	Document that outlines Grading methodology	29
Exhibit 4	Email from Mr. Austin to Ms. Danforth, cc'ing Ms. Wood	30
Exhibit 5	Matthew Austin Linked In Profile	35
Exhibit 6	Contract b/w Johns Hopkins University and The Leapfrog Group	42
Exhibit 7	Document from the Leapfrog Safety Grade website, hospitalsafetygrades.org	71
Exhibit 8	Printout of a webpage from Leapfrog's Hospital Safety Grade website	78
Exhibit 9	Hospitalsafetygrades.org website page of Frequently asked questions	102

INDEX OF EXHIBITS (cont.)
WITNESS: MATTHEW AUSTIN
Good Samaritan, et al., The Leapfrog Group
Thursday, September 25, 2025

EXHIBIT NUMBER	DESCRIPTION	PAGE
Exhibit 10	Email thread leading up to April 12th, 2024, Expert panel meeting	113
Exhibit 11	Slide deck and meeting Invite of April 12th meeting	113
Exhibit 12	Certified transcript of Expert panel meeting	128
Exhibit 13	Meeting notes from Preeti Joshi	139
Exhibit 14	Email from Matt Austin to Matt Austin, notes from Hospital Safety Grade Expert panel meeting	160
Exhibit 15	Email from Mr. Austin to Ms. Campione, Ms. Danforth, and Ms. Joshi	163
Exhibit 16	Email between Mr. Austin and Leapfrog staff	185
Exhibit 17	Email thread between you and Ms. Joshi dated May 14.	197

INDEX OF EXHIBITS (cont.)
WITNESS: MATTHEW AUSTIN
Good Samaritan, et al., The Leapfrog Group
Thursday, September 25, 2025

EXHIBIT NUMBER	DESCRIPTION	PAGE
Exhibit 18	Email from Ms. Binder to Ms. Campione, cc'ing Mr. Austin and Ms. Danforth	205
Exhibit 19	Delray Medical Center Hospital Safety Grade page	217
Exhibit 20	Continuation of prior email with Ms. Binder's comments	230
Exhibit 21	Email from the Leapfrog Help desk to Ms. Campione	234
Exhibit 22	Comment submitted through Leapfrog's Zendesk platform	242
Exhibit 23	Notes for today's call with Dr. Romano	255
Exhibit 24	Email with Leapfrog Hand Hygiene Report Analysis June 3, 2024, attachment	272
Exhibit 25	Final updates to Leapfrog Hospital Safety Grade Methodology for Fall 2024	283
Exhibit 26	2013 prepublished ahead of Print publication from the Journal of Patient Safety	286

INDEX OF EXHIBITS (cont.)
WITNESS: MATTHEW AUSTIN
Good Samaritan, et al., The Leapfrog Group
Thursday, September 25, 2025

EXHIBIT NUMBER	DESCRIPTION	PAGE
Exhibit 27	Meeting Agenda Notes	307
Exhibit 28	August 25, 2021 email between Mr. Austin, Ms. Danforth, Mr. Card, and Emma Domico	312
Exhibit 29	Email from Mr. Austin to Ms. Campione, Ms. Danforth, and Ms. Bailey from 2025 Re: Lives Saved, Lives Lost	321
Exhibit 30	Article by Deena Kelly Costa	330
Exhibit 31	Excel Spreadsheet to Calculate lives lost Lives saved	355
Exhibit 32	Email dated June 5, 2019 from Mr. Derk to Mr. Austin	356

P R O C E E D I N G S

THE VIDEOGRAPHER: Good morning.

We are going on the record at 9:09 a.m., on September 25th, 2025. This is media unit one of the video-recorded deposition of Dr. Matthew Austin taken in the matter of Good Samaritan Medical Center, Inc., et al., v. The Leapfrog Group, the United States District Court for the Southern District of Florida, West Palm Beach Division; Case No. 9:25-CV-08526 [sic.] -DMM.

My name is Curtis Roginski, representing Veritext. I'm the videographer. The court reporter is Marlene Kerr, also with Veritext.

Will counsel please identify yourselves and state whom you represent.

MS. LAWSON: Sara Lawson from Zuckerman Spaeder on behalf of the witness, Dr. Matthew Austin, and the Armstrong Institute.

MR. CRAIN: Lee Crain from Gibson Dunn & Crutcher for Plaintiffs.

MS. WOOD: Courtney Wood, Wilson Elser, on behalf of the Defendant, The Leapfrog Group.

MR. TOGIAS: Iason Togias on behalf of Plaintiffs with Gibson Dunn & Crutcher.
THE VIDEOGRAPHER: Thank you.
Would the court reporter please swear in the witness.
THE COURT REPORTER: Sure.
Would you please raise your right hand to be sworn.
(Witness complied.)
THE COURT REPORTER: Do you promise and declare under penalty of perjury the testimony you are about to give will be the truth, the whole truth, and nothing but the truth?
THE WITNESS: Yes.
THE COURT REPORTER: Thank you.
(Witness sworn.)
MR. CRAIN: I'm sorry. Could we pause for a second?
THE COURT REPORTER: Sure.
MR. CRAIN: Do we have the realtime?
THE COURT REPORTER: You should.

MR. CRAIN: Oh, okay. We've got it there.
THE COURT REPORTER: Okay.
MR. TOGIAS: Is it on, though?
THE COURT REPORTER: It's up and running.
MR. CRAIN: Actually, can we go off for a second? I'm sorry.
(Discussion held off the record regarding the realtime feed.)
THE VIDEOGRAPHER: Off the record. The time is 9:10 a.m.
(Brief pause.)
THE VIDEOGRAPHER: This marks the beginning of media unit number two. We're going back on the record. The time is 9:12 a.m.

EXAMINATION

BY MR. CRAIN:
Q. Good morning, Dr. Austin.
A. Good morning.
Q. My name is Lee Crain. I am counsel for Plaintiffs in this action.
Could you please just state your full name

for the record.
A. Yeah, my full legal name is John Matthew Austin, but I go by Matt Austin.
Q. And have you gone by any other names besides those two?
A. No, I have not.
Q. Okay.
Have you ever been deposed before?
A. I have not.
Q. Okay.
I want to go through just some ground rules at the start so we're on the same page. A couple of key rules. You understand the court reporter is taking down what you and I say to create a written transcript?
A. Uh-huh.
Q. And you understand this deposition is being video-recorded?
A. Yes, I do.
Q. Because of Marlene and to help her out, we want to make sure that we're taking time between the questions and answers. So I'll do my best to let you

finish, and you do your best to let me finish. Fair enough?
A. Sounds good. I'll do my best.
Q. It's a little unnatural, but we'll get through it.
Answers need to be audible, so no shaking heads or nodding, that sort of thing. Fair enough?
A. Fair enough.
Q. You understand you're under oath today as if you were testifying in court?
A. Yes.
Q. Are you under any medications that would impair your ability to testify truthfully today?
A. No.
Q. Is there any other reason you can't give truthful testimony today?
A. No.
Q. Okay.
Occasionally, it will happen where I will ask a bad question. Don't hesitate to ask if you have questions, if you want me to restate the question, or if

you're confused. If you don't, I'm going to assume you understand the question, but feel free to clarify any time. Fair enough?
A. Fair enough.
Q. And then the last -- two last things. From time to time, your attorney or Ms. Wood may object. Unless they're instructing you not to answer, we're going to ask you to answer the question. Clear enough?
A. That's clear enough.
Q. And then the last thing is we can take a break any time, any time you need, any time anybody else needs. The only thing we ask is not while a question is pending. So we'll go through the question and answer and then we can take a break, if that makes sense?
A. Yeah, that makes sense.
Q. Great.
Okay. So I want to just start right at the top. Did you prepare for this deposition?
A. I did.
Q. Can you tell me what you did to prepare for the deposition?

A. I met with my attorney and a paralegal yesterday and also reviewed some documents that they had sent me.
Q. Did you only meet with counsel one time?
A. To prepare for the deposition, yes.
Q. Did you meet with counsel other times regarding this case?
A. We did have an early sort of exploratory call shortly after Sara was named as my counsel.
Q. Okay.
MS. LAWSON: And I'm just going to object, just interpose an objection just to make sure that Dr. Austin understands that you can answer with respect to sort of basic details, the who, what, where, when, why, and how of our discussions, but those discussions are protected by the attorney-client privilege. So I would just ask and instruct you not to reveal the substance of any discussions that you've had with me or any other of your counsel from Zuckerman Spaeder, like my partner Marty Himeles as well. So just to make that clear.

BY MR. CRAIN:
Q. Yes. And none of my questions are getting at that. So I do not want the substance of your communications with counsel. Fair enough?
A. Fair enough.
MR. TOGIAS: And just to flag, this is -- the Zoom link, I don't see a live feed.
MR. CRAIN: We'll do it after.
BY MR. CRAIN:
Q. So how long did you meet with counsel -- yesterday, you said?
A. Yesterday, correct.
Q. And how long was that meeting?
A. It was approximately three hours.
Q. Was anybody else in attendance besides Ms. Lawson -- did I get that right? I'm sorry -- and a paralegal?
A. That was it.
Q. Okay. And you reviewed documents during that session?
A. We reviewed some documents.

Q. Okay. Did you review documents outside of that session with your counsel to prepare today?
A. No.
Q. Okay. Did you watch any videos?
A. No.
Q. Did you listen to any audio recordings?
A. No.
Q. Okay. Did you review any other -- any transcripts from depositions in this case?
A. No.
Q. Did you review any transcripts of anything else?
A. No.
Q. Let's see. Who have you talked to about this deposition besides counsel?
A. So I've talked to my boss, Allen Kachalia, to let him know that I was being deposed. I spoke to Jordan Derk who at the time of -- or at least at the start of the period was working with me on The Leapfrog Group contract; and with Preeti Joshi, who currently is working with me on the Leapfrog contract, my partner at

home, and my father who is an attorney.
Q. And just going down the line, what did you tell Mr. Kachalia about the deposition?
A. I had let him know that there was a lawsuit and that I was being deposed for testimony.
Q. And what did you talk to Mr. Derk about?
A. I let Mr. Derk know that he was going to be receiving a subpoena for documents. We talked a little bit about the lawsuit, as well as some other related items.
Q. Did you talk about the methodology, the Leapfrog Hospital Safety Grade methodology with him?
A. We didn't talk about that in detail.
Q. And what did you talk about with Ms. Joshi?
A. I let her know that there was going to be a lawsuit and that she should come to me with any questions or concerns that she had about that. And then when she received notice that she needed to supply documents, we talked about what she needed to supply and how that would go.
Q. Okay. And she's a current employee at

Armstrong?
A. Correct.
Q. Okay.
And then with regard to your partner and your father, did you talk about the substance of this case at all?
A. I talked about what I was aware of based on the public press releases that both organizations had put out.
Q. And what did you say? Just can you give us a general sense?
A. Yeah. My general sense is it felt like there was a lot of factual errors in the press release in terms of what tenant was claiming, that those things were just factually wrong.
Q. I guess we'll come back to that.
And then a couple of other questions. Did you talk to anybody at Leapfrog about this case?
A. Not -- so Leapfrog did give me a heads-up that I was going to be receiving a subpoena. So that was the sort of extent of the conversation.

Q. Okay.
And then did you also speak with counsel at Wilson Elser, Ms. Wood's firm?
A. We had a brief conversation the day that I was notified that I was going to be receiving a subpoena.
Q. Okay. And have you exchanged emails with Wilson Elser?
A. I have not beyond the counsel at Johns Hopkins requested Courtney and Kim's names and emails, and so I supplied them with those.
Q. Okay.
Now, I want to just start with an exhibit just to mark it. This will be Exhibit 1.
(Exhibit No. 1 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. Dr. Austin, do you recognize this document?
A. I do.
Q. And it was produced, if you see the bottom right, by the Armstrong Institute?
A. Correct.

Q. And it's an email from Ms. Binder to a number of folks, including yourself. Do you see that?
A. Yes, I do.
Q. And Ms. Binder told you, if you look towards the bottom, she asked everybody in the email not to email or talk about the case in writing. Do you see that?
A. Can you point me to where that says that?
Q. Yes. So it says, number two: "Do not communicate in writing about this matter, such as on slack or email or texting."
Do you see that?
A. Yes.
Q. Did you adhere to that guidance?
A. So outside of sort of the need to communicate with, say, my boss or with counsel, I did follow that.
Q. Okay.
And then she asks -- she says, number one -- do you see that right above? -- "Please refer all questions or concerns, whether you have them personally or you hear them from external sources, to me, Missy,

Lauren, or Karen. Do not put them in writing. Call us or come by my office."

Do you see that?

A. I do.

Q. Did you call any of those folks listed in bullet one?

A. I did not.

Q. Okay.

And then did you come by her office?

A. I did not.

Q. Okay.

Now, did -- I want to talk just for a second about the safety grade expert panel. Do you know what I mean when I say that?

A. Yes.

Q. I assume you spent a decent bit of time with that group.

A. Correct.

Q. Did you discuss the lawsuit with the expert, the safety grade expert panel?

A. So we did have a meeting with the expert panel

already scheduled, and at that meeting, the decision was to share with the expert panel that a lawsuit had been filed.

Q. And what was discussed at the meeting? Like, can you give a little more of a play-by-play?

A. I don't know if I can give a play-by-play without specific notes in front of me. I don't even remember who shared with the panel that the lawsuit had been filed. I don't know if that was Ms. Binder, Ms. Danforth, if it was counsel for Leapfrog. I really don't remember who shared that information with them. And it was more just to let them know since they had been involved in the safety grade.

Q. Okay.

I'm going to mark another exhibit. This is Exhibit 2, another Armstrong document.

(Exhibit No. 2 was marked for identification as of 9/25/2025.)

BY MR. CRAIN:

Q. So Dr. Austin, do you recognize this document?

A. I do.

Q. And it's another, if you look at the bottom right, another Armstrong-produced document?

A. Correct.

Q. And the email at the top, which you'll see as we go through that usually the first email is the last one in the way it's printed out, but you'll see it's from you to Ms. Danforth. Do you see that?

A. Yes.

Q. And if you go to the next page, there's an email -- actually, it starts on the bottom of page 1 from you. Do you see that, that May 1?

A. Correct.

Q. And then it's an email from you, it looks like, to the Hospital Safety Grade Expert Panelists. Do you see that?

A. Correct.

Q. And just to get a sense, take a second if you haven't read it. I just want to know was anything discussed on the expert panel that goes beyond what was said in this email?

(Witness peruses document.)

THE WITNESS: I don't remember it being much discussion beyond what's in the email.

BY MR. CRAIN:

Q. Does the email accurately depict what was discussed?

A. Yes.

Q. Okay.

And if you go up in the email, there's an email response from Ms. Danforth to you on May 1 at 12:35, p.m. Do you see that?

A. Yes.

Q. And she says, "Thanks, Matt. I've added Leah Binder and Thomas Duff from Wilson Elser for the first agenda item." Do you see that?

A. Correct.

Q. Does that refresh your recollection as to whether Ms. Binder was there or whether she spoke at the meeting?

A. I know that Ms. Binder was there, and I know counsel was there, but I can't remember exactly who actually led the conversation.

Q. Okay.
Do you typically lead the conversations in those meetings?
A. We have a formal agenda, and we have sometimes different individuals leading different agenda items depending on the item. But I would say I'm one of the primary folks for doing that.
Q. Okay.
And then just going to the top email, this is an email from you to Ms. Danforth later that day. Do you see that?
A. Yes.
Q. And it looks -- you say -- it's three lines down -- "I quickly pulled the breakdown of Spring 2025 grades by survey submission status. Will work on adding in percentages." Do you see that?
A. Yes.
Q. Percentages. I just -- I assume that refers to the percentages that these numbers reflect?
A. Correct.
Q. Okay. And why did you pull these stats?

A. To have ready for the expert panel an understanding of how hospital grades break down by the imputation status that Leapfrog uses or did use in the Spring 2025 grades.
Q. And just so we're on the same page, can you tell me in your words what's Step 1, what's Step 2?
A. Yeah. So Step 1 is that if the hospital has completed a recent Leapfrog Hospital Survey, which I believe is currently defined as within the last survey cycle, that that historical information is used for the hospital.
Step 2 is if the hospital does not have a recent survey on record, there is an imputation methodology that is laid out in the methodology document that explains how those scores will be imputed.
Q. And just to be clear, the methodology document, is it the one that's linked on the website that's about 28, 29 pages?
A. I would need to --
MS. LAWSON: Object to form but go ahead. Go ahead.

THE WITNESS: I would need to see it to confirm.
BY MR. CRAIN:
Q. Okay. Yeah, let me -- what did you mean when you said the methodology document?
A. Leapfrog makes available a public document that explains the Hospital Safety Grade methodology.
Q. We'll grab additional documents.
And then on Step 1, you said survey cycle. How long is that?
A. So if the hospital had completed a survey -- this is where I'm doing this from memory. So this is where --
Q. It's not a memory test.
A. -- I want to be -- I believe what we've changed it to is if the hospital had completed a survey in the prior survey cycle, so if you're looking at 2025, if they completed a 2024 survey, we'll use the 2024 survey results.
Q. Okay.
So each cycle, just so I understand, is

once a year?
A. The survey itself is a once-a-year cycle.
Q. And the grades are issued twice a year?
A. Correct.
Q. I think we have that document for you just to make sure we're on the same page.
MR. CRAIN: So we'll mark this as Exhibit 3. I'm taking good notes today.
(Exhibit No. 3 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. You'll see there are other exhibit markings -- oh, sorry.
You'll see there are other deposition stickers on here, but is Exhibit 3 of your deposition the document you're referring to?
A. Yes.
Q. Okay.
Is there another document you're aware of that outlines the methodology besides this?
A. There is a second document that explains how

numerical scores are converted into letter grades.
Q. What's the name of that document?
A. I don't know the official name of it. It is publicly available on Leapfrog's Hospital Safety Grade website.
Q. Got it.
Does that document includes also the imputation methodology?
A. It does not.
Q. Okay.
All right. Keep on going.
MR. CRAIN: And then just for completeness, can we do 64. And then I'm going to mark this Exhibit 4.
(Exhibit No. 4 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. This is another email produced by the Armstrong Institute. Do you see that on the bottom right?
A. Uh-huh.
Q. And it's -- the top one is from you to Ms. Danforth, cc'ing our friend Ms. Wood across the

table. Is that correct?
A. Correct.
Q. And you say, "Missy, thanks so much for putting me in touch with Courtney and Kim. I just spoke with Jordan about the lawsuit. I've copied Jordan on the email chain so he has Courtney and Kim's contact information."
Do you see that email?
A. Yeah, I do.
Q. Do this reflect what we discussed earlier, the discussions you had with Mr. Derk and with Wilson Elser?
A. Correct.
Q. Any other discussions beyond those talked about in this email?
MS. LAWSON: Object to form.
BY MR. CRAIN:
Q. Yeah, let me fix it.
About the case?
A. I had had a -- yeah, I had had a conversation with Jordan earlier that day.
Q. Okay.

A. We talked about the subpoena coming.
Q. Okay.
And did you have conversations, either phone or Zoom or in person, with Ms. Wood and Ms. Blair?
A. On the 25th of July, I had a call scheduled with The Leapfrog Group to discuss regular work. That was the day that the subpoenas were issued for Jordan and myself. So as I remember, Courtney and Kim joined that call to talk about the subpoenas and that we should contact Johns Hopkins University to let them know we were receiving subpoenas, and also that we shouldn't be chatting with our colleagues at The Leapfrog Group about the lawsuit.
Q. Conventional wisdom.
A. Yeah. But that we could talk about regular business.
Q. Okay.
One other question before we shift gears. You came today with a folio.
A. Uh-huh.
Q. What's in that folio?

A. It's actually the subpoenas.
Q. Okay.
A. And my pad of paper and a pen.
Q. Okay. I have to ask.
And when you say "the subpoenas," you mean the document and the deposition subpoenas that led to us being here today?
A. Correct.
Q. Okay. Anything else?
A. No.
Q. Okay.
I want to shift gears and just talk a little more about your history and your education.
A. Uh-huh.
Q. So you went to the University of Michigan for undergraduate?
A. Correct.
Q. Go blue!
And you graduated in 1995?
A. Correct.
Q. You later went to the University of Wisconsin,

Madison, right?
A. Correct.
Q. Okay. And you graduated with a Masters of Science in Industrial Systems Engineering?
A. Correct.
Q. And then you went on to do your Ph.D.?
A. Correct.
Q. And just in a brief nugget, what is your Ph.D. in?
A. My Ph.D. is in Industrial and Systems Engineering with a focus on Healthcare Systems.
Q. When did you start getting interested in healthcare?
A. 2005.
Q. Okay. And that was during -- that was at Wisconsin, Madison?
A. Prior to Wisconsin, Madison.
Q. Got it.
What were you doing then?
A. I actually was working for Continental Airlines.

Q. Interesting. How did that convert into a healthcare interest?
A. I was interested in transitioning out of the airline industry, and healthcare felt like a prime opportunity for that.
Q. Okay.
And then you earned your Ph.D. I think in 2011. Is that right?
A. Correct. Yeah.
Q. And then between I think 2008 and 2012, you were a director for The Leapfrog Group. Is that right?
A. That was my title --
Q. Okay.
A. -- that Leapfrog gave me, but I was not employed by The Leapfrog Group.
Q. Okay.
Let's, just to ground us, I'm going to give you everybody's favorite. LinkedIn.
MR. CRAIN: This will be Exhibit 5.
(Exhibit No. 5 was marked for identification as of 9/25/2025.)

BY MR. CRAIN:
Q. Dr. Austin, what I've handed you is what -- well, tell me what I've handed you.
A. This is what appears to be my LinkedIn profile.
Q. Does it look generally accurate to you?
A. It does.
Q. Great.
And just going back, because it's not a memory test, so I figured I'd ground you on the dates, it says you were a director of Leapfrog Hospital Survey from January 2008 to May 2012. Do you see that?
A. Correct.
Q. Is that -- is that generally right?
A. That is -- I actually was employed by the Center for Health Systems Research and Analysis. So my employer was --
Q. Got it.
A. -- actually CHSRA.
Q. Okay. The one right below?

(Whereupon, the court reporter seeks clarification, which colloquy will not be captured on the written record.)
BY MR. CRAIN:
Q. So you said you were employed by CHSRA during that period?
A. Correct.
Q. Okay.
And you said a moment ago you weren't employed by Leapfrog then. Have you ever been employed by Leapfrog?
A. No.
Q. Okay.
Can you tell us the nature of your title as director?
A. So in my role as a researcher at the Center for Health Systems Research and Analysis, I was on a contract with a PI who had a contract -- PI, principal investigator -- with The Leapfrog Group, and I was helping support that work.
Leapfrog wanted me to have the title

director of Leapfrog Hospital Survey, but that was not my official work title. My official work title at University of Wisconsin was researcher.

Q. Was the relationship you had between CHSRA and Leapfrog a contractual relationship?

A. Yes.

Q. Got it. So Leapfrog had a contract with CHSRA?

A. Correct.

Q. And who was the PI at the time?

A. Barb Rudolph.

Q. Okay. And who is she?

A. She -- Dr. Barb Rudolph, she has a Ph.D. in social work. She was a senior scientist at the Center for Health Systems Research and Analysis.

Q. And what was her role at Leapfrog?

A. She helped support them with their measurement and public reporting activities.

Q. Was she on the Leapfrog board?

A. She was not.

Q. Okay.

And who was the -- I can't recall if it's

president or CEO, but who was the leader of Leapfrog at the time?

A. So Suzanne Delbanco was the CEO at that time.

Q. Okay.

And when did Ms. Binder take that role?

A. I believe it was early 2008.

Q. Okay. So approximately at the start of your time working with Leapfrog. Is that right?

A. So I actually started working with The Leapfrog Group in March of 2007 as part of a student research assistantship.

Q. Okay. Got it.

So Ms. Binder came in towards the first year or two of your time?

A. Correct.

Q. Okay.

What were your responsibilities either as a director or researcher at the time?

A. Yeah. So I was responsible for developing survey questions, analyses of data, working with experts on developing measures, measure specifications, scoring

algorithms. Really everything related to putting out a survey around quality and safety of hospitals.

Q. And at that time, did Leapfrog assign hospital safety grades?

A. No.

Q. Approximately, when did that start?

A. That started in the Spring of 2012.

Q. Okay. We'll come to that a little bit more.

Just to round out, after you left Wisconsin, where did you go?

A. I came here to Baltimore and to Johns Hopkins University.

Q. And you've been here for about 12 years. Is that right?

A. Correct.

Q. And during that whole time, have you worked with The Leapfrog Group continuously?

A. Technically, my contract with The Leapfrog Group didn't start until I think July of 2012, and I had arrived here in May.

Q. Got it.

A. So just to clarify that.

Q. So from July 2012 to the present?

A. Correct.

Q. I want to shift gears and just talk about your relationship and Armstrong's relationship with Leapfrog.

A. Uh-huh.

Q. So you said before, I think, there's a contractual relationship between Armstrong and Leapfrog. Is that right?

A. Correct.

Q. Tell me generally about how that works.

A. Yeah. So I serve as the principal investigator on the contract for a portion of my time. So as a research faculty member, I need to cover my effort with grants and contracts, and so Leapfrog is part of that coverage for the work I do.

Q. And forgive me. I just don't know. Generally, what is a principal investigator?

A. The lead, the lead on a grant or contract.

Q. Got it. Okay.

And you said it covers a certain portion of

your time. Approximately, what time percentage is that?
A. It has ranged between 40 and 70.
Q. Forty and seventy. Okay. Forty and seventy percent of your time?
A. Correct.
Q. And Leapfrog also covers funding for you, correct?
A. That is the funding that I'm speaking of.
Q. Got it.
And does that come to you in the form of compensation?
A. That money is paid to Johns Hopkins University --
Q. Okay.
A. -- who pays me a salary.
Q. Got it.
Let's look at a couple of documents.
MR. CRAIN: Maybe start with -- let's start with 4. I'm going to mark this Exhibit 6.
(Exhibit No. 6 was marked for identification as of 9/25/2025.)

BY MR. CRAIN:
Q. So Dr. Austin, do you recognize this document?
A. I do.
Q. And it's another Armstrong-produced document, right?
A. Correct.
Q. What is it?
A. This is the contract between Johns Hopkins University and The Leapfrog Group.
Q. And this is a 2018 version. Do you see that?
A. Correct.
Q. And if you look at Fees and Payment, it's number 4A on the first page. Do you see that?
A. Yes.
Q. And it says: "Contractor shall be paid a fee not to exceed $143,898." Do you see that?
A. Yes.
Q. Does this reflect the funding that you were talking about, the payment to Armstrong?
A. The payment goes to Johns Hopkins University.
Q. Got it. Not specifically to Armstrong?

A. Correct.
Q. And then if we can keep going to page -- I'm going to refer to these numbers as Bates numbers. Do you know what I mean when I say that? And I can tell you if not.
A. Page number?
Q. Bates numbers.
A. No, I don't know what that is.
Q. So Bates numbers are these Armstrong numbers on the bottom right.
A. Oh, okay. Okay.
Q. They're just a stamp that folks give when they produced. And for some reason, there are two of them on these pages, but I'm going to look at the top little one, which is the page number.
So if you could go to Armstrong ending in Bates 006, which also happens to be page 6 of the contract.
A. Uh-huh.
Q. And do you see there first at the top it's signed by Erica Mobley and Thomas F. Burns? Do you see

that?
A. Yes.
Q. And Erica Mobley, who is she?
A. She was at the time the director of operations for The Leapfrog Group.
Q. She's since moved on?
A. Correct.
Q. Okay.
And then there's a budget further down, down there. Do you see that?
A. Uh-huh.
Q. And it sort of delineates faculty, analysts, and a few other things. Do you see it says faculty $59,799?
A. Correct.
Q. And that says: "40 percent of J. Matt Austin's time." Do you see that?
A. Uh-huh.
Q. And that refers to you, correct?
A. Correct.
Q. And does that reflect an amount that's

earmarked to you ultimately at the end of the day, or how does that work?
A. That is an amount that the university will bill Leapfrog Group for my efforts on the project.
Q. Okay. So the university bills Leapfrog for your time, correct?
A. Correct.
Q. Is it hourly or just a flat fee?
A. I don't know for sure.
Q. Got it. Okay.
And does your compensation rise with this -- or rise -- let me strike that. Bad question. That's the first of many bad questions today.
If Leapfrog didn't pay this money, would that affect your compensation?
A. Can you clarify that?
Q. Yeah.
I'm trying to understand -- so this, you said, doesn't get paid to you directly, correct?
A. Correct.
Q. It gets paid to the university, right?

A. Correct.
Q. And the university gives you a salary, right?
A. Correct.
Q. What is the relationship between your salary and grants generally? Let's start with that.
A. So as a faculty member, I'm on a three-year contract, and that contract is at risk for nonrenewal if I'm not covering a portion of myself in terms of grants and contracts.
Q. Got it. Okay.
A. So there would be long-term impact to -- if Leapfrog didn't pay the money to the university, but the short-term is that there isn't an impact. I still receive my salary.
Q. Got it. Okay.
So it affects your future contract with the university, if any, right?
A. Correct.
Q. Okay.
A. As one of many grants and contracts that I've had.

Q. Yeah, how many --
A. So it's not --
Q. Can you ballpark how many do you have in a year?
A. Most contracts or grants last multiple years. In my 12 years at Hopkins, I've probably had 10 to 11 different grants and contracts.
Q. Okay. All toll. And that includes Leapfrog as one of those 10?
A. Correct.
Q. Okay. And the reason I clarify is there are multiple contracts, right?
A. Yeah, right.
Q. Yeah.
Okay. And then what -- so I understand this number is not directly paid to you. Can you give a ballpark of what percentage that number is of your total compensation?
A. The 40 percent.
Q. So this $59,799 is 40 percent of your salary in that year, correct?

A. Correct. And then direct costs are added in overhead as well.
Q. Yeah. And those are things like -- like what?
A. That includes fringe rights, so coverage of health benefits --
Q. Got it.
A. -- and that stuff and --
Q. Got it.
A. -- then the university tacks on a percentage.
Q. Commission.
A. Yeah.
MS. LAWSON: Objection.
MR. CRAIN: Fair enough.
BY MR. CRAIN:
Q. Okay. So I just want to go through a couple of these. Over -- do you have a general sense of over time -- so this is a 2018 contract, correct? Has the grant amount changed during -- you know, in the preceding -- in the last six years?
A. Can you clarify when you say the grant has changed?

Q. Yeah.
So I'm trying to get a sense of where the numbers have gone. So there's the total number we saw on the first page that's paid to Johns Hopkins.
A. Uh-huh.
Q. Has that generally gone up year over year?
A. There has been some fluctuation.
Q. Okay.
A. I'm trying to -- so there have been times where Leapfrog has requested additional researchers at Hopkins be included in the work, and so just by pure numbers, the value, the dollar value of the contract has gone up for that.
Q. Okay.
A. My salary has changed over time. So it has increased based on just sort of salary changes, and there's been some fluctuation in efforts.
Q. So when your salary has changed, the number sort of earmarked to you as a percentage of your salary goes up, correct?
MS. LAWSON: Object to form, but you can

answer.
THE WITNESS: Yeah, I mean, right. Leapfrog is paying for a portion of my effort, of my total effort, right. So if my salary goes up, they're paying more for the portion of the effort that they're paying for.
BY MR. CRAIN:
Q. And when you say a portion of your effort, just so it's clear, that means like your time on the job?
A. Correct.
Q. Let's take a look just before we move off this. I want to look at Exhibit A, which is page little number 7.
A. Uh-huh.
Q. And this -- it says scope of work. Do you see that?
A. Yes.
Q. And are you familiar generally with -- it's a couple -- it's a few pages. Are you familiar with the scope?
A. Yes, I am.
Q. Does this accurately depict the scope of work,

I'll say plus or minus, that you performed in your role for Leapfrog?
A. Yes.
Q. Okay.
And I want to focus on particularly page little Bates 9. Do you see that?
A. Uh-huh.
Q. And there's -- about halfway down the page, it says: "Manage the hospital safety score expert panel process." Do you see that?
A. Uh-huh.
Q. And it says -- I think it's bullet A -- "Have periodic communications with client-approved national expert panel either via teleconferences and/or written communication, to solicit guidance on: One, which performance measures should be considered for inclusion in future versions of the safety score composite; and, two, suggested adjustments for weighting individual measures within the composite. The polling of panel members of these topics will involve the use of structured communication techniques; e.g., the Delphi

method."
Do you see that paragraph?
A. Uh-huh.
Q. Does this reflect your work with the Hospital Safety Grade expert panel?
A. It does generally reflect that work.
Q. What -- are there any meaningful differences between this language and what you actually do?
A. We've moved away recently from doing formal polling of panel members.
Q. Okay. Does that -- is that what the Delphi method refers to?
A. Yeah, that would be a --
Q. What is the Delphi method?
A. The Delphi method is a -- an approach to gain and understand consensus where you basically go through different rounds of voting where based on the first round, you sort of narrow down to a smaller subset and work towards where there's consensus.
Q. And is that -- I see it in here, but is that how it actually worked at the expert -- at the safety

grade expert panel?
A. In earlier meetings of the safety grade expert panel, 2011, 2012, 2013, we did put a little more of a focus on having a formal process for that.
Q. Okay.
And I think you said that you -- I don't have the realtime, so I don't remember exactly what you said, but you said in recent years, you've sort of gotten rid of the polling feature. Is that what you testified to?
A. Correct.
Q. And approximately, when did that dissipate?
A. Probably 2014, 2015.
Q. Okay. So a little while ago?
A. Yeah.
Q. Yeah, okay.
And then B says -- if you go back to the document, it says: "Work with the national expert panel to gain consensus on the direction of future versions of the safety score composite and/or understand and document the differences among panel members on their

future visions."
Do you see that as well?
A. Yes.
Q. Accurate depiction of what you've done for Leapfrog over the years?
A. Yes.
Q. Okay.
And then C: "Understand the direction set by client's Board of Directors on the hospital safety score and keep the national expert panel conceptually aligned with the board's direction."
Do you see that?
A. Yes.
Q. Is that -- so the first question is, is that an accurate statement of what you've done for Leapfrog, you know, since, let's say, 2018 to the present?
A. Yes. My one caveat is I think the Board of Directors has been less hands-on with the safety grade as they were early on.
Q. Okay. And when you say "early on," what time period are we talking about?

A. 2011 through 2014.
Q. Okay.
So is it fair to say in the early days when the safety grade was being created, the Board was more active?
A. Yes, that would be a fair statement.
Q. And over the years, the Board has been less involved with respect to changes to the safety grade methodology?
A. I have become less involved in communicating with Leapfrog's board. So I can't speak to what Ms. Binder or Ms. Danforth have been communicating to the Board but --
Q. Got it. Okay.
So let me ask it this way then. This document says one of your services -- if you look at the top, it says: "Contractor will provide client with the following services: Understand the direction set by the client's Board of Directors on the hospital safety score."
Do you feel since those early days that

you've had a sense of the direction set by the Board of Directors?
A. I have not received any feedback that the direction we're going is conflicting with what the Board would want to do.
Q. Okay.
And have you received feedback that it's consistent with what the Board would want to do?
A. As mentioned, I don't have as much communication with the Board members. So Leapfrog staff is sort of the filter for that. So I have not heard any feedback that it's one way or another.
Q. Okay. So your understanding comes from Leapfrog staff?
A. Correct.
Q. And it's your understanding of what the organization wants, as opposed to the Board?
MS. LAWSON: Object to form.
BY MR. CRAIN:
Q. Well, what is your understanding? I'm trying to get a sense of do you have an understanding of what

the Board wants, or do you have an understanding of what Leapfrog staff want?
A. My direction that I've been given has been from Leapfrog staff.
Q. Okay.
A. I don't know if that represents their own thoughts or it represents their own thoughts and the Board. I can't speak to that piece.
Q. And when you say "staff," who are we talking about?
A. Leah Binder, the CEO, and Missy Danforth, the senior vice president of healthcare ratings.
Q. Are those folks your primary contacts for Leapfrog?
A. Yes.
Q. Are there others as well that you interact with?
A. A couple of Missy Danforth's direct reports, so Katie Burgraff Stewart and Jean-Luc Tilly. I have quite a bit of contact with them as well.
Q. And Ms. Campione?

A. Yes, and Alex as well.
Q. And what's Ms. Campione's role?
A. She -- I don't know her exact title, but she's the one that supports the Hospital Safety Grade program from Leapfrog's side in terms of the analytics and all that goes with that.
Q. And does she work with you closely in that regard?
A. Yeah.
Q. And Mr. Tilly, what's his role?
A. Jean-Luc Tilly has a couple of areas of the Leapfrog Hospital Survey that he champions and leads, as well the ambulatory surgery center survey.
Q. Okay.
And then Ms. Stewart, what's her role?
A. Once again, she has certain areas of the Leapfrog Hospital Survey that she champions.
Q. Okay.
Who do you interact with most at Leapfrog?
A. Missy Danforth.
Q. Who is the second?

A. Probably Katie --
Q. Okay.
A. -- Stewart.
Q. Stewart, yeah.
Okay. Let's just keep going. Okay. You can set that -- or wait, actually. Sorry. There's one other thing I want to take a look at.
If you go to page 7, just one page back --
A. Uh-huh.
Q. -- and there's a list of services called manage the research base. Do you see that?
A. Yes.
Q. Can you just say generally what that entails?
A. Yeah. So this item is related to the Leapfrog annual hospital survey, and it's just sort of being aware of where -- what performance measures have been recently endorsed, which are sort of out there in national programs, doing literature reviews on topics. So basically, ensuring that the measures that Leapfrog is using in its Leapfrog Hospital Survey are valid, reliable, evidence-based measures.

Q. Got it.
So stepping back a little bit, Leapfrog has its hospital survey and its safety grades, right?
A. Correct.
Q. Are those the primary, like, sides of the house, so to speak?
A. Those are their two primary reporting initiatives, but there is the Leapfrog Ambulatory Surgery Center Survey as well.
Q. Are you involved in any capacity in all three?
A. I am in all three.
Q. You are what? Sorry.
A. I am involved in all three.
Q. Okay. I thought you said I am an author. I was going to say an author of what? But I guess I'll ask that question. Do you author any of the hospital survey? Do you draft any of it?
A. I do draft some of the survey questions, measure specifications, end notes, FAQs.
Q. A lot of work.
A. It is a lot of work, yeah.

Q. Do you review each iteration of the hospital survey?
A. I do.
Q. Top to bottom?
A. Not top to bottom.
Q. Okay. I would think that would take some time.
A. Yeah.
Q. Yeah.
The survey is about 350 pages. Am I right?
A. Correct.
Q. Okay.
And then with respect to the safety grade, can you just explain your role?
A. Yeah. So the role has been to provide Leapfrog with guidance and recommendations on the methodology, and that includes what measures should be included in the safety grade, how we might assign relative weights to each of those measures.
Are you asking about currently or sort of historically through the last 11 years?
Q. Fair question. I guess I'll start with has it

changed meaningfully in the past 11 years?
A. I would assess that my role has actually diminished as Alex, Leapfrog, has gained more sort of independence in what they're doing.
Q. Got it.
So let me ask you about that. The contract in here says that you're being retained to provide strategic -- let me just find the right word. What does it say? Strategic counseling I think. Is that the -- do you recall that language?
A. I don't recall that language. The language I typically use is to say strategic guidance.
Q. Guidance. That's it. Yeah, it's on page 7 under background, second paragraph, last sentence. You see it says --
A. Uh-huh.
Q. -- you were retained to provide client, meaning Leapfrog, with strategic guidance. Do you see that?
A. Uh-huh.
Q. So to your point of Leapfrog gaining more independence, has the need for strategic guidance

diminished over the years?
A. Not for strategic guidance, no.
Q. So what is diminished as compared to strategic guidance?
A. So as an example, in the early years of the Hospital Safety Grade, I actually would be the one to put together a histogram of the hospital safety scores from the prior round, the current round, and we would discuss that as a group in terms of what changes we were seeing. That is now something that Alex would do.
So there's sort of an analytic piece that has moved more internal to Leapfrog --
Q. Got it. Okay.
A. -- but not the strategic guidance part.
Q. And just what does strategic guidance mean?
A. Yeah. Strategic guidance is thinking about what measures do we currently have in the composite score, what are the changes that are happening like within national programs, CMS, like measures that might be retired, what are new measures that are out there, what are gaps that we would like to try to fill, and are

there measures out there that we could use for that.
So it's trying to sort of think about what's the right combination of measures to have in a composite score of patient safety and then to also help them think about how we might relatively weight those against each other.
Q. So fair to say it's like more holistic as opposed to something more granular that Ms. Campione might do?
A. Correct.
Q. Okay.
I'm not going to put every contract in front of you. You see me flipping.
Let me ask a question about just grants before we move on.
A. Uh-huh.
Q. So you said, for instance -- so we see in the contracts the percentage has changed over time as well, that the grant towards your salary goes to. Do you recall that?
A. Correct.

Q. Okay.
So we saw in 2018 the number allocated to you was 40 percent, right? Of the remaining 60 percent, does that come from other grants?
A. Correct.
Q. Okay. And how many grants fill that 60, ballpark?
A. Two or three depending on the size of them.
Q. Okay. And are any of them as significant in proportion as Leapfrog?
Let me -- let me -- that's a sort of unwieldy question. Let me fix that. I saw you thinking. So I'll build it a little more clearly.
So in 2018, the amount allocated to your salary was 40 percent. Is that right?
A. Correct.
Q. Okay.
You said of the remaining 60 percent, there were two or three other grants that filled that, essentially, right?
A. Correct.

Q. Are any of those two to three grants also 40 percent?
MS. LAWSON: And are you asking just specific to 2018?
BY MR. CRAIN:
Q. Specific to 2018, yeah, if you recall.
A. I don't recall, but I could find that out.
Q. Okay.
A. I just don't remember offhand.
Q. Generally, you know, to the extent you know, do you -- have you had other grants that were the same significance in size as Leapfrog over the years?
A. This would be the most significant --
Q. Okay.
A. -- ongoing contract.
Q. Okay. Got it.
And the other two or three grants, as a percentage of your compensation, can you ballpark generally what they are?
MS. LAWSON: Object -- objection to form. And maybe if you can clarify over time --

MR. CRAIN: Yeah.
MS. LAWSON: -- because I think he testified earlier that he's had like nine or ten other grants.
MR. CRAIN: Yeah, I hear you.
MS. LAWSON: Yeah.
BY MR. CRAIN:
Q. So in a given year, let's say between 2018 and 2025, the other grants that are not Leapfrog, if you can, approximately what percentage of your compensation do they -- are they?
A. It varies from year to year. I'm more trying to just think about what's on my CV and what those efforts are. They might total up to another 50 percent.
Q. Total. Okay. Got it. Okay, so --
A. So a typical breakdown might be one that's 20, one that's 20, and one that's 10.
Q. Okay. Got it. Okay. And I didn't mean it to be a memory test.
A. No, no, no, no, no. I'm trying to answer truthfully, but I don't really remember.
Q. Just your best estimate.

A. My best estimate, yeah.
Q. Okay.
MS. LAWSON: And if you're not sure, it's okay to tell him that you're not sure because he wants to know --
MR. CRAIN: Yeah.
MS. LAWSON: -- what you know.
THE WITNESS: Okay.
MR. CRAIN: I'm not asking you to guess.
THE WITNESS: Okay. Okay.
MS. LAWSON: Yes, he's not asking you to guess.
THE WITNESS: Okay.
MR. CRAIN: But your best estimate --
THE WITNESS: Okay.
MR. CRAIN: -- approximation as the expert of you.
THE WITNESS: Right. Okay.
BY MR. CRAIN:
Q. So let's shift gears a little bit. Are you doing okay on time?
A. Yeah.

Q. Okay, good. I mean break.
A. Yeah.
Q. Okay.
So I want to talk a little bit more about the safety grade and what it does and what's it's purpose. So --
MS. LAWSON: Actually, if we're going to totally switch gears --
MR. CRAIN: Yeah. You want to --
MS. LAWSON: -- do you mind if we take a --
MR. CRAIN: Yeah, yeah. No, now is fine.
MS. LAWSON: A break? Yeah.
MR. CRAIN: Yeah. Good.
THE VIDEOGRAPHER: This marks the end of media unit number two. We're going off the record. The time is 10:05 a.m.
THE COURT REPORTER: This gives us a chance to get the realtime going, too.
MR. CRAIN: Oh, yeah.

(Whereupon a short break was had, after which the proceedings continued as follows:)
(Exhibit No. 7 was marked for identification as of 9/25/2025.)
THE VIDEOGRAPHER: This marks the beginning of media unit number three. We're going back on the record. The time is 10:22 a.m.
BY MR. CRAIN:
Q. Welcome back, Dr. Austin.
A. Thank you.
Q. It's like a commercial break on TV.
So I've given you what's been marked as Exhibit 7. Do you recognize this document?
A. I do not.
Q. Okay. So I'll represent to you this is from the Leapfrog Safety Grade website, hospitalsafetygrades.org. Is that familiar to your?
A. I'm familiar with that website.
Q. Do you know -- like, are you -- do you look at the website periodically or no?

A. Once in a great while.
Q. Okay.
So I'm just going to -- I sort of want to walk through what the safety grade is and focus on some of the language in this document if we can. And I -- so starting with paragraph -- the first paragraph, you see there's a sentence "the purpose" -- do you see that --
A. Uh-huh.
Q. -- at the bottom?
A. Uh-huh.
Q. "The purpose of the Leapfrog Hospital Safety Grade is to bring this information to light in a way that's easy for you, the consumer, to use."
I realize it says "this information," so I probably need to go back. So I'll start at the top.
"One of the most significant problems with today's healthcare system is the failure to make safety and quality information available to the public. But the public deserves this information so they can make informed choices about where to receive care.
"The purpose of the Leapfrog Hospital

Safety Grade is to bring this information to light in a way that's easy for you, the consumer, to use."
Do you see that?
A. Yep, I do.
Q. Do you agree with that paragraph?
MS. LAWSON: So I'll just object to form.
And just I want to clarify. I think Dr. Austin, you testified you had not seen this before.
THE WITNESS: Correct.
I would generally agree. I would maybe reframe the first sentence slightly differently.
BY MR. CRAIN:
Q. How so?
A. I might say that one of the significant problems of today's healthcare system is how to best share safety and quality information with the public.
Q. Okay.
A. I think information is available. I think we've struggled to help people connect to that.
Q. So the difference being the failure language?
A. Yeah. I wouldn't say failure to make.

Q. Okay.
And then do you agree that the purpose of the Leapfrog Hospital Safety Grade is to bring this information to light in a way that it's easy for you, the consumer, to use?
A. Yes.
Q. Okay.
And then is it right that -- if you go down to the second page -- "Our letter grade scoring system allows consumers to quickly assess the safety of their local hospital and choose the safest hospital to seek care." Do you see that?
A. Yes.
Q. Do you agree with that statement?
A. Yes.
Q. And then it says: "As consumers use the Leapfrog Hospital Safety Grade more and more, we hope more hospitals will be compelled to be open about their safety and quality and participate in meaningful public reporting."
Do you see that as well?

A. I do.
Q. And do you agree with that sentiment?
A. I don't know what the evidence or research supporting the first clause is. I wouldn't necessarily be able to speak to that part, about whether consumers are using the safety grade more and more, but I would agree with the last part.
Q. The last part being we hope more hospitals will be compelled to be open about their safety and quality and participate in meaningful public reporting?
A. Yes.
Q. Okay.
And just to be clear, do you have any role in the creation, drafting, revision of Leapfrog's websites?
A. If I'm asked to review something, I will review it --
Q. Okay.
A. -- and provide back comments and feedback. But they don't ask me to review every single thing on their website.

Q. Okay. How often do they ask you to review the website?
MS. LAWSON: Object to form.
BY MR. CRAIN:
Q. Generally, just over, you know, the last six years.
A. Not very often. I mean, I don't know everything that's on their website. You know, so I don't know what the full scope is, so I can't speak to --
Q. No, I hear you. Just so we're on the same page, I'm talking about hospitalsafetygrades.org.
A. Right.
Q. Are you familiar generally with that website?
A. Right. Yeah, yeah, yeah, yeah. Right.
Q. And Leapfrog -- I forget the other one but the Leapfrog.org website.
A. Uh-huh, right.
Q. And one of them refers typically to the survey, right?
A. Uh-huh.

Q. And the other one is about the safety grades, correct?
A. Correct.
Q. And do you have any specific recollection sitting here today of any particular page on either of those two websites you were asked to opine on?
A. I don't remember exactly. I'm sure through 12 years there has been something that I have reviewed, but I couldn't speak to what that is and if it's still up or if it's been taken down.
Q. Just asking for your memory today.
A. Yeah, yeah. I don't. I don't know.
Q. And just to fine-tune it a little bit, do you have any specific recollection of opining on any part of the website regarding the imputation methodology?
A. Can you be more specific with what exactly you're referencing there?
Q. Yeah. So are you aware of any part of Leapfrog's website that articulates its imputation methodology on the safety grades for nonparticipating hospitals in the survey?

A. I know there's some information in a prior exhibit that we discussed that talks about the imputation. I don't know if there's something on a webpage itself. I just don't know what is actually -- what all the pages are and what's on them.
Q. Okay. Just to my question, do you have any specific memory --
A. No, I don't have any specific memory.
Q. Let me just finish the question so it's clear.
Do you have any specific memory of being asked the opine or otherwise opining on any portion of Leapfrog's website regarding the imputation methodology?
A. I don't remember being asked to do that.
Q. Okay.
MR. CRAIN: Let's go to 67. I'll mark another document. This will be Exhibit 8.
(Exhibit No. 8 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. Dr. Austin, do you recognize this document?
A. I recognize that this is a printout of a

webpage from Leapfrog's Hospital Safety Grade website.
Q. Do you have any reason to think that it's not an accurate depiction of the website?
A. No, I have no reason to think so.
Q. Are you familiar generally with the "About the Grade" website?
A. I'm familiar with that webpage, yes.
Q. I want to ask you a couple of questions about the language on this page, just to your understanding. Did you -- do you recall having any role in drafting this page?
A. It is possible but I don't remember exactly today.
Q. So page 1 -- and I apologize. There's no page numbers on it but the first page and the second paragraph, it says: "The Leapfrog Hospital Safety Grade uses up to 30 national performance measures from the Centers for Medicare & Medicaid Services, CMS, the Leapfrog Hospital Survey, and information from other sources of supplemental data."
Do you see that?

A. Yes.
Q. Is that a correct articulation of what the Leapfrog Hospital Safety Grade uses?
A. That represents a summary of what has been the formation of the Hospital Safety Grade in sort of its entirety.
Q. Okay, fair enough. So let me ask you it this way. Is that correct for the methodology as it exists today?
A. Yes, minus that currently the safety grade I do not believe is using information from other supplemental data sources.
Q. Okay. What is the safety grade currently using as a data source?
A. We're using data from the Centers for Medicare & Medicaid Services and from the Leapfrog Hospital Survey.
Q. Okay. So today there's no other supplemental data sources being used with the grade, correct?
A. That is my recollection from the current methodology.

Q. And when did that change? Approximately.
MS. LAWSON: So it really is a memory test.
THE WITNESS: It is a memory test.
BY MR. CRAIN:
Q. If he has a memory.
A. I don't know the year.
Q. Okay. Let me refresh your recollection a little bit.
A. Okay.
Q. So in 2024, am I right that the imputation methodology changed?
A. That is my recollection, yes.
Q. And then prior to that, there was a different imputation methodology, right?
A. Correct. We've actually used four or five different imputation methodologies over the 11, 12 years of the Hospital Safety Grade.
Q. Okay.
Can you, at a high level, I'm not asking for a memory test, just generally trace what you recall of those four or five different models?

A. Yeah, yeah, yeah.
So when we met with the expert panel early on to talk about the idea of the Hospital Safety Grade, one of the identified issues was that we were likely to encounter missing data, and how did we want to address the issue of missing data.
The expert panel laid out five different ideas of sort of generally-accepted approaches of how that has been addressed.
The -- if I can remember the five --
Q. I can show you a document.
A. Okay.
And so we started initially with if we didn't have data for a hospital for our measure, we ignored that measure and put greater weight on the measures for which we did have data. That evolved into using supplementary data sources, specifically the American Hospital Association survey was one of the key data sources for that.
That evolved into calculating or assigning the mean performance for hospitals based on cohorts, so

sort of the national mean based on the cohort that the hospital fell into, and that has since evolved into assigning the hospitals a lower performance score.
Q. That's the current methodology?
A. That's the current methodology.
Q. And when you say "lower performance score," that's limited achievement?
A. That is correct, how Leapfrog has operationalized that.
Q. And in the current model, am I right that there are two steps, right? The first step is the historical, as you said earlier?
A. Correct.
Q. The second step is the limited achievement that you were referring to, correct?
A. Correct.
Q. Okay.
So going back to the document, when we talk about supplemental data sources, generally, am I right that the AHA data was a supplemental data source?
A. Correct.

Q. And AHA is American Hospital Association?
A. Correct.
Q. I always mess that up. That's my aha moment. I've been playing with that one.
MS. LAWSON: You delivered it well.
MR. CRAIN: Thank you. I'm going to use that one at trial.
BY MR. CRAIN:
Q. So other forms of supplemental data, is there any -- because CMS is not supplemental data, right? Because it's covered on this page otherwise, correct?
A. Correct.
Q. Are there any other supplemental data that you can recall Leapfrog using in the Hospital Safety Grade scoring at any time?
A. Yes. So the American Hospital Association did a separate survey around health information technology, and we did use that to inform the scores for computerized prescriber order entry. And that's one that comes to my mind. There's none others that immediately come to my mind, but that's not to say there

weren't others.
Q. Okay.
A. I just don't recall.
Q. Yeah, okay. So that's helpful.
I want to keep going down this document. If you go to the bottom of that paragraph: "The Leapfrog Hospital Safety Grade methodology has been peer reviewed and published in the Journal of Patient Safety."
Do you see that?
A. Yes.
Q. Now, does the Journal of Patient Safety -- there's a hyperlink there. Do you see that?
A. Uh-huh.
Q. And I don't have the document with me, but I'll represent to you it goes to what I think is a 2014 article.
A. Correct.
Q. Does that article, the peer review that this sentence is talking about to your knowledge?
A. Yes.

Q. And what does peer review mean, generally?
A. Peer reviewed, in at least the medical world, which is really the only world I know, so that's all I can speak to, when you submit to a journal, they actually identify two to three external individuals to actually read the manuscript, provide feedback, provide recommendations of how to improve it. Those go back to the editor of the journal, and the editor makes the decision of what to share back with the authors in terms of requested updates or revisions.
The peer reviewers could decide -- could recommend that the article be rejected, right. They don't feel like it's a high enough quality. And so it's a process to sort of have some external review of the work.
Q. And the 2014 article was peer reviewed?
A. Correct.
Q. Do you recall generally by whom?
A. I don't -- as an author, you're unaware of who the peer reviewers are.
Q. Oh, interesting.

A. There's a movement recently toward moving -- making that transparent, but that has not necessarily been the practice.
Q. Got it. Okay.
Do you remember any feedback they gave on the article?
A. You're really testing my memory here.
Q. If you don't, that's okay.
A. Yeah, I don't. That was 10 years ago, 11 years ago. I don't remember. I'm sure there was feedback from -- almost every article has some degree of feedback, but I don't remember what the feedback was or to the degree.
Q. And I don't at all mean to stretch your memory. If you don't remember --
A. Right. I don't.
Q. -- that's a perfectly fine answer, yeah, but I have to ask.
So now going back, this article, it analyzes an older methodology, right?
A. Correct. It was the methodology that was in

place at the time for the Hospital Safety Grade.
Q. In 2014, correct?
A. 2014, although -- it got published in 2014. We wrote it in 2013, so this is probably an earlier version.
Q. So do you think it's fair to say that the current methodology has been peer reviewed?
A. I think it's fair to say that the general approach remains consistent from 2013, 2014. The individual measures that are included in the safety grade has evolved over time.
Q. And just to be clear, though, to my question, is it a fair statement to say the Leapfrog Hospital Safety Grade methodology has been peer reviewed and published in the Journal of Patient Safety in 2025?
A. I could argue that it does not say the current Leapfrog Hospital Safety Grade methodology. It just says that the methodology has been peer reviewed.
Q. If this is on the public consumer-facing website today, do you think the consumer would understand, looking at this, that this is referring to a

2014 methodology, not a 2025 methodology?
MS. LAWSON: Object to form. Go ahead.
BY MR. CRAIN:
Q. You can answer.
MS. LAWSON: You can answer.
THE WITNESS: I don't know what a consumer would think or not think. Like, I haven't studied that.
BY MR. CRAIN:
Q. When you first -- this was the first time you recall reading this sentence in a while, at least, right?
A. The sentence meaning the one about the patient safety?
Q. No, the one I read back to you. The Leapfrog Hospital Safety Grade methodology has been peer reviewed and published in the Journal of Patient Safety.
A. Uh-huh.
Q. You knew what that referred to, right?
A. Yes, I did.
Q. Did you think to yourself that's the same for 2025 as it was for 2014?

MS. LAWSON: Object to form, but you can answer.
THE WITNESS: As I mentioned, I think the general format of what we're doing with a composite score made up of 25 measures that are weighted in two domains remains consistent and solid throughout that time frame.
Measures, for whatever -- I mean, measures are going to come and go, right. CMS makes decisions about retiring certain measures. They've added new measures. So the safety grade does continue to evolve, and I would say appropriately, right, like to sort of keep up with the latest information and evidence.
BY MR. CRAIN:
Q. Has the imputation methodology or the imputation model been peer reviewed?
A. That has not.
Q. Okay.
Okay. Let's keep going. I want to go to -- let's see. Here we go. It's -- and I apologize. There's no page number. If you go to the document, it's

the first, second, third, fourth, fifth page to the paragraph starting "A hospital."
A. Uh-huh.
Q. Do you see that?
A. Yep.
Q. "A hospital must have enough safety data available for our experts to issue them a letter grade. Hospitals missing more than six process measures, more than five outcome measures, or PSI90 are not graded. All hospitals are encouraged to voluntarily report additional safety data through the Leapfrog Hospital Survey, but they are not required to do so to receive a safety grade."
Do you see that language?
A. I do.
Q. So let's start with process measures. Do you see it says hospitals missing more than six process measures...are not graded?
A. Uh-huh.
Q. Is that an accurate statement?
A. As far as I know. I'm not the one implementing

the methodology, so I don't -- I can't speak to --
Q. Fair enough.
A. -- how it got implemented.
Q. Yeah, let me fix the question.
Based on your knowledge of how the methodology works, not whether it's been implemented faithfully or not, but purely based on your understanding of the methodology, is that an accurate explanation or articulation of the methodology?
A. Yes.
Q. Okay.
A. That is what we have set as minimum data thresholds.
Q. So I want to talk about some process measures. BCMA, are you familiar with that term?
A. Uh-huh.
Q. What is BCMA?
A. Barcode medication administration.
Q. And what is CPOE?
A. Computerized physician order entry.
Q. And you're familiar with hand hygiene?

A. Correct.
Q. As a measure, not generally.
And are you familiar with IC -- IPS?
A. Yes, ICU physician staffing.
Q. And those I'm going to generally talk about now as we move forward as the four imputed measures.
A. Uh-huh.
Q. Do you understand what I'm talking about?
A. Uh-huh. Yes, I do.
Q. When a hospital does not report to Leapfrog's survey, does Leapfrog have any data about the hospital's performance on any of those four measures?
A. In the imputation method for Step 1, if a hospital submitted a survey in the prior year, there may be data on one or more of those four measures.
Q. Fair enough. What about for Step 2?
A. For Step 2, there wouldn't be recent data, right. So there wouldn't be either a survey that was submitted the prior year or a survey submitted this year.
Q. Yeah. So if a hospital has never reported to

Leapfrog's survey, is it fair to say that Leapfrog has no data on the actual performance of that hospital on those four imputed measures?
A. We do not have any data that's been reported through the survey, correct.
Q. So why is that not missing data?
A. Some I guess it could be one's definition of missing. Those missing data thresholds were really intended to not assign grades to small hospitals that may not have enough data from CMS. So, as an example, there are smaller hospitals that may not have had enough central lines inserted during the reporting period to actually have a central line associated blood stream infection rate.
And so the intent of those missing data thresholds was really to make sure we weren't assigning grades to hospitals for which we had unreliable information. It was not necessarily intended to allow hospitals not to report.
Q. So is missing data really supposed to be absent data? Like, you mentioned folks that don't have enough

central lines.
A. Missing data would refer to a measure for which we don't have a value.
Q. And so just to put it concretely, when you say "we don't have a value," who do you mean?
A. Meaning The Leapfrog Group doesn't have a value.
Q. So how is that different -- so one of my clients is Delray Medical Center in Florida, right. And we always use Delray as the example. I don't know why, but Delray is the example. We can pick any of them.
Leapfrog gave Delray a limited achievement for hand hygiene. Are you generally aware of that?
A. I have not reviewed Delray's results but I --
Q. But you understand, as the plaintiff in this case, it's a nonparticipating hospital, right?
A. Yes, that's my understanding.
Q. And it's -- one of the core elements of the case is the Step 2 methodology, right, for imputation?
A. Correct.
Q. So based on that, you understand that Leapfrog

gave Delray a limited achievement for hand hygiene, right?
A. That would be my understanding of how that would get applied.
Q. And but -- so there's -- to your point a minute ago, which I've now lost but I will find, you said missing data would refer to a measure for which we don't have a value. Isn't it right that Leapfrog has no value for hand hygiene for Delray?
A. That would be correct.
Q. Okay.
So this paragraph is not correct, right, the one we looked at on the document?
A. I think the distinction I would make is whether an imputed score is considered missing or if it's considered a value.
Q. You're going to have to say more about that one. What do you mean by that?
A. Right. So Leapfrog imputed a score for Delray for hand hygiene of 15 points out of 100.
Q. Yes.

A. So to me it sort of comes down to is that -- we have a score for Delray for that measure. So it's not missing.
Q. And how did Leapfrog pick that score?
A. Leapfrog -- so the reason Leapfrog chose limited achievement is that has always been the bottom performance category and it -- basically, given the lack of information that we have about the hospital's performance in hand hygiene, it felt like that was the appropriate score to give, given the absence of information that would tell us something otherwise, that they were performing on a higher level.
Q. So is the assumption that Delray is performing at the lowest level for hand wipe -- hand hygiene?
A. Given the lack of other information from them, that is our assumption.
Q. One of the things that hand hygiene evaluates is whether a hospital has a handwashing policy, right?
Let me strike that.
One of the things that the survey asks about handwashing is about handwashing training. Are

you aware --
A. Correct. Yes.
Q. Do you have any knowledge of any hospital that does not train doctors and nurses on hand hygiene?
MS. LAWSON: Object to form. You can answer.
BY MR. CRAIN:
Q. Your knowledge.
A. There are -- to be clear, what's asked in this survey isn't just about training. It's the way that the training is done, who is trained, and that was not necessarily universally done across all hospitals. So it extends just beyond training employees.
Q. Okay. Fair enough.
So coming back to this document again, so the four imputed measures, do you agree that they are process measures?
A. They are considered either process or structural measures.
Q. But in terms of -- I understand that Leapfrog puts its measures into two buckets, process or structural or outcome. Is that right?

A. Correct.
Q. They all fit the process or structural, right?
A. Correct.
Q. There are also three others, three other process measures that when a nonreporting hospital is graded are left out of the scoring methodology, right?
A. Can you clarify that?
Q. Yeah.
Are you familiar with safe practice one?
A. Yes.
Q. And can you remind me what it is? If you don't, I can pull it out.
A. Yeah, it's like leadership.
Q. Yeah. And are you familiar with safe practice two?
A. Yes, which is culture measurement.
Q. And are you familiar with total nursing care per patient hour?
A. Yes.
Q. Those are the three measures that -- for nonparticipating hospitals that do not go into the

grade, correct?
A. Those are not imputed, correct.
Q. Those are not imputed. They're just discarded, right?
A. They are ignored, and their relative weights are assigned proportionately to the others.
Q. Redistributed, right?
A. Redistributed.
Q. Yeah. I don't mean to put words in your mouth, but I think it's the word I've seen.
So then those are process and structural measures, too, right?
A. Correct.
Q. So that's seven, right?
A. Correct.
Q. Okay.
And just to be clear, this document doesn't say -- this is the Leapfrog website. I'm looking at it again. Hospitals missing more than six process measures are not graded. That's what it says. It doesn't say hospitals -- strike that.

We just walked through Leapfrog does not have data for seven process measures, right?
MS. LAWSON: Object to form. You can answer.
THE WITNESS: Okay.
BY MR. CRAIN:
Q. If you're confused, I can rephrase. Let me build it up.
So we talked about the four imputed measures, right?
A. Correct.
Q. We talked about the three what I'll call discarded measures, correct? Do you understand what I'm saying when I say that?
A. Yeah, I know the three you're referring to.
Q. And they're all process or structural measures, right?
A. Correct.
Q. And there are seven of them?
A. Correct.
Q. And yet this document tells consumers that hospitals missing more than six process measures are not

graded. Do you see that?
A. That is what the document says.
Q. And can you tell me again why that's accurate?
A. For me, it comes back to the question of is it an imputed score, a score, or is it missing. And I would argue it's a score. So for those four imputed measures, those hospitals have scores. They aren't missing data.
Q. Aren't missing data even though Leapfrog has no data for those scores?
A. Even though Leapfrog does not have any information that was reported by the hospital through the Leapfrog Hospital Survey.
Q. Okay.
Okay. All right. Let's keep going. I want to also talk about -- let's see if it's on this page.
MR. CRAIN: Can we go to tab 65. This will be Exhibit 9.
(Exhibit No. 9 was marked for identification as of 9/25/2025.)

BY MR. CRAIN:
Q. So Dr. Austin, I've been giving you a document. This one has, fortunately, a URL at the bottom. Do you see that?
A. Uh-huh.
Q. And has page numbers, fortunately, too.
Do you recognize this document?
A. I do not.
Q. Okay. Do you have a general sense just from looking at it what it purports to be at least?
A. Yeah, I do.
Q. Okay.
So I'll represent to you -- and you can see on the URL at the bottom we pulled this off of hospitalsafetygrades.org, which we talked about earlier that's one of Leapfrog's websites, right?
A. Uh-huh.
Q. And this is a frequently asked questions page. Do you see that?
A. Yes.
Q. Okay.

And I want to talk through a few things on this document. First I want to start with there is a "why." "Why should people" -- yeah. "Why should people worry about a hospital's patient safety. Aren't all hospitals the same?"
Do you see that on page 2?
A. Yes.
Q. And if you go down to about midway down the paragraph, it says "and all." Do you see that?
A. Uh-huh.
Q. And it says: "And all hospitals are not the same. Some hospitals are much safer than others. Johns Hopkins Medicine researchers estimate that patients are twice as likely to die of a preventable problem at a "C," "D," or "F" hospital than an "A" hospital, and over 50,000 lives would be saved if all hospitals performed the way "A" hospitals did."
Do you see that?
A. Yes.
Q. And I know you didn't write this, but do you have any reason to think you are not the Johns Hopkins

researcher?
A. No, that is me.
Q. And do you have any reason to think that's not referring to your white paper?
A. I have no reason to believe that it does not refer to the white paper.
Q. And tell me, just so we're on the same page, what is the white paper to which this is referring?
A. The white paper that -- so we, in 2016, did a white paper that was referred to as "lives lost, lives saved." And in 2019, we did an update to that. So I don't know -- I believe this is referring to the 2019 updated white paper.
Q. And the 2019 updated white paper did not analyze "A," "B," "C," "D," and "F" hospitals under the current methodology, right?
A. No. They were -- that was done through -- I would have to go back and look at the document but probably based on like the Fall 2018 safety grades. I don't -- yeah. I think we put it out in 2019, but I think it may have been Fall of 2018 that we actually

used.
Q. And have you published any estimates of that patients are twice as likely to die of a preventable problem at a "C," "D," or "F" hospital than an "A" hospital based on the 2025 methodology?
A. No, we have not.
Q. Do you have any understanding as to whether that is correct today, or you just don't know?
A. We have done some early analysis around this based on 2025, and these statements would remain true.
Q. Okay. Based on that early analysis?
A. Correct.
Q. Okay. And when did you conduct that analysis?
A. We started that back in March, April, somewhere in that time frame.
Q. Okay. And so even though this is referencing the 2019 white paper and the prior methodology, you're saying based on the current imputed methodology the twice as likely to die language is still correct?
A. Yes, I would stand by that.
Q. You would stand by it or you do?

A. I do.
Q. Okay.
And how did that analysis transpire?
A. Transpire? Can you clarify?
Q. How did it come to -- how did you -- why did you conduct that analysis?
A. Yeah. So The Leapfrog Group asked that we look at doing an update from the 2019 in 2025. So it was an effort to follow through on that request and to provide an updated analysis of where we're at.
Q. And have those analyses been released publicly yet?
A. No.
Q. Okay, and why is that?
A. We -- you would have to ask The Leapfrog Group on their decision and timing on that.
Q. Okay.
And you've not -- have you drafted a new white paper?
A. I have started working on drafting a new white paper. I have not finished that.

Q. Okay. Do you have any sense of when you're going to publish that?
A. I don't have a sense of it.
Q. How far into the drafting are you?
A. I don't know how to estimate that. I mean, it's actually updating the 2019 white paper. So I've gone through at this point and made notes on which values need to be updated, where we need to update tables, but all that work would still need to be done.
Q. And is your analysis, would you say, an apples to apples analysis between what you're doing today and what was done in 2019?
A. It mirrors the spirit of what we did in 2019 in that the measures themselves have changed between 2019 and now, but the approach of how we've estimated lives lost and lives saved has remained consistent.
Q. And can you explain generally what that approach is?
A. Yes. So what we've done is we have -- to estimate the lives lost for looking at "A" hospital as an aggregate, "B" hospital as an aggregate, "C" an

aggregate, and "D" and "F" hospitals an aggregate, we look at the mean incidence rates of each of the patient safety events that are included in the Hospital Safety Grade. And from the literature, we've identified an attributable mortality rate to each of those events.
So as an example, for central line associated blood stream infections, one in every seven patients who acquires one in the hospital passes away from that. So if you are in a hospital that has a higher rate of those, your risk of dying from one of those increases.
And so we apply that against the admissions that are in each of those buckets, so "A" hospitals, "Bs", "Cs", "Ds", and "Fs" to estimate the number of lives lost due to the preventable medical mistakes that are included in the Hospital Safety Grade.
And we estimate. Let me put that word out there very clearly. It's an estimate of the number of lives that are lost.
Q. And why do you emphasize estimate?
A. Because we're -- for example, one assumption

that we have to make is the attributable mortality rate, right. We're using that same rate in all four buckets, "As," "Bs," "Cs," "Ds," and "Fs." The reality is we might actually see that "A" hospitals have a lower mortality rate when a patient develops a CLABSI than, say, like a "D" and "F." But we're assuming that that mortality rate is similar across all hospitals.

Q. Got it. Okay. Okay, we'll come back to that a little bit more.

Okay. So then I want to go back to this FAQ just before we go into other topics.

A. Sure.

Q. I want to talk about -- let's see. I lost the question. Oh, here it is, page 3. It says: "Does a hospital get a better safety grade if it reports to the Leapfrog Hospital Survey?" Do you see that?

A. Uh-huh.

Q. And it says: "The Hospital Safety Grade reflects how well a hospital does on safety, not whether they complete the Leapfrog Hospital Survey." Do you see that?

A. Uh-huh.

Q. And just one question on this line. Do you believe, as, you know, familiar as you were with the methodology, is that accurate with respect to nonparticipating hospitals?

A. There are nonparticipating hospitals that have received "As," "Bs," "Cs," "Ds," and "Fs."

Q. And do you think that is -- the Hospital Safety Grade reflects how well a hospital does on safety, not whether they complete the hospital survey. Do you agree with that statement?

A. I do agree with that statement. I think transparency is an important component of safety.

Q. Okay. Why do you say that?

A. Yeah. So hospitals that are choosing to share their data through the Leapfrog Hospital Survey are making that information transparent, and I think that does tie to a safety culture of one where we want to make information publicly available, hold ourselves accountable. So I do think there is a link between transparency and safety.

Q. Have you conducted any analysis to assess whether hospitals that do not participate in the Leapfrog survey are actually less safe than hospitals that do?

A. Not that I can think of.

Q. Okay.

MR. CRAIN: I'm going to shift gears. Everybody good on time? I'm going to switch topics. You good?

BY MR. CRAIN:

Q. So I want to talk about the development of the imputation models. So I'm going to focus you on the 2024 period. Is that fair enough?

A. Yep.

Q. Okay.

So in April 2024, the expert panel met to discuss, among other things, imputation model. Do you recall that meeting?

A. That sounds correct. I know we had a meeting with them, and I think that was the timing of when we talked about that topic.

Q. Yeah. And I'll get you a document.

MR. CRAIN: Can we get 32A, just to ground the discussion. This will be Exhibit 10.

(Exhibit No. 10 was marked for identification as of 9/25/2025.)

BY MR. CRAIN:

Q. Dr. Austin, do you recognize this document?

A. Yes.

Q. Okay. And this is an email thread leading up to before and after I think the April 12th, 2024, expert panel meeting. Do you see that?

A. Yes.

Q. Okay. And I want to just start at the -- where is the attachment?

MR. CRAIN: Do we have the slide deck? 32 I need also. Sorry. We have them separately.

So let's look at the deck, which was attached to this email, but I think it's separate. This will be Exhibit 11.

(Exhibit No. 11 was marked for identification as of 9/25/2025.)

BY MR. CRAIN:
Q. Okay. So now this is the deck. Do you see that, Dr. Austin?
A. I do, yeah.
Q. Okay. And it's attached to a Zoom invite -- or to a meeting invite you sent on -- at some point but for a meeting at April 12th at 4 to 5 p.m. Do you see that?
A. Yes.
Q. Okay.
And this was for the safety grade expert panel's meeting for I think that year, right?
A. I believe that was the only meeting we held with them in 2024.
Q. Okay.
And so going to the deck, I'm just going to walk through it with you. And if you go to slide two, which is Bates ending 437364 -- do you see that?
A. Uh-huh.
Q. And you lay out three topics, right?
A. Uh-huh.
Q. The first topic is update on swearing DHA

military treatment facilities.
(Whereupon, the court reporter seeks clarification, which colloquy will not be captured on the written record.)
BY MR. CRAIN:
Q. The second is feedback on reevaluating imputation model, and the third is feedback on two possible new outcome measures.
Do you see that?
A. Yes, I do.
Q. Okay.
And I want to focus on the middle one. So if we can skip to what is page 7366 [sic].
A. Uh-huh.
Q. Now, do you see this slide is entitled "Problem that We are Working to Solve?"
A. Uh-huh.
Q. And I want to just go back to the prior exhibit. Well, I'll ask before we go there. Do you recall who drafted this slide? If you don't, I can refresh you.

A. I believe I actually am the one who probably drafted this.
Q. Yeah. So if you look at the prior exhibit --
A. Uh-huh.
Q. -- this is Exhibit 10.
A. Uh-huh.
Q. On page 74782, do you see that?
A. 782, yes.
Q. And there's an email at the bottom from you to Ms. Campione, Ms. Danforth, and Ms. Joshi. Do you see that?
A. Yes.
Q. And it goes to the next page. And you say, "Attached is an updated version of the slides. Alex, these are looking good. I added in a slide at the start of the imputation section that outlines the problems we are trying to solve." Do you see that?
A. Yep.
Q. Does that refresh your recollection as to whether you drafted --
A. Yep --

Q. -- this slide?
A. -- it does.
Q. Okay.
Just remember to let me finish before --
A. I'm sorry.
Q. -- and vice versa, just for Marlene.
So going back to the slide, why did you draft this slide?
A. I thought it was helpful to remind the expert panel of what are some of the challenges we are facing with the current Hospital Safety Grade methodology and why we might want to consider moving in a different direction for imputation.
Q. Okay. And the challenges you're talking about are the two bottom bullets, right?
A. Correct.
Q. Okay. And so the first one is imputed scores have crept up, making imputation a more favorable choice for lots of hospitals and has deincentivized true transparency of performance, right?
A. Correct.

Q. Now, when you say imputation scores have crept up, what's that based on?
A. So the imputation methodology at the time was that it involved -- there was still the historic element of Step 1.
Q. And I'll help you. I don't mean to interrupt, but there's a slide that lays it out if it's helpful to you.
A. Okay.
Q. It's 7369.
A. Uh-huh.
Q. Do you see that?
A. Yep, I do.
Q. Okay. Just in case it's helpful. But go on.
A. So the Step 1 was assigning the most recent scores from the four past rounds of the safety grade, and then Step 2 was actually looking at two different mean performances. And what we had seen was a trend with those scores were creeping up, which incentivized hospitals to not report to the survey and, instead, to take the imputed score.

A. Correct.
Q. But not necessarily empirical evidence of nonparticipating hospitals making the decision not to participate because the scores were going up?
A. I don't remember any evidence in that way.
Q. Okay.
Then the second -- just going back to slide I think it's five, which is 7367 on the Bates number, you see -- so the first bullet we just talked about is primarily a problem with Step 2 in this old methodology. Is that right?
A. Correct.
Q. And the second bullet is about Step 1, right?
A. Correct.
Q. And it says: "Hospitals are using Step 1 imputation, using their individual hospital's historical data as a reason to not report on the current year survey." Right?
A. Correct.
Q. Okay. So tell me a little bit about that issue.

Q. And how did you know it was driving that incentive, that was the reason they were not reporting?
A. That feedback was clear from hospitals. They had verbally shared that with Leapfrog.
Q. With you?
A. Not with me, with Leapfrog.
Q. Did you talk to any hospital that shared that with you personally?
A. No.
Q. Okay.
And who did they share it with at Leapfrog?
A. From what I remember, Missy Danforth.
Q. Any sense of how many hospitals?
A. I don't have a sense of that.
Q. And do you have any other basis of knowledge to support that statement besides what you said about Ms. Danforth?
A. We have -- we numerically had been tracking the mean score. So we did have empirical evidence of that going up.
Q. Empirical evidence of scores going up?

A. Yeah. Leapfrog had seen patterns where hospitals were choosing to report one year, not report the next year, report the next year as a way to sort of keep their scores sort of used in the Hospital Safety Grade without having to report to the survey every year.
Q. And what was your understanding of why those hospitals weren't reporting every year?
A. I can't speak to why the hospitals were choosing not to report.
Q. You have no understanding?
A. I have theories but I don't -- I haven't had conversations with hospitals specifically about their decision not to report.
Q. So same thing with respect to Step 1 -- 2 that we just talked about, right? You said you --
MS. LAWSON: Object to form.
BY MR. CRAIN:
Q. Yeah, let me fix it.
So you said I have theories but I haven't had conversations with hospitals specifically about their decision not to report. That goes for either

decision not to report about Step 1 or Step 2, right?
A. That is for me personally I never had conversations with hospitals about that.
Q. And did you ever have conversations with Ms. Danforth about the hospitals that are deciding not to report in the Step 1 context?
A. Yes.
Q. Okay. Tell me about those conversations.
A. So that was a similar point of feedback, that she had had conversations with hospitals who had indicated -- Leapfrog also has regional leaders, which you may be familiar with. I think the regional leaders were also hearing from hospitals that, oh, yeah, we're not going to report this year because our scores still get used in the Hospital Safety Grade.
So there had been sort of a current of we're choosing to bypass transparency.
Q. And was that in relation to the burden of completing the survey?
A. That's what I can't speak to.
Q. So you have no knowledge about the why?

A. I don't have any firsthand knowledge of the why.
Q. Do you have any secondhand knowledge about the why?
A. My secondhand knowledge would be burden would be a consideration.
Q. Okay. And when you say "burden would be a consideration," what do you mean by that?
A. So what I hear from hospitals generally, not specific to this, is that at times, they feel like they need to prioritize other quality improvement efforts and may make a decision on where those priorities exist from year to year.
Q. And when you say what you hear from hospitals, that's not firsthand, right?
A. That has been firsthand, yes.
Q. So you do talk to hospitals?
A. I do talk to hospitals, not specifically about whether they are reporting every year or every other year.
Q. Okay.

A. I have had conversations with hospitals -- well, I guess I have had conversations with hospitals about their decision to pause reporting.
Q. Okay. How many conversations, approximately?
A. Five to ten through ten years.
Q. Okay.
And have you had conversations with hospitals about this imputation methodology at all at any time?
MS. LAWSON: Well, I just want to object to form.
Just to clarify, the imputation -- this imputation methodology, are you asking about the current 2024?
MR. CRAIN: Yes.
MS. LAWSON: Yes. So just to clarify that.
THE WITNESS: I do not believe I've had any conversations with hospitals about that.
BY MR. CRAIN:
Q. Okay.
So your knowledge today about hospitals'

decision-making with respect to reporting onto the survey primarily comes from Ms. Danforth?
A. That would be a fair statement.
Q. Okay.
Okay. So going back to the deck, there's a number of tables, and I want to go to slide -- it's the slide with your proposal. Oh, here we go. Slide 13, which is 7375.
A. Uh-huh.
Q. And this is the proposed future imputation methodology. Do you see that?
A. Yes.
Q. Okay. This is not the methodology that Leapfrog ultimately adopted, right?
A. Correct.
Q. Okay. Was this the methodology discussed at the meeting?
A. Yes. This is what we put forward to the expert panel.
Q. Okay. And you received feedback about this proposal?

A. Correct.
Q. Right.
Okay. And just generally, can you explain what the proposal was?
A. The proposal was that we would basically move to a single form of imputation which would be the -- that we would use Step 2b imputation for all hospitals.
Q. And you would -- to your point, a single form of imputation, that's the retire Step 1 bullet?
A. Correct. We would retire Step 1, and we would move all hospitals to Step 2b.
Q. Okay. And which is 2b?
A. 2b, as it's described here, is that hospitals would be assigned to cohorts and then the means of scores from the first year of reporting would be used to calculate the means.
Q. Okay.
A. And then the hospital would be assigned that mean.
Q. Got it. Okay.
And then I just want to go -- so that was

the proposal you put out, correct?
A. Correct.
Q. And it was not the one that was adopted?
A. Correct.
Q. And we'll get to the why, but before we do that, if you could go one slide back, slide 12.
A. Uh-huh.
Q. You see it says: "A slight dip in survey participation occurred this past year as hospitals opted to use past survey results in Step 1 imputation." Do you see that?
A. Correct.
Q. So what is that based on? How did you know that the slight dip was caused by hospitals using past survey results in Step 1 imputation?
A. That is probably more just a -- based on conversations that Ms. Danforth had had with hospitals. I don't know if that's -- if we have anything empirically to back up that statement.
Q. Okay. So you don't know whether that's accurate or not?

A. I don't know whether that is -- yeah, correct.
Q. Okay.
So I want to talk a little bit about the meeting itself. Do you recall whether other expert panelists proposed alternative imputation methodologies?
A. I really don't remember the details of that call.
Q. Okay.
Do you remember who was on it?
A. We have meeting notes of -- from that meeting, but I don't recall who exactly was on that call.
Q. Okay.
So I want to go to tab 33. This is a document I don't think you've seen before, so I'll just preface that so you know.
A. Okay.
MR. CRAIN: And this will be Exhibit 12.
(Exhibit No. 12 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. It's huge. I'll walk you through it. So are

we good?
A. We're good.
Q. Okay.
So if you look back at exhibit -- the exhibit with the email, which I think is Exhibit 10.
A. Uh-huh.
Q. Okay?
Do you see at the top there'd an email from Ms. Campione to you?
A. Uh-huh.
Q. And it says, "Here is the link to the recording if you need it for notes. Please let me know if you have any issues with it."
A. Uh-huh.
Q. And it gives a URL and password, right?
A. Uh-huh.
Q. So the expert panel meeting was recorded?
A. Correct.
Q. Was that typically how it was done?
A. Yes.
Q. Okay.

And do you recall watching the video of the recording at any point?
A. I did not.
Q. Okay. Do you recall reviewing a Zoom transcript at any point?
A. I do not.
Q. Okay.
So I will represent to you this, what you have in front of you, is a certified transcript of that recording --
A. Okay.
Q. -- just for discussion purposes. And so I want to just walk through a couple of things with you. So -- and I know you haven't seen this before, so I'll walk you through it.
So if you go to the back of the document, there's an index. Do you see that?
A. Uh-huh -- yes.
Q. Sorry. Yes?
A. Yes.
Q. Okay.

So the index, I want to just focus on a few things. If you go to page 9 and you go to "L," do you see the word "limited" appear on the index?
A. I do not.
Q. And I want to go to the word A -- excuse me, to the portion of the index for "A." Do you see the word "achievement"?
A. I see achieving but not achievement.
Q. Okay. And where is achieving? There it is. Do you want to -- let's flip to 36.3. So page 36, line 3. Tell me when you're there.
A. I am there.
Q. And it says: "But achieving consensus is difficult." Do you see that?
A. Yes.
Q. So that doesn't refer to limited achievement, right?
A. It does not use that phrase.
Q. So based on this index, and to the best of your recollection, did anybody at any time during the meeting raise the idea that you could impute limited achievement

scores to nonparticipating hospitals?
A. I don't remember what was exactly said. I would not be surprised if the Hospital Safety Grade expert panelists weren't familiar with the term "limited achievement."
Q. Sorry. Say that again. I think that was a double negative.
A. I would not be surprised if the Hospital Safety Grade expert panelists were not familiar with the term limited achievement.
Q. Got it. Okay.
Is there another term they might use?
A. They might have used lowest performance score.
Q. Okay. What about zero?
A. It's possible that zero could have been mentioned.
Q. Okay.
So I want to go to zero, too, in the index, just to close that loop.
MS. WOOD: And Lee, I do just want to object to form. I've never seen this document before either. Has

this been produced in discovery?
MR. CRAIN: It is being produced today.
MS. WOOD: Okay. And when was it -- was it prepared on September 11th?
MR. CRAIN: I do not know the date, but we can talk off the record. So your objection is noted.
BY MR. CRAIN:
Q. So do you see zero, Dr. Austin, in the index?
A. Uh-huh.
Q. Okay.
If you go to 40, it said -- in the index, it said line 7, 7 to 11. Do you see that?
A. Yes.
Q. And I just want you to look at this page from, say, line 6 to 11. Does this reflect anybody proposing to impose a zero score for nonparticipating hospitals?
A. No, it doesn't.
Q. Okay.
Okay. So is it accurate to say that no one suggested, based on the index, based on your memory, that imposing a zero score for nonparticipating

hospitals?
MS. LAWSON: Object to form.
THE WITNESS: I honestly don't remember the conversation.
BY MR. CRAIN:
Q. Okay.
A. I will clarify that what has been assigned is not zero to hospitals.
Q. I understand.
So do you remember any other proposal made during the expert panel meeting besides the one that you proposed in the slides that we looked at?
A. I don't remember.
Q. Okay.
So I'll take you to one other that is in here. Do you recall -- who is Dr. Pronovost, Peter Pronovost?
A. He is one of the Hospital Safety Grade expert panelists.
Q. Okay. And you worked with him previously at Armstrong, right?

A. Correct.
Q. Okay.
Now, he proposes -- if you go to pages -- if you go to page 25 --
A. Uh-huh.
Q. -- oh, wait. Sorry. Page 26.
A. Uh-huh.
Q. And you see at line 18 it says Peter Pronovost and colon?
A. Uh-huh.
Q. And he says, "Peter Pronovost: Missy, though, to Arjun's point, I wonder in our model do we include that if they're in the lowest quartile, that they stay in that? You know what I mean? At least to reduce the gaming."
Do you recall him saying that?
A. That's what it says here.
Q. Yeah. Do you have any independent --
A. I don't remember.
Q. Okay.
Do you know generally what that means, the

lowest quartile?
A. I would need to go back further up in the document --
Q. If you want to take a look and --
A. -- to understand what the context was --
Q. Yeah, why don't you go back to page --
A. -- because I don't know what the discussion was at that point.
Q. Go back to page 24 and start with Dr. Srinivasan.
Who is Dr. Srinivasan?
A. He's at the Centers for Disease Control and Prevention.
Q. Okay. And take a second.
(Witness peruses document.)
THE WITNESS: So I've read it. And can you repeat your question?
BY MR. CRAIN:
Q. Yeah. I wanted to know if you have an understanding of what Dr. Pronovost was referring to when he's talking about the bottom quartile. And I

think Dr. Srinivasan talks about the bottom quartile, too. And I will also preface, if you don't remember, I can show you an email subsequently about the bottom quartile, but I wanted to know if you have an independent recollection.
A. I don't have a recollection of that.
Q. Okay. That's fine. It's not a memory test. Again, we'll get to another document. I'm just going through this.
I want to look at one other quick thing in the index. If you go to "W," do you see the word "willing"?
A. I do.
Q. Let's see. Where is it?
A. Oh, no. I don't see it.
Q. Yeah, I didn't see it.
Just to confirm, do you see the word "willing" in the index?
A. I do not.
Q. Okay.
Do you know what the phrase "willing to

report" means?
A. That is the term that Leapfrog used prior to limited achievement.
Q. Okay. So that was the lowest performing score, right?
A. That was the phrase that was used for that in the past.
Q. Okay. Do you recall when it was retired?
A. I could estimate 2018, 2019, somewhere around there.
Q. And just -- I'm representing to you that the index is from a certified court reporter. Based on this index, the phrase "willing to report" or even just the word "willing" was not discussed at this meeting, correct?
A. I do not see the word "willing" in the index.
Q. Okay.
And you have no independent recollection of a discussion of the phrase "willing to report" at the meeting, right?
A. I do not.

Q. Okay.
Okay. I'm going to set this aside, and we'll come back to it, so don't lose it.
(Whereupon, a discussion was held between counsel regarding lunch schedule, which portion was not included in the written record.)
BY MR. CRAIN:
Q. Okay. So let's keep going.
So you mentioned there were minutes after the meeting, right?
A. Correct.
Q. I want to start with tab 33A, which will be Exhibit 13.
(Exhibit No. 13 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. So Dr. Austin, do you recognize this document?
A. I recognize the meeting notes that are behind it.
Q. Behind it. Okay.

A. And I recognize the email.
Q. Yeah. Okay. So you have no reason to think this wasn't sent and received?
A. Correct. Yes.
Q. Okay.
And you'll note in the bottom it's an Armstrong-produced document, right?
A. Correct.
Q. So it's an email originally from the 16th from Preeti Joshi. And remind us, who is she again?
A. Preeti is an analyst that works for me.
Q. Okay. And she works on the Leapfrog account?
A. Correct.
Q. Okay.
And she says first in that email, "Matt, please review the attached Leapfrog Hospital Safety Grade HSG" -- is that Hospital Safety Grade?
A. Uh-huh. Correct.
Q. -- "expert panel meeting notes, and let me know your suggestions."
Then she follows up, right?

A. Correct.
Q. And she says -- it looks like it's a few hours later that same day, April 16th -- "Matt, please disregard the attachment of previous email and consider the attached document for review. I accidently attached a different file with previous email."
Do you see that?
A. Yes.
Q. Okay.
And then going on to the notes, this is, fair to say, her draft of the notes, right?
A. Correct.
Q. Okay.
And then just stepping back, does every expert panel, safety grade expert panel have meeting notes like these?
A. Yes. Could there be one or two for which we just somehow didn't do them? Possibly. But the intent is, yes, to have meeting notes like this.
Q. And is this the normal process where the person who is reporting to you starts the first draft and you

revise?
A. Correct.
Q. Okay. And do you generally try to be accurate with the meeting minutes?
A. Yes.
Q. Okay. What do you look for when you revise?
A. I look for accuracy. I try to highlight broader themes. So as an example, often when the analyst first starts working with me, the notes will be incredibly, like, detailed. Sara said this. Bob said this, right. So I try to sort of move it up a level, right, and I try to be clear with sort of action items of what we need to do next and to be clear with decision points.
Q. Okay. And you still try to be faithful to the discussion, right?
A. Correct.
Q. Okay.
So I'm going to set this one aside, and I want to go to your version of the notes. Let's see. Oh, wait. Come back. Sorry. Sorry. Let's start with

this. I'm all out of order.
Okay. So if we go down to Preeti's version of the notes, do you see number two?
A. Uh-huh.
Q. Proposed changes to the imputation model, right?
A. Uh-huh.
Q. And if you go, it looks like one, two, three bullets down, it says "Peter asked."
A. Uh-huh.
Q. "Peter asked whether Leapfrog has a way to keep the low-performing hospitals in the lowest quartile using this Step 2 imputation model." Do you see that?
A. Uh-huh.
Q. Okay. Was that what we looked at in the transcript a little while ago?
A. I don't know because I actually didn't fully follow what Peter was trying to ask there.
Q. Okay. Got it.
A. To be really, really honest, I -- it didn't make much sense to me.

Q. I've been trying to understand it, too, so I get it.
Does this seem like a fair articulation of what he was saying in the call?
A. If it's in the notes, I would say it's probably a fair articulation, but I don't remember that myself.
Q. Okay.
Now, just to be clear, looking at this, there is no indication -- and you can read the bullets. They're pretty short -- that anyone was proposing giving hospitals a zero or limited achievement or willing to report, right?
A. Can you repeat your question, please?
Q. Yeah.
Is there any indication in these notes that someone raised the idea during the meeting of giving nonparticipating hospitals a zero or limited achievement or willing to report for the imputed measures?
MS. LAWSON: Object to form, but you can answer.
THE WITNESS: It doesn't necessarily explicitly

say that in these notes.
BY MR. CRAIN:
Q. Okay.
You say "explicitly." Do you have a reason to believe those topics were discussed?
A. There was concerns about -- that Arjun raised about a hospital that was performing very poorly and that they would actually get an imputed score, so a better score than what they would actually be -- so to me that seems to be raising the question of whether the current imputation model was rewarding poor performing hospitals.
So, I mean, there could be an interpretation of that.
Q. So you said the question was raised. My question is was the answer provided, proposed answer?
A. I don't remember.
Q. Okay.
And do you see anything on this page from what you read a few minutes ago from the transcript to suggest that those solutions were proposed that I just

mentioned?
A. I don't see anything here that would indicate that the actual solution that we landed on is what was explicitly proposed by the expert panel.
Q. Okay. Let me ask you this question. Who proposed the solution that you landed on?
A. I don't recall with certainty.
Q. Okay. Do you think it was Leapfrog, or do you think it was the expert panel?
A. I'm guessing it was Leapfrog that proposed that solution based on the concerns that the expert panel was raising.
Q. Got it.
So to your framing before, the question was raised and Leapfrog was supplying an answer?
A. Is your question during this call?
Q. During this period. April 2024 --
A. I don't remember with certainty how the solution that is currently in use was developed.
Q. Okay.
I want to also take a look a couple bullets

down. It says, "Matt mentioned." Do you see that?
A. Uh-huh.
Q. And Matt, I take it, is you?
A. Correct.
Q. "Matt mentioned it is important to see whether there is an actual difference in hospitals' performance and whether there is some sort of bias in the measurement against them. He said to minimize the second, and if there are differences in hospitals' performance, we can address the structural issues to fix them."
Do you see that?
A. I do.
Q. So taking that one by one, what does the first sentence mean?
MS. LAWSON: Might it be helpful for him to just review the transcript of what he said?
MR. CRAIN: Yeah. I'm pulling that out now.
THE WITNESS: That would be helpful.
BY MR. CRAIN:
Q. But you know what, let's start with this

document and what's your understanding of this sentence, and I'll try to find a line.
A. It's unclear to me what "them" is referring to in this sentence. Like, I don't have the context to remember what "them" is. To me, I was suggesting that, perhaps, we needed to look at difference in performance between -- yeah, I don't have a great sense just from --
Q. I can take you where the -- if you go back to the transcript, page 27 is where you talk about bias.
MS. LAWSON: And you might want to just start from the page preceding, which is the page we reviewed previously, and just keep going on the discussion. I think that might help.
(Witness peruses document.)
THE WITNESS: The context from the transcript is such that we were talking about safety net hospitals and some sort of concerns about bias in measurement for those safety net hospitals.
BY MR. CRAIN:
Q. Only for them?
A. That is the context that Kathy McDonald had

brought up was the safety net hospitals.
Q. Fair enough. I get that she says that from lines 3 to 11 on page 27, but you follow up, and you say, "I think where I struggle is what is a true -- well, where is there a true difference in performance, right, and where is there some sort of bias in the measurement against them. Right?" And then Kathy says, "Right." And then you say, "And I think we want to minimize the second."
And so I guess the question I have out of that is what does bias mean in that context?
A. Bias would refer to that there is some sort of -- that there is some sort of structural -- I'm trying to think of the right words for this. That there is some sort of structural sort of -- there's something structural about safety net hospitals that disadvantages them.
Q. So you're talking about bias about the hospitals or bias about the scoring methodology?
A. The bias in the hospitals. And I say that because I think on the next page I talk about that

marginalized communities tend to receive care at less safe hospitals. So I think the concern is that there is a bias against safety net hospitals in terms of quality and safety.

Q. So this doesn't refer to bias in the survey -- in the scoring methodology -- excuse me -- against safety net hospitals?

A. I believe what this is referring to is actually the bias in the challenges that safety net hospitals face to prioritize quality and safety of care.

Q. And how does that factor into the imputation methodology?

A. So safety -- well, to be clear, safety net, there is no formal definition of that. If they are a critical access hospital, they don't receive a Hospital Safety Grade.

Q. What is a critical access hospital?

A. Critical access hospital, there is about 1,400 of them in the United States. They're small hospitals that have 25 beds or less --

Q. Got it.

A. -- that are generally in rural areas and for which the funding from the government is different, basically to keep their doors open, and they are generally in small, rural communities.

Q. And so I get there is no definition of safety net hospital. What's your general understanding of what that means?

A. One definition that I commonly use is it's hospitals that care for greater proportions of patients who have Medicaid as their primary insurance.

Q. Got it. And they can be for-profit or nonprofit hospitals?

A. Correct.

Q. Okay. And so what type of -- so how does the safety -- how does the imputation -- like, how does that fact -- let me state the question in a real way rather than stuttering way.

How does the safety net bias that you're talking about here relate to the imputation methodology that was the topic of the agenda here?

A. I believe what Kathy is looking at is -- was

looking at some of the safety net hospitals and just making sure that they were going to be treated fairly.

Q. Okay. And is that -- is a difference in the safety net hospitals, as compared to non-safety net hospitals, their capacity to complete the survey?

A. I couldn't speak to that.

Q. Do they have fewer resources than non-safety net hospitals?

A. They typically are more resource constrained hospitals than larger hospitals -- or not larger hospitals, than hospitals that are better funded.

Q. So did you understand Kathy to be saying that she wanted to recognize the burden that they were experiencing as compared to non-safety net hospitals?

A. I don't know if that was what she was implying there.

Q. Okay.

So and then going back to your point about bias, how would the imputation methodology -- strike that. Sorry.

Going back to your point about bias, how

could the imputation methodology take that into account?

A. Which imputation methodology are we discussing?

Q. Any one, whether -- well, how could any imputation methodology take into account the bias that you're identifying here apparently as to safety net hospitals?

A. Well, there's the concern that -- I mean, one potential bias is that if other safety net hospitals are performing less well and you choose to not complete the survey, you're going to maybe get assigned the same value as your average safety net hospital. So that would be one way that a safety net hospital might face a bias.

Q. Okay. But you need the definition of what qualifies as a safety net hospital, right?

A. Correct. And Leapfrog has its own definition that it uses for that.

Q. Is it different from yours?

A. I don't know.

Q. Okay. You have no knowledge of what that definition is?

A. I couldn't say with exact certainty what their definition is.
Q. Do you know in what context they have that definition?
A. They have it in some of their data files because a lot of their data licensees like to be able to drill down on that type of detail, but I don't know what -- how they get that source or what they are using for them.
Q. Okay. Okay.
So going back to the notes, which I believe is Exhibit 13, I want to go back to the bullet. Preeti said, "Matt mentioned it is important to see whether there is an actual difference in hospitals' performance and whether there is some sort of bias in the measures against them. He said to minimize the second, and if there are differences in hospitals' performance, we can address the structural issues to fix them."
Do you see that?
A. I do.
Q. Now, she doesn't mention safety net hospitals

there, right?
A. She does not.
Q. Okay. So -- okay. I'll leave it there.
MR. CRAIN: I think maybe we'll take a break now. Do you want to do the lunch break now?
MS. LAWSON: We're off the record.
THE VIDEOGRAPHER: This marks the end of media unit number three. We're going off the record. The time is 11:49 a.m.
(Whereupon a lunch break was had, after which the proceedings continued as follows:)
THE VIDEOGRAPHER: This marks the beginning of media unit number four. We're back on the record. The time is 12:56 p.m.
BY MR. CRAIN:
Q. Okay. Welcome back.
A. Thank you.
Q. I hope you had a nice lunch.
A. Yeah. Thank you.
Q. So we were talking about the April 12th meeting

before we broke. Do you recall that?
A. Yes.
Q. I want to go back in time just a little bit. The April 12th meeting, if you recall correctly from the notes we saw, was between 4 and 5 o'clock.
A. Correct.
Q. And if you keep the notes out, if you look at the portion where it says the attendees, do you see that?
A. Yes.
Q. Dr. Romano is not on that list, right?
A. Correct.
Q. Okay. And do you recall that -- whether you met with Dr. Romano earlier that day with regard to the safety grade expert panel?
A. I can't say with certainty.
Q. Okay.
A. But I believe we met with him at some point around that meeting.
Q. Okay. And that was -- do you recall who attended that meeting?

A. I don't recall with certainty. I could estimate who I think would be there, but I can't say with certainty.
Q. That's okay. That's okay.
And before we go to -- I'll refresh you with a document, but before we go there, who is Dr. Patrick Romano?
A. So Dr. Patrick Romano is one of the Hospital Safety Grade expert panelists.
Q. And what's his background?
A. He is a physician and health services researcher at the University of California, Davis.
Q. And fair to say he's an expert in something?
A. He is.
MS. LAWSON: Object to form but go ahead.
THE WITNESS: Yeah. He would be perceived as being an expert in quality measurements in healthcare.
BY MR. CRAIN:
Q. And have you worked with him for a long time?
A. Yes, I have.
Q. Did you work with him in the early days when

the safety grade was being developed?
A. Yes.
Q. And was he involved in the development of the first imputation model around 2020, 2021?
A. We worked with Dr. Romano in thinking through different options for the imputation.
Q. Okay. And do you know how long Dr. Romano has been involved in any capacity with Leapfrog?
THE COURT REPORTER: I'm sorry. We just lost connection.
MR. CRAIN: Should we go off?
THE COURT REPORTER: Could we?
MR. CRAIN: Can we go off the record.
THE COURT REPORTER: Just one quick second.
THE VIDEOGRAPHER: This marks the end of media unit number four. We're going off the record. The time is 12:58 p.m.
(Whereupon, the proceedings paused due to technical difficulty, after which the proceedings continued as follows:)
THE VIDEOGRAPHER: This marks the beginning of

media unit number five. We're going back on the record. The time is 1 o'clock p.m.
BY MR. CRAIN:
Q. Great. Okay. We're back after a technical glitch, and I'm going to ask the question that we started before.
So was Dr. Romano involved in the development of the first imputation model around 2020/21?
A. He was. To clarify, that wasn't -- it depends on your definition of what is an imputation model. We had had other imputation approaches prior to '20 to '21.
Q. Fair enough.
Was he involved in the development of that model in --
A. Yes. He helped provide input and guidance.
Q. Okay.
MS. LAWSON: And just make sure that Mr. Crain has finished his question, yes.
BY MR. CRAIN:
Q. And I think I had asked during the technical

glitch, so I'll make sure we get it, how long has Dr. Romano been involved with Leapfrog?
A. Since 2011.
Q. Okay. So he came on after you joined or after you got involved with Leapfrog, let's say?
A. He was part of the Hospital Safety Grade expert panel that was formed in 2011.
Q. When the safety grade was originally being developed?
A. Correct.
Q. Okay.
MR. CRAIN: Okay. So I'm going to mark as Exhibit 14...
(Exhibit No. 14 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. Dr. Austin, do you see this is an Armstrong-produced document?
A. Yes.
Q. And it's an email from you to you. Do you see that?

A. Correct.
Q. Does this reflect notes that you took on April 12th, 2024?
A. It reflects --
Q. I'll direct you to the subject matter, the subject of the email.
A. Yes. It was my notes from the Hospital Safety Grade expert panel meeting.
Q. And do you have a practice of sending yourself notes over email?
A. I do.
Q. Okay. So this is a true and accurate, to the best of your knowledge, copy of your notes from that day?
A. Yes.
Q. Okay.
And on the top, it says: "Patrick recommend keep Step 1." Do you see that?
A. Yes.
Q. Does that refresh your recollection of whether you had a meeting with Dr. Romano on April 12th?

A. As I mentioned, I know we met with Dr. Romano around that time because he was unable to make the primary call, but I don't remember the exact timing of when that was.
Q. Okay.
Do you -- is it correct that these bullets one, two, and three below, "Patrick recommend keep Step 1," reflect your notes from the discussion with Dr. Romano?
A. That would be likely to be true, yes.
Q. Okay. You don't have a specific memory, but that's what the document --
A. Correct.
Q. -- indicates?
A. Yes.
Q. Okay. Again, just let's try not to talk over each other.
Okay. And then the remainder of this email, just going down, do those reflect your notes from the subsequent expert safety grade panel meeting later that day?

A. Yes.
Q. Okay.
That's all we need to talk about with this document. You can set it aside.
MR. CRAIN: Now, I want to go to another document. This will be 15, tab 34.
(Exhibit No. 15 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. And you will see on the bottom this was a deposition exhibit from Ms. Campione as well. Do you see that blue sticker?
A. Yes.
Q. Okay.
So the top email is from you to Ms. Campione, Ms. Danforth, and Ms. Joshi. Do you see that?
A. Yes.
Q. And I want to just go through -- if we could start at the bottom, which is the first email, this will be page -- if you could go to page 8331, the second to

the last page to orient. Good? Are you there?
A. Can you repeat that, please?
Q. Sorry.
Can you go to page 8331, the second to the last page.
A. Yes.
Q. Okay.
And there's an email from Ms. Campione to, among others, you at 12:17 p.m.?
A. Yes.
Q. And the subject is imputation changes. Do you see that?
A. Yes.
Q. So Ms. Campione writes to you and others, "Hi all, please find the table we discussed below. I also included the underlying issues. Please feel free to edit the response to this email." Do you see that?
A. Yes.
Q. Okay.
Do you have a recollection of her sending this email?

A. I do remember seeing that table at the bottom of the email, but I didn't remember the context of the email.
Q. Do you remember seeing it from back then? Do you remember from seeing it more recently?
A. I -- in showing this to me today, I very distinctly remember her sending an email with this table.
Q. Okay. Do you remember -- and you said you don't remember the context. Do you remember anything about why she sent it?
A. I would guess, based on what's here, it was to sort of further refine a potential direction that we would go for the imputation models.
Q. And this was about 10 days after the expert panel meeting, right?
A. Correct.
Q. Okay.
So I want to just go through this chart a little bit just to make sure we're on the same page. Are you looking at the chart on 8332?

A. Uh-huh.
Q. Okay. So "no change" is the left-most column. Do you see that?
A. Yes.
Q. And that's -- is it right that's basically the model you had, right, at the time?
A. Correct.
Q. "Small change" says: "Shorten imputation to past two rounds for Step 1." Do you see that?
A. Yes.
Q. Is that what you ultimately did, or is it "moderate change" that Leapfrog ultimately imposed?
A. Are you asking about recent survey participants?
Q. I'm asking -- yeah, I'm asking about Step 1 for recent survey participants. I'll walk you through it. I'll build it a little more clearly.
Under "small change" for Step 1, it says: Shorten imputation to two past rounds. Do you see that?
A. Uh-huh.
Q. Does that reflect, to the best of your

understanding, an imputation of a historical score in the past two rounds of the hospital survey?
A. Can you repeat that again, please?
Q. Yeah.
To the best of your understanding, does this column, does this "small change" box in Step 1 reflect that you would propose to impute the historical score for a nonparticipating hospital for the past two rounds of the hospital survey? Am I reading that right?
A. That is not exactly my understanding.
Q. Okay. Can you give me your understanding?
A. Yeah. My understanding is what's being proposed is for hospitals that have recently completed the survey, how far of a lookback would we do to see if there was a recent survey.
Q. Got it. And was that different from what I said because I said nonparticipating hospitals?
A. Correct.
Q. Yeah, okay. Let me fix that. That's a fair point.
For hospitals that are not participating

every year, is that a more apt understanding of what the Step 1 is?
A. I would frame it as hospitals that have not submitted the most recent hospital survey.
Q. Got it. But for which there exists a historical survey response?
A. Correct.
Q. Okay.
So on the top in Step 1, small change, you go back to the two past rounds of the survey, right?
A. That is what's being proposed under small change.
Q. Then moderate change is you shorten imputation to one past round, right?
A. Correct.
Q. And is that what you testified earlier -- is that what ultimately Leapfrog did for Step 1?
A. I would have to defer to the methodology --
Q. Okay.
A. -- document on how that gets phrased or framed.
Q. Okay.

What do you think is the difference?
A. Difference from what?
Q. What's your hesitation as to why this is not the same thing as you understand Leapfrog is doing today for Step 1?
A. I guess I'm a little unclear on what moderate change would actually be. So that's where I'm now sort of second-guessing like, well, did we implement moderate or did we implement small change?
Q. Okay.
A. My understanding, putting the words aside, is that what we moved to was the ability for a hospital -- we would look back and see if a hospital submitted a survey last year --
Q. Got it.
A. -- and if we did, we would use that.
Q. Okay.
A. But we wouldn't go any further back than that.
Q. Okay.
A. So I don't know how that translates into these exact words.

Q. Okay.
I mean, I would read one past round to be last year, but I don't know if that's right. You're not sure about that either?
A. I'm not sure about that either.
Q. Okay.
Okay. And then "drastic change" is eliminate Step 1. Do you see that?
A. Yes.
Q. And that you did not do, right?
A. Correct.
Q. But that was the proposal at the April 12th meeting, to retire Step 1?
MS. LAWSON: Object to form.
THE WITNESS: The proposal that we introduced at the Hospital Safety Grade expert panel meeting was to eliminate Step 1.
BY MR. CRAIN:
Q. Yeah. Okay.
Now, in Step 2, if you could just go -- I don't know if you feel more comfortable walking me

through it, or I could walk you through it, but Step 2, the no change, it says: "Impute with the mean of first time scores for their cohort." Do you see that?
A. Yes.
Q. And is that a no change, or is that sort of an adaptation? I had understood the Step 2 to be the mean of first time versus the mean of the cohort generally, right?
A. At the time, the nonsurvey -- so Step 2 was -- yes, it was the lower of the mean of either first time respondents or the mean of the cohort.
Q. Yeah, okay. So slightly different from what the no change says here, right?
A. Correct.
Q. Okay.
And that small change -- there's a no change, which is interesting. Do you see that?
A. Correct.
Q. Okay.
And then moderate change says: "Assign hospitals to the bottom quartile or several standard

deviations below the mean." Do you see that?
A. Yes.
Q. Now, we saw in the transcript that we looked at in the notes the discussion of the lowest quartile. Is this what that's referring to, to the best of your understanding?
MS. LAWSON: Object to form.
THE WITNESS: I would need to re-review the transcript to refresh myself on what exactly the conversation was about lowest quartile.
BY MR. CRAIN:
Q. Okay. I'm trying to think should we do that. Would you like to do that? I'm happy to take you back to it unless you have an understanding.
A. I don't have -- I mean, I saw in the transcript there was conversation about lowest quartile.
Q. Yeah.
A. And there's, obviously, conversation here about bottom quartile. I don't know if those two conversations are the same thing. That's what I don't know.

Q. Okay. So you don't have an independent recollection of whether this column comes from the discussion of the expert panel meeting or not?
A. Correct. I do not have an independent recollection.
Q. Okay.
And then on the last one, the drastic change, it says: "Impute with limited achievement scores," right?
A. Correct.
Q. Okay.
And, again, we looked at the index, and there was no discussion of limited achievement, right, at least based --
MS. LAWSON: Object to form.
BY MR. CRAIN:
Q. At least based on the index?
MS. LAWSON: Object to form.
THE WITNESS: Correct. There was no use of that explicit term.
BY MR. CRAIN:

Q. Yeah.
And there was no use of the term willingness, as in willingness to report, right?
MS. LAWSON: Object to form.
THE WITNESS: Correct.
BY MR. CRAIN:
Q. Okay.
And in the index at least, when we looked at the word "zero," there was no discussion of anybody proposing that nonparticipating hospitals should get zero in Step 2, right?
MS. LAWSON: Object to form. Go ahead.
THE WITNESS: Correct.
BY MR. CRAIN:
Q. Okay.
So let's go up a little bit on this box. And you respond, do you see that, 12:27 p.m.?
A. I --
Q. I can give you a page number if you need it.
A. I do -- yep.
Q. Got it?

A. Yep. I do, yes.
Q. And you said, "Alex, this looks great. I'm wondering do we, one, want to reflect that we're already" -- doing -- "using" -- sorry -- "drastic change for Step 2 for IPS? And, two, do we want to use a different term for drastic change, like large change?"
Do you see that?
A. Yes.
Q. So just breaking that down, number one, can you tell me what you understood yourself to mean when you said: Do we want to reflect that we're already using drastic change for Step 2 for IPS?
A. So as I remember it, we had already moved imputation for IPS to be limited achievement.
Q. And when did that come about?
A. I don't remember exactly.
Q. Okay. And do you remember the basis?
A. The basis is we actually had information from CMS, Centers for Medicare and Medicaid Services, that could tell us whether a hospital operated an ICU. And if they operated an ICU, and they had not submitted

information to the Leapfrog Hospital Survey about their staffing, we were coming to the conclusion that they didn't meet the staffing model that Leapfrog requires.
Q. Got it.
So you made the assumption based on the existence of an ICU that they were performing at a level of limited achievement?
A. To clarify, I'm not sure we were making an assumption. We were -- we had a lack of information about their staffing models. That would be the equivalent of assigning limited achievement.
Q. Got it.
And is that, to your knowledge, communicated anywhere on the Leapfrog website to consumers?
A. I don't know.
Q. Okay.
Is that communicated in the methodology document, that that's why Leapfrog assigns limited achievement for IPS for nonparticipating hospitals?
A. I don't know for certainty.

Q. Okay. Do you want to take a look?
A. I can.
Q. I'm happy to take you there. That's Exhibit 3.
A. That sounds correct.
Q. I wrote them down today.
A. If my memory serves me right.
Q. Do you have it, Dr. Austin?
A. I do.
Q. And if you go to page 10, it talks about the IPS model -- or the measure.
MS. LAWSON: This is for Spring 2025?
MR. CRAIN: Correct.
BY MR. CRAIN:
Q. The IPS, as you testified a minute ago, I think, did not change, right, the imputation methodology?
A. That was my comment back to Alex.
Q. Okay. Yeah.
But to the best of your recollection today, between 2024 and 2025, Step 2 for IPS was always limited achievement, right?

A. Correct.
Q. Okay.
So are you on page 10?
A. I am.
Q. Okay. So just take a look and read the IPS block.
A. Yep. I have, yes.
Q. And does it provide any explanation, the explanation you just gave for why hospitals receive limited achievement if they don't participate in the survey?
A. You would need to follow the last line that says if a hospital didn't submit a survey, you need to look at using secondary data sources.
Q. Okay. Let's go to that page. That's page 15? Take a look. And it's on 15 and 16?
A. Yes.
Q. Yeah. Is there an explanation there?
A. On page 16 there is.
Q. Let's see. Where is it?
A. Note about IPS: Only hospitals that operate an

adult or pediatric medical and/or surgical or neuro ICU are eligible for Step 2 imputation of the IPS measure. A hospital's ICU designation is determined from the number of beds reported on Worksheet 5-3 Part 1 of the hospital's most recent CMS cost report. If your hospital does not operate an ICU but shares a CMS certification number, please contact the help desk.
Q. Sorry. I see that on page 15. You see it on 16?
A. I see it on 16.
MS. LAWSON: I also see it on 16.
THE WITNESS: Under Step 2.
BY MR. CRAIN:
Q. Step 2. Okay.
And your testimony is that language communicates that if a hospital has an ICU and doesn't participate, it automatically gets limited achievement?
A. That is the first sentence under Step 2.
Q. Okay.
A. If the hospital does not have historical data from the last two rounds of the safety grade, the

hospital is assigned a point value that is equivalent to receiving limited achievement for this measure on the Leapfrog Hospital Survey.
Q. And so what you testified a minute ago, though, was that the -- tell me if I'm misunderstanding -- that the assumption is if a hospital has an ICU and is not reporting, it's not meeting Leapfrog's standards, right?
A. We have assigned a score to hospitals. If we know they operate an ICU based on the CMS cost report, and they don't report to the Leapfrog Hospital Survey, we are assigning them a score of limited achievement.
Q. Yes, but that was not directly responsive to my question which was -- and I'll go back just to make sure I say it the right way.
What you said a minute ago was that the assumption is that if a hospital has an ICU, and they are not reporting, that they are not meeting Leapfrog's standards, right? That's what you said.
A. Correct. And then I corrected myself and did not use the word "assumption." That was a poor choice of word there.

Q. Okay. That's what I'm trying to understand.
A. Correct.
Q. Okay.
So maybe you tell me in your words then, because now I'm a little confused by the change, why does a hospital get assigned limited achievement if it has an ICU and does not participate?
A. They receive a score of limited achievement because we know they have an ICU, and we don't have any information that would tell us whether or not they are meeting the staffing models that Leapfrog asks hospitals to have in the ICU.
Q. So why not impose some achievement and not limited achievement?
A. Because the way Leapfrog's standards are set in the survey is there are clear criteria of what needs to be met for some achievement, considerable achievement, and achieved the standard. And if you don't meet the criteria for some achievement, you're in the limited achievement bucket.
Q. But, again, you don't know either way whether a

given hospital is meeting some versus limited or -- I forgot -- the top one, right?
A. Correct.
Q. Okay.
Okay. So let's go back to this document. So that covers IPS Step 2.
The second part says, "Do we want to use a different term for drastic change like large change?" Why did you not like the phrase "drastic change"?
MS. LAWSON: Object to form.
BY MR. CRAIN:
Q. Did you not like the word "drastic change"?
A. I did not like the word "drastic change."
Q. With that now established, why did you not like the phrase "drastic change"?
A. I'm trying to think. It felt -- it felt sensational.
Q. Okay. What do you mean by sensational?
A. I personally think of the word "drastic" as having sort of a sensational connotation, right. It's extreme.

Q. Got it. Dramatic?
A. Dramatic. That would be a better word.
Q. We work with words for a living.
MS. LAWSON: I struggled not to interpose my own.
BY MR. CRAIN:
Q. So did you feel dramatic was inaccurate or it was a problem with the messaging and how it might be received?
A. My concern was the messaging and how it would be received.
Q. Okay.
MR. CRAIN: Oh, I'm sorry. Iason tells me I said dramatic. No, I meant dramatic.
MR. TOGIAS: Oh, you meant it?
MR. CRAIN: Yeah.
MR. TOGIAS: Okay. Sorry.
MR. CRAIN: I meant dramatic.
BY MR. CRAIN:
Q. Let's see. Okay. So let's keep going up. Let me see if there's anything else here. So you see the

chart is revised on page 8330?
A. Yes.
Q. And that, as best I can tell, is just changing to reflect the limited achievement, you know, for IPS, right?
MS. LAWSON: And Dr. Austin, you can read -- feel free to read through the whole email chain if you need that to refresh your recollection.
(Witness peruses document.)
THE WITNESS: Can you repeat your question, please?
BY MR. CRAIN:
Q. Yeah. I'm just looking at 8330, and it looks like the change on the chart is just as you noted before, that IPS was already doing the impute limited achievement.
A. Correct.
Q. So there's no change there, right?
A. That is the only change from the prior chart.
Q. Yeah. Sorry. There's no change to IPS under this chart?

A. Correct.
Q. Yeah.
Okay. Let's set this aside. Keep it at the ready.
MR. CRAIN: Can I get 36. I'll mark this as Exhibit 16.
(Exhibit No. 16 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. So Dr. Austin, do you recognize this document?
A. Yes. It's an email between myself and Leapfrog staff.
Q. You get the hang of it now, these documents.
And you see on the bottom right it's an Armstrong-produced document, right?
A. Correct.
Q. Okay. I want to start -- just go to the bottom again to the first email in the chain, and if you need a minute, take it. Whenever you're ready.
(Witness peruses document.)
THE WITNESS: Yes.

BY MR. CRAIN:
Q. Okay.
So the first email on the bottom is from Ms. Campione, and it's to Ms. Danforth, you, and Ms. Joshi. Do you see that at 5:41 p.m.?
A. Yes.
Q. And the subject is Step 2 imputation scores. Do you see that?
A. Yes.
Q. And she says, "Hi all. I have some bad/good news. The Step 2 scores aren't what we would like. Turns out the hospitals that do the survey perform very well. The BCMA scores below will likely drop with the methodology changes, though."
Do you see that?
A. Yes.
Q. Do you have any understanding today of what she meant by the Step 2 scores aren't what we would like?
MS. LAWSON: Object to form. Go ahead.
(Witness peruses documents.)
THE WITNESS: Where I'm hesitating is my sense

is she was looking at a subset of hospitals, and I don't remember what that subset of hospitals was.
BY MR. CRAIN:
Q. Okay.
Do you remember the purpose of her running that subset?
A. My recollection is it's somehow connected back to conversations with the expert panel about imputation and one of the scenarios that maybe someone suggested we look at, but I couldn't explicitly say which scenario that was.
Q. So we talked a little bit about quartile, right? Do you remember that discussion?
A. Uh-huh.
Q. If you look at the chart right below her text, do you see it says Mean of Bottom Quartile?
A. Yes.
Q. Okay. And it says the CPOE, hand hygiene, and BCMA scores. Do you see that?
A. Yes.
Q. And I'll work you up the email now.

(Whereupon, the court reporter seeks clarification, which colloquy will not be captured on the written record.)
BY MR. CRAIN:
Q. Let's go up. You respond. Do you see that?
A. Yes.
Q. And you say, "Alex, would it be easy to look at the same for first time reporters? We may have to consider the option of just assigning the score for limited achievement, which is actually consistent with how we are approaching IPS."
Do you see that?
A. Yes.
Q. Okay.
Does this refresh your recollection as to what she was running and why she was doing this?
A. Not really.
Q. Okay. It doesn't have to. That's okay.
A. Okay.
Q. Okay. So she responds it looks like five minutes later. She says, "Not too difficult. I would

predict they're just slightly lower." And then you respond at the top, "Thanks. Then maybe not worth the effort."
Do you see all of that?
A. Yes.
Q. Okay.
Do you have any recollection today about why you would say it's not worth the effort?
A. What I interpreted from Alex's statement was that the results wouldn't be much different than what she had originally produced.
Q. And the -- go ahead. Sorry.
A. So it didn't seem worth the analytical effort to update it for something that wasn't meaningful different -- meaningfully different in terms of Leapfrog deciding how it wanted to move forward.
Q. And meaningfully different in this case meaning lower, right?
A. Correct. She indicated that they would be slightly lower.
Q. And you all wanted the numbers to be lower,

right?
MS. LAWSON: Object to form.
BY MR. CRAIN:
Q. You can answer.
A. There were concerns that the mean scores that we had been using for imputation had been going up considerably which created a disincentive for hospitals to actually complete the survey.
Q. Yes. We saw that in the safety grade meeting, right, that there were concerns that imputation scores were creeping up?
A. That was one of the noted -- yeah.
Q. Right. On the slide that you drafted.
A. Correct.
Q. That was one of the bullets, right?
A. Correct.
Q. And in response to that, we saw that Dr. Pronovost suggested a quartile approach, right?
MS. LAWSON: Object to form.
THE WITNESS: Once again, I -- in reading the transcript, it wasn't super clear what Peter was exactly

discussing or suggesting.
BY MR. CRAIN:
Q. Let me phrase it a little bit differently that I hope will be easier.
At the expert panel meeting, in the transcript we saw him say the word "quartile." Fair?
A. Fair.
Q. Okay.
And then 10 days later -- let me just double check. More than 10 days later we have Ms. Campione sending around a chart that lays out, among other things, the mean of bottom quartile. Do you see that? That's on the last page.
A. Yes.
Q. Okay.
But the numbers are too high there, right?
MS. LAWSON: Object to form.
THE WITNESS: I don't know how to respond to that. I mean, all of the data are here.
BY MR. CRAIN:
Q. So let's go to Ms. Danforth's email of

9:11 p.m. This is on page 2128. Do you see it?
A. Uh-huh.
Q. She said, "This is sort of what I was afraid of but somehow more stark seeing the actual numbers. I do think that we need to at least go wider" -- which I understand to mean consider -- "going to limited achievement." Do you see that?
A. Yes.
Q. Okay.
Do you understand what she is saying in this email?
A. My understanding is she was indicating that the numbers aligned with what she thought might be the case and was recommending that we need to consider going to limited achievement.
Q. Okay.
So just to build this out a little bit, at this time, under the methodology that was governing, the imputation under Step 2 was a straight mean, not a lowest quartile mean but a straight mean, right? Do you understand what I mean?

A. It was a -- there were two values that were calculated for each hospital. There was the overall mean and I believe that of -- the first time reporters in the hospital got the lower of those two values.
Q. And the concern was those means were too high, right?
A. The concern was that those means disincentivized hospitals to report into the survey.
Q. Yes. Okay. Because they were too high, right?
A. Because they would give hospitals a lot of credit when they wouldn't have to necessarily demonstrate anything for that.
Q. Okay.
And you say when they wouldn't have to demonstrate anything for that, but do you have any empirical knowledge of whether that credit, so to speak, would have been due as a matter of performance?
A. We don't have any empirical evidence on what a hospital's performance would be when they don't report because we don't actually have those data.
Q. On the measures for which you don't have data,

right? What I mean is you have other data, like CMS data for those hospitals?
A. Correct.
Q. That's all I meant.
So then Ms. Campione runs a different mean, right? The mean in this email is not the mean that you all had been imputing as a part of Step 2 in the prior methodology. Is that right?
A. My understanding is the very bottom table --
Q. Uh-huh.
A. -- where it says current Step 2 means for reference are what the means had been that we were using at the time.
Q. Okay.
And so but the mean in the top part where it says the Mean of Bottom Quartile, am I understanding right that that's taking the bottom quartile of hospitals and calculating the mean of those hospitals?
A. That's what I don't know was what sample of hospitals she was using for that calculation. I don't know if it was all hospitals or if it was a subset of

hospitals.
Q. Okay.
So how would it work to calculate the mean of bottom quartile for all hospitals?
A. I would take the full dataset of hospitals for which we have data, identify the bottom 25 percent, and calculate the mean of that sample.
Q. Okay. And do you have any reason to think that's not what she did?
A. I don't have any reason to think it's not what she did, but I also don't know that is what she did.
Q. Okay. Okay.
Okay. So we can set that aside.
MR. CRAIN: Okay. Let's go to tab 38. This will be Exhibit 17.
(Exhibit No. 17 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. Okay. Dr. Austin, you have Exhibit 17, and you see on the bottom it's an Armstrong document ending 16473?

A. Yes.
Q. And this is an email thread between you and Ms. Joshi, right?
A. Yes.
Q. And this, if you look at the bottom two emails on the first page, that's the emails we saw at a prior exhibit where she's sending you her draft of the notes, right?
A. Yes.
Q. Okay. And you say -- this is on May 14th. Do you see that date?
A. Yes.
Q. So it's a few days after the email we just looked at, which was dated April 22nd. Do you see that?
A. Yes.
Q. Okay. So this is after you've gone through the analysis of the bottom quartile mean. It's after you've gone through that email thread we just saw, right?
A. Yes.
Q. Okay.
In between that period of April 12th and

now May 14th, do you recall any other discussions you had with members of the expert panel about the imputation model?
A. I don't remember.
Q. Okay. You don't -- just to be clear, you don't remember either way?
A. I don't remember either way.
Q. Okay.
So I want to go to the Word document here of the attachment. And do you see -- is it -- these are your revisions to the notes, correct?
A. Yes.
Q. And I want to walk through a few of these. You start by at the top adding Tim Vogus to the attendees?
A. Yes.
Q. Any idea how you remembered he was there a month later?
A. To be clear, I sent the edits back to Preeti a month later.
Q. That's what the email suggests. If you look -- look on page 1.

A. But that doesn't mean I made the edits a month later.
Q. Oh, so I'll represent to you that the metadata shows that these are your changes.
A. Okay.
Q. I'm trying to see if there is a comment, too. No. But I'll represent to you that the attachment shows that you -- like you inserted the track changes.
Do you have any reason to think you didn't?
A. No. I'm wondering about the timing of when I made the edits.
Q. Got it. Okay. That I don't know as well. So you're saying you could have made these edits earlier?
A. Correct.
Q. Got it. Okay.
Do you recall, to do these edits, did you watch the video of the meeting?
A. No.
Q. Okay. So you were going from memory, you think?
A. Yes, and my own notes.

Q. And your own notes. And your own notes, would they have been different from the email we saw earlier where you sent it to and from yourself?
A. No. That was the extent.
Q. So I'm going to skip bullet one, which is on the military treatment facilities again, and I want to focus on your edits to bullet two. Do you see those?
A. Yes.
Q. Okay. And you say, "Matt provided the expert panel with a quick overview of the current imputation model approaches Leapfrog has been using and some of the challenges those approaches have created for issuing accurate grades." Do you see that?
A. Yes.
Q. Okay. And to the best of your recollection, that is an accurate statement of what occurred at the meeting, right?
A. Yes.
Q. Okay.
Then you say, "The current imputation model has two steps when data are missing." Do you see that?

A. Yes.
Q. And I won't read them because we've been through them, but just looking yourself at Step 1 and Step 2, consistent with the slide deck that we saw?
A. Yes.
Q. And then you say, "Leapfrog's proposal was to retire Step 1 of the model and use only Step 2, assigning hospitals the mean score for their cohort." Do you see that?
A. Yes.
Q. And then I want to skip down a bullet that you delete. Do you see that?
A. Yes.
Q. And it says, "Missy gave an example of Stewart Health System and said that Leapfrog's purpose by implementing the Step 2 imputation model is not to penalize hospitals or to motivate them to submit a survey, but they don't want to report hospitals with the highest scores when hospitals are not submitting the hospital survey."
Do you recall why you deleted that bullet?

A. I believe I deleted that bullet because it felt like a little too micro of a note to include in a meeting summary.
Q. Got it. So it was not an edit for substance?
A. Can you define that?
Q. Yeah. Fair enough.
Did you delete it because you disagreed that anything -- with anything in that bullet?
A. No, that was not my reason for deleting it.
Q. Okay.
Then let's keep going. So you then go -- there's a bullet we looked at before. "Matt mentioned it's important to see whether there is an actual difference in hospitals' performance and whether there is some sort of bias in the measurement against them. He said to minimize the second, and if there are differences in hospitals' performance, we can address the structural issues to fix them."
Do you see that?
A. Yes.
Q. And you deleted that one as well, right?

A. Yes.
Q. And similar, not to be so granular in the meetings?
A. Yes.
Q. And then you added a bullet and you say, "The experts' panel were in support of having hospitals share their current performance, so liked the idea of imputing the equivalent of willing to report to hospitals that do not submit a survey."
Do you see that?
A. Yes.
Q. Now, you recall looking at the index of the transcript, right?
A. Yes.
Q. And we saw the phrase "willing" did not appear at least in the index, correct?
A. Yes.
Q. Where did this line come from?
A. So as mentioned, I'm not sure the expert panel would have necessarily used the term "willing to report" in their conversation. I would need to go back to the

transcript, but my guess is that there was communication about putting them in the lowest performance category.
Q. Okay. So the phrase you would be looking for is lowest performance category?
A. Or some context of that.
Q. Okay. And presumably you would want to review the whole thing before committing one way or another?
A. Correct.
Q. Fair enough.
Okay. So to the best of your recollection -- so strike that.
When creating the notes, you would have wanted to be accurate, right?
A. Correct.
Q. Okay. And so just looking at these notes and your edits, your best understanding of these edits is that at some point somebody discussed the concept of giving them the willing to report grade, right?
A. Correct.
Q. Okay.
A. And that others agreed with that point of view.

Q. Okay.
And then just to go back, do you remember the chart we looked at, the drastic change chart?
A. Yes.
Q. You want to look at it again just so we're not -- and that is exhibit --
A. Fifteen.
Q. Fifteen. Let's look at 15. And we can go to the last page, 18332. Do you see that?
A. Yes.
Q. Okay.
And is it your testimony that the bottom right box is the same as this willing to report?
A. Yes.
Q. Okay. And the bottom right box says impute with limited achievement scores, right?
A. Yes.
Q. So your testimony is that at the meeting at least somebody discussed the notion of imputing limited achievement scores, maybe not by that word, and that others agreed, right?

MS. LAWSON: Object to form.
THE WITNESS: From my notes here, it indicates that the expert panel supported the idea of assigning the bottom performance category.
BY MR. CRAIN:
Q. Okay. And do you recall -- strike that.
Okay. You can set that aside.
MR. CRAIN: Let's go to tab 43. This is going to be Exhibit 18.
(Exhibit No. 18 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. All right. This is an email. The top one is from Ms. Binder to Ms. Campione, cc'ing you and Ms. Danforth. Do you see that?
A. Yes.
Q. Okay. And do you recognize this document?
MS. LAWSON: You can take a minute to read through it all.
THE WITNESS: The email or the --
BY MR. CRAIN:

Q. Let's start with the email. Do you recognize the email?
A. Yes.
Q. Okay. You recall it today?
A. Can you clarify that?
Q. Yeah. Do you recall receiving it?
A. I do recall Alex putting together a document with the proposed changes to the methodology that would go out for public comment.
Q. And is that the document, at least in edited form, on page 9813?
A. Yes.
Q. Okay. And do you recall did any members of the expert panel review and revise the document?
A. I don't remember explicitly if we shared this document with them.
Q. Yeah. Okay. I mean -- I'll move on from that. I'll move on from that.
So the attachment, do you see it says Request for Public Comment?
A. Yes.

Q. Do you recall reviewing the document?
A. I don't recall.
Q. Okay. Just your best answer. That's all we ask.
So I want to go -- I'll represent to you on page 9814 these are Ms. Binder's tracked change edits to the documents, and I want to just note a few things that she tweaked. So if you go to the second -- tell me when you're ready. No worries.
MS. LAWSON: The font is so small.
MR. CRAIN: Yeah, it is small. Sorry about that.
BY MR. CRAIN:
Q. Are you good, Dr. Austin?
A. Yes.
Q. Okay.
So if you go to the second paragraph, to ensure, do you see that?
A. Yes.
Q. And I apologize. It's in black and white, too, which makes it harder.

But go down to the third line. The original text said: "The panel recognized that the current imputation method, which is used to fill in missing data among hospitals that did not complete the most recent Leapfrog survey, have influenced hospital survey participation and may no longer be valid."
Do you see that?
A. Yes.
Q. Okay. She changed it to: "The panel advised that Leapfrog modify the current imputation method, which is used to fill in missing data among hospitals that did not complete the most recent Leapfrog survey."
Is that consistent with your recollection of who was advising? Did the panel actually advise Leapfrog to change the methodology?
MS. LAWSON: Object to form but go ahead.
THE WITNESS: The Leapfrog Group has full decision-making authority around its ratings and rating systems and methodologies. So myself and all of the expert panels are acting in an advisory capacity to Leapfrog for that.

BY MR. CRAIN:
Q. Okay.
So is this accurate, this change?
A. Yeah, that change would be accurate.
Q. Okay.
And then if we go down, I want you to look at -- can you read what she cut in the next paragraph?
A. Yes.
Q. Okay. "Note that Step 1 imputation will be temporarily paused" -- oh, sorry. That's not the one I wanted.
Go back up, excuse me, to the prior paragraph. She cut a sentence: "The collective recommendation was for Leapfrog to modify its current imputation approach to encourage survey participation and to improve user's confidence in the data that are used to calculate scores."
Do you see that?
A. Yes.
Q. Okay. Was that accurate?
MS. LAWSON: Just to be clear, you're asking

was the sentence that she struck, that the collective recommendation, was that sentence accurate?
MR. CRAIN: Correct. Not the strike. I don't want to know if the strike was accurate. I want to know if the sentence as written was accurate.
THE WITNESS: Okay.
(Witness peruses document.)
THE WITNESS: Yes.
BY MR. CRAIN:
Q. Okay.
Now, I want to go to her email. And what she says is -- are you at the top?
A. Yes.
Q. The second paragraph: "I don't think we need the sentence about influencing survey participation and giving people confidence in validity. It sounds defensive, like nobody participates in the survey and our own TEP questions our validity. Actually, this change affects a minority of hospitals and optimizes the grade's already strong validity. Anyway, it's not necessary to get into the why. It's enough that the

expert panel advised us to do the imputation in a different way and not treat older, better data in an equivalent way to new data."
Do you see that?
A. Yes.
Q. Okay.
And then did you agree that it sounded defensive -- that's my first question -- the changes that she cut?
MS. LAWSON: Object to form.
I think, just to clarify, do you agree that the sentence she cut sounded defensive?
MR. CRAIN: Correct.
(Witness peruses document).
THE WITNESS: That wouldn't be the word I would use to describe that sentence.
BY MR. CRAIN:
Q. What word would you use?
A. Explanatory.
Q. Okay.
And do you agree -- I mean, she says it

sounds like nobody participates in the survey and our on TEP questions our validity. Did you have that same reaction reading it?
A. That wasn't my own read of that sentence.
Q. What was your read of the sentence?
A. That we wanted to improve confidence in the data that we were using and the score.
Q. And to encourage participation?
A. That would be a byproduct of that change.
Q. How would that be a byproduct?
A. If we're no longer imputing the mean scores, it might encourage some hospitals, specifically those that are performing better than the mean, to actually come in and share their performance. I take that back. They would have been already incentivized to do that.
It would incentivize hospitals that didn't report and were below the mean to come in and report.
Q. Because the new score would be lower than their performance?
A. Correct.
Q. Okay. And the new score would not necessarily

reflect their actual performance?
A. It's undetermined whether it would reflect their performance or not.
Q. Because you don't know either way?
A. Because we don't know, exactly, where each hospital is at.
Q. Yes. Okay.
And then I want to go back to her email. And she says, "I think when we respond to the public comments, we can be more pointed and specific about the survey and imputation reasoning, if necessary. The comments will give us a good gauge on the extent to which we need to reveal all our reasoning and whether the expert panelists will truly stand up for it when push comes to shove."
Do you see that paragraph?
A. Yes.
Q. What's your understanding of what she meant here?
A. That the -- putting out the proposed changes wasn't the time to share all of the logic which led to

the decision to propose this, that that could come out during the responses to the comments.

Q. And do you have any understanding by what she means of whether the expert panelists will truly stand up for it when push comes to shove?

A. I believe she meant that there could be some pushback from hospitals about this proposed change and would the expert panel stand with Leapfrog in this -- in moving forward in this direction.

Q. Had the expert panel ever not stood with Leapfrog in a change to the methodology?

A. No.

Q. Okay. So any understanding as to why this might be different?

A. This change was the most direct in confronting hospitals about their lack of participation in the survey.

Q. What do you mean by direct?

A. In the past, all the imputation models, from ignoring the measure to using secondary data sources to calculating, assigning you the national mean didn't

necessarily direct -- confront a hospital to say you're not submitting data and that's a problem with us.

We gave them sort of a pass. We found another way to give them a score. So this was the most direct confrontation on that.

Q. Was that the goal of the change?

A. I think the goal was multifold.

Q. Okay.

A. I think one, as mentioned, was to improve the confidence of the data in terms of what data we were using to calculate the scores. A secondary goal was to increase or incentivize survey participation.

Q. Okay.

And then the confidence of the data, how does it improve the confidence of the data to automatically assign nonparticipating hospitals limited achievement on the four imputed measures?

A. In the framework of the idea being that if we don't have any information about your hospital -- so the historical use of willing to report, the idea was that was to acknowledge hospitals who were willing to be

transparent but didn't meet the standards that Leapfrog had set.

So we don't have -- can you repeat your question again, please?

Q. Sure. Sure.

I said -- you said -- so you talked about one goal was the confidence of the data, right, and what I asked was how does it improve the confidence of the data to automatically assign nonparticipating hospitals limited achievement on the four imputed metrics?

A. So when we were calculating the national mean for hospitals, we don't necessarily have any information that that hospital is an average performer in that area. We are assuming they are average, and in a normal distribution, half of hospitals are below the average.

So because we don't know anything about the hospital and their performance in that way, in some ways this idea of willing to report actually better reflects what we do know.

Q. Better -- okay.

So I want to go and look at -- let's get

concrete with this.

MR. CRAIN: So this is Exhibit 19.

(Exhibit No. 19 was marked for identification as of 9/25/2025.)

BY MR. CRAIN:

Q. So Dr. Austin, do you recognize this page, at least generally?

A. Yes.

Q. Okay. This is the Delray Medical Center Hospital Safety Grade page, right?

A. Yes.

Q. Have you ever seen Delray in particular?

A. No.

Q. Okay. But you know generally the format of how these pages work, right?

A. Yes.

Q. Okay. So it's not necessarily the best because it's a paper, and you can see it on a website instead, but you get the gist, right?

A. Yes.

Q. So I want to go down the page. You see at the

top it says big "F," right, for Delray?
A. Yes.
Q. Okay.
And I want to go to page 2. And so this is specifically on the handwashing measure, right?
A. Yes.
Q. And if you go just back to page 1, and it's a little hard to tell because -- but if you line up the handwashing at the top of page 2 with the gas gauge, do you see that?
A. Yes.
Q. And there's a red gas gauge above handwashing, right? And then it says: The hospital's score is 15, right?
A. Yes.
Q. And it says: Worst hospital's score is 15, correct?
A. Yes.
Q. And then it says: What safer hospitals do.
And before I go into that, I just want to clarify again. Did you have any role in editing this

website, not specific to Delray but the safety grade pages, generally?
A. I did review and help edit the descriptions that are -- the handwashing and what safer hospitals do.
Q. Okay. So you're familiar with this language?
A. Yes.
Q. Okay.
And it says: "What safer hospitals do. Hospitals provide training and implement policies to make sure all hospital staff cleans their hands before touching a patient." Do you see that?
A. Yes.
Q. Okay.
Now, you said a goal of the new methodology, the first goal was -- let me just go back to what it was. It's confidence in the data, right?
A. Correct.
Q. How does putting Delray at a 15 for handwashing give confidence in the data?
A. Once again, we don't have any information from Delray Medical Center about how they are doing toward

meeting Leapfrog's standard for hand hygiene, and, therefore, in the absence of information, we're going to assign the equivalent of willing to report, which is now limited achievement.
Q. Even though they're not willing to report, right? Correct?
A. Correct.
Q. Yeah.
So how does a consumer looking at this page, though, feel confidence that the grade is accurate?
A. I haven't studied how consumers review and interpret this information, so I don't know if I can speak to how they would interpret this.
Q. You buy things, right?
A. I do.
Q. And do you look at consumer reports, other ratings types for products?
A. Yes.
Q. Do you trust that the rating is accurate that those reports provide?

MS. LAWSON: Object to form. Go ahead.
THE WITNESS: I think it depends on the source.
BY MR. CRAIN:
Q. Fair enough. Give me one that you trust.
A. I can't think of one offhand, but I'd be more inclined to trust something that was an individual reviewing products against similar products.
Q. Okay. I'm not sure I understood that, but can you clarify? Sorry.
A. Yeah. Meaning like if I wanted to buy a new coffee maker --
Q. Yeah.
A. -- I would be more inclined to trust someone who has reviewed coffee maker A against B, C, and D --
Q. Okay. Got it.
A. -- than someone just chiming in about coffee maker A and what their experience was.
Q. Okay. That's -- okay. We can work with that one.
So my question is if you have coffee maker -- in your first analogy, right, coffee maker A, B, C,

and D, he's reviewing them all. If you find out that for a subset of the coffee makers he's giving you information about the quality of the product without actually having reviewed it, does that instill confidence in you or no?

A. It might give me pause.

Q. And how is that different from what we see here?

A. Can you clarify that question?

Q. Yeah. So you said it might give you pause if for certain of the coffee makers the ultimate rating included measures for which the reviewer didn't have any information, right? How is that different from handwashing for Delray?

A. So I think what's notable is that the score has an asterisk, which explains, I believe, how that score was arrived at.

Q. So we'll come to the asterisk in a second. I'm trying to get a sense of you said one of the goals of the new model was to instill confidence in the data. And you said another goal was to encourage

participation, right? How does it instill confidence in data to represent that a hospital got the lowest score on hand hygiene when you have no information about their performance otherwise? Doesn't that undermine confidence in the data?

MS. LAWSON: Object to form.

MR. CRAIN: Two questions.

MS. LAWSON: Two questions.

BY MR. CRAIN:

Q. You can pick either one or I can restart, either or.

A. Can you restart?

Q. Sure. So -- that's a fair ask.

So I want to understand how does it instill confidence in data to represent that a hospital got the lowest score in hand hygiene where this page says hospitals that are safer provide training and implement policies to make sure all hospital staff cleans their hands before touching a patient. How does it instill confidence in data to give a hospital the lowest score on that metric with no information?

A. That's what we're representing here is that we have no information. That's what the asterisk is telling you is we have no information.

Q. Okay. So the asterisk, you're saying -- so does the asterisk undermine the score?

A. No. The asterisk is saying the hospital declined to report their performance, so the score reflects the lack of information available.

Q. So then how can the consumer feel confident that the ultimate grade is accurate?

A. So Leapfrog is fully transparent with the information it presents. A patient can review each of the measures, decides what's important to them, what's not important to them, and make decisions based on that and other pieces of information that they may look for and acquire.

Q. So I take the talking point. Do -- when you say they're fully transparent, is that referring to the methodology document that we looked at as Exhibit 3?

A. That is the methodology document. That is how each of the individual scores on each of the individual

measures make up the composite.

Q. So let's take a different hospital. Delray, you understand, got Step 2 imputation, right?

A. Yes.

Q. If I showed you a hospital for Step 1 imputation, is the website any different?

A. I don't know the answer to that.

Q. Okay. I will represent to you it's the same asterisk. How does a consumer know whether a nonparticipating hospital got Step 1 or Step 2 imputation?

A. I don't know enough about what those different scenarios are on the website, so I can't.

Q. Do you have any reason to believe that Leapfrog actually communicates to the consumer that Wood hospital or Austin hospital got Step 1, as opposed to Crain hospital Step 2?

MS. LAWSON: Object to form. Go ahead.

THE WITNESS: To answer that, I would need to see an example of a hospital that had Step 1 imputation.

BY MR. CRAIN:

Q. Okay. But you have no reason today to think that there is any difference in the presentation?
A. I don't know whether there is or is not.
Q. Okay.
Where on the page in front of you does it say how the score was assigned?
A. Can you clarify that question?
Q. Yes.
So you pointed to the asterisk on this package, right, and it says a score was assigned, right?
A. Correct.
Q. And you said you had a role in at least reviewing that asterisk, right?
A. I don't know that that's true or not true.
Q. Okay. You said you had a role in reviewing something on this page.
A. I reviewed the descriptions underneath handwashing and what safer hospitals do.
Q. Got it. But you don't recall whether you reviewed the asterisk?
A. Correct.

Q. Okay.
So it says a score was assigned, right? Where does it say how the score was assigned?
A. Can you clarify the "how"?
Q. Sure. I'll give you an example. This was -- let's say a hospital is assigned a score through Step 1. Where would it say that on this page?
A. I don't know where Leapfrog chose to put that.
Q. Okay.
Where does it say that Delray received a score under Step 2?
A. That's what the asterisk is noting is that it was -- they declined to report their performance, so a score was assigned to reflect the lack of information available.
Q. So you're saying that somebody reading that will understand that the assignment of the score was under Step 2?
MS. LAWSON: Object to form.

BY MR. CRAIN:

Q. Is that what you're saying?
A. I don't know how people read and interpret things.
Q. Okay.
Do you think this is a clear explication of how the score was assigned?
A. I think it puts in words what Leapfrog did. It puts Step 2 into words.
Q. How does it put Step 2 into words?
A. There was a lack of information available --
Q. Uh-huh.
A. -- so a score was assigned to reflect the lack of information.
Q. But a score could be assigned in any way, right? How would a consumer know that it was assigned with an automatic limited achievement?
MS. LAWSON: Object to form.
THE WITNESS: From the text that's there and the asterisk, I'm not sure they would know how that was assigned.

BY MR. CRAIN:

Q. Okay. Thank you.
And are you aware of any other page on Leapfrog's website where that's explained besides Exhibit 3, the methodology document?
A. I don't know if it is or not.
Q. Okay.
MR. CRAIN: Okay. Let's -- let's see. How long have we been going? About an hour. Are you good to keep going, or do you want a break?
THE WITNESS: Yep. I'm good.
MS. LAWSON: I was going to say can we take a quick break?
MR. CRAIN: Yeah, that's fine. It's been about an hour. It's not an endurance test.
THE VIDEOGRAPHER: This marks the end of media unit number five. We're off the record. The time is 2:13 p.m.
(Whereupon a short break was had, after which the proceedings continued as follows:)
THE VIDEOGRAPHER: This marks the beginning of

media unit number six. We're going back on record. The time is 2:38 p.m.
BY MR. CRAIN:
Q. So Dr. Austin, we were talking about the website, and I think that's what you have in your hand. You can put that aside for now. We're going to go back to what we were talking about before we went down the website rabbit hole.
You recall we were looking at Ms. Binder's edits to the -- the public comment document. Do you recall that?
A. Yes.
Q. Okay.
I just want to show you another email.
MR. CRAIN: This will be Exhibit 20.
(Exhibit No. 20 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. All right. Dr. Austin, you see the document, the email at the top is from you?
A. Yes.

Q. Okay. Do you recognize this email thread?
A. Yeah. It's a continuation of the prior one.
Q. Yeah, the one -- the prior one being where Ms. Binder gave her comments, right?
A. Correct.
Q. And do you see Ms. Danforth forwards you Ms. Binder's email that we were looking at before, and she says, "Hi, Matt. Since she mostly updated the parts Peter and Patrick helped with, you can take a look and let us know if you have any concerns? We'd love to get this out Monday or Tuesday next week."
Do you see that?
A. Yes.
Q. First of all, does this refresh your recollection as to whether Peter and Patrick helped with this document?
A. Yeah. I will take it at its value or face value. That's what it says, so that's what they had done.
Q. And Peter refers to Dr. Pronovost?
A. Correct.

Q. And Patrick refers to Dr. Romano?
A. Correct.
Q. Okay. Both of whom have been involved with Leapfrog for many years, right?
A. Correct.
Q. And you respond at 4:25. Do you see that?
A. Yes.
Q. And you say, "My only note is the "why" has been edited out the explanation. So you don't really explain why this change is being done. But it reads fine. No concerns." Do you see that?
A. Yes.
Q. So you noted that the "why" was edited out, right?
A. Yes.
Q. Would you have preferred to keep it in?
A. Prefer is, perhaps, a strong term. The communication is coming from The Leapfrog Group, so they get the final call on what it says. I thought it was -- it would be stronger to sort of explain why we were doing this.

Q. So you thought -- okay. Got it.
And why did you think it would be stronger to explain why you were doing it?
A. I think generally people like a context to why something is being done.
Q. Would it have been more transparent to explain the reasoning?
A. I don't know if transparent is the word I would use for that. It would have been more complete.
Q. Okay.
Okay. You can set that one aside.
Let's see. So just going back to the comment document, right, that we saw. You're aware that it was issued to the public, right?
A. Yes.
Q. And you're aware that the public commented on the proposal, right?
A. Yes.
Q. Did you have any role in reviewing the comments?
A. I don't remember.

Q. Okay. Do you remember anything about the comments generally?
A. I don't.
Q. Okay. Let's take a look at some and just see if it jogs your memory.
MR. CRAIN: Iason, can you give me 45.
This will be Exhibit 21.
(Exhibit No. 21 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. Okay. Exhibit 21. So take a look at this document, Dr. Austin. Do you recognize it at all?
A. I do not.
Q. Okay. I'm just going to read -- this is an email from the Leapfrog help desk to Ms. Campione. I'm just going to read -- do you see down the page it says Becky Wenthold?
A. Yes.
Q. And she said, "I was [sic.] disappointed with the 2024 proposed changes. These changes will penalize hospitals that do not submit a Leapfrog survey. The

public will not understand nor dig into the methodology of these grades, and hospitals will be falsely represented with a lower grade because they choose not to complete a survey. The survey is extremely time intensive and, in a time when hospitals are barely breaking even financially, they do not have the resources to commit to this survey."
Do you see that?
A. Yes.
Q. You don't recall comments to this effect?
A. I do not remember reviewing Ms. Wenthold's comments.
Q. Do you recall any other comments?
A. I don't remember reviewing the comments.
Q. Do you recall comments in favor of the change?
A. I don't remember seeing the comments that came in from the public comment period.
Q. Okay. So just to close the loop, you have no memory either way?
A. I have no memory of seeing them, but I see a lot of information and a lot of -- so if someone

produced something and said I had reviewed it, it's probably true, but I don't remember reviewing the comments.
Q. Okay. It's possible but you just don't have a recollection?
A. Correct.
Q. Okay.
And fair to say you disagree with what I read, with her comment, or no?
MS. LAWSON: Object to form but go ahead.
BY MR. CRAIN:
Q. I can rephrase if it's helpful.
A. Could you rephrase?
Q. Yeah.
Is there any portion of what I read to you from her comment that you agree with?
A. Of the sentences you've read or the ones that go beyond that?
Q. Will your answer change?
A. It will.
Q. Okay. Start with the sentences I've read.

A. The sentences you have read, obviously, the first sentence is her own opinion of what she sort of sees the situation as. I don't disagree that the changes will penalize hospitals that don't submit a Leapfrog survey.
Q. Okay.
A. Her statement about the public won't understand or dig into the methodology of these grades, I'm not sure her nor I really know that to be the truth.
Q. Okay.
A. Hospitals will be falsely represented with a lower grade I don't think is necessarily a truthful statement.
Q. Is it possible because you don't know the actual performance of nonrepresenting hospitals -- nonparticipating hospitals, excuse me?
A. Correct. So if she said possibly represented with a lower grade.
Q. So let me ask it this way. Is it possible that at least some hospitals will be falsely represented with a lower grade than they otherwise would achieve based on

performance?
A. Right. So imputation by definition is trying to estimate performance, and there is almost, by definition, going to be some error, and that error may be in the measured entity's favorite. It may be in the measured entity's unfavor or disfavor.
But, I mean, it's imputation, right. So we don't know the answer. So, therefore, we're trying to estimate or guess an answer. So by definition, imputation is going to have an error associated with it.
So when we were imputing higher scores with a means for many hospitals, there was an error associated with that as well.
Q. So it's your testimony that imputation is an estimation of actual performance?
A. Correct.
Q. And is that true with regard to the automatic assignment of limited achievement?
A. If we're imputing a score like we were doing with limited achievement, there is the possibility for error.

A. Correct.
Q. So you are saying that's an estimation of their actual performance on handwashing?
A. Yes.
Q. Okay. And that, again, is based on no data to support it, right?
A. That is based on a lack of data.
Q. Yes. Okay. But it's an estimate, right?
A. It's an estimate.
Q. Okay.
Okay. Let's go back to the comment.
A. Okay. This extremely time intensive, once again, extremely is a relative term, so I don't know how Ms. Wenthold would define extremely.
Q. How would you characterize the burden?
A. What I hear from hospitals or I've heard from hospitals is that it takes about 40-person hours to complete it the first time but that in future years, as hospitals refine their internal processes for reporting, that that burden decreases.
Q. Okay. And which hospitals have you heard that

Q. So my question is a little bit different. So let's break it down a little bit.
A. Okay.
Q. In the prior model for imputation, prior to 2024, let's go prior to 2021, you used American Hospital Association data -- we had our aha moment -- to impute a score for the hospitals, right?
A. Correct.
Q. Okay. And was that an estimation based on the AHA data?
A. Yes.
Q. Okay.
Then when you get to 2024, you impute limited achievement, correct?
A. Correct.
Q. Is that an estimation of performance or no?
A. That is an estimation of performance.
Q. Okay.
So going back to the website we looked at, again for Delray you impute limited achievement on handwashing, right?

from?
A. I've heard that from Johns Hopkins Hospital when I queried them on that question. I've heard that from other hospitals that I couldn't necessarily name, but that's just from poor memory.
Q. Fair enough.
Ballpark, how many did you ask?
A. I've maybe have heard that from three or four.
Q. Okay.
So going back to the comment.
A. Yeah. So what I would -- she is correct that there is no option for the submission for a survey for a health system; that Leapfrog's policy, since its inception, has been for each individual brick and mortar hospital to complete its own survey.
And her statement about excellent outcomes will no longer be able to receive an A is actually incorrect because there were two hospitals that actually did get an A that did not complete a survey.
Q. Nationwide, right?
A. Nationwide.

Q. And that was on that first email we looked at where you were pulling information --
A. Yes.
Q. -- for the lawsuit, right?
A. Yes.
Q. Just to make sure, I think that was Exhibit 1. Okay. That's helpful.
MR. CRAIN: Okay. Let's go to tab 47. This will be Exhibit 22.
(Exhibit No. 22 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. I'm sorry. This one is very small.
Dr. Austin, this is another comment, which I think was submitted through what I believe is Leapfrog's Zendesk platform. Do you see that?
A. Yes.
Q. My guess is -- have you not -- have you seen this document before?
A. No, I haven't.
Q. Okay. So I want to just take you to the

bottom, and I think that's the comment. Do you see it's from it looks like Alana Noble?
A. Yes.
Q. And she says, "We strongly disagree with the proposed Fall 2024 Step 2 imputation. If Leapfrog is going to implement this change, they need to offer hospitals an option to opt out of being graded rather than penalize a hospital for not submitting the resource intensive survey. The survey is very resource intensive outside of existing regulatory, quality operations and quality improvement efforts. Hospitals that do not have the resources to do the survey annually should not be so adversely punished, especially in the post-COVID era when resources are increasingly hard to come by and retain."
And my question to you is: Why can't Leapfrog give hospitals an option to opt out of being graded?
MS. LAWSON: Object to form.
You can answer.
BY MR. CRAIN:

Q. To your understanding.
MS. LAWSON: I mean to your understanding.
BY MR. CRAIN:
Q. It's always to your understanding.
A. Right.
So the impetus for the Hospital Safety Grade -- let me take us back a little bit in time.
So since 2001, Leapfrog has been doing a voluntary survey of hospitals around quality and safety practices. It has collected those data and made those publicly available. One of the concerns for that model is Leapfrog was collecting a lot of different data points and reporting those out as individual data points.
And what we know from conversations with consumers and patients is that they strongly prefer composite scores, star ratings, letter grades, that they find that much more digestible.
Q. Easier to understand?
A. Easier to understand.
In addition to wanting to move towards a

letter grade, Leapfrog also wanted to -- the model that Leapfrog was working from was the restaurant ratings in like New York City, Los Angeles, right, where the health department comes in. They do an assessment of the restaurant, and the hospital has to post a letter grade in their window with an A, a B, or a C.
And one of Leapfrog's board members supposedly thought, oh, wouldn't it be great if we could ask hospitals to do the same thing around the idea of patient safety.
The concern with making it voluntary is that it is a relative score, right. So the methodology is such that hospitals are being compared to the national mean, the standard deviation of the national sample. And so it would be difficult to issue grades if we were pulling from a selected subset of hospitals.
Q. Is that still true today where 80 percent of inpatient beds are I think represented on the Leapfrog survey?
A. So I see that as a little bit of a chicken and egg situation.

Q. Okay. Tell me why.
A. That if Leapfrog made it voluntary, one potential consequence of that would be fewer hospitals would report to the survey, and, therefore, you would lose that 80 percent capture that is currently there.
Q. Is it fair to characterize that as a slippery slope problem?
A. I don't know how to characterize a slippery slope.
Q. Okay.
I guess what I mean by that is you're suggesting that if you make it voluntary, the number 20 percent of inpatient beds that were not responding would increase, right?
A. That could be a potential consequence.
Q. Okay.
So to encourage greater participation, it cannot be voluntary. Is that right? Take your time.
A. So one of the challenges Leapfrog was trying to address with the Hospital Safety Grade was that there had been a plateauing of hospital participation in the

survey.
Q. Okay.
A. And, therefore, we only had quality and safety information for a -- not a small, a fraction of the hospitals in the United States. And so by making it nonvoluntary was an opportunity to have safety information out there about as many hospitals in the U.S. as possible.
And so if you make it voluntary, you sort of defeat that goal of trying to have safety information for as many as possible.
Q. Has that goal overtaken any goal to report accurately on safety?
A. No.
Q. Okay. And why is that? Because -- strike that.
We've talked a lot about how there are errors, right, with any imputation methodology. Isn't the most accurate way to get safety information out there to not impute?
A. Can you rephrase the question?

Q. Yeah.
A. Or not rephrase but repeat the question.
Q. Oh, repeat? Yeah, repeat I can do because I have the realtime.
We've talked a lot about how there are errors with any imputation methodology, correct?
A. Correct.
Q. Isn't the most accurate way to get safety information out there to not impute?
A. Are we discussing the scores, or are we discussing the grades?
Q. Let's do both. Start with the score.
A. So for the score, I think that would have a little more of an influence -- let me say that again. The decision to impute a score would impact the overall score.
Q. The overall grade?
A. The overall -- so just to clarify, when we calculate the grade, what we're actually calculating is a score, a numerical score. So each hospital has a numerical score that's calculated. Those numerical

scores then get converted into letter grades.
Q. Yes. Got it.
A. So the letter grade, by definition, is a range of scores, right. So it's less sensitive to the decision to impute one measure or not to impute a measure.
If we're talking about the actual numerical score, the accuracy would be improved without imputation.
Q. Okay.
So is it right that Leapfrog has prioritized as a goal increasing participation as compared to the accuracy of the score?
A. So when you say participation, what are you referring to?
Q. Participation in the survey. Let me rephrase it so it's clear.
Is it fair to say that Leapfrog has prioritized encouraging greater participation in the survey as compared to greater accuracy in the scoring of a safety grade?

A. I don't see it as an absolute tradeoff in that way.
Q. Okay. Is it -- why is that?
A. Because I think you can work towards both goals. I don't think you necessarily have to completely have one goal be worked towards at the detriment of the other goal.
Q. You don't think that's what's happening with imputation?
A. So to be clear, the decision to impute scores is primarily driven by the desire to have more accuracy in what we are issuing as a score grade. A potential benefit of that is that hospitals may choose to come in and report to the survey.
So that's why I don't see them as necessarily diametrically opposed goals.
Q. Is the most accurate way to score excluding imputation altogether?
A. Yes. As previously stated, you would have a more accurate score without imputation.
Q. Okay.

Leapfrog feel it can't allow an opt out?
A. This is my own speculation because I have not discussed with Leapfrog this scenario. One might be concerned that if you allow hospitals to opt out, most of them will, and now what is your rating program if you don't have many participates.
Q. And it's also -- what is your rating program, meaning the grade, the survey, or both?
A. Potentially both.
Q. And going back to the restaurant analogy. You mentioned the L.A. restaurant grades. Do you think that's a fair analogy to what Leapfrog is able to do?
MS. LAWSON: Object to form.
BY MR. CRAIN:
Q. To your knowledge.
A. So Leapfrog can't require hospitals to post a letter grade in their window.
Q. It also, unlike a regulatory agency, can't compel participation, right? As a legal matter, right?
A. I will defer to lawyers on that.
Q. Fair enough. Okay.

And so going -- I don't know if I got an answer to this question, though, but let me just be really clear. So this comment says if Leapfrog is going to implement this change, they need to offer hospitals an option to opt out, right?
First, I guess stepping back, do you recall any discussion of an opt out internally to either the expert panel or Leapfrog?
A. No. That's never been the conversation.
Q. Okay. And why can an opt out not be provided?
A. If -- is your question is it possible for Leapfrog to implement an opt out?
Q. Well, so --
A. Or --
Q. Yeah, fair question.
So there's the question of whether it's physically possible. I assume it's physically possible to implement an opt out, right?
A. Yes.
Q. Yeah.
Why does -- to your knowledge, why does

Let me ask --
A. Leapfrog, what it's doing is it's using publicly available data to make an assessment of a hospital's patient safety performance.
Q. And it's also using the lack of data, right, to make an assessment of performance?
A. That's using what data are available.
Q. Yeah.
A. And in some situations, that is data that's not available.
Q. Yeah. Okay.
Okay. You can set that one aside.
I want to talk a little bit about the imputed measures themselves so -- and we talked about earlier in the day, it feels like hours ago, BCMA, CPOE, IPS, and hand hygiene, right?
A. Correct.
Q. So I've been trying to understand why are those the four that are imputed as compared to the three what I called earlier in the day discarded measures. You may feel free to call them something else, but why are those

different?
A. It is somewhat a function of historical artifact and when the measure was introduced to the Leapfrog Hospital Survey. So within those three measures, we put the two safe practices into one bucket and hand hygiene in the other bucket.
Q. Okay.
A. The safe practices I put in the sort of historical artifact bucket in that when the decision was to move towards secondary data sources, like the aha, AHA hospital survey --
Q. That's my favorite.
A. There wasn't any data within that AHA survey that matched up with those safe practices. Like, there was nothing about leadership. There was nothing about culture measurement.
So at that time, the decision was, okay, we're going to continue to hold those in the we're-just-going-to-ignore-the-measure-if-you-don't-have -it bucket, which was the original imputation.
That historical sort of artifact has just

sort of rolled forward.
Q. Okay. Fair to say it was grandfathered in?
A. Yeah. It's a historical artifact of where we started and where we're at.
The nursing workforce --
Q. Yep.
A. -- was just recently introduced to the Leapfrog Hospital Survey, and the collective wisdom was perhaps we don't have enough experience in data with that to impute scores.
Q. So very helpful on the three.
I want to ask you also about the four, why they are imputed, and I have a document that I think might help us in what I've been trying to figure out.
MR. CRAIN: So this will be Exhibit 23.
(Exhibit No. 23 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. So this is another Armstrong-produced document. You see that on the bottom, right?
A. Yes.

Q. And it's one of your notes to yourself. Do you see that?
A. Yes.
Q. And it says: "Notes for today's call with Dr. Romano." [sic] Right?
A. Yes.
Q. Okay.
April 12th, coincidentally, 2019. Do you see that? I say coincidentally because the expert panel meeting was also April 12th.
A. Okay.
MS. LAWSON: Of 2024.
MR. CRAIN: Yeah, of 2024. Sorry. It was my own aha moment.
BY MR. CRAIN:
Q. So going down, you say, "Patrick, to guide today's call, I put together some quick notes." Do you see that?
A. Yes.
Q. And I can't tell if you sent this to him or they were just talking points. Any sense?

A. They were notes for myself, I believe, for the conversation with Dr. Romano.
Q. And do you remember this conversation? Feel free to take a second to read through it if it's helpful.
(Witness peruses document.)
THE WITNESS: Okay.
BY MR. CRAIN:
Q. Do you remember the context of this discussion?
A. I don't with certainty but based on the --
Q. Context clues?
A. -- context clues, it would be to talk about maybe changing the imputation approach --
Q. And --
A. -- and missing data thresholds.
Q. Okay.
And you see it mentions AHA responses sort of towards the bottom third of the page?
A. AHA responses?
Q. There's a bullet that says exceptions are BCMA.
A. Yes.

Q. Okay.
And just stepping back for a second, do you recall a time where Leapfrog no longer had access to the AHA data?
A. There was a point where AHA revoked Leapfrog's license to use the data.
Q. Do you know why they did that?
A. My understanding is they had gotten -- strike that.
I don't know why AHA revoked the license.
Q. When you said "my understanding," did you have something that you heard about it?
A. I had heard that, you know, they were getting complaints from their member hospitals about how those data were being used by Leapfrog.
Q. Got it.
And complaints with respect to the imputation into the methodology?
A. Complaints on two fronts. One was how the data were being translated into scores for Leapfrog. Also, some of the hospitals' data were pretty old, and they

felt like it was outdated and there really wasn't a mechanism for them to update it. And there were sort of logistical challenges, and my understanding is I think AHA was like, we're out.
Q. We're out of this business?
A. Right -- what's that?
Q. We're out of this business?
A. We're out of this business.
Q. And when you say old, so I know like CMS data has a lag, right? Yes?
A. Some of it does, yes.
Q. Was the AHA data a bigger lag than CMS?
A. I don't know the exact lag period for the AHA survey.
Q. And what you had heard about why the AHA did not want to license anymore, do you recall who that came from?
A. The information that I heard from?
Q. Yeah, that you just shared with us about --
A. From Missy Danforth.
Q. Got it. Okay. So Ms. Danforth told you that.

Do you know where she got it?
A. I don't know.
Q. Okay.
Anything else you remember about why AHA stopped licensing?
A. That's all I'm aware of.
Q. Okay.
So I want to look specifically at -- you see in this document imputing data?
A. Yes.
Q. If you go down to the third bullet -- well, let's go to the second bullet first for context. It says: "Current Approach: Exclude the measure and recalibrate the weights for the affected hospitals using only those measures for which data are available."
Do you see that?
A. Yes.
Q. And can you sort of translate what that means?
A. Yeah. So the earliest approach of imputation that we followed was to -- if a hospital was missing a measure, we ignored that measure and we redistributed

the weights to other measures for which they did have data.
Q. Okay.
And then there's a -- the next bullet says exceptions, right?
A. Correct.
Q. And it says: "Exceptions are BCMA, CPOE, and IPS, in which case we have created crosswalks between the AHA responses and Leapfrog performance categories."
Do you see that?
A. Yes.
Q. What does the crosswalk mean?
A. The crosswalk was we looked at -- for hospitals that reported to both the AHA survey and to the Leapfrog Hospital Survey, we were able to compare their responses on both and understand in an aggregate way what the relationship was between a hospital's responses to the AHA survey and how they were performing on the Leapfrog Hospital Survey standards.
Q. So just to rearticulate, is it fair to say that you had identified that the AHA data was a reasonable

enough proxy for the BCMA, CPOE, and IPS scores for Leapfrog?
A. In our review and discussions of the AHA survey, we felt like it represented a reasonable approximation of the same quality -- or the same safety standards.
Q. And is that the original reason why those three became imputed measures, as opposed to discarded measures?
A. Yes.
Q. Okay.
After Leapfrog lost the AHA data, do you recall any time at which other crosswalks were considered?
A. We explored other potential secondary data sources. I can specifically remember having lots of calls with HIMMS, H-I-M-M-S, which is a technology consortium, to see if we could get relevant data related to computerized physician order entry. And as we reviewed their data, we didn't feel confident in that it was getting us the same thing that we needed.

So we explored other options, just nothing met.
Q. Okay.
So is it fair to say that those three measures were essentially grandfathered in from the period in which Leapfrog was using AHA as the crosswalks to the Leapfrog scores?
A. We had been imputing scores for those measures using the AHA datasets. That would be true.
Q. And it was grandfathered into the next instantiation of the imputation methodology?
A. I would need to have better notes on what was the next phase of the imputation methodology --
Q. Okay.
A. -- to remember what came next after that.
Q. Fair enough. Fair enough.
So subsequently -- like, the current methodology still imputes on these three measures, right?
A. Correct.
Q. Is there any particular reason, except for the

historical fact of Leapfrog having those crosswalks to the AHA data, that those three are imputed as opposed to other measures that are discarded that you're aware of?
A. I could argue that there is, perhaps, some clinical, additional clinical relevance to those. I mean, they do get higher weights in the safety grade. They have been shown to be more effective as it relates to safety and improving safety. So that's what I would speak to.
Q. So my question is a little different, though. You are, I think, providing a reason for why those are valuable measures, right?
A. Correct.
Q. And, in fact, I could show you websites. I'll just represent to you that sometimes Leapfrog puts out information that says those are among the most important measures. It sounds like you might agree with that?
A. Correct.
Q. Yeah. And they're significantly weighted, right?
A. They have higher weights than some other

measures.
Q. I think the four imputed measures are approximately a quarter to 30 percent of the grade. Are you aware of that?
A. I couldn't agree or disagree with that.
Q. I mean, it's in the methodology document.
A. Right.
Q. We can set it aside. I'm not trying to, you know, test you on it. It's all right.
So you're giving me reasons for why they are important measures, correct? I want to know the -- whether there's an empirical reason or an evidence-based reason for continuing imputation of them outside of the crosswalks that we see in this email.
MS. LAWSON: Do you understand the question? Are you clear on what the question is?
THE WITNESS: I think I am.
MS. LAWSON: Okay. I think he's asking is there a historical -- like, other than the historical experience --
MR. CRAIN: I think I'd asked just for no

speaking objections or coaching.
MS. LAWSON: Yeah, but I just want to make sure that he's clear because we're covering this a second time. We've asked it a -- you know, and I understand. So I understand what your question is, and I just want to make sure he understands so he can answer what you're asking.
BY MR. CRAIN:
Q. Let me ask it again because I want to make sure the record is clear.
So I said: You're giving me reasons for why they are important measures, correct?
A. Correct.
Q. And I want to know whether there is an empirical reason or some evidence-based reason for continuing to impute these three measures in this email outside of the crosswalks that Leapfrog had identified between the AHA responses and Leapfrog performance categories.
A. So the reason it would be important to keep those measures in and to be imputed is because they have

a significant impact to patient safety. So to create a composite score that doesn't include those measures would be missing some very key components.
Q. For Step 2, where you're automatically assigning limited achievement, doesn't that rationale cut the other way?
A. I would disagree. We're actually imputing a score for those because those measures are important.
Q. So I take it that those measures are important. Set that aside for a second.
We've talked about the limited achievement, right, the automatic assignment is not grounded in any actual evidence about a given hospital's performance, right, today?
A. The imputation is -- has an error component to it by definition.
Q. Yes. So just -- I want you to answer my question yes or no. The automatic assignment is not grounded in any actual evidence about a given hospital's performance today, correct?
A. Can you repeat that?

Q. Yeah. Glad to.
The automatic assignment of limited achievement for the four imputed measures for a nonparticipating hospital is not grounded in any actual evidence about a nonparticipating hospital's performance today, correct?
A. Back to the earlier point, we know the hospital is not being transparent about their safety performance and that safety is an important component of a culture of safety.
Q. Okay. So I'll go down the line. An automatic assignment of limited achievement for BCMA is not grounded in any actual facts about a hospital's performance on BCMA, right?
A. An imputed score is based on an assumption.
Q. Okay. And not actual facts on the ground about performance, right?
A. Correct.
Q. Okay.
A. And that's true of all imputation.
Q. It wasn't necessarily true when you had the

crosswalks, right?
A. That's not completely true.
Q. Okay. Explain it for me.
A. Because when we had the crosswalks, we were looking at large numbers of hospitals. So we might have had 500 hospitals that reported to both the Leapfrog Hospital Survey and the AHA survey. What we looked at was what was basically the average performance.
If a hospital answered this in the AHA survey, how did they, on average, perform on the Leapfrog Hospital Survey? Some of the hospitals performed better. Some performed worse. So there is a degree of error there in imputation.
Q. But you had some sort of analysis to build that out, right?
A. We had some secondary data sources to help us inform those imputed scores.
Q. And today, for the methodology, there is no secondary data source to help you inform the imputed assignment of limited achievement?
A. Correct.

Q. Okay.
So is it fair to say that the reason these three remain as imputed measures is largely, as you said for the other ones, a historical artifact or no?
A. I think it's a combination of historical artifact and their importance to the broad concept of patient safety.
Q. Got it. Okay. So they're significant, so Leapfrog didn't want to lose them, and also they had been imputing based on other secondary data sources. That combination is why they are still imputed measures today. Is that fair?
A. Fair.
Q. Okay.
Why hand hygiene, which is not represented here? Can you give me the history of that one?
A. So hand hygiene was introduced to the Leapfrog Hospital Survey after -- well, don't quote me on this. I believe after the AHA had pulled their data license.
Q. Okay. Got it.
Okay. So you had no opportunity to create

(Exhibit No. 24 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. This is an Armstrong-produced document. Do you see that on the bottom right?
A. Yes.
Q. And the top email is from you to a group of folks at Leapfrog, I think, and Preeti Joshi. Do you see that? And maybe a couple others.
A. Yes.
Q. And there's an attachment. It says: Leapfrog Hand Hygiene Report Analysis June 3, 2024. Do you see that?
A. Yes.
Q. And you write to the group, "As a follow-up from our meeting a few weeks ago, attached are the requested analyses for the hand hygiene report. I think the analyses are pretty self-explanatory, but we are happy to have a call to review if that would be helpful."
Do you see that?

the crosswalk, correct?
A. Correct.
Q. Okay.
I want to show a document. So talking about hand hygiene, again, is it your testimony today that the limited achievement automatic assignment of hand hygiene for nonparticipating hospitals in Step 2 -- stay with me -- is an accurate reflection of a hospital's hand hygiene performance, an accurate estimation?
A. My testimony is that it's an imputed score for that hospital's performance on hand hygiene.
Q. And is it an accurate estimation of their performance on the ground?
A. Imputation, by definition, has error.
Q. Okay. So for certain hospitals it may be inaccurate?
A. Correct.
Q. Okay.
So I want to look at --
MR. CRAIN: This will be Exhibit 24.

A. Yes.
Q. And then you go in I guess starting with -- first question: Did you draft -- I'm looking at page 5116. Do you see that?
A. Yes.
Q. Did you draft what looks like it's titled Leapfrog Hand Hygiene Analysis for Landslide Report?
A. Preeti Joshi did this.
Q. Okay. Did you review it?
A. Yes.
Q. Okay. And what was the purpose of this document?
A. Leapfrog was interested in putting out a national report on its hand hygiene standard and where hospitals had -- how they've improved over time on the standard.
Q. Okay.
And so you go, it looks like to me, you go question by question through the Leapfrog survey. Is that right?
A. We looked at it both at the individual question

level -- yes. In this first part, it's looking at each individual question.
Q. Okay. And fair to say for some questions there is pretty -- you know, there's change between 2020 and 2023, and for others there's less change. Is that right? I can be more concrete.
MS. LAWSON: I was going to object to form there.
MR. CRAIN: Fair enough. I'll take it back.
BY MR. CRAIN:
Q. So question number one is provision of hand hygiene training. Do you see that?
A. Yes.
Q. And in 2020, it looks like 92.8 percent -- well, tell me what the percentage reflects.
A. Yeah, that represents the percentage of hospitals -- yeah, the denominator is the number of hospitals that submitted responses to the hand hygiene section of the Leapfrog survey. So the numerator would be those that answered yes, that they meet Leapfrog's requirements for that question.

Q. So 92.8 percent of hospitals in 2020 responding to the survey met question one. Is that right?
A. Yes.
Q. Okay.
And that increases to 96.8 percent in 2021, 96.8 percent in 2022, and 97.9 percent in 2023. Do you see that?
A. Yes.
Q. Okay.
And I guess the question that I have on any of these, really, is: Is it your assumption that a hospital that is not participating in the survey will perform worse than these numbers as compared to the participating hospitals?
A. Can you say that one more time, please?
Q. Yeah. So I'm trying to get at -- let's back up a little bit.
So I'm trying to understand why Leapfrog imputes for hand hygiene, right. And my question is it seems like, at least based on this analysis, that most hospitals, at least that report, do fairly well on the

hand hygiene questions. Is that fair to say or no?
A. So Leapfrog actually has fairly high standards, and so for a hospital to meet a domain, they actually have to answer "yes" to all of the questions in that domain.
So, for example, in domain training and education, only 85.7 percent answered yes to question two in 2023. So at most, 85.7 percent of hospitals meet that domain, and it's probably something less than that, right.
So looking at individual questions may not be the most accurate indicator of how hospitals are doing on each of the domains as Leapfrog has defined them.
Q. Okay. So in each of these four domains, you're saying only the lowest denominator respondent are those that passed the domain?
A. The lowest percentage within a domain would be the absolute ceiling of the percentage of hospitals that can meet that domain.
Q. Got it. Okay.

So for domain one, the most -- the highest number of hospitals that would have met that domain are 85.7 percent of responding hospitals in 2023, correct?
A. Correct.
Q. Okay.
And do you have any basis to suggest that nonperforming hospitals would be so much worse in performance than 85.7 percent?
A. We don't have any information to know how they would perform.
Q. So why is it fair to those hospitals to give them the lowest score when the gross majority of hospitals, at least in this domain, pass?
MS. LAWSON: Object to form. Go ahead.
THE WITNESS: So there are 15 percent of hospitals, at least, that are not meeting the domain, right. So how would we know if hospitals that don't report are part of that 15 percent or part of the 85 percent?

BY MR. CRAIN:

Q. You don't know either way, right?
A. We don't know either way.
Q. Okay. But you assume that the hospitals in that domain that are not reporting are necessarily part of the 15 percent, right?
A. We don't have any information about those hospitals, so we are imputing a score.
Q. You're imputing a score that estimates that their performance is failing, essentially?
A. That they are in the bottom performance category.
Q. Okay.
And then if you go to domain two, this is infrastructure, do you see that?
A. Yes.
Q. And this is things like hand sanitizers?
A. Correct.
Q. Okay.
Forgive the question, but have you ever been to a hospital for care?
A. Yes.

Q. Do you recall any room that you were in without a sanitizer?
MS. LAWSON: Object to form.
THE WITNESS: So the Leapfrog survey questions about hand sanitizers are fairly specific about the location of them, whether they produce the correct amount of alcohol-based hand gel, and whether or not the hospital does audits to know if they actually have hand gel in them. Because I think we've all experienced going up to one and nothing comes out.
BY MR. CRAIN:
Q. Not fun.
A. So there is more than just about do you have hand sanitizer dispensers. There's a lot more to that standard.
Q. Fair enough.
So taking your bottom number, if you look at domain two, this would imply that 90.5 percent, at a maximum, passed this domain, right?
A. Ninety-one -- 90.5 --
Q. Ninety point five, right.

A. -- in 2023 --
Q. In 2023, correct.
A. -- would be the absolute ceiling.
Q. Yes.
Do you have any sense for what the number actually is for the number of hospitals that passed this domain?
A. I don't know offhand.
Q. Okay. Fair to say it's likely quite high because of these numbers?
MS. LAWSON: Object to form but go ahead.
THE WITNESS: Yeah, I mean, I could -- you know, you could assume that all of these were independent, and if you multiply them together, you would come up with an answer that's somewhere in the 63 percent, which is probably the floor. So it's somewhere between 63 and 90.5.
BY MR. CRAIN:
Q. Okay.
So but, again, for hospitals that don't participate, for this domain, effectively, they get the lowest possible score, right?

A. So to be clear, the hand hygiene standard has five domains. For a hospital to be in achieved the standard, they need to -- if they're only collecting 100 hand hygiene observations a month, they need to meet all five domains, which means they're saying "yes" to every single question.
Q. Okay.
A. Seventy-four percent of hospitals in 2023 achieved the standard, so 26 percent did not.
Q. Yep. Okay. And that achieved the standard is the highest, right?
A. Correct.
Q. Then how do you quantify the next three down?
A. We have a scoring algorithm that's available online that details that. I couldn't recite what that is, but the idea is basically if you meet a subset of the domains, you get one category; if you meet fewer domains, you get a lower category.
Q. Okay.
A. It's sort of assessed at the domain level but

then it rolls up into an overall score.
Q. Okay. No, fair enough.
So I guess then my question is why is hand hygiene one of the imputed measures and not one of the discarded measures?
A. Because its clinical relevance to patient safety is paramount.
Q. Okay.
So, again, it's the same point. When we talked about the other three, there were two reasons. The first was the historical what I call grandfathering in combined with the significance, right?
A. Correct.
Q. For this one, there's no historical, but it's just, you're saying, it's so important, Leapfrog feels it has to impute?
A. Correct.
Q. Okay. Okay. Let's leave it at that.
A. Okay.
MR. CRAIN: All right. I think we've been going about an hour. Do you mind if we take a break?

MS. LAWSON: That's fine.
MR. CRAIN: Okay. Courtney, are you good?
MS. WOOD: Uh-huh.
THE VIDEOGRAPHER: This marks the end of media unit number six. We're going off the record. The time is 3:26 p.m.
(Whereupon a short break was had, after which the proceedings continued as follows:)
(Exhibit No. 25 was marked for identification as of 9/25/2025.)
THE VIDEOGRAPHER: This marks the beginning of media unit number seven. We're going back on the record. The time is 3:43 p.m.
BY MR. CRAIN:
Q. Thank you, Dr. Austin.
So I've handed you what has been marked as Exhibit 25. Do you see that document?
A. Yes.
Q. And this is an email from you to what I think is the safety grade expert panel. Do you see that?

A. Yes.
Q. Okay. And the subject is: Final updates to Leapfrog Hospital Safety Grade methodology for Fall of 2024. Do you see that?
A. Yes.
Q. And generally, can you tell me what this email is?
A. This email is an email to the expert panel with the attachment of the final updates to the safety grade methodology for Fall of 2024.
Q. Okay. And you say, "Based on the expert panel's thoughtful input and guidance, Leapfrog has decided to move forward with updates to imputation methodology used in the Hospital Safety Grade, effective Fall '24." Do you see that?
A. Yes.
Q. Okay. Fall of 2024. Sorry. I think I said that wrong. Do you see that as well?
A. Yes.
Q. Okay.
Now, just for the record, I want to be

clear. Did Leapfrog decide to adopt this methodology, or did the expert panel decide to adopt it?
A. Leapfrog makes all the decisions about their ratings and ratings programs. The work of the expert panel, expert panels, myself, is all in a recommendation advisory capacity.
Q. Okay. And are you aware of any document in which the expert panel weighed in on this final proposal as a group?
A. Not that I am aware of. Not that I'm aware of.
Q. Okay.
Do you know sitting today whether the entire expert panel approved of this path forward?
A. We did not query the expert panel about whether they approved this or not.
Q. Okay. Is it your view that they did approve it?
A. It is -- from my point of view, we heard their input and guidance. Leapfrog made a decision of how it wanted to move forward, and we communicated that to the expert panel.

Q. Okay.
Okay. All right. You can set that aside.
MR. CRAIN: Okay. I want to move on to another topic. Tab 15, please. This will be Exhibit 26.
(Exhibit No. 26 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. All right. So Dr. Austin, you have in front -- well, what do you have in front of you?
A. I have in front of me our 2013 prepublished ahead of print publication from the Journal of Patient Safety.
Q. And we talked about this document a little bit earlier today, right?
A. Correct.
Q. Okay. This is the document that was peer reviewed that analyzed the methodology at least as it stood back in 2023, right?
A. This was the methodology in 2012, early 2013.
Q. Okay. And you are the lead author on this paper, correct?

A. Correct.
Q. As well as it looks like other folks on the expert panel, safety grade expert panel?
A. Correct.
Q. And I see, for instance, Dr. Romano is here, right?
A. Correct.
Q. Okay.
I want to ask you a few questions about this. I'm going to go to -- starting at the top, do you see the little -- on the left side at the top it says "Methods."
A. Yes.
Q. And it says: "The Leapfrog Group sought advice [sic.] from a panel of national patient safety experts to develop a composite score." Do you see that?
A. Yes.
Q. Does that describe generally what this paper is about?
A. The paper describes how -- the process Leapfrog used to develop a composite score.

Q. Okay. And it says, the next sentence --
A. And we do some analyses of early rounds of the grades to demonstrate what that looks like.
Q. Some early rounds of the grades to demonstrate -- say more about what you mean.
A. Yeah. So let me look in the -- so we had done some data analysis using composite safety scores for 2,652 general acute care hospitals, and we calculated safety scores for those.
Q. Okay.
A. And we show that in figure one.
And then in tables two and three, we did some analysis to look at how those safety scores varied by different hospital characteristics, as well as by state in the United States.
Q. Okay. And this is the document that we saw that was linked to Leapfrog's website, right?
A. Correct.
Q. Okay.
I want to go to page 4, and I think it's Bates number 668.

A. Yes.
Q. And there's a section, Dealing with Missing Data. Do you see that?
A. Yes.
Q. And it says: "Although the expert panel selected nationally reported measures, some data were missing for hospitals that did not report to The Leapfrog Group, and other data were missing because hospitals did not meet CMS's minimum sample requirements to publicly report their results."
Do you see that?
A. Yes.
Q. So this is the section that's, for lack of a better word, dealing with missing data, right?
A. Correct.
Q. Okay.
So the next paragraph lays out, what it looks like, five possible approaches for assessing hospital performance when data were missing. Do you see that?
A. Yes.

Q. Okay. And I'm going to not march through, but it looks like number four is: "Give the hospital zero credit for the measure." Do you see that?
A. Yes.
Q. And that's not -- Leapfrog has never done zero, right?
A. Correct.
Q. They've done limited achievement, correct?
A. Correct.
Q. Okay. And limited achievement, just to be clear, is the lowest measure, which can range anywhere from 5 to 25 depending on the measure, right?
A. Correct.
Q. Okay.
And then number five says: "Exclude the measure and recalibrate the weights for the affected hospitals using only those measures for which data are available." Right?
A. Correct.
Q. Now, the -- if you look at -- further down there's a paragraph that says "After." Do you see that?

A. Yes.
Q. Okay. And it says: "After conducting sensitivity analyses using each of the above approaches, the panel recommended approach number five to address missing data, excluding the measure for a hospital and recalibrating the weights for those measures for which performance data were available, for most measures."
Do you see that?
A. Yes.
Q. Okay. And was that generally the approach that Leapfrog took in the ensuing years?
A. That was the approach Leapfrog used initially with the hospital safety grades.
Q. Okay.
A. As previously mentioned, Leapfrog has evolved its imputation approaches, working through actually at least four out of the five here.
Q. Fair enough, yeah. So it's been a moving target.
A. It's been evolving.
Q. Evolving. Fair enough.

So then the paragraph keeps going. The next sentence is -- let's see. It's on the top of page 4 on the right side. "In this way." Do you see that?
A. Yes.
Q. "In this way, we avoided making questionable assumptions about the performance of hospitals with missing data, and we also maintain variation of the final calculated scores by not imputing identical values for all missing observations."
Do you see that language?
A. Yes.
Q. Okay.
So at least as of 2013, Leapfrog -- this group of authors peer reviewed, came to the conclusion that excluding the measure was the way to avoid making questionable assumptions about the performance for hospitals. Do you see that?
A. Yes.
Q. Okay. That changed, right?
A. That has evolved.
Q. Okay. Is it your view that Leapfrog is making

questionable assumptions today about the performance of hospitals?
A. I don't believe that to be true.
Q. Okay. What's changed between this analysis and today?
A. So what has changed is that the -- that we've actually evolved through different imputation approaches. So we started with number five, right. Then we moved to number two, imputing based on other available data. Then we moved to number one, which is imputing performance at the national mean or median, although we did that by cohorts. And then we eventually landed here now at number three, which is imputing a score above or below the median or mean.
So all of these are valid imputation approaches. I think the choice of an imputation approach needs to be in the context of sort of time, place, situation.
So in 2012, when Leapfrog rolled out these hospital safety grades, hospitals did not know these were coming. So that needed to be sort of the context

in which an imputation decision was made.

If we fast-forward to 2024, now we've been issuing safety grades for 25 rounds. Hospitals are very aware of the grades. They're very aware of the measures that go into the survey, and so you might have your imputation approach evolve with that.

Q. So the assumptions change?

A. I don't know if assumptions have changed, but the context has changed.

Q. So let me -- so first going back, you said number three, impute a score above or below the median or mean; e.g., minus one standard deviation. Do you see that?

A. Yes.

Q. That's not what Leapfrog does today, right?

A. It is imputing a score below the mean.

Q. Below the mean, fair, but not by one standard deviation, right?

A. That was just an example of how that could be operationalized.

Q. The measure of limited achievement is more than

one standard deviation below, right?

A. I have not looked at a distribution of scores to be able to answer that.

Q. Do you have an estimate as to what -- how much lower than the standard deviation below -- one standard deviation below the mean it is?

A. I don't know what that would be.

Q. Okay.

Okay. So going back, do you recall what the questionable assumption the authors were worried about in this paper was?

A. So I think the biggest concern was around option number four, which would be to give the hospitals zero credit for not reporting to Leapfrog.

Q. Why is that the biggest concern?

A. That was a concern in that hospitals didn't know that this was coming, that we weren't really being fair to hospitals to just assign zero right from the get-go for not reporting.

Q. Is it more fair to assign -- would it be more fair to assign zero now?

A. From my point of view, it feels like the context and times have changed, and so I would say, yes, that would feel like a more fair decision to make.

Q. More fair. Okay.

Is it more or less fair than limited achievement?

A. It's probably less fair to assign zero than limited achievement. With limited achievement, hospitals are getting some credit. They're not getting zero credits.

Q. No one gets zero, right?

A. No one gets zero.

Q. Okay. Zero is not an available score, correct?

A. Correct.

Q. Okay.

Then so the questionable assumption, just to make sure I understand it, is about the startup of the safety grade, as opposed to assumptions about performance generally?

A. It's assumptions about the rollout of the imputation and whether or not it was fair to assign a

score that penalized hospitals when they didn't know that the safety grades were coming.

Q. Do you know if that language is in this paper?

A. I'm not sure that that -- I would have to reread it.

Q. I mean, if you want to take a second and read this section, which I think is the only section dealing with this and just goes to the next page, I'm curious does it articulate that as the questionable assumption in here.

A. So in the -- that paragraph at the top of page 4, in the second paragraph it says: Finally, the third and fourth approaches were rejected to avoid creating a structural bias in favor of Leapfrog reporting hospitals.

So as I mentioned, there was a concern about doing that right from the get-go.

Q. But that doesn't say get-go, though. It's talking about reporting versus nonreporting, right?

A. It was at that -- the article was written at a point in time with experience only up until that point

of time, and that was our experience up 'til that point.
Q. Is there any structural bias today in favor of reporting hospitals?
A. There are hospitals that report to the Leapfrog Hospital Survey that score limited achievement. So a score of limited achievement is not just for hospitals that don't report. There are some hospitals that report that receive that score as well.
Q. What does structural bias mean?
A. I guess in that context I would think of it as some sort of bias in how we assign scores based on whether they report or don't report to Leapfrog.
Q. And so based on that definition, you're still maintaining there's no structural bias in favor of reporting hospitals?
A. Based on what we just discussed, I would say there is a structural bias against nonreporting Leapfrog -- nonreporting hospitals.
Q. Okay. There is a structural bias?
A. There is a structural bias.
Q. Okay. That makes sense. Okay.

And that's one of the reasons this group of authors, which included yourself and many of the safety grade expert panelists, like Dr. Romano, rejected this, it looks like, the third and four approaches, right?
A. At that point in time.
Q. Okay. And your position is the structural bias has changed?
A. It's not that it has changed. It is more apparent and can be addressed, right. So in the early days of the safety grade, hospitals didn't even know these grades were coming. A lot of them had never completed the Leapfrog Hospital Survey.
Fast-forward 12 years, we're in a different place where hospitals are very aware of the safety grades. They're very aware of the survey, and so the context has changed.
Q. So just to be clear, when you say addressed, that's not addressing within the methodology. That's an addressing in the context of hospitals could decide to report?
A. Correct.

Q. Got it.
So the methodology doesn't take any measures to address that structural bias?
A. Correct.
Q. Okay.
Okay. And then the other -- if you keep going on that paragraph, it says: "By scoring hospitals on" -- tell me when you're ready.
"By scoring hospitals on the available data, the composite scores were based on what was known about the hospital's performance, with no penalties for missing data."
Do you see that?
A. Yes.
Q. Okay. Now, that also is different for today, right?
A. That is different than today.
Q. Okay.
And at this time, scoring hospitals based on what was known about the hospital's performance was something this group of authors deemed advisable, right?

A. So to be clear, what we're representing is the Hospital Safety Grade methodology. Not all authors were part of the expert panel. And just to remind you, all of the decisions about the methodology are ultimately Leapfrog's to make.
Q. Yes.
A. So what we're writing up is the implications of that decision. So when you asked about whether authors agreed, to me it's not an agreement or disagreement. It's were we stating what the facts were at that time.
Q. Okay. No, that's fair. So I got it. So you're saying it's an empirical observation?
A. Correct.
Q. So the observation is by scoring hospitals on the available data, the composite scores were based on what was known about the hospital's performance with no penalties for missing data. You're saying, just to make sure I understand, you're not making a judgment about whether that's good or bad. You're saying it's what's being done?
A. Correct.

Q. Okay. Got it.
Now, this is the paper that Leapfrog touts as having peer reviewed its methodology, right?
A. Correct.
Q. But there are multiple components, at least in this paragraph that we've seen, that don't apply anymore, right?
A. There are -- can you repeat the question?
Q. So we've walked through this paragraph about different observations, the questionable assumptions, the structural bias, and then the penalties for missing data, all of which you said are not what Leapfrog does today. They're not reflective of the methodology Leapfrog uses today, correct?
A. Correct.
Q. Is it fair to say that this paper is a peer reviewed assessment of the methodology today?
A. I'm going to be a little careful because I don't know if Leapfrog's website says that it's a peer reviewed of today, right. It's a peer reviewed of their methodology, right.

So I'll go back to the previous point that I think the overall structure of the composite score, that it's based on two domains of measures, the data sources, we're going to do relative weights, has remained consistent and constant through time.
Have some of the individual decisions about imputation -- obviously, some of that has evolved and changed. So I don't know how to say whether or not it's a fair representation of Leapfrog's methodology or not.
Q. Do you agree, yes or no, that Leapfrog's current methodology has been peer reviewed?
A. Are you speaking of the Fall 2024 methodology?
Q. The one that's operative today.
A. I think it sort of depends on your definition of what we mean by methodology. And I don't mean to get into semantics, but I would still come back to like the general structure of all of this is still the same. Some of the nuance differences are different, but that happens continuously throughout the last 12 years.
So I don't know how you would write a new paper every time we change one measure or re-weight one

measure.
Q. So we talked about, maybe an hour ago, that the imputed measures are significant, right?
A. I don't know if that's what we discussed.
Q. Okay. You talked about how they're clinically -- they matter, right?
A. Correct. They're important elements of patient safety.
Q. Yes.
A. Yes.
Q. And they weight quite heavily, right?
A. They make up somewhere between 20 and 30 percent.
Q. Yes, as we talked about.
A. Yeah.
Q. Is it -- so 30 percent, 20 to 30 percent of the methodology is derived from an imputation model that this paper did not comment on, correct?
MS. LAWSON: Object to form. Go ahead.
THE WITNESS: As listed under the imputation methods, one of them is exactly what we're doing today.

BY MR. CRAIN:
Q. Which one? Three?
A. Number three.
Q. Okay. Impute a score below the mean, correct?
A. Correct.
Q. Okay. I guess this doesn't say how much far below, right?
A. Correct.
Q. Because if the means that we saw earlier from Ms. Campione's emails were in the 70s, 80s, and 90s, and the imputation is 15, was that the type of difference below the mean that you were contemplating when you wrote this piece?
A. I think there was room for -- there was room for decisions to be made around number three and what sort of score above or below the mean or median. The minus one standard deviation was just an example. Obviously, number four is a more extreme example of zero. So there's a range of options in between those two.
Q. Okay.

So then I guess going back to my question, we've talked about the imputation methodologies being 20 or 30 percent, being significant. Is it fair to say that the current methodology has been peer reviewed given that that substantial portion of it was never reviewed?

A. I don't know how to answer that. I feel like it is fair to say that because the primary structure of the methodology has remained the same. Now, others could have a different assessment of that. Some could say, oh, wow, the imputation approaches make this nonrepresentative. I guess that's just a disagreement in how maybe we see the world.

Q. Okay. Fair enough.

So let me ask this question. The imputation model, has that been peer reviewed?

A. No.

Q. Okay.

Okay. You can set that aside.

MR. CRAIN: Let's go to tab 21. This will be Exhibit 27.

(Exhibit No. 27 was marked for identification as of 9/25/2025.)

BY MR. CRAIN:

Q. Okay. So this is another, you see at the bottom, Armstrong-produced document?

A. Yes.

Q. Do you recognize this one?

A. Yes. Well, it's been a while.

Q. What does it look like?

A. It says it's the meeting agenda. What it actually represents is notes from the meeting.

Q. Maybe somebody built out the notes within the agenda?

A. Correct.

Q. Okay.

A. And we just forgot to change the title.

Q. Any reason to think this isn't a true and accurate depiction?

A. No.

Q. So I just have a couple of questions. If you go to -- where is it again -- page 76, do you see theirs

is a big, bold "Unintentional consequences of how we currently treat missing data"? Do you see that header on page -- it's the first page?

A. Yes.

Q. Okay. And I want to go to page 2. And do you see the bullet number two?

A. Yes.

Q. It says: "Imputation of the score when we have missing data."

A. Yes.

Q. And it says: "Matt mentioned that expert panel discussed this in the past and did not feel it supported the goal of the safety grade." Do you see that?

A. Yes.

Q. So I want to break this down a little bit.

Now, do you recall making this statement at an expert panel meeting? I recognize it's a while ago.

A. I don't remember --

Q. Okay.

A. -- that conversation.

Q. Is it accurate, to the best of your knowledge

today, that, looking at the top bullet, imputation of the score when you have missing data is something the expert panel discussed in the past?

A. So, yes, we have discussed imputation with them.

Q. Okay. Just to build out the --

A. Right. Yes, that's fine.

Q. Just to get on the same page.

A. Yes.

Q. And now it says: Did not feel it supported the goal of the safety grade.

A. I don't know what that refers to.

Q. Okay.

A. I will take ownership that the note-taking here may not have been all that accurate, because I don't even know what that refers to because I don't think they -- they have never indicated that imputing scores doesn't support the goal of the safety grade.

Q. Okay.

A. So I'm thinking that there might have been some nuance to that that wasn't captured in the notes.

Q. What could the goal have been referring to?
A. I don't know for sure.
Q. Okay.
So if you go to the next bullet, do you see how -- "Imputing scores for individual measures, like safe practices, would incentivize them to report on the survey." Do you see that?
A. Yes.
Q. First of all, does that reflect that the safety grade expert panel considered imputing for safe practices?
A. That was something that was, I guess, discussed at that meeting.
Q. And as we talked about before, was decided against, right?
A. Leapfrog has never imputed scores for --
Q. Safe practices?
A. -- safe practices.
Q. One or two?
A. One or two.
Q. Now, imputing -- it says: "Imputing scores for

individual measures would incentivize them to report on the survey." Is that different from the goal reflective in bullet one?
A. That I don't know how those connect.
Q. We've talked a little bit today about what the goals of the safety grade are. I think we've talked about information, right, as one goal, getting information out there, correct?
A. Correct.
Q. We've talked about accuracy as another goal, correct?
A. Yes.
Q. Are there any other goals that you can think of, of the safety grade, that we haven't -- besides those two?
A. None come to -- immediately come to mind.
Q. Okay.
So looking at this bullet, you noted earlier today you endeavor to be accurate in these notes, right?
A. That is our goal.

Q. And goal -- we talked about goals.
So you have no recollection or understanding as to why imputation, at least at this time, would be deemed not supportive of the goal of the safety grade, at least the two goals that we've talked about?
A. Yeah. I do not understand how that note ties to everything else I know and understand.
Q. Okay. So you just don't remember, or it just doesn't make sense anymore?
A. I don't remember what that was intending to --
Q. To say?
A. To say.
Q. Okay. I have to ask.
Okay. Let me just see. Yeah. Okay. You can set that aside.
MR. CRAIN: And then just one more historical document. Can we do tab 30. This is Exhibit 28.
(Exhibit No. 28 was marked for identification as of 9/25/2025.)

BY MR. CRAIN:
Q. Dr. Austin, you have in front of you an email thread between you, Ms. Danforth, Mr. Card, and Emma Domico. Do you see that?
A. Correct.
Q. Who is Emma Domico?
A. Emma was the research analyst who was working for me at the time on the Leapfrog contract.
Q. What Ms. Joshi does now?
A. Correct. She was in between Jordan and Preeti.
Q. Got it.
And who is Mr. Card?
A. Mr. Card worked for The Leapfrog Group and was the analyst who was supporting the Hospital Safety Grade. So he preceded Alex.
Q. Got it.
So I want to just look -- so it's a little bit of a confusing email, but I'm going to walk you through at least how I think I read it. So go to the bottom, which is the first one.
A. Yes.

Q. And it's from you and it's dated August 25th, 2021, right?
A. Yes.
Q. And just for context, is this around the time where AHA was rescinding the license?
A. I don't know -- I don't know the timing of the AHA license.
Q. Okay. Do you remember generally what was happening in 2021?
A. I don't other than COVID was.
Q. Fair enough. We all remember that one.
A. Yeah, but I don't remember what -- I don't remember the timing of the AHA data because that was all between Leapfrog and --
Q. Got it. Okay.
So I will at least represent to you that this was -- well, we'll go through the document.
A. Okay.
Q. So you write -- you say, "Missy, Andrew: Next Friday is the HSG" -- Hospital Safety Grade. Yes? Is that right?

A. Yes.
Q. Okay.
A. Correct.
Q. -- "expert panel call. As Emma and I were walking through agenda items, we would benefit from your input/expertise." Do you see that?
A. Yes.
Q. And I want to focus on number two and start with the bold. Do you see there's two pieces of text. There's a bold and a sort of grayer one on each line?
A. Yes.
Q. Okay. So let's start with the bold. You say, number two: "How to score hospitals missing process/structural measures. Are we looking for suggestions on imputation methods?" Do you see that?
A. Yes.
Q. And then if you go to four, it says: "Penalizing hospitals if they don't report. Is this part of agenda item number two? And is Leapfrog really open to this idea? If not, I don't want to keep asking their opinions."

Do you see that?
A. Yes.
Q. Now, we'll come back to this, but I just want to explain to you what the gray is. So if you go one up, the prior page, you see Ms. Danforth writes: "See below"?
A. Yes.
Q. Okay.
So the gray, is it correct to say, those are her comments interlined with your agenda?
A. Yes.
Q. Okay.
So on number two, she says in response to your agenda point, she says, "Yes, and the idea to impute for all missing, including safe practices and HH. I will send a follow-up to the email that Andrew sent."
So can you tell me generally what are you proposing as an agenda item, and what did you understanding her response was?
A. So what we were proposing as an agenda item was to discuss with the expert panel our imputation methods

for process and structural measures.
Q. Okay.
A. And Missy suggested back the idea that maybe we impute for all missing, including safe practices and hand hygiene.
Q. Okay.
And then if you go to four, you say -- you have a separate agenda item, right?
A. Correct.
Q. And it says: "Penalizing hospitals if they don't report. Is this part of agenda item number two? And is Leapfrog really open to this idea?" You all caps "really." Do you see that?
A. Yes.
Q. So why were you all capping really?
A. So back to attachment 27, back to Old Town Alexandria, the Hilton, that was actually a point where the expert panel actually brought up the idea of moving towards an imputation approach where -- to penalize hospitals --
Q. Okay.

A. -- if they didn't complete the Leapfrog Hospital Survey.

So even though it got implemented in 2024, as far back as 2017 conversations were happening about whether or not this was the direction to go into.

Q. Okay.

A. So in 2021, it was like, is Leapfrog open to this? Are they not open to this? I don't want to keep asking the expert panel over and over again about this if Leapfrog is not open to moving in this direction.

Q. Okay.

A. So that was the intent of that.

Q. And by this direction, you mean a penalty?

A. It could be a penalty. It could be an imputation below the mean or median. It could take many different forms, and I don't think a specific proposal had been floated at that point.

Q. Okay.

And then -- so look at her response. She says: "Remove. This is really covered in number two." Do you see that?

A. Correct.

Q. Okay. And it sounds like you agree with that?

A. Well, I agree that that decision is part of imputation, right. So as we go back to the five imputation methods, number three was one of the possible options, right. So that is part of the imputation discussion is do we impute that a hospital is an average performer? Do we impute that they're a better performer? Right? Like, those are all decisions around imputation.

Q. So and when you say "those," you mean the decision of whether to penalize a hospital is part of the analysis of how to impute or whether to impute?

A. So there were a couple of approaches that could be taken, right. So if we go back to number 27, Old Town Alexandria, one suggestion from the expert panel was, well, would we want to assign some sort of explicit negative penalty.

So we wouldn't necessarily work that into the imputation of individual scores, but we would take so much off of the final score for not being

transparent. So that was one idea of how that could be manifested. This could be other ways of manifesting it.

Q. Yeah. No, I get that. I'm just trying to understand. So the agenda item number two is how to score hospitals missing process and structural measures. Do you see that?

A. Correct.

Q. And the question of penalizing hospitals is bound up in that discussion as well, correct?

A. I think what Missy was saying is she didn't see that as being a unique part of the agenda, that that would be -- could be incorporated into number two.

Q. Well, she said covered in number two, right?

A. Correct.

Q. And you agree with her?

A. I would agree that that, as we've discussed, that that is an option for imputation.

Q. And is it fair to say over the years when this topic has come up, the notion of penalizing hospitals has been covered by the topic in number two?

A. It's been brought up in that space, yeah.

Q. Okay. Okay.

Let me take another look. I think that may be it for this email. Yeah, we can set this one aside.

So I'm going to shift gears again. We're getting there.

A. How many gears are there on this car?

Q. I've got a lot of gears. I've got a lot of gears. We're getting close to the end gear. I've only got so much time.

I want to talk about the 2019 white paper.

A. Okay.

Q. Okay? Oh, you seem excited for it.

A. I love it.

Q. Okay.

MR. CRAIN: So I want to start with -- let's go to tab 58. And this is Exhibit 29.

(Exhibit No. 29 was marked for identification as of 9/25/2025.)

BY MR. CRAIN:

Q. So, Dr. Austin, you see this is an email from you to Ms. Campione, Ms. Danforth, and Ms. Bailey from

2025.
A. Yes. So this is not in reference to the 2019 --
Q. Yes.
A. -- report.
Q. It's the lives saved, lives lost, right?
A. Correct.
Q. Okay. This was the update you were talking about, right?
A. This is the update that we've worked on but have not published.
Q. Okay. I want to walk through this one, if I can.
A. Okay.
Q. Okay. So maybe I was a little unfair. I'm starting with 2025 and then I want to lead into the white paper --
A. Okay.
Q. -- but I want to talk about your numbers here.
A. Okay.
Q. Okay?

analysis done on the 2016 white paper, and the 2019 reflects the update?
A. Correct.
Q. Okay. And 2025 reflects, at least in draft form, what the current numbers would be?
A. They represent, if we were to maintain the same methodology we used in 2019, what the numbers would look like in 2025.
Q. Okay. Can you -- and I'm happy to give you documents if it's helpful, but can you generally describe what that methodology is?
A. Yep.
Q. And if you need a document, we can get you that document.
A. No, no. I can.
So what we do is for each grade, "A", "B", "C", and we lump "D" and "Fs" together --
Q. Why is that?
A. Primarily due to small sample sizes of "F" hospitals.
Q. Got it.

So let's go to page -- so I want to look at -- you see Ms. Campione's email on the bottom? It's from her to you, and there's a table on page 0900. Do you see that?
A. Yes.
Q. Okay. Now, this table -- tell me what this table is.
A. So what this table represents is for three points in time, 2016, 2019, and 2025, we have estimated the number of lives lost due to preventable medical mistakes that are captured through the Leapfrog Hospital Safety Grade measures.
We also have estimated the number of lives that could be saved if "B," "C," "D," and "F" hospitals all performed as well as "A" hospitals. So we've estimated that at three different points in time.
We also have done relative comparisons between "B" and "A" hospitals, "C" and "A", "D" and "A" and "F", and then we break the numbers down.
Q. So the chart that we're looking at here on page 0900, is it correct that the 2016 column reflects the

A. We're looking at less than 20 or 25.
Q. Okay.
A. For each of the outcome measures that are included in the Hospital Safety Grade, we calculate a mean incidence rate for each cohort of hospitals. So "A" hospitals, how do they do on foreign objects retained? "B" hospitals, how do they do on foreign objects retained?
So we have basically an estimated incidence rate of these events by hospitals.
Q. And just to translate that, estimated incidence rate means how many times this thing happened?
A. Correct.
So we display it as a percentage, right? You can think of like, oh, 1.2 percent of patients develop a central line associated blood stream infection in an "A" hospital. Some of those measures, outcome measures are applicable just to patients who have had surgery. Some are just applicable to patients who have been in the intensive care unit.
And so we discount the total patients based

on who those -- who those measures apply to.
Q. Yep.
A. Then in terms of estimating the lives lost, from the literature, we've identified the attributable mortality rate to that event happening to a patient in a hospital and their -- yeah, attributable mortality rate.
So as previously discussed, like for central line associated blood stream infections, one out of every seven patients who develop C infection in the hospital will die.
And we're using that same attributable mortality rate for all categories of hospitals. So that is one of our limitations. We may have variation in that "A" hospitals could actually have a lower mortality rate than "D" and "F" hospitals, but we're making the assumption of that mortality rate.
And so that is -- and then in addition to the outcome measures, we're also using ICU physician staffing because there is strong evidence linking improvements in intensivists managing and comanaging patients in the ICU and reduced mortality hospital-wide.

Q. Okay.
A. Well, both in the ICU and hospital-wide. And so that's the one process and structural method that we use as part of the analysis.
Q. So looking at this chart again, just as a grounding mechanism, it looks like to me that there are 19 outcome measures and 1 process measure. Is that right? That's what I'm seeing, the 19 and the 1.
A. Correct.
Q. Okay. And the one is, as you said, ICU physician staffing, correct?
A. Correct.
Q. Okay. And so basically you're taking the incidence times the mortality and outputting the amount of estimated deaths?
A. We are for the outcome measures.
Q. Okay.
A. What we're doing for ICU physician staffing is we're going back to the historical literature that established the standard to say that there is a 30 percent reduction in hospital-wide mortality between

no intensivist and high intensivist staffing.
And so we actually go back to seventh or eighth grade math, and we have the slope of a line. And this is where hospitals are now at, and, therefore, if we calculate the slope, it would be this point on the line.
Q. Oh, boy. You're testing my math skills.
A. I test my own as well.
And so basically, hospitals that are fully implemented we think have -- we estimate that they have achieved the full impact of that.
Q. Okay.
A. And if hospitals are somewhere along that continuum, they've achieved a portion of that impact.
Q. Okay.
So the mortality rating for ICU physician staffing, am I right that it is based on a 2004 article by Dr. Pronovost?
A. It's definitely by an article by Dr. Pronovost. I couldn't speak to the year.
Q. Okay. Can we grab it?

A. I don't disagree with you that it was 2004.
Q. You don't know for sure?
A. I don't know for sure.
Q. I'll represent to you it's 2004. We may as well pull it out. We have it if you want to take a look.
A. Okay.
Q. My question is have you looked at the research that's come sense to test that estimate?
A. So Leah Binder at The Leapfrog Group has asked us to look at that. We have not found anything recently that would be a better way for us to estimate that value.
Q. Okay.
So I guess, one, have you heard of -- there's an article by -- do you know who Deena Kelly Costa is?
A. I do not.
Q. Okay. I guess I'll just mark it to see if you've seen this article before.
MR. CRAIN: Let's mark it as Exhibit 30.

(Exhibit No. 30 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. Does this article look familiar to you at all?
A. I'm not familiar with it.
Q. Okay.
So the title is: The Association Between Daytime Intensivist Physician Staffing and Mortality in the Context of Other ICU Organizational Practices: A Multicenter Cohort Study.
Do you see that?
A. Yes.
Q. Do any of the authors -- are they familiar to you, Dr. Wallace, Dr. Kahn, and Dr. Costa?
A. I do not know any of them.
Q. Okay.
Do you know the journal here?
A. I am familiar with critical care medicine, yes.
Q. Reputable journal?
A. As far as I know.
Q. Okay.

individually to assess whether there is a relationship or not a relationship, right. I think if we think about -- through humankind, there's lots of studies that have been done. One will show red wine is good for the heart. The next one will show, oh, no, you should stay away from alcohol, right. And over time we sort of build a body of literature.
What an additional -- one of the strengths of the Pronovost article, if I'm remembering it correctly, is it was actually a meta analysis. So it actually looked at 15 to 20 different studies and synthesized those results.
So it's not to say that every study is going to show a relationship, but one study doesn't necessarily negate a wider body of literature.
BY MR. CRAIN:
Q. Okay.
This is dated 2015. Do you see that?
A. Correct.
Q. And you've not seen this article, right?
A. I have not seen this.

Now, I want to go down to Measurements and Main Results, and there's a sentence just at the end which seems to sort of give the bottom line starting with "there." Do you see that?
A. Yes.
Q. "There was no association between daytime intensivist physician staffing and in-hospital mortality. After adjusting for interprofessional rounds and protocols for mechanical ventilation, the effect of daytime intensivist physician staffing remained nonsignificant."
Do you see that?
A. Yes.
Q. I know you haven't read this article, but at least based on the first page -- and feel free if you want to flip through -- does this undermine the assumptions that the white paper makes with respect to IPS and mortality?
MS. LAWSON: Object to form.
THE WITNESS: So I think in research there is -- I don't think one can look at one study

Q. Okay. Is it something that you think you should review in the next iteration or no?
A. I would be happy to review it and see what we come to in terms of a conclusion.
Q. Okay. Okay.
So I want to go back to -- I want to just go back to the chart again.
A. Yeah. Okay.
MS. LAWSON: Is that Exhibit 29?
MR. CRAIN: Yeah, 29, the email and the invite.
BY MR. CRAIN:
Q. Now, I want to just look at the differences in mortality, right. So when you look at -- just take -- starting with "D" and "F," right, at the bottom. Do you see that?
A. Yes.
Q. It says, focusing primarily -- focusing on the outcome measures. It says 1.46 in 2019. Do you see that?
A. For "D" and "F," correct.
Q. Correct.

And is that, just to make sure I understand the numbers, is 1.46, that's 1.46 deaths?
A. Correct.
Q. Okay.
And then if you go down to "C," it's 1.40, right?
A. Correct.
Q. To "B," it's 1.31, right?
A. Correct.
Q. And 1.22 for "A." Do you see that?
A. Correct.
Q. Is the difference just for outcome measures between 1.22 for an "A" and 1.46 statistically significant in your view?
A. I would need to do a statistical test to determine whether that there is a statistical difference there.
Q. Okay. It's not twice, right? There are not two times as many deaths between -- in that comparison, right?
A. Not in just comparing the outcome measures.

Q. Just comparing the outcome measures.
A. Correct.
Q. With respect to the ICU physician staffing, fair to say the difference is more substantial, right?
A. Correct.
Q. Is the -- would you agree that the analysis places -- like the number of deaths in the analysis is significantly weighted to the ICU physician staffing metric?
A. Yes. Although, there is a methodological clarification that I should make because this will help explain it to some degree. We actually take the number of outcome measures, or we take the lives lost in the outcome measures and actually divide that by two.
Q. Okay.
A. And the reason we do that is because we recognize that there are some deaths that are probably occurring in the ICU that are a result of not good care, right.
So you may have developed a central line blood stream infection. We didn't want to count that

twice, both in the outcome measures and the ICU physician staffing.
So the methodological decision was to cut the outcome measures in half. So we take each value and divide by two so that we aren't double counting between the two.
Q. And what was that based on? That's the 50 percent number?
A. Yeah, the 50 percent. That was just an educated guess.
Q. Okay. Is it based on a study or is it based on --
A. No. It was just sort of a collective wisdom of people.
Q. The authors or other people?
A. Other people as well.
Q. Who were the other people?
A. So the initial work for this actually came out of some work that The Leapfrog Group had done, Leah Binder, with another consultant.
Q. Okay. Who is that?

A. I don't remember his name.
Q. Okay.
A. I can sort of picture him, but I don't remember the name. And so it was out of that that the decision was made to multiply it by 50 percent.
Q. Okay.
So if we look at the bottom, you're saying that "D" and "F," the actual number is closer to 3 than 1.46?
A. Correct.
Q. Okay. Got it.
Okay. So then that's still I guess -- my question still remains. The biggest difference, at least it appears to me, between a "D" and "F" hospital and an "A" hospital is the physician staffing mortality. Is that right?
A. That is -- from what we're able to quantify in terms of harm, that is where the biggest differences are.
Q. Okay. And the mortality rating for that is based on the Pronovost article, right?

A. Correct.
Q. Okay.
And then so let's go to another document. I want to look primarily -- let's look at the chart, actually, on the right side, so the 2025 metric.
A. Okay.
Q. Now, in all -- this is the first time, at least for IPS and I think everywhere else, there's a slash. Do you see that?
A. Yes.
Q. What does the slash reflect?
A. The slash is reflecting if we -- the value to the right of the slash would be if we were to remove the imputed scores for IPS.
Q. Yeah. And say more about that. You mean remove the mortality for nonparticipating hospitals?
A. No. We would remove -- if a hospital had an IPS score that was imputed, we would remove that from the calculation.
Q. Okay. And that's the right side?
A. That is the right side.

Q. So the left side reflects -- tell me if this is wrong. I'm just trying to understand. The left side of the slash reflects the hospitals that are participating with IPS scores based on their actual performance data, and the right side includes nonparticipating hospitals with the limited achievement assignment?
A. So the left-hand side would be the scores for all hospitals that received a safety grade, including those that were imputed.
Q. Okay.
A. The right-hand side would be just hospitals that had a score reported through the Leapfrog Hospital Survey.
Q. And that's the 80 percent of inpatient beds we've been talking about?
A. Correct.
Q. Okay. Got it.
So the numbers are pretty different, right, at least in certain categories?
MS. LAWSON: Object to form. Go ahead.
THE WITNESS: I don't know how you would define

pretty different.
BY MR. CRAIN:
Q. Fair enough.
If you go to "D" and "F," the difference is 7.98 on the left and 3.89 on the right. Do you see that?
A. Correct.
Q. And if you go to "C," 4.92 and 2.52, right?
A. Correct.
Q. Now, the differences get smaller. So "B," it's 2.12 and 2.01, right?
A. Correct.
Q. And then "A," it's 1.53 versus 1.5, right?
A. Correct.
Q. And if I recall correctly, there were only two hospitals that got an "A" with imputed scores, right?
A. Correct.
Q. So that -- did that explain why that's so close together? Correct?
A. I would need to go back and look at the math, but your statement about that there's two hospitals is

correct.
Q. Yeah. Okay.
Do you have a theory as to why the numbers are so different left and right, at least for "D" and "F" and "C"?
A. The difference between the two values is the inclusion or exclusion of the imputed values.
Q. Is the number on the left or the right more likely an accurate estimate?
MS. LAWSON: Object to form.
BY MR. CRAIN:
Q. Let me step back. You're trying to estimate mortality of "A," "B," "C," "D," and "F" hospitals, right?
A. Correct.
Q. You want to be accurate in the estimate as best you can?
A. Yes, recognizing it's an estimate.
Q. Yes. So I'm going to posit that 4.92 versus 2.52 for the "C" hospitals, pretty different number of deaths. Is that fair to say or you disagree? I mean,

it's almost double, right, on the left side.
A. That last part is true. It is almost double.
Q. So we'll just go with numerical. It's almost double.
What is a more accurate estimate of the mortality of "C" hospitals as a result of ICU physician staffing? Is it 4.92 or is it 2.52?
A. I will say both are incorrect.
Q. Okay. I'm eager to hear why.
A. Well, one includes imputed values, which, by definition, are not exact values.
Q. Okay.
A. The other one is excluding hospitals that we don't have any data for. So there is some lives lost attached to them. So both of them are actually -- both of them are estimates in two different scenarios.
Q. You said a moment ago both of them are incorrect.
A. Okay. Both of them are incorrect.
Q. Okay.
A. It's an estimate, so unless you hit it right on

the dot, an estimate is going to be incorrect.
Q. Which one is more incorrect?
A. I don't know how to judge that.
Q. Okay. So you don't know one way or another?
A. I don't know one way or another.
Q. Okay.
MR. CRAIN: So I want to take a look at a few documents here. Give me one second. Oh, no wonder I can't find it. It's actually in this document. Iason knows them better than I do.
THE WITNESS: Which one?
BY MR. CRAIN:
Q. So this is Exhibit 30, what we were just looking at -- oh, sorry, 29 I mean was the chart.
MS. LAWSON: 29.
MR. CRAIN: Yeah, Exhibit 29 with the chart.
BY MR. CRAIN:
Q. Okay. And this is from you to Ms. Campione, Ms. Danforth, and Ms. Bailey, right?
A. Correct.
Q. Okay. So you send an email, and the tenor -- I

can read it all, but the tenor seems to be there's a discussion about whether you include the imputed scores in the mortality or not, right?
MS. LAWSON: Take a minute and read the email.
MR. CRAIN: Yeah, take a second.
(Witness peruses document.)
THE WITNESS: So, yeah, this is -- the tenor is about the table that we just went through.
BY MR. CRAIN:
Q. Whether to include the imputed scores or not, right?
A. Correct.
Q. Okay.
And you at the end say, "I would vote for keeping the imputed IPS scores in place. My guess is the averages with the imputed scores are closer to the truth than averages excluding the imputed scores." Right?
A. Correct.
Q. So what's that based on?
A. Well, I think I used the word "guess," so I

will qualify that. I guess it's somewhat informed by that, you know, hospitals that choose not to disclose likely may not be meeting Leapfrog's standards. Because if they were meeting them, they would be more likely to disclose them. So it was probably with that assumption.
Q. So that -- so okay. But it's multiple levels of assumptions, right? I can build it out to see what I mean.
So assumption one is that hospitals that are not reporting are not meeting Leapfrog's standards, right?
A. That is the assumption I just stated.
Q. And assumption two is that the failure to meet Leapfrog's standards yields a higher mortality rate?
A. Correct, based on the literature.
Q. Okay. So it's an assumption, but you're saying it's backed by literature?
A. Correct.
Q. And, again, meaning the Pronovost article?
A. Correct.
Q. Okay. So your guess is based on those two

assumptions?
A. Correct.
Q. Okay.
Do you have any understanding of where Leapfrog is landing on this question, whether to include the imputed or nonimputed?
A. I do not know.
Q. And just going back to the chart, I want to just look at the numbers. Just go right to the top. You see lives lost, lives saved? Do you see that?
A. Yes.
Q. Okay. And it's -- the numbers, again, you know, are -- so I'll be factual about it. Lives lost, if you exclude the imputed hospitals, it's about 30,000 fewer, right?
A. Correct.
Q. Okay. And if you exclude the imputed values, it's also about 30,000 fewer on lives saved, right?
A. Correct.
Q. Okay. And so your view is that it is -- your best guess is that those 30,000 are -- bear some

relation -- have some accuracy to them -- strike that. That was a bad question. I know you were going to object. And it was fair.
So let me ask another question then.
You said the numbers bear out the twice as likely mortality point. Do you remember earlier in the day we talked about Leapfrog says on its website that Johns Hopkins researchers say you're two times likely to die if you go to a "D" or an "F" hospital, as opposed to an "A"?
A. I remember that conversation, but I don't remember in what context.
Q. We were looking at the website, which we can look at if someone will tell me the exhibit number, and we talked about -- so maybe we can get that document out just to ground us. I think it's exhibit --
MR. TOGIAS: It was tab 65.
MR. CRAIN: Sixty-five. So that's Exhibit 9.
MR. TOGIAS: Frequently asked questions.
MR. CRAIN: Yeah.
MS. LAWSON: It's on page 2.

MR. CRAIN: Yeah, I think that's right.
BY MR. CRAIN:
Q. Page 2 and it's under the second -- we talked about -- remember this question? "Why should people worry about a hospital's patient safety?" Do you remember that?
A. Yes.
Q. And if you go to the end of that paragraph: "All hospitals are not the same. Some hospitals are much safer than others. John Hopkins Medicine researchers estimate that patients are twice as likely to die of a preventable problem at a "C," "D," or "F" hospital than an "A" hospital, and over 50,000 lives would be saved if all hospitals performed the way "A" hospitals did."
Do you see that?
A. Yes.
Q. Okay. Now, first of all, the 50,000 lives, based on this chart, going back to Exhibit 29, refers to 2019, right?
A. Correct.

Q. Okay.
Your 2025 numbers, I understand, are in draft form, but it would either be 49,000 or 20,000 depending on the imputed scores, right?
A. Correct.
Q. Okay.
Now, this Johns Hopkins Medicine researchers estimate that patients are twice as likely to die of a preventable problem at a "C," "D," or "F" hospital than an "A" hospital, do you see that?
A. Yes.
Q. Now, that -- is that based on the 2019 numbers?
A. Yes.
Q. Okay.
Now, you had said that that was also true as for 2025, albeit in draft form. Do you recall that testimony?
A. I think I mentioned that we were seeing probably similar trends.
Q. Okay. Is that reflected here? Can you explain to me just on this chart how that works?

A. Yeah. So I think Leapfrog took a little liberty with the "twice," but if you take the 87 and the 91.8 --
Q. Where are you on that?
A. Sorry. 2019.
Q. Yep. Yep. I see that.
A. Those are close to 100 percent, or one could make the argument, so that would be twice as likely --
Q. From 2019?
A. From 2019.
Q. Okay.
And what about today?
A. And then today the numbers are actually higher. I was just sort of hedging a little bit about what that would be because they range anywhere between 46.6 percent and 353.6.
Q. Okay. So that's -- it's different whether you include the imputed or not, right?
A. Correct.
Now, as I look at this further, what I think I would argue is that the number of lives saved

when we take out the imputed scores, the 20,252, is such a significant drop-off. I don't know if that's -- that's where I had caution about why I thought that seemed questionable to exclude the imputed scores.
Same with the 105. To be more clear, the 105 is quite a drop, and I don't think we've seen that level of improvement in patient safety in the country, and so I think that would oversell our efforts in patient safety.
Q. Is this an annual number?
A. That would be an annual number.
Q. Okay.
A. Correct.
Q. So you're saying it would surprise you if it was only 105,000 patients dying, as opposed to 161,000?
A. Correct.
Q. Okay. Got it. Okay.
A. So the 134 on the face felt like more of a reasonable level of improvement that we would have seen.
Q. Because it's fewer lives -- it's more lives lost?

A. It's fewer lives lost. So we've seen improvements. We've gone from 161,000 lives lost due to medical error to 134,000.
Q. It's fewer lives lost than 2019 but more lives lost than without the imputed values?
A. Correct.
Q. Okay.
And then you're saying -- so how does that equate now to the twice as likely to die for "C," "D," and "F"? Can you walk me through that?
A. Yeah, yeah. So that's what I was -- if you look at the --
Q. The percent.
A. -- 2019 column --
Q. Yes, that I'm clear on.
A. The "C" versus "A", "D" and "F" versus "A," those are somewhere in the 100 percent range. Like I said, I think Leapfrog took a little liberty there.
Q. Yeah.
But 2025?
A. For 2025, if we exclude -- if we include the

imputed scores, it's actually 133 to 353,000. We would have to do some sort of blended average of those since it says "C," "D," and "F."
Q. Yeah. And if you don't include it, it's 46 to 204?
A. Correct.
Q. Okay. And as you said, blended average because there are -- I think there are more "C" hospitals --
A. There's a lot more "C" hospitals, right.
Q. Okay. Got it.
So maybe you just don't know today, but do you have an estimate today as to whether it's really accurate that you're twice as likely to die if you go to a "C," "D," or "F" hospital as compared to an "A" hospital?
A. Well, given my statement in the email about Leapfrog, that I feel like the numbers with the imputed scores are more reflective of the actual reality, that would be something greater than twice. It would be probably two and a half times.
Q. So --

A. So what we're seeing nationally is bigger gaps between "A" hospitals and hospitals at the back of the pack.
Q. And what's driving that in your view?
A. I believe it's -- I think hospitals have -- some hospitals have chosen to really invest time, resources, energy, have created more of a learning health system. I think they have just prioritized safety in ways that other hospitals have chosen not to.
Q. And when you say those hospitals, you're talking about the ones that report or the ones that don't report?
A. A combination.
Q. Okay.
Okay. And then I'm going to show you one more document.
So if you actually keep that exhibit in front of you, 29, do you see there's a document -- go to the first page.
A. Of 29?
Q. Of 29, yeah.

version, yeah, 2025 version.
Q. And are you the author of this document?
A. Myself and the analyst together.
Q. Okay. Got it.
Okay. And this is a true and correct copy of the Excel Spreadsheet we're talking about?
A. As far as from what I can see, yes.
Q. Yeah. And the two pages, right?
A. Yeah.
Q. Okay.
MR. CRAIN: Okay. Can we take five? Go off.
THE VIDEOGRAPHER: This marks the end of media unit number seven. We're going off the record. The time is 4:55 p.m.
(Whereupon a short break was had, after which the proceedings continued as follows:)
(Exhibit No. 32 was marked for identification as of 9/25/2025.)
THE VIDEOGRAPHER: This marks the beginning of media unit number eight. We're going back on the

A. Okay.
Q. The email that we've been talking about with the chart.
A. Yeah.
Q. Do you see there's an attachment that says Lives Lost, Lives Saved Calculator 250515?
A. Yeah.
Q. Okay.
MR. CRAIN: So I just want to mark this as Exhibit 31.
(Exhibit No. 31 was marked for identification as of 9/25/2025.)
BY MR. CRAIN:
Q. So this is an Excel Spreadsheet. Do you see the document?
A. Yes, I do.
Q. Do you know what this document is?
A. Yeah. It's the excel file we use to calculate the lives lost and lives saved.
Q. And is that the one attached to this email?
A. This is the 2025 -- actually, this is the '25

record. The time is 5:07 p.m.
BY MR. CRAIN:
Q. All right. Thank you, Dr. Austin. We're in the home stretch.
I've given you what's been marked as Exhibit 32. Do you see it's an Armstrong-produced Document, 14327?
A. Yes.
Q. Okay. And it's an email from Mr. Derk to you. Do you see that?
A. Yes.
Q. And it's dated June 5th, 2019?
A. Yes.
Q. And it says, Subject: Lives Saved Presentation. Do you see that?
A. Correct.
Q. And there's an attachment. Can you read that attachment into the record?
A. Lives lost, Leapfrog partners 02190610.pptx [sic.]
Q. And the rest of the document, is that the pptx

you just mentioned?
A. In reviewing it, I believe that is the case, but there's nothing on here indicating the file name so --
Q. Fair enough.
If you look at the title, is says: Lives Lost, Lives Saved: The Comparative Analysis.
Do you see that?
A. Yes.
Q. And it's dated June 10th, 2019?
A. Yes.
Q. Okay.
So to the best of your understanding, this is the PowerPoint attached to the email?
A. Yes.
Q. And I'll also note Armstrong produced it sequentially from 14327 and forward.
A. Yeah. The only thing that strikes me as a bit odd is how the presentation is dated June 10th, 2019, but he sent the email on June 5th, 2019.
Q. Could it have been a draft?

A. That's a possibility.
Q. Like for a future presentation?
A. Yeah. That makes sense.
Q. So flip through the PowerPoint and just -- you know, does it look like a true and accurate depiction of the PowerPoint presentation that either you or he prepared?
A. Are you asking me to verify whether each slide is accurate?
Q. No, no. Fair enough. Let me start over.
Do you recognize this PowerPoint presentation?
A. I don't remember this PowerPoint presentation.
Q. Okay. Do you recall giving a presentation in 2019 on the lives lost, lives saved?
A. I don't remember that --
Q. Okay.
A. -- but that's not to say I didn't do it.
Q. Okay.
Any reason to think this is not -- you know, again, produced by Armstrong -- this is not a true

and accurate depiction of the email and the attachment?
A. No, there's no reason to believe that.
Q. Okay.
Do you remember anything about this presentation at all?
A. I don't other than I think we were trying to summarize the lives lost, lives saved analysis.
Q. Okay. So just flipping through, that's what this PowerPoint does, it summarizes the methodology?
A. Yes.
Q. Okay.
And then I think you can set that one aside.
And then just a question going back to the 2019 white paper. Was the 2019 white paper peer reviewed?
A. It was not peer reviewed.
Q. Was the 2016 white paper peer reviewed?
A. The 2016 paper was reviewed by a couple of my colleagues.
Q. Is that peer reviewed in the way that we talked

about earlier?
A. Peer reviewed in terms of journal articles is usually the editors selecting who is going to review your paper. This was me asking two colleagues who I knew and trusted to look through it and provide input and comments.
Q. So not peer reviewed in the academic sense?
A. Correct.
Q. Okay.
And 2019 was not peer reviewed in any sense?
A. Correct, in the sense that it was an update from 2016. So all we had done was update numbers.
Q. Is it right that Ms. Binder edited the white paper in 2019?
A. It is possible that Ms. Binder provided some edits to the white paper.
Q. Okay.
MR. CRAIN: With that, I will, pursuant to the agreement of the parties, for division of time, pass the witness and reserve the balance for recross.

MS. WOOD: You want to go off the record while I get mic'd up?
MR. CRAIN: It's up to you. I'm happy to go off. Yeah, that's fine. Let's go off.
THE VIDEOGRAPHER: This marks the end of media unit number eight. We're going off the record. The time is 5:11 p.m.
(Whereupon a short break was had, after which the proceedings continued as follows:)
THE VIDEOGRAPHER: This marks the beginning of unit number nine. We're going back on the record. The time is 5:13 p.m.
EXAMINATION
BY MS. WOOD:
Q. Dr. Austin, my name is Courtney Wood. I represent the defendant, The Leapfrog Group, in this matter.
I know you testified earlier that we had met before previously when the subpoena came in. It's good to see you again.

A. Good to see you as well.
Q. I don't have much to ask you today. However, I have enjoyed listening to all of your testimony today, and we appreciate you being here, so I just want to thank you for that.
But to start, are you familiar with the hospital grade calculator?
A. Yes, I am.
Q. Okay. And so is it fair to me -- fair for me to say that there are 10 outcome measures that are included on that grade calculator?
A. I couldn't speak to the current version of the calculator. I have not seen it.
Q. Okay. But to your knowledge, are there 10 outcome measures that are used in the methodology currently?
A. Can I refer to the --
Q. Sure. Yeah.
A. Okay.
Q. Was that Exhibit 3?
A. I think it's Exhibit 3, yeah.

Q. My apologies because I'm not going to know what page it's on but --
A. That's fine. I actually know. It is actually on page 6 and 7; 10, correct.
Q. Okay. Perfect.
And then is it fair to me -- for me to say that those 10 outcome measures all come from CMS data?
A. For the five healthcare-associated infections, the primary data source is the Leapfrog Hospital Survey, and a secondary data source is the Centers for Medicare & Medicaid Services.
Q. Correct.
And then for the process and structural measures, there are 12 of those. Is that correct?
A. Correct.
Q. Okay.
And then are you aware that of those -- well, let's strike that.
So the 12 structural and process measures come from survey data. Is that correct?
A. The seven of them, the Leapfrog Hospital Survey

is the primary data source. For 5 out of the 12, the Centers for Medicare & Medicaid Services is the primary data source.
Q. Right. And then we call those HCAHPS.
A. Correct.
(Whereupon, the court reporter seeks clarification, which colloquy will not be captured on the written record.)
BY MS. WOOD:
Q. Okay. And so to your knowledge, if a hospital does not respond to the Leapfrog survey, then it does not receive a score for the safe practices 1, safe practices 2, and then the nursing care hours per patient day. We were talking about that earlier. Is that still correct?
A. Correct.
Q. Okay.
And so then to your knowledge, when a nonreporting hospital does not respond to the hospital survey, then those weights are redistributed to the other nine measures in that process and structural?

A. Correct.
Q. Okay.
MR. CRAIN: I'm just going to object to form.
BY MS. WOOD:
Q. Okay. And then of those nine measures, we had just indicated that five of those are the HCAHPS and then the other four are the imputed measures that we were talking about earlier. Is that correct?
A. So of the 12, process and structural measures, 5 of them come from HCAHPS, which is a patient experience survey that goes to patients. The other seven, the Leapfrog Hospital Survey is the primary data source.
As previously discussed, four of those are imputed if the hospital doesn't respond to the survey and three are not imputed.
Q. Right. Okay.
So what I'm trying to get at is when the hospital doesn't respond -- so those three that we were talking about, the safe practice 1, the safe practice 2, and then the nursing, we take those out and then the

weights are redistributed on those other nine, which are the five HCAHPS and then the four imputed measures. Is that correct?
MR. CRAIN: Objection to form. I just want to lodge a standing objection to the leading, and then I won't interrupt. But is it okay to stipulate to that?
MS. WOOD: Sure.
BY MS. WOOD:
Q. Is that your understanding?
A. Yes.
Q. Okay.
And would you agree with me when I say -- if I made the assertion that if a hospital performed poorly on their HCAHPS scores, then those measures now are getting greater impact on the overall grade?
MS. LAWSON: Object to form.
BY MS. WOOD:
Q. Yeah, let me rephrase it.
So since the weights are now a little bit heavier on those HCAHPS scores and the four imputed scores, it would be arguable that those five HCAHPS

scores now play a bigger role in going into the Hospital Safety Grade. Is that correct?
MS. LAWSON: Object to form.
MR. CRAIN: Objection.
MS. LAWSON: You can still answer.
THE WITNESS: If the hospital does not have data for those three measures, safe practice 1, safe practice 2, nursing workforce, or nursing hours per patient day, more weight is put on the remaining nine measures and that would include the five HCAHPS measures.
BY MS. WOOD:
Q. Right.
So is it fair to say then that if a hospital had poor HCAHPS scores, then those would be weighed heavier and could have a greater impact on the Hospital Safety Grade?
MR. CRAIN: Objection to form.
THE WITNESS: So independent of the hospital's performance, more weight would be put on those nine measures. So I guess I'm just clarifying that whether

they're a good performer or poor performer, more weight is going to be put on those.
BY MS. WOOD:
Q. Understood. And I would agree with that.
And do you have any opinion on how significant that impact can be, whether, you know, say if you're a great hospital and you have great HCAHPS scores, and say you have bad -- and then you get the imputed score because you're a nonresponding hospital, do you have any opinion on what that impact might look like on the Hospital Safety Grade?
MR. CRAIN: Object to form.
MS. LAWSON: Object to form.
THE WITNESS: So the -- I mean, one could test out different scenarios of that question, right. So one could -- the hospital may do really well on certain measures, may not do well on others. There's not necessarily universal, like, just because you're doing well on one HCAHPS, that you're doing well on all HCAHPS.
So one could sort of empirically test

different what-if scenarios, but I don't know if there's a universal answer to your question.
BY MS. WOOD:
Q. Okay.
And so would it be true that if a hospital was performing well on those five HCAHPS scores and then still got those low imputed scores, that maybe those five HCAHPS scores would actually -- let me rephrase that.
So if the five HCAHPS scores were really great scores and then you got those four imputed scores, would it be fair to say that maybe those four imputed scores wouldn't really have an impact then on the overall Hospital Safety Grade?
MR. CRAIN: Objection to form.
THE WITNESS: There would be a potential scenario where if the hospital does well on the HCAHPS scores and does well on the outcome measures, that they could have a pretty good safety score and safety grade.
BY MS. WOOD:
Q. Okay. And then would that be applicable as

well if there were poor scores for the HCAHPS?
A. Once again, it's -- the measures are not looked at simply in isolation, right, because I think one would also need to look at the outcome measures. So just -- it needs to be a slightly more holistic view of performance.
Q. Okay.
And then we were talking about earlier how there is never a zero that is imputed for any of those four measures. Is that correct?
A. To the best of my recollection, that is correct.
Q. Okay. And do you know why that is?
A. So we -- for the Leapfrog Hospital Survey measures, we did have to come up with a way to assign a numerical value to the performance categories, right. So in the Leapfrog Hospital Survey, for those four imputed measures hospitals get reported out as achieved the standard, considerable achievement, some achievement, and limited achievement. But for purposes of incorporating those into the Hospital Safety Grade,

we needed to translate those into some sort of numerical value.
And so we've used different approaches through the years and for different measures for how to assign those values. If we use hand hygiene as an example, the assigned values are 100, 75, 50, and 25. It was basically to give hospitals some numerical credit for being in a performance category.
Q. And is it true that those numerical values on the performance is used for both reporting and nonreporting hospitals?
A. So the imputed values for those four measures match what hospitals who report and get limited achievement receive.
Q. Okay.
And do you ever recall speaking with anybody, whether it's the expert panel or anybody at Leapfrog, about considering imputing a zero for any of those four measures rather than doing the limited achievement, the considerable achievement?
A. I don't remember any explicit discussion about

zero; although, it's not to say that that hasn't come up as a potential option.
Q. Okay.
And I want to look at Exhibit 27 again, and this is the -- I think you had said earlier that these were actually your notes from this expert panel meeting. Was that right?
A. These were a set of notes.
Q. Okay. Because it just had said agenda at the top, but then I think you had said that these were notes following --
A. These are notes. I don't -- your question was are these my notes. I don't know if they were my notes or if these were notes prepared by someone else.
Q. Oh, okay. That's fair. But these would have been notes following that meeting on this day?
A. Correct.
Q. And then if we can flip to that second page and number three, and it's the last bullet point under number three. It says: "The panel wondered what the distributions would look like if Leapfrog assigned a

score of zero or lowest score possible for the missing elements. Matt and Jordan will look into this following the meeting."

Does that refresh your recollection in any way on whether you or Jordan looked into that?

A. I don't remember what scenarios we actually ran as a result of that meeting. It's possible that we -- I don't remember. We could have just ran the lowest possible scores. I don't know if we ran zero. I would have to be refreshed on that.

Q. Yeah. That's okay.

And then do you remember anything else regarding -- any other discussions during this meeting about imputing zeros for those imputed measures?

A. Other than what's in the notes --

Q. Okay.

A. -- that the panel discussed that as a potential scenario.

Q. Okay.

And then even after seeing this bullet point, you don't recall speaking to anybody else on the

expert panel about this?

A. I don't remember.

Q. Do you recall if you ever spoke with Arjun about this?

MR. CRAIN: Objection to form.

THE WITNESS: I don't remember if I spoke to Arjun in particular about this topic.

BY MS. WOOD:

Q. Okay.

And usually, after following expert panel meetings, do you ever reach out to some of the panelists to discuss bullet points like this independently?

A. Yeah, we do.

Q. Okay. So it wouldn't be weird if you had spoken with Arjun, but you just don't recall today? That's something that you might do?

A. Correct.

Q. Okay. In addition to other panel members as well. Arjun is just an example.

A. Correct.

MR. CRAIN: Objection to form.

BY MS. WOOD:

Q. Okay. And so then we were -- I was going to use the handwashing as an example as well. So it's your understanding that 15 is the imputed score for limited achievement for handwashing?

A. Let me refer to Exhibit No. 3.

Q. Sure. No problem.

A. So slide 16 hand hygiene. Was that your --

Q. Yep.

A. Fifteen is the --

Q. Limited?

A. -- yep, limited achievement.

Q. Perfect. Thank you.

And then we were looking at Exhibit 3 again for that, page 16. Hand hygiene, limited achievement, the corresponding measure score is 15.

And so I think what you had just testified, that that is both for nonreporting and reporting hospitals, correct?

A. That is the score that's assigned to nonreporting hospitals as well as reporting hospitals

who failed to meet the some achievement criteria.

Q. Right.

And so would you agree with me that nonreporting hospitals are actually still receiving a benefit by reviewing a score -- receiving a score that is based on responding hospitals?

MS. LAWSON: Object to form.

MR. CRAIN: Object to form.

THE WITNESS: They are receiving a score -- can you maybe explain more about when you say benefit?

BY MS. WOOD:

Q. Sure.

So if I'm a reporting hospital and I meet the criteria for limited achievement, I get a 15 imputed. Is that correct?

A. Repeat that one more time.

Q. Sure.

So a hospital that responds to the survey and they are filling out the hand hygiene portion of the survey and based on the criteria they receive a 15 and they get the limited achievement?

A. If the hospital doesn't meet the criteria for a higher performance category --
Q. Correct.
A. -- they will get limited achievement.
Q. Right.
But then for the nonresponding hospitals, we don't necessarily know what their hand hygiene policies may be -- or I think earlier we were talking about the hand sanitizer. You had mentioned that there were several different criteria, correct?
A. Correct.
Q. And so would you say to me -- or would you agree with me when I say that assigning a nonresponding hospital the same score for limited achievement as a responding hospital is giving the nonresponding hospital a benefit?
MR. CRAIN: Objection to form.
MS. LAWSON: Object to form also.
THE WITNESS: I think that's a little bit in the eye of the beholder. Is it better than zero? Yes. Is it as good as 50? No.

BY MS. WOOD:
Q. Right.
A. So I don't know how to really answer that.
Q. Okay. So I guess I can ask it another way.
So if Leapfrog is not imputing a zero, rather, they're imputing the 15, is Leapfrog making an assumption that the hospitals who are not reporting are actually performing to some extent rather than not performing at all?
MR. CRAIN: Objection to form.
THE WITNESS: So Leapfrog in that situation is giving nonreporting hospitals an equivalent score to hospitals that have not met the criteria for some achievement, and that can be a range, right. That can be from a hospital that barely missed some achievement to a hospital who has done nothing.
So there is a range of hospitals that are getting the limited achievement based on responding.
BY MS. WOOD:
Q. Understood.
And now I want to look at Exhibit 19

quickly, and I will have you -- I'm sorry. I'll wait until you're there. And then it's like this webpage. Yes.
Okay. And can you flip to the second page that we were talking about earlier. And then you see the asterisk next to the number 15, and it says "This Hospital's Score"?
A. Yes.
Q. And you would agree with me that that's the limited achievement score for handwashing, correct?
A. That 15 is the same value that's assigned, yes, to hospitals that receive limited achievement.
Q. Okay.
And then right next to it on the right there it says "handwashing." So this would indicate that this hospital, Delray Medical Center, received a 15 on the handwashing measure?
A. Yes.
Q. Okay.
And then I know earlier we were talking about the asterisk next to the number 15 indicates to

the reader to go down to the end of the webpage there to that disclosure.
A. Yes.
Q. Okay. And that disclosure says: "The hospital declined to report their performance on this measure, so a score was assigned to reflect the lack of information available." Is that right?
A. Yes.
Q. Okay.
And I think earlier we were talking about the "how," and I believe the question that you were asked was does this webpage show how the score was assigned. Do you recall being asked that question?
A. Yes.
Q. Okay. And would you agree with me that when it says, so a score was assigned to reflect the lack of information available, that that does indicate the how here?
MR. CRAIN: Objection to form.
THE WITNESS: So I personally would agree with that. I think the opposing counsel saw that

differently.
BY MS. WOOD:
Q. That's fair. I would agree with you on that one.
So let's take it one step further. So if we go back up to where the asterisk is linked to under the hospital safety score 15 asterisk, and then do you see right below that it says best hospital's score 100?
A. Yes.
Q. And then right below that it says average hospital's score 74.40?
A. Yes.
Q. And then right below that it says worst hospital's score 15?
A. Yes.
Q. Okay.
And so would you agree with me now, looking at it from this perspective, considering those four hospital scores in conjunction with the asterisk and the disclosure at the bottom, that that shows how the scores are assigned for this handwashing measure?

MS. LAWSON: Object to form.
MR. CRAIN: Object to form.
THE WITNESS: I personally don't think that the display of the other three scores, the best hospital average and worst, helps nor hurts the explanation of how that 15 was assigned.
BY MS. WOOD:
Q. Okay. But do you think it makes it easier for the reader of this webpage to look and see that if 15 is this hospital's score and 15 is the worst hospital's score, they can come to the conclusion that this hospital is being assigned the worst hospital's score?
MS. LAWSON: Object to form.
MR. CRAIN: Objection to form.
THE WITNESS: I don't want to speculate what people who come to the website, how they understand the material.
BY MS. WOOD:
Q. That's fair.
But you would agree with me that at the top, when it says this hospital's score 15 asterisk,

that matches at the bottom the worst hospital's score 15? It just doesn't include the asterisk?
A. Correct.
Q. Okay.
And I think earlier you may have testified about whether or not the imputation model and the current methodology penalizes hospitals. Do you remember testifying about that?
A. We had a lot of conversation about imputation today, so I would need to be refreshed on what --
Q. Sure.
A. Yeah, more detail might be needed there.
Q. Sure.
In your view, when Leapfrog was considering the Fall 2024 methodology change, was the intent or the purpose to change this imputation model to penalize hospitals?
A. The goal was not to assess a penalty. The goals were to improve the accuracy of the data and to incentivize -- as a sub goal, incentivize survey participation.

Q. Okay.
And then would it be fair to say that, rather, the result then of the Fall 2024 methodology change may be that hospitals feel penalized by receiving those limited achievement scores?
MS. LAWSON: Object to form.
MR. CRAIN: Object to form.
THE WITNESS: I can't speak to how hospitals feel.
BY MS. WOOD:
Q. Okay.
I think you said earlier that the penalization is a byproduct of the imputation score. Do you remember? And I'm not trying to mischaracterize your testimony in any way. I just remember you referencing it as being a byproduct.
A. Yeah, there may be a feeling of, yes, a penalty.
Q. Okay. But that wasn't the intent or the purpose of Leapfrog, to your knowledge?
A. That was not the stated intent.

Q. Okay.
Do you believe that hospitals should report to the Leapfrog Hospital Survey?
A. I do.
Q. And why do you believe that?
A. Because I am a strong believer in transparency. I think in transparency we create a better healthcare system where we understand where our successes are, where our failures are, and that those who are using the healthcare system and those who are paying for the healthcare system know how it's operated.
Q. And I know you have testified earlier that sometimes you speak with hospitals in various capacities. Have you ever heard any hospitals refer to the Leapfrog Hospital Survey as kind of a benchmark or an outline to improve their patient safety?
A. I -- can you repeat the question?
Q. Sure. Yeah.
I just know earlier you had testified that sometimes you speak to hospitals in different capacities. So the question I'm about to ask you, I'm

not insinuating that you have heard this before. I'm asking if anybody at a hospital has discussed this with you before.
But have any of the hospitals told you that -- sorry. Now I'm forgetting my own question -- oh, that the Leapfrog Hospital Survey helps them put in benchmarks and outline how they can improve on patient safety measures?
A. So for purposes of the Leapfrog Hospital Survey, I have had at least one conversation with a hospital who does see the survey as an opportunity for benchmarking their performance relative to others.
Q. And do you believe that to be true?
A. I believe it is a source of information for hospitals on a very broad quality improvement journey.
Q. And based on your experience in working with Leapfrog, would you understand that you -- or would you testify to me that you understand the mission of Leapfrog?
MR. CRAIN: Objection to form.
MS. WOOD: Yeah, I can fix that. I tripped

over that one.
BY MS. WOOD:
Q. Based on all your experience and working with Leapfrog, it's been over a decade, almost two decades, would you say that you understand what Leapfrog's mission is?
A. Yes.
Q. And can you explain that to me in your own words?
A. To me, it would be to drive improvements in the quality of our healthcare system primarily using transparency as the mechanism to do that.
Q. And do you believe that that's always been Leapfrog's mission?
A. Yes.
Q. And do you believe that continues to be Leapfrog's mission today?
A. Yes.
Q. Okay.
And so in your experience as a researcher and as a principal faculty member at the Armstrong

Institute for patient safety and quality, do you believe that Leapfrog's Hospital Safety Grade provides a benefit to consumers?
A. I think sharing information in summary form is what patients and consumers are seeking. So whether that be a star rating, a letter grade, the research is clear that that is what they find helpful for their decision-making.
Q. Okay.
And have you done any research on whether or not the patients benefit from those star ratings or the Hospital Safety Grade?
A. No, I have not done any research on that.
Q. Have you read any research or peer reviewed articles on that?
A. I have read some research on consumers' use of publicly available quality and safety information. I can't say it's the most recent. There may be more recent information out there.
Q. And do you believe that consumers would lose any sort of benefit if hospitals were not graded through

the Hospital Safety Grade?
MR. CRAIN: Objection to form.
THE WITNESS: Can you repeat the question one time?
BY MS. WOOD:
Q. Sure.
If Leapfrog stopped grading hospitals, do you think that that would have any negative impact on consumers?
A. So the greatest benefit that's been noted for public reporting of quality and safety information has actually been the hospital's use of that information to drive improvements within their own healthcare system. -- hospital or healthcare system.
I don't want to be the bottom performer, right, so I'm going to do what I need to do to get out of the bottom. So in a sense, that improvement in quality and safety has universal benefit, right.
Every patient that comes to that hospital has some benefit of the hospital working to improve their quality and safety.

Q. And would you say that the Hospital Safety Grade also creates some competition between the hospitals?
A. I don't know enough about that.
Q. Okay. I just wasn't sure if that's what you were getting at. So that's okay.
And so then is it fair to say that if Leapfrog stopped grading hospitals and now patients did not have access to information on patient safety and these measures, that could potentially harm patients?
A. I don't know about what the implications of that would be.
Q. Okay.
Do you think that when patients have the most accurate and transparent data when making their informed decisions on where to treat, that that makes them safer and protects them?
MS. LAWSON: Object to form.
MR. CRAIN: Object to form.
THE WITNESS: I believe that having information is helpful in making a decision to where to receive

care.
BY MS. WOOD:
Q. And are you aware of any other rating systems that are comparable to Leapfrog?
MR. CRAIN: Objection to form.
THE WITNESS: Can you define comparable?
BY MS. WOOD:
Q. Sure.
Do you believe think -- do you believe that Leapfrog has any direct competitors?
A. There's no other entity I know that's putting out a composite, composite and noncomposite information -- well, let me start again.
I'm not aware of any other entity that's putting out a composite score around the specific area of patient safety. There are other entities, like the Centers for Medicare & Medicaid Services that do publish information about the quality and safety of care, similar to what Leapfrog does.
Q. And do you have any knowledge about the CMS star ratings?

A. I do.
Q. And what is your knowledge with regard to the CMS star ratings?
MR. CRAIN: Object to form.
BY MS. WOOD:
Q. I guess we can start with do you have experience with working with CMS in regard to those CMS star ratings?
A. I do. I served on their technical expert panel.
Q. Okay. Can you explain to me a little bit what that was like?
A. Yeah. So that is a -- this is actually written into federal legislation that CMS needs to publish a star rating for hospitals. It is considered to be a summary of all of the information that is shared on their care compare website.
So early on in the technical expert panel meetings, I would say, well, what are we actually trying to measure? And the contractor was like, well, we're supposed to summarize all the information. I'm like,

well, what's the underlying construct? We're just supposed to summarize the information.

So it's not clear exactly what CMS is measuring, but it is intended to be a summary of information. And so what they do is they take the measures that are publicly reported and have put those into domains, and different domains get different weights. They use Z-scores. It's all -- it's very similar to how Leapfrog has gone about calculating scores but just with a different set of measures and a different set of constructs.

Q. To your knowledge, does CMS have any patient safety measures that go into that star rating system?

A. They do.

Q. Okay.

And I know Leapfrog on their website usually says, when looking at the Hospital Safety Grade, consider other options or look to other sources. Does that sound familiar to you?

MS. LAWSON: Object to form.

MR. CRAIN: Object to form.

THE WITNESS: I don't know what's said on the website so...

BY MS. WOOD:

Q. Okay. Have you ever heard people at Leapfrog discuss that patients should not only consider the Hospital Safety Grade when choosing where to seek care?

A. Yes.

Q. Okay. And would you say that other -- strike that.

Another source that patients could look at is CMS star ratings. Is that correct?

MR. CRAIN: Object to form.

THE WITNESS: That is another publicly available rating of hospitals.

BY MS. WOOD:

Q. And do you have any knowledge on how, I guess, popular those star ratings are? You know, in your line of business or speaking with hospitals, do you tend to see that people rely on them or talked about relying on them?

MS. LAWSON: Object to form.

MR. CRAIN: Objection to form.

THE WITNESS: So I can speak to my experience with Johns Hopkins Medicine. The Board of Directors for Johns Hopkins Medicine, as well as senior leaders, have -- are very, very interested in the hospital safety grades. And when they see that the safety grades are dropping, there is usually a call for what's going to be done to get us back to an "A" or to a "B."

So I think it's been a way to engage health system leaders, Board of Directors, around the issue of patient safety. That's just my experience with Johns Hopkins Medicine.

BY MS. WOOD:

Q. Yeah.

And then does Johns Hopkins Medicine also discuss their star ratings?

A. I believe so.

MS. WOOD: I think that's all that I have for you.

THE WITNESS: Thank you.

MR. CRAIN: I have a little recross.

FURTHER EXAMINATION

BY MR. CRAIN:

Q. So just a few questions, Dr. Austin.

At one point counsel was asking you questions about whether the Leapfrog survey was a benchmark. Do you recall that line of questions?

A. Correct.

Q. And you said something like hospitals don't want to be the bottom performers. Do you recall testifying something to that effect?

A. Correct.

Q. Why don't hospitals want to be a bottom performer?

A. What I hear is that, specifically when you're dealing with physicians, they generally are individuals who have excelled throughout their lifetime in terms of academics and don't want to be perceived as being at the bottom.

Q. So to put it concretely, doctors working at a hospital don't want to work for an "F." Is that fair to say?

A. I can't speak for doctors working at "F" hospitals.
Q. But the ones, the doctors you were just talking about --
A. Yeah, they would -- yes. They would not want to work at an "F" hospital.
Q. And fair to say that an "F" can damage a hospital's reputation?
MS. LAWSON: Object to form.
THE WITNESS: I don't know -- well, what reputation are you referring to?
BY MR. CRAIN:
Q. Fair enough.
So hospitals -- in your experience, do hospitals have reputation in their communities, just reputations for quality of care, for safety, that sort of thing?
A. I think there are perceptions within communities around which hospitals have higher quality care than others.
Q. Can an "F" hospital -- can an "F" grade from

Leapfrog influence that perception?
A. I don't know.
Q. You have no opinion one way or another?
A. You didn't ask my opinion. You asked what I knew.
Q. Okay. Fair enough. Fair enough.
Do you have an opinion?
You're getting good at this.
A. I don't know how much -- if reputation is -- well, let me start over.
I don't know how -- I don't know the literature well enough to know how hospitals form reputations in their communities.
Q. Okay.
A. Obviously, a component of that is consumers and patients directly. There is media. There's a lot of different influences, and I don't know how each of those is tying into the Hospital Safety Grade and influencing the reputation.
Q. Okay. Fair enough. I get it.
Okay. We talked -- you went back --

counsel went back to look at the Delray website again, right. And you testified something to the effect of the asterisk at the bottom of the page explains the how a grade is assigned, right?
So I don't have a piece of paper for you, but I'm going to do something a little avant-garde and show you a website.
So I want to just direct you -- and just so counsel can see, it's another Hospital Safety Grade website. Do you see that?
So this is a hospitalsafetygrade.org website. Can you see it okay?
A. I can.
Q. And do you see it says Pikeville Medical Center? Do you see that?
A. Yes.
Q. And Pikeville is in Pikeville, Kentucky. Do you know anything about Pikeville, Kentucky?
A. I do not.
Q. Okay.
What's the grade it gets?

A. They received a "D" in the Spring 2025 Hospital Safety Grade.
Q. Okay.
So I want to go down and just look at safe medication administration. Do you see that's toggled there?
A. Yes.
Q. And that is the BCMA?
A. Correct.
Q. Okay.
So now, do you see what their score is?
A. It's a 25.
Q. Okay. And what's the worst score?
A. Twenty-five.
Q. Okay. And it has the little asterisk, right?
A. Correct.
Q. Now, read the asterisk for me. Can you read it into the record?
A. The hospital declined to report their performance on this measure, so a score was assigned to reflect the lack of information available.

Q. Do you have any idea how the score was imputed?
A. Are you asking me do I know that, or do I know that from what I'm reading there?
Q. From the information you have gathered from this website or otherwise -- but you don't know Pikeville, so I assume it's from this website -- how was Pikeville's limited achievement score assigned?
A. I, Matt Austin, know that it was assigned based on them not reporting to the survey, and they get assigned a score based on that nonsubmission.
Q. So that's why it was assigned, right? It was assigned because they didn't report, right?
A. Uh-huh.
Q. The question of how it was assigned I see as conceptually different. Does that seem fair to you or no?
A. I guess I see them as linked and maybe one in the same. That's where I'm struggling to distinguish.
Q. So let me -- I can make it more concrete.
The imputation methodology as it applies today has two steps, right?

A. Correct.
Q. Right? There is Step 1, historical, and Step 2, limited achievement, right?
A. Correct.
Q. Do you have any idea how Pikeville -- which step was applied to Pikeville?
A. I know from the Hospital Safety Grade methodology that declining to report on the measure is what resulted in them getting a score assigned.
Q. But I'm asking a different question. I'll just do it more directly. Did Pikeville get assigned limited achievement through Step 1 or Step 2?
A. I don't know from what this is telling me whether --
Q. And yet, to be clear, you testified earlier that this asterisk explained how the score was assigned, right?
A. I testified that the why and how to me were sort of one in the same.
Q. Okay. So then just setting the semantics aside, just looking at this asterisk, you have no idea

whether Pikeville got limited achievement through Step 1 or Step 2, correct?
A. I don't know that.
Q. Now, you -- sorry. Just to be clear. Correct?
A. Correct. I do not know whether they were assigned a Step 1 or Step 2.
Q. Now, is it fair to say Step 1 is a little more accurate because it relies at least on the prior year's survey that Pikeville or another hospital might submit?
A. The underlying assumption is that a hospital's specific information from a recent time period would be a better indicator of current performance than just a general imputed score.
Q. So Step 1 can be a better, I think you said, better indicator of current performance, right?
A. Correct.
Q. Okay. And yet you have no idea whether Pikeville is Step 1 or Step 2, right?
A. Not from what's shown here.
Q. Which, again -- can you state for the record what is being shown here?

A. What's being shown here is the hospital's score with an asterisk, which says the hospital declined to report their performance on this measure, so a score was assigned to reflect the lack of information available. So that could be either Step 1 or Step 2.
Q. Great. Okay.
So we'll set Pikeville aside, our dear friends in Kentucky.
A couple other questions. So counsel raised the question of whether the limited achievement score was a benefit, right? Do you recall that line?
A. Yes.
Q. Okay. Is it your testimony that assigning limited achievement automatically in Step 2 is a benefit?
A. I did not testify to that.
Q. I just want to understand if it is your testimony.
A. That is my testimony, that it is not necessarily a benefit.
Q. Can it be a benefit ever?

A. For some hospitals it could be a benefit.
Q. Now, why is that, though?
A. If the alternative was to assign zero, assigning a 15 is better than a zero. But if we assign -- if the decision was to assign 50, assigning 15 would be a negative. So I don't know if there's a universal way of answering that question.
Q. Fair enough. So let me just lay it out this way. If a hospital participated in the survey and failed on every hand hygiene question, what score did they get?
A. They would receive limited achievement.
Q. They wouldn't achieve zero, right?
A. They would be scored as limited achievement.
Q. So what is the benefit vis-à-vis the nonparticipating hospital and the hospital that scores zero down the line? Is there a benefit? Let's start with that.
A. Can you repeat that again?
Q. Yeah.
Counsel was suggesting there's a benefit

that Leapfrog gives limited achievement versus zero. But just to be clear, no hospital gets zero, right?
A. In the current scoring methodology, no hospital gets zero.
Q. Even if the hospital failed every one of the questions we looked at for hand hygiene, they would get I think it's 15, right?
A. Correct.
Q. Okay.
A couple other lines. So we talked about the Alexandria, Virginia notes. Do you remember that document?
A. Yes.
Q. I think that was Exhibit --
A. Twenty-seven.
Q. -- 27. And you said at one point other than the notes, I don't remember anything. I just want the record to be clear. Do you remember the meeting, or are you just looking at the notes?
A. I remember having an in-person meeting with the expert panel. I can picture a conference room. I

honestly can't remember if it was this meeting or a different meeting.
Q. I guess what I'll say is do you remember, actually have a memory of what was said, or you just have no reason to doubt the notes?
A. I have -- I do remember at this in-person meeting, I do remember the conversation about whether an explicit penalty should be something that's on the table or if Leapfrog should consider assigning an explicit penalty.
Q. Okay.
A. I do remember that, but I don't remember whether it was this meeting or another meeting. But when I look at these notes, this seems to corroborate that it was this meeting.
Q. Okay. Fair enough.
And then I want you to just tell me everything you remember about the discussion about the penalty you're referring to just so it's clear.
A. So what I remember, which may be different than what's in the notes, is specifically Dr. Andrew Bindman,

who at the time was the head of -- the director of the Agency for Healthcare Research and Quality, which is the federal agency that oversees quality and safety work. From what I remember, Andy is -- broached the subject of, well, hospitals should just be reporting to the survey. Shouldn't we just like assign some sort of penalty for them if they aren't reporting? That will get them to report.
Q. Fair enough. Okay.
A. So that's what I remember.
Q. Yep.
A. Because I sort of remember where I was sitting, where he was sitting.
Q. Okay. And anything else you remember about that --
A. No. That's what I remember.
Q. Okay.
A couple of last questions. HCAHPS. So you talked a little bit with counsel about HCAHPS, right?
A. Correct.

Q. What does HCAHPS measure?
A. HCAHPS measures the patient experience of their inpatient hospital stay.
Q. Okay. So if a hospital is loud, is that reflected in HCAHPS?
A. So there are different domains within the HCAHPS survey. One is quietness of the hospital environment.
Q. Okay. Can you give us a sense of the others?
A. Yeah. So the five that are included in the Hospital Safety Grade include physician communication, nurse communication, communication about medicines.
Q. Not a memory test.
A. The other -- the five that we've included are all related to communication --
Q. Okay.
A. -- and sort of the importance of communication as it relates to patient safety.
Q. And there are other HCAHPS domains that are not included?
A. Correct.

Q. Okay.
And HCAHPS, as you said, relates primarily to patient satisfaction?
A. Patient experience.
Q. Experience. I'm sorry.
A. Yes, which is considered a different construct than patient satisfaction.
Q. Got it. And is it a different construct from safety?
A. There are -- there is probably some conceptual overlap between safety and patient experience.
Q. Okay.
A. There's probably some overlap between patient experience and patient satisfaction, to be fair.
Q. So like a Venn diagram?
A. Correct.
Q. Okay. Got it.
I think the last sequence, I want to go back to Exhibit 3, the methodology document that you were asked about. Do you recall that?
A. I remember being asked about the number of

measures --
Q. Yes.
A. Yes, in each domain.
Q. So I want to just -- a quick question for you. Does Leapfrog -- for nonparticipating hospitals that are imputed, does Leapfrog impute secondary data to assign a score?
A. Is -- can you repeat that?
Q. Yeah, let me break it down. So let's go back to the AHA days, right. So back then when Leapfrog was using the American Hospital Association data, it was using the AHA data as a secondary source that it was imputing into the safety grade score. Is that fair or no?
A. Correct. So the AHA data was the data that was being used to impute a score.
Q. Okay. Because the imputation model is not secondary data itself. It's a method of imputing secondary data, right?
A. Correct.
Q. Okay. To impute, one needs secondary data,

right?
A. No.
Q. No. Okay. Tell me why.
A. So as outlined in the famous email where we list the five different imputation options, one of them is using secondary data to arrive at some sort of estimate of the hospital's performance.
Q. Got it.
A. But one could just assign zero. One could assign some value above or below the mean, right. So one does not necessarily require secondary data to impute a score.
Q. Okay. But if one is imputing secondary data, there needs to be a secondary data source, in theory, right?
A. Correct.
Q. Okay.
So I want to go to page 5 of the methodology document, Exhibit 3. You see it's the measures you were talking about before?
A. Yes.

Q. And do you see the top three at least are three of the imputed measures, right?
A. Which page are you on?
Q. I'm looking at five.
A. Okay.
MS. LAWSON: Is it four of the slide, or is it five of the slide?
BY MR. CRAIN:
Q. Oh, I'm sorry. It's the one -- I may be -- page 4. You're right. Page 4.
A. Okay.
Q. Okay. I'm pulling if off my electronic version.
So my question is do you see where it says Computerized Physician Order Entry right there?
A. Yes.
Q. And Primary Data Source is the 2024 Leapfrog Hospital Survey, right?
A. Right.
Q. That's accurate, correct?
A. Correct.

Q. Secondary data source says the imputation model applied, right?
A. Correct.
Q. For any hospital under Step 2, there isn't a secondary data, right?
A. In the -- are you asking about the current?
Q. Yes.
A. In the current methodology, there is not secondary data, correct.
Q. Under Step 2?
A. Under Step 2.
Q. Is there under Step 1, or would you not call the historical secondary data?
A. I wouldn't call that secondary data.
Q. Okay.
So fair to say for CPOE, BCMA, IPS, and hand hygiene there is no secondary data?
A. We are currently not using secondary data as part of the imputation models.
Q. Okay.
MR. CRAIN: Okay. Nothing further from me.

You good?
You're free to go unless Sara wants to go.
MS. LAWSON: We can go off the record.
MR. CRAIN: Off the record.
THE VIDEOGRAPHER: This concludes the deposition of Dr. Matthew Austin. This ends media unit number nine. We're off the record. The time is 6:06 p.m.
THE COURT REPORTER: Ms. Lawson, will you be handling signature for the witness, or are you waiving signature?
MS. LAWSON: We'll read and sign.
She'll prepare a transcript of it so that you can review your testimony and note any corrections.
THE COURT REPORTER: Ms. Wood, do you need a rough draft as well?
MS. WOOD: Yes, if I can get a rough as soon as possible.
(The deposition adjourned at 6:06 P.M.)

I, Marlene Kerr, a Notary Public of the District of Columbia, do hereby certify that the within-named witness personally appeared before me at the time and place herein set out, and after having been duly sworn by me, according to law, was examined by counsel.
I further certify that the examination was recorded stenographically by me, and this transcript is a true record of the proceedings.
I further certify that I am not of counsel to any of the parties, nor in any way interested in the outcome of this action.
As witness my hand this 29th day of September, 2025.

Marlene Kerr
Notary Public

My Commission Expires:
July 28, 2026.

CERTIFICATE OF DEPONENT

I hereby certify that I have read and examined the foregoing transcript, and the same is a true and accurate record of the testimony given by me.

Any additions or corrections that I feel are necessary will be made on the Errata Sheet.

_____

Matthew Austin

_____

Date

(If needed, make additional copies of the Errata Sheet on the next page or use a blank piece of paper.)

Job Number: 7616361

September 29, 2025

Good Samaritan Medical Center Inc, Et Al. v. The Leapfrog Group

DEPOSITION OF: Dr. Matthew Austin (# 7616361)

The above-referenced witness transcript is available for read and sign.

Within the applicable timeframe, the witness should read the testimony to verify its accuracy. If there are any changes, the witness should note those on the attached Errata Sheet.

The witness should sign and notarize the attached Errata pages and return to Veritext at errata-tx@veritext.com.

According to applicable rules or agreements, if the witness fails to do so within the time allotted, a certified copy of the transcript may be used as if signed.

Yours,

Veritext Legal Solutions

ERRATA SHEET

WITNESS: MATTHEW AUSTIN

Good Samaritan Medical, et al., vs. The Leapfrog Group

Thursday, September 25, 2025

PAGE/LINE	SHOULD READ	REASON FOR CHANGE

JOB NUMBER: 7616361

&

& 2:3 9:18 10:2 79:18 80:16 364:11 365:2 392:17

0

006 44:17
02190610.pptx 357:19
08526 9:9
0900 323:3,21

1

1 5:6,7 20:13 20:14 24:10,11 25:9 27:6,7 28:9 79:14 93:13 118:5,15 120:13,15 121:14 122:1,6 126:9,10 127:10,15 159:2 161:18 162:8 166:9,15 166:18 167:6 168:2,9,17 169:5 170:8,13 170:17 179:4 197:21 200:3,7 209:9 218:7 225:5,10,16,20 227:6 242:6 327:7,8 365:12 366:20 368:7 403:2,12 404:1 404:6,7,14,18 405:5 415:12
1,400 150:18
1.2 325:15
1.22 334:10,13
1.31 334:8
1.40 334:5
1.46 333:18 334:2,2,13 337:9
1.5 340:13
1.53 340:13
10 6:6 48:6,9 68:16 87:9 113:3,4 116:5 129:5 165:15 177:9 178:3 191:9,10 363:10,14 364:4,7
100 1:13 2:16 96:20 281:4 350:7 352:17 372:6 382:8
10166-0193 2:7
102 5:19
105 351:5,6
105,000 351:15
10:05 70:16
10:22 71:8
10th 358:10,19
11 4:6 6:8 48:6 62:20 63:1 81:16 87:9 113:19,20 133:12,15 149:3
113 6:6,8
11:49 155:9
11th 133:4
12 6:9 40:13 48:6 77:8 81:16 127:6 128:17,18 299:13 303:19 364:14,19 365:1 366:9
128 6:9
12:17 164:9
12:27 174:17
12:35 25:10
12:56 155:15
12:58 158:17
12th 6:6,8 113:10 114:7 155:21 156:4 161:3,21 170:12 196:21 256:8,10
13 6:11 125:7 139:14,15 154:12
133 353:1
134 351:18
134,000 352:3
139 6:11
14 6:12,19 160:13,14
143,898 43:16
14327 357:7 358:17
14th 196:10 197:1
15 6:15 96:20 163:6,7 178:15 178:16 179:8 204:8 218:13 218:16 219:18 277:15,18 278:5 286:4 305:11 332:11 376:4,16 377:14,20 379:6 380:6,11 380:16,21 382:7,14 383:6 383:9,10,21 384:2 406:4,5 407:7
16 6:17 178:16 178:19 179:9 179:10,11 185:6,7 376:8 376:15
160 6:12
161 3:5
161,000 351:15 352:2

163 6:15
16473 195:21
16th 140:9 141:3
17 6:18 195:15 195:16,19
18 7:6 135:8 205:9,10
18332 204:9
185 6:17
19 7:8 217:2,3 327:7,8 379:21
197 6:18
1995 33:19

2

2 5:7 23:16,17 27:6,12 93:16 93:17 95:19 104:6 118:17 120:10 121:14 122:1 143:13 170:20 171:1,6 171:9 174:11 175:5,12 177:20 179:2 179:12,14,18 182:6 186:7,11 186:18 192:19 194:7,11 200:4 200:7,16 218:4 218:9 225:3,10 225:17 227:11 227:18 228:8,9 243:5 267:4 271:7 308:5 347:21 348:3 365:13 366:20 368:8 403:3,12 404:2,6,18 405:5,14 415:4 415:10,11
2,652 288:8
2.01 340:11
2.12 340:11
2.52 340:8 341:20 342:7
20 5:6 7:9 68:15,16 159:12 230:15 230:16 246:13 304:12,16 306:2 325:1 332:11
20,000 349:3
20,252 351:1
200 2:6
2001 244:8
2004 328:17 329:1,4
2005 34:14
2007 39:10
2008 35:10 36:11 39:6
2011 35:8 54:3 56:1 160:3,7
2012 35:10 36:11 40:7,19 41:2 54:3 286:19 293:19
2013 7:19 54:3 88:4,9 286:10 286:19 292:13
2014 54:13 56:1 85:16 86:16 88:2,3,3 88:9 89:1,21
2015 54:13 332:18
2016 105:9 323:9,21 324:1 360:18,19 361:13
2017 318:4
2018 43:10 49:17 55:16 66:2,14 67:4,6 68:7 105:19,21 138:9
2019 8:15 105:11,12,14 105:20 106:17 107:8 108:6,12 108:13,14 138:9 256:8 321:10 322:3 323:9 324:1,7 333:18 348:20 349:12 350:5,9 350:10 352:4 352:14 357:12 358:10,19,20 359:15 360:15 360:15 361:10 361:15
2020 158:4 274:4,14 275:1
2020/21 159:9
2021 8:7 158:4 239:5 275:5 314:2,9 318:7
2022 275:6
2023 274:5 275:6 276:8 277:3 280:1,2 281:9 286:18
2024 6:6 7:16 7:18 28:18,18 81:10 112:13 112:16 113:10 114:13 124:14 146:17 161:3 177:20 234:20 239:5,13 243:5 256:12,13 272:12 284:4 284:10,17 294:2 303:12 318:3 384:15 385:3 414:17
2025 4:4 5:4 6:4 7:4 8:4,10 9:4 26:14 27:4 28:17 68:8 88:15 89:1,21 106:5,10 107:8

177:11,20 322:1,16 323:9 324:4,8 338:5 349:2,16 352:20,21 355:21 356:1 401:1 417:14 419:4 420:2
2026 417:19
204 353:5
205 7:6
21 7:11 159:12 234:7,8,11 306:20
212.351.2454 2:8
21202 1:14 2:17
2128 192:1
217 7:8
22 7:12 242:9 242:10
22nd 196:14
23 5:7 7:14 255:15,16
230 7:9
234 7:11
24 7:15 136:9 271:21 272:1 284:15
242 7:12
2440 1:14 2:16
25 4:4 5:4 6:4 7:4,17 8:4,7 90:5 135:4 150:20 195:6 283:10,18 290:12 294:3 325:1 355:21 372:6 401:12 419:4
250515 355:6
255 7:14
25th 9:4 32:5 314:1
26 7:19 135:6 281:10 286:4,5
26.1 1:13
27 8:6 148:9 149:3 306:21 307:1 317:16 319:15 373:4 407:16
272 7:15
28 8:7 27:18 312:18,19 417:19
283 7:17
286 7:19
29 5:8 8:9 27:18 321:16 321:17 333:9 333:10 343:14 343:15,16 348:19 354:18 354:20,21 420:2
29th 417:13
2:13 229:17
2:38 230:2
2b 126:7,11,12 126:13

3

3 5:8 7:16 29:7 29:9,15 110:14 131:11 149:3 177:3 224:19 229:4 272:12 337:8 363:20 363:21 376:6 376:14 411:19 413:19
3.89 340:5
30 5:10 8:12 79:17 265:3 304:13,16,16 306:3 312:18 327:21 329:21 330:1 343:13
30,000 346:14 346:18,21
307 8:6
31 8:13 355:10 355:11
312 8:7
312.821.6139 3:7
31896 417:16
32 8:15 113:15 356:18 357:6
321 8:9
32a 113:2
33 128:13
330 8:12
33a 139:13
34 163:6
35 5:12
350 62:9
353,000 353:1
353.6. 350:16
355 8:13
356 8:15
36 131:10 185:5
36.3. 131:10
362 4:7
38 195:14
397 4:8
3:26 283:6
3:43 283:14

4

4 5:10 30:13,14 42:19 114:7 156:5 288:20 292:3 297:12 414:10,10
4.92 340:8 341:19 342:7
40 42:2 45:16 48:19,20 66:3 66:15 67:2 133:11 240:17

410.949.1181 2:18
417 4:11
418 4:12
419 4:13
42 5:13
43 205:8
437364 114:17
45 1:12 234:6
4500 3:5
46 353:4
46.6 350:16
47 242:8
49,000 349:3
4:25 232:6
4:55 356:14
4a 43:13

5

5 5:12 8:15 35:19,20 114:7 156:5 290:12 365:1 366:10 413:18
5-3 179:4
50 68:13 336:8 336:9 337:5 372:6 378:21 406:5
50,000 104:16 348:13,18
500 269:6
5116 273:4
58 321:16
59,799 45:14 48:20
5:07 357:1
5:11 362:7
5:13 362:13
5:41 186:5
5th 357:12 358:20

6

6 5:13 42:19,20 44:17 133:15 364:4
60 66:3,6,18
60601 3:6
63 280:16,17
64 30:13
65 102:18 347:17
668 288:21
67 78:15
6:06 416:8,19

7

7 5:15 51:12 60:8 63:13 71:4,14 133:12 133:12 364:4
7.98 340:5
70 42:2
70s 305:10
71 5:15
7366 115:13
7367 120:8
7369 118:10
7375 125:8
74.40 382:11
74782 116:7
75 372:6
76 307:21
7616361 1:21 418:18 419:21 420:4
78 5:17
782 116:8

8

8 5:17 78:16,17
80 245:17 246:5 339:14
80526 1:6
80s 305:10
8330 184:1,13
8331 163:21 164:4
8332 165:21
85 277:19
85.7 276:7,8 277:3,8
87 350:2

9

9 5:19 52:6 102:19,20 131:2 347:18
9/25/2025 20:15 23:18 29:10 30:15 35:21 42:21 71:5 78:18 102:21 113:5 113:21 128:19 139:16 160:15 163:8 185:8 195:17 205:11 217:4 230:17 234:9 242:11 255:17 272:2 283:11 286:6 307:2 312:20 321:18 330:2 355:12 356:19
90.5 279:18,20
90.5. 280:17
90s 305:10
91.8 350:3
92.8 274:14 275:1
96.8 275:5,6
97.9 275:6
9813 206:11
9814 207:6
9:09 1:16 9:3
9:10 11:10
9:11 192:1
9:12 11:14
9:25 1:6 9:9

a

a.m. 1:16 9:3 11:10,14 70:16 71:8 155:9

ability 13:13 169:12
able 75:5 154:6 241:17 252:12 261:15 295:3 337:17
above 1:15 21:19 218:12 291:3 293:14 294:11 305:16 413:10 420:5
absence 97:10 220:2
absent 94:20
absolute 250:1 276:19 280:3
academic 361:7
academics 397:17
accepted 82:8
access 150:15 150:17,18 258:3 391:9
accidently 141:5
account 140:12 153:1,4
accountable 111:20
accuracy 142:7 249:8,13,20 250:11 311:10 347:1 384:19 420:8
accurate 36:5 55:4,15 79:3 91:20 92:8 102:3 111:4 127:21 133:19 142:3 161:12 199:13,16 203:13 209:3,4 209:20 210:2,4 210:5 220:11 220:20 224:10 247:19 248:8 250:17,20 271:8,9,13 276:12 307:18 308:21 309:15 311:19 341:9 341:16 342:5 353:13 359:5,9 360:1 391:15 404:8 414:20 418:5
accurately 25:4 51:21 247:13
achieve 237:21 406:13
achieved 181:18 281:3 281:10,11 328:11,14 371:18
achievement 83:7,14 95:12 96:1 97:6 131:7,8,16,21 132:5,10 138:3 144:11,17 173:8,13 175:14 176:7 176:11,20 177:21 178:10 179:17 180:2 180:11 181:6,8 181:13,14,17 181:17,19,20 184:4,16 188:10 192:7 192:15 204:16 204:20 215:17 216:10 220:4 228:16 238:18 238:20 239:14 239:20 267:5 267:11 268:3 268:12 269:20 271:6 290:8,10 294:21 296:6,8 296:8 298:5,6 339:6 371:19 371:20,20 372:14,20,20 376:5,12,15 377:1,14,21 378:4,14 379:14,15,18 380:10,12 385:5 402:7 403:3,12 404:1 405:10,14 406:12,14 407:1
achieving 131:8,9,13
acknowledge 215:21
acquire 224:16
acquires 109:8
acting 208:20
action 1:15 11:20 142:12 417:12
active 56:5
activities 38:17
actual 94:2 146:3 147:6 154:14 192:4 201:13 213:1 237:15 238:15 240:3 249:7 267:13,19 268:4,13,16 337:8 339:4 353:18
actually 11:5 24:10 25:21 33:1 34:20 36:14,18 39:9 53:8,21 60:6 63:2 64:6 70:7 78:4 81:15 86:5,6 94:13 105:21 108:6

110:4 112:3 116:1 118:17 143:17 145:8,9 150:8 169:7 175:18 188:10 190:8 193:20 208:14 210:18 212:13 216:18 222:4 225:15 241:17,18 248:19 267:7 276:2,3 279:8 280:6 291:16 293:7 307:11 317:17,18 326:14 328:2 332:10,11 335:12,14 336:18 338:5 342:15 343:9 350:13 353:1 354:17 355:21 364:3,3 370:8 373:6 374:6 377:4 379:8 390:12 393:13 393:19 408:4
acute 288:8
adaptation 171:6
added 25:12 49:1 90:10 116:15 202:5
adding 26:15 197:14
addition 244:21 326:17 375:18
additional 28:8 50:10 91:11 264:5 332:8 418:15
additions 418:7
address 82:5 147:10 154:18 201:17 246:20 291:4 300:3
addressed 82:9 299:9,17
addressing 299:18,19
adhere 21:14
adjourned 416:19
adjusting 331:8
adjustments 52:18
administration 92:18 401:5
admissions 109:12
adopt 285:1,2
adopted 125:14 127:3
adult 179:1
adversely 243:13
advice 287:14
advisable 300:21
advise 208:14
advised 208:9 211:1
advising 208:14
advisory 208:20 285:6
affect 46:15
affected 260:14 290:16
affects 47:16 210:19
afraid 192:3
agency 252:18 409:2,3
agenda 8:6 25:14 26:4,5 151:20 307:10 307:13 315:5 315:19 316:10 316:14,18,20 317:8,11 320:4 320:11 373:9
aggregate 108:21,21 109:1,1 261:16
ago 37:9 54:14 87:9,10 96:6 143:16 145:20 177:14 180:4 180:15 253:15 272:16 304:2 308:17 342:17
agree 73:5,10 74:2,14 75:2,7 98:15 111:10 111:12 211:7 211:11,21 236:16 264:17 265:5 303:10 319:2,3 320:15 320:16 335:6 367:12 369:4 377:3 378:13 380:9 381:15 381:20 382:3 382:17 383:20
agreed 203:21 204:21 301:9
agreement 301:9 361:20
agreements 420:14
aha 83:20 84:1 84:3 239:6,10 254:10,11,13 256:14 257:17 257:19 258:4,5 258:10 259:4 259:12,13,15 260:4 261:9,14 261:18,21 262:3,12 263:6 263:9 264:2 266:18 269:7,9

270:19 314:5,7 314:13 412:10 412:12,15
ahead 7:19 27:20,21 89:2 157:15 174:12 186:19 189:12 208:16 221:1 225:18 236:10 277:14 280:11 286:11 304:19 339:20
airline 35:4
airlines 34:21
al 1:4 4:3 5:3 6:3 7:3 8:3 9:7 419:3 420:3
alana 243:2
albeit 349:16
alcohol 279:7 332:6
alex 59:1 63:3 64:10 116:14 175:2 177:17 188:7 206:7 313:15
alex's 189:9
alexandria 317:17 319:16 407:11
algorithm 281:15
algorithms 40:1
aligned 55:11 192:13
allen 17:16
allocated 66:2 66:14
allotted 420:15
allow 94:18 252:1,4
allows 74:10
alternative 128:5 406:3
altogether 250:18
ambulatory 59:13 61:8
american 82:18 84:1,16 239:5 412:11
amount 45:21 46:3 49:18 66:14 279:7 327:14
analogy 221:21 252:10,12
analyses 39:20 107:11 272:17 272:18 288:2 291:3
analysis 7:16 36:15 37:17 38:14 106:9,11 106:13 107:3,6 107:10 108:10 108:11 112:1 196:17 269:14 272:12 273:7 275:20 288:7 288:13 293:4 319:13 324:1 327:4 332:10 335:6,7 358:7 360:7
analyst 140:11 142:9 313:7,14 356:3
analysts 45:12
analytic 64:11
analytical 189:13
analytics 59:5
analyze 105:15
analyzed 286:17
analyzes 87:20
andrew 314:19 316:16 408:21
andy 409:4
angeles 245:3
annual 60:15 351:10,11
annually 243:12
answer 14:7,8 14:13 15:13 51:1 68:19 87:17 89:4,5 90:2 98:5 101:3 144:20 145:16,16 146:15 190:4 207:3 225:7,19 236:19 238:8,9 243:20 251:2 266:6 267:17 276:4 280:15 295:3 306:7 368:5 370:2 379:3
answered 269:9 274:20 276:7
answering 406:7
answers 12:21 13:6
anybody 14:11 16:15 19:18 131:20 133:15 174:9 372:17 372:17 374:21 387:2
anymore 259:16 302:7 312:10
anyway 210:20
apologies 364:1
apologize 79:14 90:20 207:20
apparent 299:9
apparently 153:5

appear 131:3 202:15
appeared 417:3
appears 36:4 337:14
apples 108:10 108:11
applicable 325:18,19 370:21 420:7 420:14
applied 96:4 403:6 415:2
applies 402:20
apply 109:12 302:6 326:1
appreciate 363:4
approach 53:15 88:9 108:15,18 190:18 209:15 257:13 260:13 260:19 291:4 291:10,12 293:17 294:6 317:19
approaches 82:8 159:12 199:11,12 289:18 291:3 291:16 293:8 293:16 297:13 299:4 306:11 319:14 372:3
approaching 188:11
appropriate 97:10
appropriately 90:12
approve 285:16
approved 52:13 285:13 285:15
approximately 16:14 39:7 40:6 42:1 54:12 68:9 81:1 124:4 265:3
approximation 69:15 262:5
april 6:6,8 106:14 112:16 113:10 114:7 141:3 146:17 155:21 156:4 161:3,21 170:12 196:14 196:21 256:8 256:10
apt 168:1
area 216:13 392:15
areas 59:11,16 151:1
arguable 367:21
argue 88:16 102:6 264:4 350:21
argument 350:8
arjun 145:6 375:3,7,15,19
arjun's 135:12
armstrong 2:13 9:17 19:1 20:20 23:16 24:2 30:17 41:8 43:4,19 43:21 44:9,16 134:21 140:7 160:18 185:15 195:20 255:19 272:4 307:5 357:6 358:16 359:21 388:21
armstrong's 41:5
arrive 413:6
arrived 40:20 222:17
article 8:12 85:17,19 86:12 86:16 87:6,11 87:19 297:20 328:17,19 329:16,20 330:4 331:14 332:9,20 337:21 345:19
articles 361:2 389:15
articulate 297:9
articulates 77:19
articulation 80:2 92:9 144:3,6
artifact 254:3,9 254:21 255:3 270:4,6
aside 139:2 142:19 163:4 169:11 185:3 195:13 205:7 230:6 233:11 253:12 265:8 267:10 286:2 306:19 312:16 321:3 360:13 403:21 405:7
asked 5:20 21:5 75:16 77:6 78:11,13 98:8 103:18 107:7 143:9,11 159:21 216:8 265:21 266:4 301:8 329:10 347:19 381:12 381:13 399:4

411:20,21
asking 62:19
67:3 69:9,11
77:11 81:19
124:13 166:13
166:15,15
209:21 265:18
266:7 315:20
318:9 359:8
361:4 387:2
397:4 402:2
403:10 415:6
asks 21:18
97:20 181:11
assertion
367:13
assess 63:2
74:10 112:1
332:1 384:18
assessed 281:21
assessing
289:18
assessment
245:4 253:3,6
302:17 306:10
assign 40:3
62:17 94:9
171:20 215:16
216:9 220:3
295:18,20,21
296:7,21
298:11 319:17
371:15 372:5
406:3,5,5
409:6 412:6
413:9,10
assigned 100:6
126:14,18
134:7 153:10
180:1,8 181:6
226:6,10 227:2
227:3,6,14
228:6,12,14,15
228:20 372:6
373:21 376:20
380:11 381:6
381:13,16
382:21 383:6
383:12 400:4
401:20 402:7,8
402:10,11,12
402:14 403:9
403:11,16
404:6 405:4
assigning 82:20
83:3 94:16
118:15 176:11
180:11 188:9
200:8 205:3
214:21 267:5
378:13 405:13
406:4,5 408:9
assignment
227:17 238:18
267:12,18
268:2,12
269:20 271:6
339:6
assigns 176:19
assistantship
39:11
associated
94:13 109:7
238:10,13
325:16 326:8
364:8
association
82:18 84:1,16
239:6 330:7
331:6 412:11
assume 14:1
22:16 26:18
251:17 278:3
280:13 402:6
assuming 110:6
216:14
assumption
97:13,16
109:21 176:5,9
180:6,16,20
268:15 275:11
295:10 296:16
297:9 326:16
345:5,9,12,13
345:16 379:7
404:10
assumptions
292:6,16 293:1
294:7,8 296:18
296:20 302:10
331:17 345:7
346:1
asterisk 222:16
222:18 224:2,4
224:5,6 225:9
226:9,13,20
227:12 228:19
380:6,21 382:6
382:7,19
383:21 384:2
400:3 401:15
401:17 403:16
403:21 405:2
attached
113:18 114:5
116:14 140:16
141:5,5 272:16
342:15 355:20
358:14 420:10
420:12
attachment
7:16 113:14
141:4 197:10
198:7 206:19
272:11 284:9
317:16 355:5
357:17,18
360:1
attendance
16:15
attended
156:21
attendees 156:8
197:14
attorney 2:12
14:6 15:1,16

18:1
attorneys 2:2 3:2
attributable 109:5 110:1 326:4,6,11
audible 13:6
audio 17:6
audits 279:8
august 8:7 314:1
austin 1:11 2:12 4:2 5:2,7 5:10,12 6:2,12 6:13,15,17 7:2 7:7 8:2,7,9,16 9:5,16 11:17 12:3,3 15:12 20:17 23:20 36:2 43:2 71:10 73:8 78:20 103:2 113:7 114:3 133:8 139:18 160:17 177:7 184:6 185:10 195:19 207:14 217:6 225:16 230:4,19 234:12 242:14 283:16 286:8 313:2 321:20 357:3 362:16 397:3 402:8
416:6 418:11 419:2 420:4
austin's 45:16
author 61:14 61:15,16 86:19 286:20 356:2
authority 208:18
authors 86:9 292:14 295:10 299:2 300:21 301:2,8 330:13 336:15
automatic 228:16 238:17 267:12,18 268:2,11 271:6
automatically 179:17 215:16 216:9 267:4 405:14
available 28:6 30:4 72:18 73:18 91:7 111:19 224:8 227:15 228:10 244:11 253:3,7 253:10 260:15 281:15 290:18 291:7 293:10 296:13 300:9 301:15 381:7 381:17 389:17 395:14 401:21
405:4 420:6
avant 400:6
avenue 2:6
average 153:11 216:13,14,15 269:8,10 319:7 353:2,7 382:10 383:5
averages 344:16,17
avoid 292:15 297:13
avoided 292:5
aware 19:7 29:19 60:16 77:18 95:13 98:1 229:2 233:13,16 260:6 264:3 265:4 285:7,10 285:10 294:4,4 299:14,15 364:17 392:3 392:14

b

b 5:13 54:17 105:15 108:21 221:14,21 245:6 323:14 323:18 324:16 325:7 334:8 340:10 341:13 396:8
back 11:13 19:16 36:8 54:17 60:8 61:2 71:7,10 72:15 75:19 83:18 86:7,9 87:19 89:14 98:14 102:4 105:18 106:14 110:8,10 115:18 117:7 120:7 125:5 127:6,19 129:4 130:16 136:2,6 136:9 139:3 141:14 142:21 148:8 152:18 152:21 154:11 154:12 155:14 155:17 156:3 159:1,4 165:4 168:10 169:13 169:18 172:13 177:17 180:13 182:5 187:7 197:18 202:21 204:2 209:12 212:14 213:8 218:7 219:15 230:1,6 233:12 239:19 240:11 241:10 244:7 251:6 252:10 258:2 268:7

274:9 275:16 283:13 286:18 294:10 295:9 303:1,16 306:1 316:3 317:3,16 317:16 318:4 319:4,15 327:19 328:2 333:6,7 340:20 341:12 346:8 348:19 354:2 356:21 360:14 362:12 382:6 396:8 399:21 400:1 411:19 412:9,10
backed 345:17
background 63:14 157:10
bad 13:20 46:12,13 186:10 301:19 347:2 369:8
bailey 8:10 321:21 343:19
balance 361:21
ballpark 48:3 48:17 66:7 67:18 241:7
baltimore 1:14 2:17 40:11
barb 38:10,12
barcode 92:18
barely 235:5 379:15
base 60:11
based 19:7 50:16 53:17 60:21 82:21 83:1 92:5,7 95:21 105:19 106:5,10,11,18 118:2 127:13 127:16 131:19 133:20,20 138:12 146:11 165:12 173:14 173:17 176:5 180:9 224:14 237:21 239:9 240:5,7 257:10 265:12 266:15 268:15 270:10 275:20 279:7 284:11 293:9 298:11,13,16 300:10,19 301:15 303:3 325:21 328:17 331:15 336:7 336:11,11 337:21 339:4 344:20 345:15 345:21 348:19 349:12 377:6 377:20 379:18 387:16 388:3 402:8,10
basic 15:14
basically 53:16 60:19 97:7 126:5 151:3 166:5 269:8 281:17 325:9 327:13 328:9 372:7
basis 119:15 175:17,18 277:6
bates 44:3,7,9 44:17 52:6 114:17 120:8 288:21
bcma 92:15,17 186:13 187:19 253:15 257:20 261:7 262:1 268:12,14 401:8 415:16
beach 1:2 9:9
bear 346:21 347:5
becky 234:17
beds 150:20 179:4 245:18 246:13 339:14
beginning 1:15 11:12 71:6 155:13 158:21 229:21 283:12 356:20 362:11
behalf 9:16,21 10:1
beholder 378:20
believe 27:9 28:15 39:6 80:11 105:5,12 111:3 114:12 116:1 124:17 145:5 150:8 151:21 154:11 156:18 193:3 201:1 214:6 222:16 225:14 242:15 257:1 270:19 293:3 354:5 358:2 360:2 381:11 386:2,5 387:13 387:14 388:13 388:16 389:1 389:20 391:20 392:9,9 396:17
believer 386:6
benchmark 386:15 397:6
benchmarking 387:12
benchmarks 387:7
benefit 250:13 315:5 377:5,10 378:16 389:2 389:11,21

390:10,18,20
405:11,15,20
405:21 406:1
406:15,17,21
benefits 49:5
best 12:21 13:1
13:3 68:21
69:1,13 73:15
131:19 161:13
166:21 167:5
172:5 177:19
184:3 199:15
203:10,16
207:3 217:17
308:21 341:16
346:21 358:13
371:11 382:8
383:4
better 110:15
145:9 152:11
183:2 211:2
212:13 216:18
216:20 263:12
269:12 289:14
319:8 329:12
343:10 378:20
386:7 404:12
404:14,15
406:4
beyond 20:8
24:19 25:2
31:13 98:12
236:18
bias 147:7
148:9,17 149:6
149:11,12,18
149:19,20
150:3,5,9
151:18 152:19
152:21 153:4,8
153:13 154:15
201:15 297:14
298:2,9,11,14
298:17,19,20
299:6 300:3
302:11
big 218:1 308:1
bigger 259:12
354:1 368:1
biggest 295:12
295:15 337:13
337:18
bill 46:3
bills 46:5
binder 5:6 7:6
21:1,4 23:9
25:13,17,19
39:5,13 56:12
58:11 205:14
231:4 329:10
336:20 361:14
361:16
binder's 7:10
207:6 230:9
231:7
bindman
408:21
bit 18:9 22:16
40:8 58:20
61:2 69:19
70:4 77:13
81:8 110:9
120:20 128:3
156:3 165:20
174:16 187:12
191:3 192:17
239:1,2 244:7
245:20 253:13
275:17 286:13
308:15 311:5
313:18 350:14
358:18 367:19
378:19 393:11
409:19
black 207:20
blair 32:4
blank 418:16
blended 353:2
353:7
block 178:6
blood 94:13
109:7 325:16
326:8 335:21
blue 33:18
163:12
board 38:18
55:9,17 56:4,7
56:11,13,19
57:1,4,8,10,17
58:1,8 245:7
396:3,10
board's 55:11
bob 142:10
body 332:7,15
bold 308:1
315:9,10,12
boss 17:16
21:16
bottom 20:19
21:5 24:1,10
30:18 44:10
62:4,5 72:9
85:6 97:6
103:3,14 116:9
117:15 136:21
137:1,3 140:6
163:10,20
165:1 171:21
172:19 185:14
185:17 186:3
187:16 191:12
194:9,16,17
195:4,6,20
196:5,17
204:12,15
205:4 243:1
255:20 257:18
272:5 278:10
279:17 307:5
313:20 323:2
331:3 333:14
337:7 382:20
384:1 390:15
390:17 397:9
397:12,18

400:3
bound 320:9
box 167:6 174:16 204:13 204:15
boy 328:7
break 14:10,14 27:2 70:1,12 71:1,12 155:4 155:5,10 229:9 229:12,18 239:2 282:21 283:7 308:15 323:19 356:15 362:8 412:9
breakdown 26:14 68:15
breaking 175:9 235:6
brick 241:14
brief 11:11 20:4 34:8
bring 72:12 73:1 74:3
broached 409:4
broad 270:6 387:15
broader 142:8
broke 156:1
brought 149:1 317:18 320:21
bs 109:14 110:3 111:7
bucket 181:20 254:5,6,9,20
buckets 98:20 109:13 110:2
budget 45:9
build 66:13 101:7 166:17 192:17 269:14 309:6 332:7 345:7
built 307:12
bullet 22:6 52:12 120:9,13 126:9 154:12 199:5,7 200:11 200:21 201:1,8 201:12 202:5 257:20 260:11 260:12 261:4 308:6 309:1 310:4 311:3,18 373:19 374:20 375:12
bullets 117:15 143:9 144:9 146:21 162:6 190:15
burden 122:18 123:5,7 152:13 240:15,20
burgraff 58:19
burns 44:21
business 32:16 259:5,7,8
395:18
buy 220:15 221:10
bypass 122:17
byproduct 212:9,10 385:13,16

c

c 2:1 3:1 9:1 55:8 104:15 105:15 106:4 108:21 221:14 221:21 245:6 323:14,18 324:17 326:9 334:5 340:8 341:5,13,20 342:6 348:12 349:9 352:9,16 353:3,8,9,14
calculate 8:14 126:16 195:3,7 209:17 215:11 248:19 325:4 328:5 355:18
calculated 193:2 248:21 288:8 292:8
calculating 82:20 194:18 214:21 216:11 248:19 394:9
calculation 194:20 338:19
calculator 355:6 363:7,11 363:13
california 157:12
call 7:14 15:8 22:1,5 32:5,9 101:11 128:7 128:11 144:4 146:16 162:3 232:19 253:21 256:4,17 272:19 282:11 315:4 365:4 396:7 415:12 415:14
called 60:10 253:20
calls 262:17
campione 6:15 7:6,11 8:10 58:21 65:8 116:10 129:9 163:11,16 164:8,14 186:4 191:11 194:5 205:14 234:15 321:21 343:18
campione's 59:2 305:10 323:2

capacities 386:14,21
capacity 61:10 152:5 158:8 208:20 285:6
capping 317:15
caps 317:12
capture 246:5
captured 37:3 115:4 188:3 309:21 323:11 365:8
car 321:6
card 8:8 313:3 313:12,13
care 72:20 74:12 99:17 150:1,10 151:9 278:20 288:8 325:20 330:18 335:18 365:13 392:1,18 393:17 395:6 398:16,20
careful 302:18
case 1:5 9:9 15:7 17:9 19:6 19:18 21:6 31:18 95:16,19 118:14 189:17 192:13 261:8 358:2
categories 261:9 266:19 326:12 339:19 371:16
category 97:7 203:2,4 205:4 278:11 281:18 281:19 372:8 378:2
caused 127:14
caution 351:3
caveat 55:17
cc'ing 5:10 7:6 30:21 205:14
ceiling 276:19 280:3
center 1:4 7:8 9:6 36:15 37:16 38:13 59:13 61:9 95:9 217:9 219:21 380:16 400:15 420:3
centers 79:18 80:15 136:12 175:19 364:10 365:2 392:17
central 94:12 94:13 95:1 109:6 325:16 326:8 335:20
ceo 39:1,3 58:11
certain 41:21 59:16 90:10 222:11 271:16 339:19 369:16
certainty 146:7 146:18 154:1 156:16 157:1,3 176:21 257:10
certificate 4:11 4:12 418:1
certification 179:7
certified 1:17 1:18,19 6:9 130:9 138:12 420:16
certify 417:2,7 417:10 418:3
chain 31:6 184:7 185:18
challenges 117:10,14 150:9 199:12 246:19 259:3
champions 59:12,17
chance 70:17
change 81:1 166:2,8,12,18 167:6 168:9,12 168:13 169:7,9 170:7 171:2,5 171:13,16,17 171:20 173:8 175:4,6,6,12 177:15 181:5 182:8,8,9,12,13 182:15 184:14 184:18,19,20 204:3 207:6 208:15 209:3,4 210:19 212:9 214:7,11,15 215:6 232:10 235:15 236:19 243:6 251:4 274:4,5 294:7 303:21 307:16 384:15,16 385:4 419:5
changed 28:15 49:18,21 50:15 50:18 63:1 65:18 81:11 108:14 208:9 292:19 293:4,6 294:8,9 296:2 299:7,8,16 303:8
changes 50:16 56:8 64:9,18 143:5 164:11 186:14 198:4,8 206:8 211:8 213:20 234:20 234:20 237:4 420:9
changing 184:3 257:13
characteristics 288:14

characterize 240:15 246:6,8
chart 165:19,21 184:1,14,19,21 187:15 191:11 204:3,3 323:20 327:5 333:7 338:4 343:14 343:16 346:8 348:19 349:21 355:3
chatting 32:12
check 191:10
chicago 3:6
chicken 245:20
chiming 221:16
choice 117:18 180:20 293:16
choices 72:20
choose 74:11 153:9 235:3 250:13 345:2
choosing 111:15 121:2,9 122:17 395:6
chose 97:5 227:8
chosen 354:6,9
chsra 36:18 37:5 38:4,7
city 245:3
civil 1:11
clabsi 110:5
claiming 19:14
clarification 37:2 115:3 188:2 335:11 365:7
clarify 14:2 41:1 46:16 48:11 49:20 67:21 73:7 99:7 107:4 124:12,16 134:7 159:10 176:8 206:5 211:11 218:21 221:9 222:9 226:7 227:4 248:18
clarifying 368:21
clark 3:5
clause 75:4
cleans 219:10 223:18
clear 14:8,9 15:20 27:16 51:8 75:13 78:9 88:12 98:8 100:17 119:3 142:12 142:13 144:8 150:13 181:16 190:21 197:5 197:18 209:21 228:5 249:17 250:10 251:3 265:16 266:3 266:10 281:2 285:1 290:11 299:17 301:1 351:5 352:15 389:7 394:3 403:15 404:4 407:2,18 408:19
clearly 66:13 109:18 166:17
client 15:16 52:13 56:17 63:17
client's 55:9 56:19
clients 95:9
clinical 264:5,5 282:6
clinically 304:6
close 132:19 235:18 321:8 340:18 350:7
closely 59:7
closer 337:8 344:16
clues 257:11,12
cms 64:19 79:18 84:10 90:9 94:10 175:19 179:5,6 180:9 194:1 259:9,12 364:7 392:20 393:3,7 393:7,14 394:3 394:12 395:11
cms's 289:9
coaching 266:1
coffee 221:11 221:14,16,20 221:21 222:2 222:11
cohort 83:1 171:3,7,11 200:8 325:5 330:10
cohorts 82:21 126:14 293:12
coincidentally 256:8,9
colleagues 32:12 360:20 361:4
collected 244:10
collecting 244:12 281:4
collective 209:13 210:1 255:8 336:13
colloquy 37:2 115:3 188:2 365:7
colon 135:9
columbia 417:2
column 166:2 167:6 173:2

323:21 352:14
comanaging 326:20
combination 65:3 270:5,11 354:13
combined 282:12
come 18:16 19:16 22:2,9 40:8 42:10 66:4 84:21 90:9 107:5 110:8 139:3 142:21 175:15 202:18 212:13 212:17 214:1 222:18 243:14 250:13 280:15 303:16 311:16 311:16 316:3 320:19 329:9 333:4 364:7,20 366:10 371:15 373:1 383:11 383:16
comes 57:13 84:20 97:1 102:4 125:2 173:2 213:15 214:5 245:4 279:10 390:19
comfortable 170:21
coming 32:1 98:14 176:2 232:18 293:21 295:17 297:2 299:11
comment 7:12 177:17 198:6 206:9,20 230:10 233:13 235:17 236:9 236:16 240:11 241:10 242:14 243:1 251:3 304:18
commented 233:16
comments 7:10 75:19 213:10 213:12 214:2 231:4 233:20 234:2 235:10 235:12,13,14 235:15,16 236:3 316:10 361:6
commercial 71:12
commission 49:10 417:18
commit 235:7
committing 203:7
commonly 151:8
communicate 21:10,15
communicated 176:14,18 285:20
communicates 179:16 225:15
communicating 56:10,12
communication 52:15,21 57:10 203:1 232:18 410:11,12,12 410:15,17
communicati... 16:4 52:13
communities 150:1 151:4 398:15,19 399:13
comparable 392:4,6
comparative 358:7
compare 261:15 393:17
compared 64:3 152:4,14 245:13 249:13 249:20 253:19 275:13 353:14
comparing 334:21 335:1
comparison 334:19
comparisons 323:17
compel 252:19
compelled 74:18 75:9
compensation 42:11 46:11,15 48:18 67:18 68:9
competition 391:2
competitors 392:10
complaints 258:14,17,19
complete 110:20 111:10 152:5 153:9 190:8 208:4,12 233:9 235:4 240:18 241:15 241:19 318:1
completed 27:8 28:11,16,18 167:13 299:12
completely 250:5 269:2
completeness 30:12
completing 122:19

complied 10:9
component 111:13 267:15 268:9 399:15
components 267:3 302:5
composite 52:17,19 54:20 64:17 65:4 90:4 225:1 244:17 267:2 287:16,21 288:7 300:10 301:15 303:2 392:12,12,15
computerized 84:19 92:20 262:19 414:15
concept 203:17 270:6
conceptual 411:10
conceptually 55:10 402:15
concern 150:2 153:7 183:10 193:5,7 245:11 295:12,15,16 297:16
concerned 252:4
concerns 18:17 21:20 145:6 146:11 148:17 190:5,10 231:10 232:11 244:11
concludes 416:5
conclusion 176:2 292:14 333:4 383:11
concrete 217:1 274:6 402:19
concretely 95:4 397:19
conduct 106:13 107:6
conducted 112:1
conducting 291:2
conference 407:21
confidence 209:16 210:16 212:6 215:10 215:14,15 216:7,8 219:16 219:19 220:10 222:5,20 223:1 223:5,15,20
confident 224:9 262:20
confirm 28:2 137:17
conflicting 57:4
confront 215:1
confrontation 215:5
confronting 214:15
confused 14:1 101:6 181:5
confusing 313:18
conjunction 382:19
connect 73:19 311:4
connected 187:7
connection 158:10
connotation 182:20
consensus 53:16,19 54:19 131:13
consequence 246:3,15
consequences 308:1
consider 117:12 141:4 188:9 192:6,14 394:18 395:5 408:9
considerable 181:17 371:19 372:20
considerably 190:7
consideration 123:6,8
considered 52:16 96:15,16 98:17 262:14 310:10 393:15 411:6
considering 372:18 382:18 384:14
consistent 57:8 88:9 90:6 108:16 188:10 200:4 208:13 303:5
consortium 262:18
constant 303:5
constrained 152:9
construct 394:1 411:6,8
constructs 394:11
consultant 336:20
consumer 72:13 73:2 74:5 88:19,20 89:6 220:9,17 224:9 225:9,15 228:15

consumers 74:10,16 75:5 101:20 176:15 220:12 244:16 389:3,5,16,20 390:9 399:15
cont 6:1 7:1 8:1
contact 31:6 32:10 58:20 179:7
contacts 58:13
contemplating 305:12
context 122:6 136:5 148:4,15 148:21 149:11 154:3 165:2,10 203:5 233:4 257:9,11,12 260:12 293:17 293:21 294:9 296:2 298:10 299:16,19 314:4 330:9 347:12
continental 34:20
continuation 7:9 231:2
continue 90:11 254:18
continued 3:1 71:2 155:11 158:20 229:19 283:8 356:16 362:9
continues 388:16
continuing 265:13 266:16
continuously 40:17 303:19
continuum 328:14
contract 5:13 17:20,21 37:18 37:18 38:7 40:18 41:13,19 43:8 44:18 47:7,7,16 49:17 50:12 63:6 65:12 67:15 313:8
contractor 43:15 56:17 393:20
contracts 41:15 47:9,20 48:5,7 48:12 65:18
contractual 38:5 41:8
control 136:12
conventional 32:14
conversation 19:21 20:4 25:21 31:19 134:4 172:10 172:16,18 202:21 251:9 257:2,3 308:20 347:11 384:9 387:10 408:7
conversations 26:2 32:3 121:12,20 122:3,4,8,10 124:1,2,4,7,18 127:17 172:20 187:8 244:15 318:4
convert 35:1
converted 30:1 249:1
copied 31:5
copies 418:15
copy 161:13 356:5 420:16
core 95:18
correct 16:12 19:2 20:21 22:18 24:3,12 24:16 25:15 26:20 29:4 31:1,2,12 33:8 33:17,20 34:2 34:5,7 35:9 36:12 37:7 38:8 39:15 40:15 41:3,10 42:5,7 43:6,11 44:1 45:7,15 45:19,20 46:6 46:7,19,20 47:1,3,18 48:10,21 49:1 49:17 50:20 51:9 54:11 57:15 61:4 62:10 65:10,21 66:5,16,21 73:9 77:2,3 80:2,8,19 81:15 83:8,13 83:15,16,21 84:2,11,12 85:18 86:17 87:21 88:2 93:1 94:5 95:20 96:10,12 98:2 99:1,3 100:1,2,13,15 101:10,12,17 101:19 106:8 106:12,19 112:19 117:16 117:21 120:1 120:12,14,19 125:15 126:1 126:10 127:1,2 127:4,12 128:1 129:18 135:1 138:15 139:12 140:4,8,13,18 141:1,12 142:2 142:17 147:4

151:13 153:16
156:6,12
160:10 161:1
162:6,13
165:17 166:7
167:18 168:7
168:15 170:11
171:14,18
173:4,10,19
174:5,13 177:4
177:12 178:1
180:19 181:2
182:3 184:17
185:1,16
189:19 190:14
190:16 194:3
197:11 198:14
202:16 203:8
203:14,19
210:3 211:13
212:20 218:17
219:17 220:6,7
226:11,21
231:5,21 232:2
232:5 236:6
237:17 238:16
239:8,14,15
240:1 241:11
248:6,7 253:17
261:6 263:20
264:13,18
265:11 266:12
266:13 267:20
268:6,18
269:21 271:1,2
271:18 277:3,4
278:17 279:6
280:2 281:13
282:13,17
286:15,21
287:1,4,7
288:18 289:15
290:7,8,9,13,19
296:13,14
299:21 300:4
301:13,21
302:4,14,15
304:7,18 305:4
305:5,8 307:14
311:8,9,11
313:5,10 315:3
316:9 317:9
319:1 320:7,9
320:14 322:7
323:21 324:3
325:13 327:9
327:11,12
332:19 333:20
333:21 334:3,7
334:9,11 335:2
335:5 337:10
338:1 339:16
340:7,9,12,14
340:17,19
341:1,15
343:20 344:12
344:19 345:15
345:18,20
346:2,16,19
348:21 349:5
350:19 351:13
351:16 352:6
353:6 356:5
357:16 361:8
361:12 364:4
364:12,14,15
364:20 365:5
365:15,16
366:1,8 367:3
368:2 371:10
371:12 373:17
375:17,20
376:19 377:15
378:3,10,11
380:10 384:3
395:11 397:7
397:11 401:9
401:16 403:1,4
404:2,4,5,16
407:8 409:21
410:21 411:16
412:15,20
413:16 414:20
414:21 415:3,9
corrected
180:19
corrections
416:14 418:7
correctly 156:4
332:10 340:15
corresponding
376:16
corroborate
408:14
cost 179:5
180:9
costa 8:12
329:17 330:14
costs 49:1
counsel 9:13
11:19 15:4,6,9
15:19 16:4,10
17:2,15 20:2,8
21:16 23:10
25:20 139:5
381:21 397:4
400:1,9 405:9
406:21 409:19
417:6,10
counseling 63:9
count 335:21
counting 336:5
country 351:7
couple 12:12
19:17 42:17
49:15 51:18
58:18 59:11
79:8 130:13
146:21 272:9
307:20 319:14
360:19 405:9
407:10 409:18
court 1:1 9:8
9:11 10:4,6,10
10:15,19,21
11:2,4 12:13

13:10 37:1 70:17 115:2 138:12 158:9 158:12,14 188:1 365:6 416:9,15
courtney 3:4 9:20 20:9 31:4 31:6 32:8 283:2 362:16
courtney.wood 3:8
cover 41:14
coverage 41:16 49:4
covered 84:11 318:20 320:13 320:20
covering 47:8 266:3
covers 41:21 42:6 182:6
covid 243:13 314:10
cpoe 92:19 187:18 253:15 261:7 262:1 415:16
crain 2:4 4:6,8 9:18,18 10:17 10:20 11:1,5 11:16,19 16:1 16:8,9 20:16 23:19 25:3 28:3 29:7,11 30:12,16 31:16 35:19 36:1 37:4 42:18 43:1 49:13,14 51:6 57:19 67:5 68:1,4,6 69:6,9,13,15,18 70:9,11,13,19 71:9 73:12 76:4 78:15,19 81:4 84:6,8 89:3,8 90:14 98:6 101:5 102:18 103:1 112:7,10 113:2 113:6,15 114:1 115:5 121:17 124:15,19 128:17,20 133:2,5,7 134:5 136:18 139:8,17 145:2 147:18,20 148:19 155:4 155:16 157:18 158:11,13 159:3,18,20 160:12,16 163:5,9 170:18 172:11 173:16 173:21 174:6 174:14 177:12 177:13 179:13 182:11 183:6 183:13,16,18 183:19 184:12 185:5,9 186:1 187:3 188:4 190:3 191:2,20 195:14,18 205:5,8,12,21 207:11,13 209:1 210:3,9 211:13,17 217:2,5 221:3 223:7,9 225:16 225:21 227:21 228:21 229:7 229:13 230:3 230:15,18 234:6,10 236:11 242:8 242:12 243:21 244:3 252:14 255:15,18 256:13,15 257:8 265:21 266:8 271:21 272:3 274:9,10 277:21 279:11 280:18 282:20 283:2,15 286:3 286:7 305:1 306:20 307:3 312:17 313:1 321:15,19 329:21 330:3 332:16 333:10 333:11 340:2 341:11 343:7 343:12,16,17 344:5,9 347:18 347:20 348:1,2 355:9,13 356:11 357:2 361:19 362:3 366:3 367:4 368:4,18 369:12 370:15 375:5,21 377:8 378:17 379:10 381:19 383:2 383:14 385:7 387:20 390:2 391:19 392:5 393:4 394:21 395:12 396:1 396:21 397:2 398:12 414:8 415:21 416:4
create 12:14 267:1 270:21 386:7
created 56:4 190:7 199:12 261:8 354:7
creates 391:2
creating 203:12 297:13
creation 75:14

credit 193:11 193:16 290:3 295:14 296:9 372:7
credits 296:10
creeping 118:19 190:11
crept 117:18 118:1
criteria 181:16 181:19 377:1 377:14,20 378:1,10 379:13
critical 150:15 150:17,18 330:18
crosswalk 261:12,13 271:1
crosswalks 261:8 262:13 263:6 264:1 265:14 266:17 269:1,4
crutcher 2:3 9:19 10:2
cs 109:14 110:3 111:7
culture 99:16 111:18 254:16 268:9
curious 297:8
current 18:21 64:8 80:20 83:4,5,10 88:7 88:16 105:16 106:18 117:11 120:17 122:16 124:13 145:11 194:11 199:10 199:20 202:7 208:3,10 209:14 260:13 263:17 303:11 306:4 324:5 363:12 384:7 404:12,15 407:3 415:6,8
currently 17:20 27:9 62:19 64:17 80:10,13 146:19 246:5 308:2 363:16 415:18
curtis 3:11 9:10
cut 209:7,13 211:9,12 267:6 336:3
cv 1:6 9:9 68:12
cycle 27:10 28:9,17,21 29:2

d

d 9:1 104:15 105:15 106:4 109:1 110:6 221:14 222:1 323:14,18 324:17 326:15 333:14,20 337:8,14 340:4 341:4,13 347:9 348:12 349:9 352:9,16 353:3 353:14 401:1
damage 398:7
danforth 5:7 5:10 6:15 7:7 8:8,10 23:10 24:7 25:9 26:10 30:21 56:12 58:11 59:20 116:10 119:12,17 122:5 125:2 127:17 163:16 186:4 205:15 231:6 259:20 259:21 313:3 316:5 321:21 343:19
danforth's 58:18 191:21
data 39:20 79:20 80:12,14 80:15,19 82:5 82:6,14,16,17 82:19 83:19,20 83:20 84:9,10 84:13 91:6,11 92:12 93:11,15 93:17 94:2,4,6 94:8,10,15,20 94:21 95:2 96:7 101:2 102:8,9,10 111:16 120:17 154:5,6 178:14 179:20 191:19 193:20,21 194:1,2 195:6 199:21 208:4 208:11 209:16 211:2,3 212:7 214:20 215:2 215:10,10,14 215:15 216:7,9 219:16,19 222:20 223:2,5 223:15,20 239:6,10 240:5 240:7 244:10 244:12,13 253:3,5,7,9 254:10,13 255:9 257:15 258:4,6,15,19 258:21 259:9 259:12 260:9 260:15 261:2 261:21 262:12 262:15,18,20 264:2 269:16

[data - deleted]

269:19 270:10 270:19 288:7 289:3,6,8,14,19 290:17 291:5,7 292:7 293:10 300:10,12 301:15,17 302:12 303:3 308:2,9 309:2 314:13 339:4 342:14 364:7,9 364:10,20 365:1,3 366:12 368:7 384:19 391:15 412:6 412:11,12,15 412:15,18,19 412:21 413:6 413:11,13,14 414:17 415:1,5 415:9,13,14,17 415:18
dataset 195:5
datasets 263:9
date 133:5 196:11 418:13
dated 5:7 6:19 8:15 196:14 314:1 332:18 357:12 358:10 358:19
dates 36:9
davis 157:12
day 20:4 26:10 31:20 32:7 46:1 141:3 156:14 161:14 162:21 253:15 253:20 347:7 365:14 368:9 373:16 417:13
days 56:3,21 157:21 165:15 191:9,10 196:13 299:10 412:10
daytime 330:8 331:6,10
dealing 289:2 289:14 297:7 397:15
dear 405:7
deaths 327:15 334:2,19 335:7 335:17 341:21
decade 388:4
decades 388:4
decent 22:16
decide 86:11 285:1,2 299:19
decided 284:13 310:14
decides 224:13
deciding 122:5 189:16
decision 23:1 86:9 107:16 120:3 121:13 121:21 122:1 123:12 124:3 125:1 142:13 208:18 214:1 248:15 249:5 250:10 254:9 254:17 285:19 294:1 296:3 301:8 319:3,12 336:3 337:4 389:8 391:21 406:5
decisions 90:9 224:14 285:3 301:4 303:6 305:15 319:9 391:16
deck 6:8 113:15 113:17 114:2 114:15 125:5 200:4
declare 10:10
declined 224:7 227:13 381:5 401:19 405:2
declining 403:8
decreases 240:20
deemed 300:21 312:4
deena 8:12 329:16
defeat 247:10
defendant 1:8 3:2 9:21 362:17
defensive 210:17 211:8 211:12
defer 168:18 252:20
define 201:5 240:14 339:21 392:6
defined 27:9 276:13
definitely 328:19
definition 94:7 150:14 151:5,8 153:14,16,21 154:2,4 159:11 238:2,4,9 249:3 267:16 271:15 298:13 303:14 342:11
degree 87:11 87:13 269:13 335:12
deincentivized 117:19
delbanco 39:3
delete 200:12 201:7
deleted 200:21 201:1,21

deleting 201:9
delineates 45:12
delivered 84:5
delphi 52:21 53:11,14,15
delray 7:8 95:9 95:10,11,12 96:1,9,19 97:2 97:13 217:9,12 218:1 219:1,18 219:21 222:14 225:2 227:10 239:20 380:16 400:1
delray's 95:14
demonstrate 193:12,15 288:3,5
denominator 274:17 276:16
department 245:4
depending 26:6 66:8 290:12 349:4
depends 159:10 221:2 303:14
depict 25:4 51:21
depiction 55:4 79:3 307:18 359:5 360:1
deponent 2:12 4:12 418:1
deposed 12:8 17:17 18:5
deposition 1:10 1:16 9:5 12:16 14:18,21 15:5 17:15 18:3 29:14,15 33:6 163:11 416:6 416:19 420:4
depositions 17:9
derived 304:17
derk 8:16 17:18 18:6,7 31:11 357:9
describe 211:16 287:18 324:11
described 126:13
describes 287:20
description 5:5 6:5 7:5 8:5
descriptions 219:3 226:17
deserves 72:19
designation 179:3
desire 250:11
desk 7:11 179:7 234:15
detail 18:13 154:7 384:12
detailed 142:10
details 15:14 128:6 281:16
determine 334:16
determined 179:3
detriment 250:6
develop 287:16 287:21 325:16 326:9
developed 146:19 158:1 160:9 335:20
developing 39:19,21
development 112:11 158:3 159:8,14
develops 110:5
deviation 245:14 294:12 294:18 295:1,5 295:6 305:17
deviations 172:1
dha 114:21
diagram 411:15
diametrically 250:16
die 104:14 106:3,19 326:10 347:9 348:12 349:9 352:9 353:13
difference 73:20 147:6 148:6 149:5 152:3 154:14 169:1,2 201:14 226:2 305:11 334:12,16 335:4 337:13 340:4 341:6
differences 53:7 54:21 147:9 154:17 201:17 303:18 333:12 337:18 340:10
different 26:5,5 48:7 53:17 81:13,16,21 82:7 95:8 117:12 118:17 141:6 151:2 153:18 158:6 167:16 171:12 175:6 182:8 189:10,15,15 189:17 194:5 199:2 211:2 214:14 222:7 222:13 225:2,6

225:12 239:1 244:12 254:1 264:10 288:14 293:7 299:13 300:15,17 302:10 303:18 306:10 311:2 318:16 323:16 332:11 339:18 340:1 341:4,20 342:16 350:17 369:15 370:1 372:3,4 378:10 386:20 394:7,7 394:10,11 399:17 402:15 403:10 408:2 408:20 410:6 411:6,8 413:5
differently 73:11 191:3 382:1
difficult 131:14 188:21 245:15
difficulty 158:19
dig 235:1 237:8
digestible 244:18
diminished 63:3 64:1,3
dip 127:8,14
direct 49:1 58:18 161:5
214:15,18 215:1,5 392:10 400:8
direction 54:19 55:8,11 56:18 57:1,4 58:3 117:13 165:13 214:9 318:5,10 318:13
directly 46:19 48:16 180:12 399:16 403:11
director 35:11 36:10 37:15 38:1 39:18 45:4 409:1
directors 55:9 55:18 56:19 57:2 396:3,10
disadvantages 149:16
disagree 236:8 237:3 243:4 265:5 267:7 329:1 341:21
disagreed 201:7
disagreement 301:9 306:12
disappointed 234:19
discarded 100:3 101:12 253:20 262:8
264:3 282:5
disclose 345:2,5
disclosure 381:2,4 382:20
discount 325:21
discovery 133:1
discuss 22:19 32:6 64:9 112:17 316:21 375:12 395:5 396:16
discussed 23:4 24:19 25:5 31:10 78:2 125:16 138:14 145:5 164:15 203:17 204:19 252:3 298:16 304:4 308:12 309:3,4 310:12 320:16 326:7 366:14 374:17 387:2
discussing 153:2 191:1 248:10,11
discussion 11:7 25:2 113:3 130:12 136:7 138:19 139:4 142:16 148:12 162:8 172:4
173:3,13 174:9 187:13 251:7 257:9 319:7 320:9 344:2 372:21 408:18
discussions 15:15,15,18 31:11,13 197:1 262:3 374:13
disease 136:12
disfavor 238:6
disincentive 190:7
disincentivized 193:8
dispensers 279:14
display 325:14 383:4
disregard 141:4
dissipate 54:12
distinction 96:14
distinctly 165:7
distinguish 402:18
distribution 216:15 295:2
distributions 373:21
district 1:1,1 1:12 9:7,8 417:2

divide 335:14 336:5
division 1:2 9:9 361:20
dmm 1:6 9:9
doctors 98:4 397:19 398:1,3
document 5:8 5:15 20:17 23:16,20 24:2 24:21 27:14,16 28:5,6 29:5,16 29:19,21 30:2 30:7 33:6 43:2 43:4 54:18,21 56:16 71:14 72:5 78:16,20 82:11 83:18 85:5,15 90:21 96:13 98:14 100:17 101:20 102:2 103:2,7 104:2 105:18 113:1,7 128:14 130:16 132:21 136:3,15 137:8 139:18 140:7 141:5 148:1,14 157:6 160:18 162:12 163:4,6 168:20 176:19 182:5 184:9 185:10,15,20 195:20 197:9 205:17 206:7 206:10,14,16 207:1 210:7 211:14 224:19 224:20 229:4 230:10,19 231:16 233:13 234:12 242:19 255:13,19 257:6 260:9 265:6 271:4 272:4 273:12 283:18 285:7 286:13,16 288:16 307:5 312:18 314:17 324:13,14 338:3 343:9 344:6 347:15 354:16,18 355:15,17 356:2 357:7,21 407:12 411:19 413:19
documents 15:2 16:19,21 17:1 18:8,19 28:8 42:17 185:13 186:20 207:7 324:10 343:8
doing 26:7 28:12 34:19 53:9 60:18 63:4 69:20 90:4 107:8 108:11 169:4 175:4 184:15 188:16 219:21 232:21 233:3 238:19 244:8 253:2 276:13 297:17 304:21 327:18 369:18 369:19 372:19
dollar 50:12
domain 276:3,5 276:6,9,17,18 276:20 277:1,2 277:13,16 278:4,13 279:18,19 280:7,21 281:21 412:3
domains 90:6 276:13,15 281:3,6,18,19 303:3 394:7,7 410:6,19
domico 8:8 313:4,6
doors 151:3
dot 343:1
double 132:7 191:10 336:5 342:1,2,4
doubt 408:5
dr 2:12 7:14 9:5,16 11:17 15:12 20:17 23:20 36:2 38:12 43:2 71:10 73:8 78:20 103:2 113:7 114:3 133:8 134:16 136:10,11,20 137:1 139:18 156:11,14 157:7,8 158:5 158:7 159:7 160:2,17 161:21 162:1,9 177:7 184:6 185:10 190:18 195:19 207:14 217:6 230:4,19 231:20 232:1 234:12 242:14 256:5 257:2 283:16 286:8 287:5 299:3 313:2 321:20 328:18,19 330:14,14,14 357:3 362:16 397:3 408:21 416:6 420:4
draft 61:17,18 117:8 141:11 141:21 196:7

273:3,6 324:4 349:3,16 358:21 416:16
drafted 107:18 115:20 116:2 116:20 190:13
drafting 75:14 79:10 107:20 108:4
dramatic 183:1 183:2,7,14,14 183:18
drastic 170:7 173:7 175:4,6 175:12 182:8,9 182:12,13,15 182:19 204:3
drill 154:7
drive 388:10 390:13
driven 250:11
driving 119:1 354:4
drop 186:13 351:2,6
dropping 396:7
ds 109:14 110:3 111:7
due 109:15 158:18 193:17 323:10 324:19 352:2
duff 25:13
duly 417:5
dunn 2:3 9:18 10:2
dying 109:10 351:15

e

e 1:13 2:1,1 3:1 3:1 9:1,1
e.g. 52:21 294:12
eager 342:9
earlier 31:10 31:20 54:2 68:3 83:12 88:4 103:15 156:14 168:16 198:13 199:2 253:15,20 268:7 286:14 305:9 311:19 347:6 361:1 362:19 365:14 366:8 371:8 373:5 378:8 380:5,20 381:10 384:5 385:12 386:12 386:19 403:15
earliest 260:19
early 15:8 39:6 55:19,20 56:3 56:21 64:5 82:2 106:9,11 157:21 286:19 288:2,4 299:9 393:18
earmarked 46:1 50:19
earned 35:7
easier 191:4 244:19,20 383:8
east 2:16
easy 72:13 73:2 74:4 188:7
edit 164:17 201:4 219:3
edited 206:10 232:9,13 361:14
editing 218:21
editor 86:8,8
editors 361:3
edits 197:18 198:1,11,13,16 199:7 203:16 203:16 207:6 230:10 361:17
educated 336:10
education 33:13 276:7
effect 235:10 331:9 397:10 400:2
effective 264:7 284:14
effectively 280:21
effort 41:14 51:3,3,5,7 107:9 189:3,8 189:13
efforts 46:4 50:17 68:13 123:11 243:11 351:8
egg 245:21
eight 356:21 362:6
eighth 328:3
either 32:3 39:17 52:14 77:5 93:18 98:17 121:21 132:21 170:4,5 171:10 181:21 197:6,7 213:4 223:10,11 235:19 251:7 278:1,2 349:3 359:6 405:5
electronic 414:12
element 118:4
elements 95:18 304:7 374:2
eligible 179:2
eliminate 170:8 170:17

elser 3:3 9:20 20:3,7 25:13 31:11
email 5:6,10 6:6,12,15,17,18 7:6,9,11,15 8:7 8:9,15 21:1,5,6 21:11 24:4,5 24:10,13,20 25:2,4,8,9 26:9 26:10 30:17 31:6,8,14 113:9,18 116:9 129:5,8 137:3 140:1,9,15 141:4,6 160:20 161:6,10 162:19 163:15 163:20 164:8 164:17,21 165:2,3,7 184:7 185:11 185:18 186:3 187:21 191:21 192:11 194:6 196:2,13,18 197:20 199:2 205:13,20 206:1,2 210:11 213:8 230:14 230:20 231:1,7 234:15 242:1 265:14 266:16 272:7 283:20 284:6,8,8 313:2,18 316:16 321:3 321:20 323:2 333:10 343:21 344:4 353:16 355:2,20 357:9 358:14,20 360:1 413:4
emails 20:6,9 196:5,6 305:10
emma 8:8 313:3,6,7 315:4
emphasize 109:20
empirical 119:19,21 120:2 193:16 193:18 265:12 266:15 301:12
empirically 127:19 369:21
employed 35:15 36:14 37:5,10,10
employee 18:21
employees 98:12
employer 36:16
encounter 82:5
encourage 209:15 212:8 212:12 222:21 246:17
encouraged 91:10
encouraging 249:19
endeavor 311:19
endorsed 60:17
ends 416:6
endurance 229:14
energy 354:7
engage 396:9
engineering 34:4,11
enjoyed 363:3
ensuing 291:11
ensure 207:18
ensuring 60:19
entails 60:13
entire 285:13
entirety 80:6
entities 392:16
entitled 115:15
entity 392:11 392:14
entity's 238:5,6
entry 84:19 92:20 262:19 414:15
environment 410:8
equate 352:9
equivalent 176:11 180:1 202:8 211:3 220:3 379:12
era 243:13
erica 44:21 45:3
errata 4:13 418:8,15 419:1 420:10,12,13
error 238:4,4 238:10,12,21 267:15 269:13 271:15 352:3
errors 19:13 247:18 248:6
especially 243:13
esquire 2:4,5 2:15 3:4
essentially 66:20 263:5 278:9
established 182:14 327:20
estimate 68:21 69:1,13 104:13 108:5,20 109:14,17,18 109:20 138:9 157:2 238:3,9 240:8,9 295:4 328:10 329:9 329:12 341:9

341:12,16,18 342:5,21 343:1 348:11 349:8 353:12 413:7
estimated 108:15 323:9 323:13,16 325:9,11 327:15
estimates 106:2 278:8 342:16
estimating 326:3
estimation 238:15 239:9 239:16,17 240:2 271:10 271:13
et 1:4 4:3 5:3 6:3 7:3 8:3 9:6 419:3 420:3
evaluates 97:17
event 326:5
events 109:3,5 325:10
eventually 293:12
everybody 21:5 112:8
everybody's 35:18
evidence 60:21 75:3 90:13 119:19,21 120:2,5 193:18 265:12 266:15 267:13,19 268:5 326:19
evolve 90:11 294:6
evolved 82:16 82:20 83:2 88:11 291:15 292:20 293:7 303:7
evolving 291:20,21
exact 59:3 154:1 162:3 169:21 259:13 342:11
exactly 25:20 54:7 77:7,16 79:12 128:11 132:2 167:10 172:9 175:16 190:21 213:5 304:21 394:3
examination 4:1,5 11:15 362:14 397:1 417:7
examined 417:5 418:4
example 64:5 94:10 95:10,11 109:6,21 142:8 200:14 225:20 227:5 276:6 294:19 305:17 305:18 372:6 375:19 376:3
exceed 43:16
excel 8:13 355:14,18 356:6
excelled 397:16
excellent 241:16
except 263:21
exceptions 257:20 261:5,7
exchanged 20:6
excited 321:12
exclude 260:13 290:15 346:14 346:17 351:4 352:21
excluding 250:17 291:5 292:15 342:13 344:17
exclusion 341:7
excuse 131:5 150:6 209:12 237:16
exhibit 5:5,6,7 5:8,10,12,13,15 5:17,19 6:5,6,8 6:9,11,12,15,17 6:18 7:5,6,8,9 7:11,12,14,15 7:17,19 8:5,6,7 8:9,12,13,15 20:12,13,14 23:15,16,17 29:7,9,12,15 30:13,14 35:19 35:20 42:19,20 51:11 71:4,14 78:2,16,17 102:19,20 113:3,4,19,20 115:19 116:3,5 128:17,18 129:4,5,5 139:14,15 154:12 160:13 160:14 163:7 163:11 177:3 185:6,7 195:15 195:16,19 196:7 204:6 205:9,10 217:2 217:3 224:19 229:4 230:15 230:16 234:7,8 234:11 242:6,9 242:10 255:15 255:16 271:21 272:1 283:10 283:18 286:4,5 306:21 307:1 312:18,19 321:16,17 329:21 330:1

333:9 343:13 343:16 347:14 347:16,18 348:19 354:17 355:10,11 356:18 357:6 363:20,21 373:4 376:6,14 379:21 407:14 411:19 413:19
exhibits 5:1 6:1 7:1 8:1
exist 123:12
existence 176:6
existing 243:10
exists 80:8 168:5
experience 221:17 255:9 265:20 297:21 298:1 366:11 387:16 388:3 388:20 393:7 396:2,11 398:14 410:2 411:4,5,11,14
experienced 279:9
experiencing 152:14
expert 6:7,10 6:14 22:13,19 22:20,21 23:2 24:14,19 27:1 52:9,14 53:5 53:21 54:1,2 54:18 55:10 69:15 82:2,7 112:16 113:10 114:10 117:9 125:18 128:4 129:17 132:4,9 134:11,18 140:19 141:15 141:15 146:4,9 146:11 156:15 157:9,13,17 160:6 161:8 162:20 165:15 170:16 173:3 187:8 191:5 197:2 199:9 202:19 205:3 206:14 208:20 211:1 213:14 214:4,8,10 251:8 256:9 283:21 284:8 284:11 285:2,4 285:5,8,13,14 285:21 287:3,3 289:5 299:3 301:3 308:11 308:17 309:3 310:10 315:4 316:21 317:18 318:9 319:16 372:17 373:6 375:1,10 393:9 393:18 407:21
expertise 315:6
experts 39:20 91:7 202:6 287:15
expires 417:18
explain 62:13 108:17 126:3 232:10,20 233:3,6 269:3 316:4 335:12 340:18 349:20 377:10 388:8 393:11
explained 229:3 403:16
explains 27:15 28:7 29:21 222:16 400:3
explanation 92:9 178:8,9 178:18 232:9 383:5
explanatory 211:19 272:18
explication 228:5
explicit 173:20 319:17 372:21 408:8,9
explicitly 144:21 145:4 146:4 187:10 206:15
exploratory 15:8
explored 262:15 263:1
extends 98:12
extent 19:21 67:10 199:4 213:12 379:8
external 21:21 86:5,14
extreme 182:21 305:18
extremely 235:4 240:12 240:13,14
eye 378:20

f

f 44:21 104:15 105:15 106:4 109:1 110:6 218:1 323:14 323:19 324:19 326:15 333:14 333:20 337:8 337:14 340:4 341:5,13 347:9 348:12 349:9 352:10,16 353:3,14 397:20 398:1,6 398:7,21,21

face 150:10 153:12 231:17 351:18
facilities 115:1 199:6
facing 88:19 117:10
fact 151:16 264:1,14
factor 150:11
facts 268:13,16 301:10
factual 19:13 346:13
factually 19:15
faculty 41:14 45:12,13 47:6 388:21
failed 377:1 406:10 407:5
failing 278:9
fails 420:15
failure 72:17 73:20,21 345:13
failures 386:9
fair 13:1,7,8 14:3,4 16:4,5 49:13 56:3,6 62:21 65:7 80:7 88:6,8,13 92:2 93:16 94:1 98:13 112:13 125:3 141:11 144:3,6 149:2 157:13 159:13 167:19 191:6,7 201:6 203:9 221:4 223:13 236:8 241:6 246:6 249:18 251:15 252:12,21 255:2 261:20 263:4,16,16 270:2,12,13 274:3,9 276:1 277:11 279:16 280:9 282:2 291:18,21 294:17 295:18 295:20,21 296:3,4,5,7,21 301:11 302:16 303:9 306:3,8 306:14 314:11 320:18 335:4 340:3 341:21 347:3 358:5 359:10 363:9,9 364:6 368:14 370:12 373:15 382:3 383:19 385:2 391:7 397:20 398:7 398:13 399:6,6 399:20 402:15 404:7 406:8 408:16 409:9 411:14 412:13 415:16
fairly 152:2 275:21 276:2 279:5
faithful 142:15
faithfully 92:7
fall 7:18 105:19 105:21 243:5 284:3,10,15,17 303:12 384:15 385:3
falsely 235:2 237:11,20
familiar 51:17 51:18 71:18,19 76:14 79:5,7 92:15,21 93:3 99:9,14,17 111:3 122:12 132:4,9 219:5 330:4,5,13,18 363:6 394:19
famous 413:4
faq 110:11
faqs 61:19
far 91:21 108:4 167:14 305:6 318:4 330:20 356:7
fast 294:2 299:13
father 18:1 19:5
favor 235:15 297:14 298:2 298:14
favorable 117:18
favorite 35:18 238:5 254:12
feature 54:9
federal 1:11,19 393:14 409:3
fee 43:15 46:8
feed 11:8 16:7
feedback 57:3 57:7,12 75:19 86:6 87:5,10 87:12,12 115:6 115:7 119:3 122:9 125:20
feel 14:2 56:21 86:13 123:10 164:16 170:21 183:7 184:7 220:10 224:9 252:1 253:21 257:3 262:20 296:3 306:7 308:12 309:10 331:15 353:17 385:4,9 418:7
feeling 385:17
feels 253:15 282:15 296:1

fees 43:12
fell 83:2
felt 19:12 35:4 97:9 182:16,16 201:1 259:1 262:4 351:18
fewer 152:7 246:3 281:18 346:15,18 351:20 352:1,4
fifteen 204:7,8 376:10
fifth 91:1
figure 255:14 288:11
figured 36:9
file 141:6 355:18 358:3
filed 23:3,9
files 154:5
fill 64:21 66:6 208:3,11
filled 66:19
filling 377:19
filter 57:11
final 7:17 232:19 284:2,9 285:8 292:8 319:21
finally 297:12
financially 235:6
find 63:8 67:7 96:6 148:2 164:15 222:1 244:18 343:9 389:7
fine 70:11 77:13 87:17 137:7 229:13 232:11 283:1 309:7 362:4 364:3
finish 13:1,1 78:9 117:4
finished 107:21 159:19
firm 20:3
first 24:5 25:13 39:13 43:13 44:20 46:13 50:4 53:17 55:14 72:6 73:11 75:4 79:15 83:11 89:9,9 91:1 104:2 114:21 117:17 120:9 126:15 140:15 141:21 142:9 147:14 158:4 159:8 163:20 171:2,7,10 179:18 185:18 186:3 188:8 193:3 196:6 211:8 219:15 221:21 231:14 237:2 240:18 242:1 251:6 260:12 273:3 274:1 282:11 294:10 308:3 310:9 313:20 331:15 338:7 348:18 354:19
firsthand 123:1 123:15,16
fit 99:2
five 81:15,21 82:7,10 91:9 120:8 124:5 159:1 188:20 229:16 279:21 281:3,6 289:18 290:15 291:4 291:17 293:8 319:4 347:18 356:11 364:8 366:6 367:2,21 368:10 370:6,8 370:10 401:14 410:10,14 413:5 414:4,7
fix 31:17 66:12 92:4 121:18 147:10 154:18 167:19 201:18 387:21
flag 16:6
flat 46:8
flip 131:10 331:16 359:4 373:18 380:4
flipping 65:13 360:8
floated 318:17
floor 280:16
florida 1:1,12 9:8 95:9
fluctuation 50:7,17
focus 34:11 52:5 54:4 72:4 112:12 115:12 131:1 199:7 315:8
focusing 333:17,17
folio 32:19,21
folks 21:2 22:5 26:7 44:12 58:13 94:21 272:8 287:2
follow 21:16 107:9 143:18 149:3 178:12 272:15 316:16
followed 260:20
following 56:18 373:11,16 374:2 375:10
follows 71:3 140:21 155:12

158:20 229:20 283:9 356:17 362:10
font 207:10
foregoing 418:4
foreign 325:6,7
forget 76:16
forgetting 387:5
forgive 41:17 278:19
forgot 182:2 307:16
form 27:20 31:15 42:10 50:21 57:18 67:20 73:6 76:3 89:2 90:1 98:5 101:3 121:16 124:11 126:6,8 132:21 134:2 144:19 157:15 170:14 172:7 173:15 173:18 174:4 174:12 182:10 186:19 190:2 190:19 191:17 205:1 206:11 208:16 211:10 221:1 223:6 225:18 227:19 228:17 236:10 243:19 252:13 274:7 277:14 279:3 280:11 304:19 324:5 331:19 339:20 341:10 349:3 349:16 366:3 367:4,16 368:3 368:18 369:12 369:13 370:15 375:5,21 377:7 377:8 378:17 378:18 379:10 381:19 383:1,2 383:13,14 385:6,7 387:20 389:4 390:2 391:18,19 392:5 393:4 394:20,21 395:12,21 396:1 398:9 399:12
formal 26:4 53:9 54:4 150:14
format 90:4 217:14
formation 80:5
formed 160:7
forms 84:9 318:16
fortunately 103:3,6
forty 42:3,3
forward 93:6 125:18 189:16 214:9 255:1 284:13 285:13 285:20 294:2 299:13 358:17
forwards 231:6
found 215:3 329:11
four 81:15,21 93:6,12,15 94:3 98:15 101:8 102:6 110:2 118:16 155:14 158:16 215:17 216:10 241:8 253:19 255:12 265:2 268:3 276:15 281:9 290:2 291:17 295:13 299:4 305:18 315:17 317:7 366:7,14 367:2 367:20 370:11 370:12 371:10 371:17 372:12 372:19 382:18 414:6
fourth 91:1 297:13
fraction 247:4
frame 90:7 106:15 168:3
framed 168:20
framework 215:18
framing 146:14
free 14:2 164:16 184:7 253:21 257:4 331:15 416:2
frequently 5:20 103:18 347:19
friday 314:20
friend 30:21
friends 405:8
fringe 49:4
front 23:7 65:13 130:9 226:5 286:8,9 286:10 313:2 354:18
fronts 258:19
fs 109:14 110:3 111:7 324:17
full 11:21 12:2 76:9 195:5 208:17 328:11
fully 143:17 224:11,18 328:9
fun 279:12
function 254:2
funded 152:11

funding 42:6,8 43:18 151:2
further 45:9 136:2 165:13 169:18 290:20 350:20 382:5 397:1 415:21 417:7,10
future 47:16 52:17 54:19 55:1 125:10 240:18 359:2

g

g 9:1
gain 53:15 54:19
gained 63:3
gaining 63:20
gaming 135:15
gaps 64:21 354:1
garde 400:6
gas 218:9,12
gathered 402:4
gauge 213:12 218:9,12
gear 321:8
gears 32:18 33:12 41:4 69:19 70:8 112:7 321:4,6 321:7,8
gel 279:7,9
general 19:11 19:12 49:16 88:8 90:4 103:9 151:6 288:8 303:17 404:13
generally 36:5 36:13 41:11,17 47:5 50:6 51:17 53:6 60:13 67:10,19 73:10 76:5,14 79:5 81:20 82:8 83:19 86:1,18 93:2,5 95:13 108:17 123:9 126:3 135:21 142:3 151:1,4 171:7 217:7,14 219:2 233:4 234:2 284:6 287:18 291:10 296:19 314:8 316:17 324:10 397:15
getting 16:2 34:12 258:13 262:21 296:9,9 311:7 321:5,8 367:15 379:18 391:6 399:8 403:9
gibson 2:3 9:18 10:2
gibsondunn.c... 2:9,10
gist 217:19
give 10:12 13:15 19:10,19 23:5,6 35:17 44:12 48:16 97:10 167:11 174:19 193:10 213:12 215:4 219:19 221:4 222:6,10 223:20 227:5 234:6 243:17 270:16 277:11 290:2 295:13 324:9 331:3 343:8 372:7 410:9
given 58:3 68:7 71:13 97:7,10 97:15 182:1 267:13,19 306:5 353:16 357:5 418:5
gives 47:2 70:17 129:15 407:1
giving 103:2 144:10,16 203:18 210:16 222:2 265:10 266:11 359:14 378:15 379:12
glad 268:1
glitch 159:5 160:1
go 11:5 12:3,11 14:13 18:20 24:5,9 25:8 27:20,20 33:18 40:10 44:16 49:15 53:16 54:17 60:8 72:15 74:8 78:15 85:6 86:7 89:2 90:9 90:19,20,21 99:21 102:18 104:8 105:18 110:10,11 114:16 115:18 115:19 118:14 125:6,7 126:21 127:6 128:13 130:16 131:2,2 131:5 132:18 133:11 135:3,4 136:2,6,9 137:11 142:20 143:2,8 148:8 154:12 156:3 157:5,6,15 158:11,13 163:5,19,21 164:4 165:14

165:19 168:10
169:18 170:20
174:12,16
177:9 178:15
180:13 182:5
185:17 186:19
188:5 189:12
191:21 192:5
195:14 197:9
201:11 202:21
204:2,8 205:8
206:9 207:5,8
207:17 208:1
208:16 209:6
209:12 210:11
213:8 216:21
217:21 218:4,7
218:20 219:15
221:1 225:18
230:6 236:10
236:18 239:5
240:11 242:8
260:11,12
268:11 273:2
273:18,18
277:14 278:13
280:11 287:10
288:20 294:5
295:19 297:17
297:18 303:1
304:19 306:20
307:21 308:5
310:4 313:19
314:17 315:17
316:4 317:7
318:5 319:4,15
321:15 323:1
328:2 331:1
333:6,7 334:5
338:3 339:20
340:4,8,20
342:3 346:9
347:9 348:8
353:13 354:18
356:11 362:1,3
362:4 381:1
382:6 394:13
401:4 411:18
412:9 413:18
416:2,2,3
goal 215:6,7,11
216:7 219:14
219:15 222:21
247:10,12,12
249:12 250:6,7
308:13 309:11
309:18 310:1
311:2,7,10,21
312:1,4 384:18
384:20
goals 222:19
250:5,16 311:6
311:13 312:1,5
384:19
goes 24:19
43:20 50:20
51:4 59:6
65:19 85:16
116:13 121:21
297:8 366:11
going 9:3 11:13
14:1,8 15:11
18:2,7,15
19:20 20:5
23:15 26:9
30:11,13 35:17
36:8 42:19
44:2,3,14 57:4
60:5 61:15
65:12 70:7,15
70:18 71:7
72:3 83:18
84:6 85:5
87:19 90:9,19
93:5 96:17
102:15 108:2
112:7,8,12
114:15,15
117:7 119:20
119:21 120:4,7
122:14 125:5
137:8 139:2,9
141:10 142:19
148:12 152:2
152:18,21
153:10 154:11
155:8 158:16
159:1,5 160:12
162:19 183:20
190:6 192:6,14
198:19 199:5
201:11 205:8
220:2 229:8,9
229:11 230:1,6
233:12 234:14
234:16 238:4
238:10 239:19
241:10 243:6
251:1,3 252:10
254:18,19
256:16 274:7
279:10 282:21
283:5,13
287:10 290:1
292:1 294:10
295:9 300:7
302:18 303:4
306:1 313:18
321:4 327:19
332:14 341:19
343:1 346:8
347:2 348:19
354:15 356:13
356:21 360:14
361:3 362:6,12
364:1 366:3
368:1 369:2
376:2 390:16
396:7 400:6
good 1:3 4:3
5:3 6:3 7:3 8:3
9:2,6 11:17,18
13:3 29:8 70:1
70:13 112:8,9
116:15 129:1,2
164:1 186:10

207:14 213:12
229:8,10 283:2
301:19 332:4
335:18 362:21
363:1 369:1
370:19 378:21
399:8 416:1
419:3 420:3
gotten 54:9
258:8
governing
192:18
government
151:2
grab 28:8
328:21
grade 5:16,18
6:13 7:8,18
18:12 22:13,20
23:13 24:14
28:7 30:4 53:5
54:1,2 55:18
56:4,8 59:4
62:12,17 64:6
70:5 71:17
72:4,12 73:1
74:3,9,17 75:6
79:1,6,16 80:3
80:5,10,13,19
81:17 82:3
84:14 85:7
88:1,11,14,17
89:15 90:11
91:7,13 100:1
109:4,16
110:15,18
111:9 114:10
117:11 118:16
121:5 122:15
132:3,9 134:18
140:17,17
141:15 150:16
156:15 157:9
158:1 160:6,8
161:8 162:20
170:16 179:21
190:9 203:18
217:10 219:1
220:10 224:10
235:3 237:12
237:18,21
244:7 245:1,5
246:20 248:17
248:19 249:3
249:21 250:12
252:8,17 264:6
265:3 283:21
284:3,9,14
287:3 296:18
299:3,10 301:2
308:13 309:11
309:18 310:10
311:6,14 312:5
313:15 314:20
323:12 324:16
325:4 328:3
339:8 363:7,11
367:15 368:2
368:17 369:11
370:14,19
371:21 389:2,6
389:12 390:1
391:2 394:17
395:6 398:21
399:18 400:4,9
400:21 401:2
403:7 410:11
412:13
grade's 210:20
graded 91:9,18
99:6 100:20
102:1 243:7,18
389:21
grades 26:15
27:2,4 29:3
30:1 40:4 61:3
77:1,20 94:9
94:17 105:19
199:13 235:2
237:8 244:17
245:15 248:11
249:1 252:11
288:3,4 291:13
293:20 294:3,4
297:2 299:11
299:15 396:6,6
grading 5:9
390:7 391:8
graduated
33:19 34:3
grandfathered
255:2 263:5,10
grandfathering
282:11
grant 41:19
49:18,20 65:19
grants 41:15
47:5,8,20 48:5
48:7 65:14
66:4,6,19 67:1
67:11,17 68:3
68:8
granular 65:8
202:2
gray 316:4,9
grayer 315:10
great 14:16
36:7 72:1
148:7 159:4
175:2 245:8
369:7,7 370:11
405:6
greater 82:15
151:9 246:17
249:19,20
353:19 367:15
368:16
greatest 390:10
gross 277:12
ground 12:11
35:17 36:9
113:2 268:16
271:14 347:16
grounded
267:12,19
268:4,13

grounding 327:6
group 1:7 4:3 5:3,14 6:3 7:3 8:3 9:7,21 17:20 22:17 32:6,12 35:11 35:15 37:19 39:10 40:17,19 43:9 45:5 46:4 64:9 95:6 107:7,15 208:17 232:18 272:7,15 285:9 287:14 289:8 292:14 299:1 300:21 313:13 329:10 336:19 362:17 419:3 420:3
guess 19:16 61:15 62:21 69:9,11 94:7 124:2 149:10 165:12 169:6 203:1 238:9 242:18 246:11 251:6 273:2 275:10 282:3 298:10 305:6 306:1,12 310:12 329:15 329:19 336:10 337:12 344:15 344:21 345:1 345:21 346:21 368:21 379:4 393:6 395:16 402:17 408:3
guessing 146:10 169:8
guidance 21:14 52:15 62:15 63:12,13,18,21 64:2,4,14,15,16 159:16 284:12 285:19
guide 256:16

h

h 262:17
half 216:15 336:4 353:20
halfway 52:8
hand 7:15 10:7 92:21 95:13 96:1,9,20 97:9 97:14,14,17 98:4 187:18 220:1 223:3,16 230:5 253:16 254:6 270:15 270:17 271:5,7 271:9,12 272:12,17 273:7,14 274:11,18 275:19 276:1 278:16 279:5,7 279:8,14 281:2 281:5 282:3 317:5 339:7,11 372:5 376:8,15 377:19 378:7,9 406:10 407:6 415:17 417:13
handed 36:2,3 283:17
handling 416:10
hands 55:18 219:10 223:19
handwashing 97:18,21,21 218:5,9,12 219:4,18 222:14 226:18 239:21 240:3 376:3,5 380:10 380:15,17 382:21
hang 185:13
happen 13:19
happened 325:12
happening 64:18 250:8 314:9 318:4 326:5
happens 44:17 303:19
happy 172:13 177:3 272:19 324:9 333:3 362:3
hard 218:8 243:14
harder 207:21
harm 337:18 391:10
hcahps 365:4 366:6,10 367:2 367:14,20,21 368:10,15 369:7,19,20 370:6,8,10,17 371:1 409:18 409:19 410:1,2 410:5,7,19 411:2
head 409:1
header 308:2
heads 13:7 19:19
health 36:15 37:17 38:14 49:5 84:17 157:11 200:15 241:13 245:3 354:8 396:9
healthcare 34:11,13 35:2 35:4 58:12 72:17 73:15 157:17 364:8

386:7,10,11 388:11 390:13 390:14 409:2
hear 21:21 68:4 76:11 123:9,14 240:16 342:9 397:14
heard 57:11 240:16,21 241:2,3,8 258:12,13 259:15,18 285:18 329:15 386:14 387:1 395:4
hearing 122:13
heart 332:5
heavier 367:20 368:16
heavily 304:11
hedging 350:14
held 11:7 114:12 139:4
help 7:11 12:19 65:4 73:19 118:6 148:13 179:7 219:3 234:15 255:14 269:16,19 335:11
helped 38:16 159:16 231:9 231:15
helpful 85:4 117:9 118:7,14 147:16,19 236:12 242:7 255:11 257:5 272:20 324:10 389:7 391:21
helping 37:20
helps 383:5 387:6
hesitate 13:20
hesitating 186:21
hesitation 169:3
hh 316:15
hi 164:14 186:10 231:8
high 81:19 86:13 191:16 193:5,9 276:2 280:9 328:1
higher 97:12 109:10 238:11 264:6,21 345:14 350:13 378:2 398:19
highest 200:19 277:1 281:12
highlight 142:7
hilton 317:17
himeles 15:20
himms 262:17
histogram 64:7
historic 118:4
historical 27:10 83:11 120:16 167:1,7 168:6 179:20 215:20 254:2,9,21 255:3 264:1 265:19,19 270:4,5 282:11 282:14 312:17 327:19 403:2 415:13
historically 62:20
history 33:13 270:16
hit 342:21
hold 111:19 254:18
hole 230:8
holistic 65:7 371:5
home 18:1 357:4
honest 143:20
honestly 134:3 408:1
hope 74:17 75:8 155:19 191:4
hopkins 5:13 20:8 32:10 40:11 42:12 43:8,20 48:6 50:4,10 104:13 104:21 241:2 347:8 348:10 349:7 396:3,4 396:12,15
hospital 5:18 6:13 7:8,18 18:12 24:14 27:2,7,8,11,12 28:7,11,16 30:4 36:10 38:1 40:3 52:9 53:4 55:9 56:19 59:4,12 59:17 60:15,20 61:3,16 62:1 64:6,7 72:11 72:21 74:3,11 74:11,17 79:1 79:16,19 80:3 80:5,16 81:17 82:3,14,18 83:2 84:1,14 84:16 85:7 88:1,13,17 89:15 91:2,6 91:11 93:10,14 93:21 94:2 95:16 97:18 98:3 99:5 102:12,13 104:15,15 106:4,5 108:20

108:21 109:3,8
109:9,16
110:15,16,18
110:19,20
111:8,9,10,16
117:11 119:7
121:4 122:15
126:18 132:3,8
134:18 140:16
140:17 145:7
150:15,15,17
150:18 151:6
153:11,12,15
157:8 160:6
161:7 167:2,8
167:9 168:4
169:12,13
170:16 175:20
176:1 178:13
179:6,16,20
180:1,3,6,10,16
181:6 182:1
193:2,4 200:20
208:5 213:6
215:1,19
216:13,17
217:10 219:10
223:2,15,18,20
224:6 225:2,5
225:10,15,16
225:17,20
227:6 239:5
241:2,15 243:8
244:6 245:5
246:20,21
248:20 254:4
254:11 255:8
260:20 261:15
261:19 268:4,7
269:7,9,11
270:18 275:12
276:3 278:20
279:8 281:3
284:3,14
288:14 289:19
290:2 291:5,13
293:20 298:5
299:12 301:2
313:14 314:20
318:2 319:7,12
323:11 325:4
325:17 326:6
326:10,21
327:2,21 331:7
337:14,15
338:17 339:12
347:9 348:13
348:13 349:10
349:10 353:14
353:15 363:7
364:9,21
365:10,19,19
366:12,15,19
367:13 368:1,6
368:15,17
369:7,9,11,16
370:5,14,17
371:14,17,21
377:13,18
378:1,14,15,15
379:15,16
380:16 381:4
382:7,19 383:4
383:12 386:3
386:15 387:2,6
387:9,11 389:2
389:12 390:1
390:14,19,20
391:1 394:17
395:6 396:5
397:20 398:6
398:21 399:18
400:9 401:1,19
403:7 404:9
405:2 406:9,16
406:16 407:2,3
407:5 410:3,4
410:7,11
412:11 414:18
415:4
hospital's
93:11 97:8
104:4 120:16
179:3,5 193:19
218:13,16
253:4 261:17
267:13,19
268:5,13 271:9
271:12 300:11
300:20 301:16
348:5 368:19
380:7 382:8,11
382:14 383:10
383:10,12,21
384:1 390:12
398:8 404:10
405:1 413:7
hospitals 40:2
74:18 75:8
77:21 82:21
83:3 91:8,10
91:17 94:9,11
94:17,19 98:11
99:21 100:19
100:21 101:21
102:7 104:5,11
104:12,16,17
105:15 109:1
109:13 110:4,7
111:5,6,15
112:2,3 117:19
118:20 119:3
119:13 120:3
120:15 121:2,7
121:8,12,20
122:3,5,10,13
123:9,14,17,18
124:1,2,8,18,21
126:7,11,13
127:9,14,17
132:1 133:16
134:1,8 143:12
144:11,17
145:12 147:6,9
148:16,18
149:1,16,19,20

150:2,3,7,9,19
151:9,12 152:1
152:4,5,8,10,10
152:11,11,14
153:6,8 154:14
154:17,21
167:13,17,21
168:3 171:21
174:10 176:20
178:9,21 180:8
181:11 186:12
187:1,2 190:7
193:8,10 194:2
194:18,18,20
194:21 195:1,4
195:5 200:8,17
200:18,19
201:14,17
202:6,8 208:4
208:11 210:19
212:12,16
214:7,16
215:16,21
216:9,12,15
218:19 219:4,8
219:9 223:17
226:18 234:21
235:2,5 237:4
237:11,15,16
237:20 238:12
239:7 240:16
240:17,19,21
241:4,18 243:7
243:11,17
244:9 245:9,13
245:16 246:3
247:5,7 250:13
251:4 252:4,16
258:14,21
260:14 261:13
269:5,6,11
271:7,16
273:15 274:17
274:18 275:1
275:14,21
276:8,12,19
277:2,3,7,11,13
277:16,17
278:3,7 280:6
280:20 281:9
288:8 289:7,9
290:17 292:6
292:17 293:2
293:20 294:3
295:13,16,18
296:9 297:1,15
298:3,4,6,7,15
298:18 299:10
299:14,19
300:7,9,19
301:14 315:13
315:18 317:10
317:20 320:5,8
320:19 323:14
323:15,18
324:20 325:5,6
325:7,10
326:12,14,15
328:4,9,13
338:16 339:3,5
339:8,11
340:16,21
341:13,20
342:6,13 345:2
345:9 346:14
348:9,9,14,15
353:8,9 354:2
354:2,5,6,9,10
371:18 372:7
372:11,13
376:19,21,21
377:4,6 378:6
379:7,12,13,17
380:12 384:7
384:17 385:4,8
386:2,13,14,20
387:4,15
389:21 390:7
391:3,8 393:15
395:14,18
397:8,12 398:2
398:14,15,19
399:12 406:1
409:5 412:5
hospitalsafet...
400:11
hospitalsafet...
5:16,19 103:15
hospitalsafet...
71:18 76:12
hour 99:18
229:8,14
282:21 304:2
hourly 46:8
hours 16:14
141:2 240:17
253:15 365:13
368:8
house 61:6
hsg 140:17
314:20
huge 128:21
huh 12:15
30:19 32:20
33:14 41:6
44:19 45:11,18
50:5 51:13
52:7,11 53:3
60:9 63:16,19
65:16 72:8,10
76:18,21 85:14
89:17 91:3,19
92:16 93:7,9
103:5,17
104:10 110:17
111:1 114:18
114:20 115:14
115:17 116:4,6
118:11 125:9
127:7 129:6,10
129:14,16
130:18 133:9
135:5,7,10
140:18 143:4,7
143:10,14
147:2 166:1,20

187:14 192:2 194:10 228:11 283:3 402:13
humankind 332:3
hurts 383:5
hygiene 7:16 92:21 95:13 96:1,9,20 97:9 97:14,17 98:4 187:18 220:1 223:3,16 253:16 254:6 270:15,17 271:5,7,9,12 272:12,17 273:7,14 274:12,18 275:19 276:1 281:2,5 282:4 317:5 372:5 376:8,15 377:19 378:7 406:10 407:6 415:17
hyperlink 85:13

i

iason 2:5 10:1 183:13 234:6 343:9
ic 93:3
icu 93:4 175:20 175:21 176:6 179:1,3,6,16 180:6,9,16 181:7,9,12 326:18,21 327:2,10,18 328:16 330:9 335:3,8,18 336:1 342:6
idea 82:3 131:21 144:16 197:16 202:7 205:3 215:18 215:20 216:18 245:9 281:17 315:20 316:14 317:3,12,18 320:1 402:1 403:5,21 404:17
ideas 82:8
identical 292:8
identification 20:15 23:18 29:10 30:15 35:21 42:21 71:5 78:18 102:21 113:5 113:21 128:19 139:16 160:15 163:8 185:8 195:17 205:11 217:4 230:17 234:9 242:11 255:17 272:2 283:11 286:6 307:2 312:20 321:18 330:2 355:12 356:19
identified 82:4 109:4 261:21 266:17 326:4
identify 9:13 86:5 195:6
identifying 153:5
ignore 254:19
ignored 82:15 100:5 260:21
ignoring 214:20
illinois 3:6
immediately 84:21 311:16
impact 47:11 47:13 248:15 267:1 328:11 328:14 367:15 368:16 369:6 369:10 370:13 390:8
impair 13:12
impetus 244:6
implement 169:8,9 219:9 223:17 243:6 251:4,12,18
implemented 92:3,6 318:3 328:10
implementing 91:21 200:16
implications 301:7 391:11
imply 279:18
implying 152:15
importance 270:6 410:17
important 111:13 147:5 154:13 201:13 224:13,14 264:16 265:11 266:12,20 267:8,9 268:9 282:15 304:7
impose 133:16 181:13
imposed 166:12
imposing 133:21
improve 86:7 209:16 212:6 215:9,15 216:8 384:19 386:16 387:7 390:20
improved 249:8 273:15

improvement 123:11 243:11 351:7,19 387:15 390:17
improvements 326:20 352:2 388:10 390:13
improving 264:8
imputation 27:3,13 30:8 77:15,19 78:3 78:12 81:10,14 81:16 90:15,16 93:13 95:19 112:12,17 115:7 116:16 117:13,18 118:1,3 120:16 124:8,12,13 125:10 126:6,7 126:9 127:10 127:15 128:5 143:5,13 145:11 150:11 151:15,19 152:19 153:1,2 153:4 158:4,6 159:8,11,12 164:11 165:14 166:8,19 167:1 168:13 175:14 177:15 179:2 186:7 187:8 190:6,10 192:19 197:3 199:10,20 200:16 208:3 208:10 209:9 209:15 211:1 213:11 214:19 225:3,6,11,20 238:2,7,10,14 239:4 243:5 247:18 248:6 249:9 250:9,18 250:20 254:20 257:13 258:18 260:19 263:11 263:13 265:13 267:15 268:20 269:13 271:15 284:13 291:16 293:7,15,16 294:1,6 296:21 303:7 304:17 304:20 305:11 306:2,11,16 308:8 309:1,4 312:3 315:15 316:21 317:19 318:15 319:4,5 319:6,10,20 320:17 384:6,9 384:16 385:13 402:20 412:17 413:5 415:1,19
impute 131:21 167:7 171:2 173:8 184:15 204:15 239:6 239:13,20 247:20 248:9 248:15 249:5,5 250:10 255:10 266:16 282:16 294:11 305:4 316:15 317:4 319:7,8,13,13 412:6,16,21 413:12
imputed 27:15 93:6 94:3 96:15,19 98:15 100:2,3 101:8 102:5,6 106:18 117:17 118:21 144:18 145:8 215:17 216:10 253:14,19 255:13 262:8 264:2 265:2 266:21 268:3 268:15 269:17 269:19 270:3 270:11 271:11 282:4 304:3 310:16 338:14 338:18 339:9 340:16 341:7 342:10 344:2 344:10,15,16 344:17 346:6 346:14,17 349:4 350:18 351:1,4 352:5 353:1,17 366:7 366:15,16 367:2,20 369:9 370:7,11,12 371:9,18 372:12 374:14 376:4 377:15 402:1 404:13 412:6 414:2
imputes 263:18 275:19
imputing 194:7 202:7 204:19 212:11 238:11 238:19 260:9 263:8 267:7 270:10 278:7,8 292:8 293:9,11 293:13 294:16 309:17 310:5 310:10,21,21 372:18 374:14 379:5,6 412:13 412:18 413:13
inaccurate 183:7 271:17
incentive 119:2
incentivize 212:16 215:12

310:6 311:1 384:20,20
incentivized 118:19 212:15
inception 241:14
incidence 109:2 325:5,9,11 327:14
inclined 221:6 221:13
include 135:12 201:2 267:2 344:2,10 346:5 350:18 352:21 353:4 368:10 384:2 410:11
included 50:11 62:16 88:10 109:3,16 139:6 164:16 222:12 299:2 325:4 363:11 410:10 410:14,20
includes 30:7 48:8 49:4 62:16 339:5 342:10
including 21:2 316:15 317:4 339:8
inclusion 52:16 341:7
incorporated 320:12
incorporating 371:21
incorrect 241:18 342:8 342:18,19 343:1,2
increase 215:12 246:14
increased 50:16
increases 109:11 275:5
increasing 249:12
increasingly 243:14
incredibly 142:10
independence 63:4,21
independent 135:18 137:5 138:18 173:1,4 280:14 368:19
independently 375:12
index 4:1 5:1 6:1 7:1 8:1 130:17 131:1,3 131:6,19 132:18 133:8 133:11,20 137:11,18 138:12,13,16 173:12,17 174:8 202:12 202:16
indicate 146:2 380:15 381:17
indicated 122:11 189:19 309:17 366:6
indicates 162:14 205:2 380:21
indicating 192:12 358:3
indication 144:9,15
indicator 276:12 404:12 404:15
individual 52:18 88:10 120:16 221:6 224:21,21 241:14 244:13 273:21 274:2 276:11 303:6 310:5 311:1 319:20
individually 332:1
individuals 26:5 86:5 397:15
industrial 34:4 34:10
industry 35:4
infection 94:14 325:16 326:9 335:21
infections 109:7 326:8 364:8
influence 248:14 399:1
influenced 208:5
influences 399:17
influencing 210:15 399:18
inform 84:18 269:17,19
information 23:11 27:10 31:7 72:12,14 72:18,19 73:1 73:16,18 74:4 78:1 79:19 80:11 84:17 90:13 94:18 97:8,11,15 102:12 111:17 111:19 175:18 176:1,9 181:10 215:19 216:12 219:20 220:2 220:13 222:3

222:13 223:3 223:21 224:2,3 224:8,12,15 227:14 228:10 228:13 235:21 242:2 247:4,7 247:10,19 248:9 259:18 264:16 277:9 278:6 311:7,8 381:6,17 387:14 389:4 389:17,19 390:11,12 391:9,20 392:13,18 393:16,21 394:2,5 401:21 402:4 404:11 405:4
informed 72:20 345:1 391:16
infrastructure 278:14
initial 336:18
initially 82:13 291:12
initiatives 61:8
inpatient 245:18 246:13 339:14 410:3
input 159:16 284:12 285:19 315:6 361:5
inserted 94:12 198:8
insinuating 387:1
instance 65:17 287:5
instantiation 263:11
instill 222:4,20 223:1,14,19
institute 2:13 9:17 20:20 30:18 389:1
instruct 15:17
instructing 14:7
insurance 151:10
intended 94:9 94:18 394:4
intending 312:11
intensive 235:5 240:12 243:9,9 325:20
intensivist 328:1,1 330:8 331:7,10
intensivists 326:20
intent 94:15 141:18 318:12 384:15 385:19 385:21
interact 58:16 59:19
interest 35:2
interested 34:12 35:3 273:13 396:5 417:11
interesting 35:1 86:21 171:17
interlined 316:10
internal 64:12 240:19
internally 251:7
interpose 15:12 183:4
interpret 220:13,14 228:2
interpretation 145:14
interpreted 189:9
interprofessi... 331:8
interrupt 118:6 367:6
introduced 170:15 254:3 255:7 270:17
invest 354:6
investigator 37:19 41:12,18
invite 6:8 114:5 114:6 333:10
involve 52:20
involved 23:13 56:8,10 61:10 61:13 118:4 158:3,8 159:7 159:14 160:2,5 232:3
ips 93:3 175:5 175:12,14 176:20 177:10 177:14,20 178:5,21 179:2 182:6 184:4,15 184:20 188:11 253:16 261:8 262:1 331:18 338:8,14,18 339:4 344:15 415:16
isolation 371:3
issue 82:6 91:7 120:21 245:15 396:10
issued 29:3 32:7 233:14
issues 82:4 129:13 147:10 154:18 164:16 201:18

issuing 199:12 250:12 294:3
item 25:14 26:6 60:14 315:19 316:18,20 317:8,11 320:4
items 18:10 26:5 142:12 315:5
iteration 62:1 333:2
itogias 2:10

j

j 45:16
january 36:11
jean 58:19 59:11
job 1:21 51:8 418:18 419:21
jogs 234:5
john 12:2 348:10
johns 5:13 20:8 32:10 40:11 42:12 43:8,20 50:4 104:12,21 241:2 347:8 349:7 396:3,4 396:11,15
joined 32:8 160:4
jordan 17:18 31:5,5,20 32:7 313:10 374:2,5
joshi 6:11,16 6:19 17:20 18:14 116:10 140:10 163:16 186:5 196:3 272:8 273:8 313:9
journal 7:20 85:8,12 86:4,8 88:15 89:16 286:11 330:17 330:19 361:2
journey 387:15
judge 343:3
judgment 301:18
july 32:5 40:19 41:2 417:19
june 7:16 8:15 272:12 357:12 358:10,19,20

k

kachalia 17:16 18:3
kahn 330:14
karen 22:1
kathy 148:21 149:7 151:21 152:12
katie 58:19 60:1
keep 30:11 44:2 55:10 60:5 85:5 90:13,19 102:15 121:4 139:9 143:11 148:12 151:3 156:7 161:18 162:7 183:20 185:3 201:11 229:9 232:16 266:20 300:6 315:20 318:8 354:17
keeping 344:15
keeps 292:1
kelly 8:12 329:16
kentucky 400:17,18 405:8
kerr 1:16 9:12 417:1,16
key 12:12 82:18 267:3
kim 31:4 32:8
kim's 20:9 31:6
kind 386:15
knew 89:18 361:5 399:5
know 17:17 18:4,7,15 22:13 23:6,9 23:12 24:18 25:19,19 30:3 32:10 41:17 44:4,8 46:9 49:18 55:16 58:6 59:3 67:10,10 69:5 69:7 71:20 75:3 76:5,7,8,9 77:12 78:1,3,4 81:6 86:3 89:6 91:21 95:10 101:14 104:20 105:12 106:8 108:5 111:3 112:19 119:1 127:13,18,20 128:1,15 129:12 130:14 133:5 135:14 135:21 136:7 136:19 137:4 137:21 140:19 143:17 147:21 152:15 153:19 154:3,7 158:7 162:1 169:20 170:3,21 172:19,21 176:16,21 180:9 181:9,21 184:4 191:18 194:19,21 195:11 198:12 210:4,4 213:4 213:5 216:16

216:19 217:14
220:13 225:7,9
225:12 226:3
226:14 227:8
228:2,15,19
229:5 231:10
233:8 237:9,14
238:8 240:13
244:15 246:8
251:1 258:7,10
258:13 259:9
259:13 260:1,2
265:9,11 266:4
266:14 268:7
274:4 277:9,17
278:1,2 279:8
280:8,13
285:12 293:20
294:8 295:7,17
297:1,3 299:10
302:19 303:8
303:20 304:4
306:7 309:12
309:16 310:2
311:4 312:8
314:6,6 329:2
329:3,16
330:15,17,20
331:14 339:21
343:3,4,5
345:2 346:7,13
347:2 351:2
353:11 355:17
359:5,21
362:19 364:1,3
369:6 370:1
371:13 373:13
374:9 378:7
379:3 380:20
386:11,12,19
391:4,11
392:11 394:16
395:1,17
398:10 399:2,9
399:11,11,12
399:17 400:18
402:2,2,5,8
403:7,13 404:3
404:5 406:6
knowledge 85:20 92:5 98:3,7 119:15 122:21 123:1,3 123:5 124:21 153:20 161:13 176:13 193:16 251:21 252:15 308:21 363:14 365:10,18 385:20 392:20 393:2 394:12 395:16
known 300:10 300:20 301:16
knows 343:10

l

l 3:4 131:2
l.a. 252:11
lack 97:7,15 176:9 214:16 224:8 227:14 228:10,12 240:7 253:5 289:13 381:6 381:16 401:21 405:4
lag 259:10,12 259:13
laid 27:14 82:7
landed 146:3,6 293:13
landing 346:5
landslide 273:7
language 53:8 63:10,11,11 72:5 73:20 79:9 91:14 106:19 179:15 219:5 292:10 297:3
large 175:6 182:8 269:5
largely 270:3
larger 152:10 152:10
latest 90:13
lauren 22:1
law 417:5
lawson 2:15 9:15,15 15:11 16:16 27:20 31:15 49:12 50:21 57:18 67:3,20 68:2,5 69:3,7,11 70:7 70:10,12 73:6 76:3 81:2 84:5 89:2,5 90:1 98:5 101:3 121:16 124:10 124:16 134:2 144:19 147:16 148:10 155:6 157:15 159:18 170:14 172:7 173:15,18 174:4,12 177:11 179:11 182:10 183:4 184:6 186:19 190:2,19 191:17 205:1 205:18 207:10 208:16 209:21 211:10 221:1 223:6,8 225:18 227:19 228:17 229:11 236:10 243:19 244:2 252:13 256:12 265:15,18

266:2 274:7
277:14 279:3
280:11 283:1
304:19 331:19
333:9 339:20
341:10 343:15
344:4 347:21
367:16 368:3,5
369:13 377:7
378:18 383:1
383:13 385:6
391:18 394:20
395:21 398:9
414:6 416:3,9
416:12
lawsuit 18:4,9
18:16 22:19
23:2,8 31:5
32:13 242:4
lawyers 252:20
lay 114:19
406:8
lays 118:7
191:11 289:17
lcrain 2:9
lead 26:2 41:19
41:19 286:20
322:16
leader 39:1
leaders 122:11
122:12 396:4
396:10
leadership
99:13 254:15
leading 6:6
26:5 113:9
367:5
leads 59:12
leah 25:12
58:11 329:10
336:19
leapfrog 1:7
4:3 5:3,14,15
6:3,17 7:3,11
7:15,17 8:3 9:7
9:21 17:19,21
18:12 19:18,19
23:10 27:3,8
28:6 32:6,12
35:11,14,15
36:10 37:10,11
37:19,21 38:1
38:5,7,15,18
39:1,8,9 40:3
40:17,18 41:5
41:8,15 42:6
43:9 45:5 46:4
46:5,14 47:12
48:8 50:10
51:2 52:2 55:5
55:15 57:10,14
58:2,4,14
59:12,17,19
60:14,19,20
61:2,8 62:14
63:3,18,20
64:12 66:10
67:12 68:8
71:17 72:11,21
74:3,17 76:16
79:16,19 80:3
80:16 83:8
84:14 85:7
88:13,17 89:14
91:11 93:11
94:1 95:6,12
95:21 96:8,19
97:4,5,5 98:19
100:18 101:1
102:9,11,13
107:7,15
110:16,20
111:16 112:3
119:4,6,11
121:1 122:11
125:14 138:2
140:12,16
143:11 146:8
146:10,15
153:16 158:8
160:2,5 166:12
168:17 169:4
176:1,3,14,19
180:3,10
181:11 185:11
189:15 199:11
208:5,10,12,15
208:17,21
209:14 214:8
214:11 216:1
224:11 225:14
227:8 228:7
232:4,18
234:15,21
237:5 243:5,17
244:8,12 245:1
245:2,18 246:2
246:19 249:11
249:18 251:3,8
251:12 252:1,3
252:12,16
253:2 254:4
255:7 258:3,15
258:20 261:9
261:14,18
262:2,12 263:6
263:7 264:1,15
266:17,18
269:6,11 270:9
270:17 272:8
272:11 273:7
273:13,19
274:19 275:18
276:2,13 279:4
282:15 284:3
284:12 285:1,3
285:19 287:14
287:20 289:8
290:5 291:11
291:12,15
292:13,21
293:19 294:15
295:14 297:14
298:4,12,18
299:12 302:2
302:12,14

310:16 313:8
313:13 314:14
315:19 317:12
318:1,7,10
323:11 329:10
336:19 339:12
346:5 347:7
350:1 352:18
353:17 357:19
362:17 364:9
364:21 365:11
366:12 371:14
371:17 372:18
373:21 379:5,6
379:11 384:14
385:20 386:3
386:15 387:6,9
387:17,19
388:4 390:7
391:8 392:4,10
392:19 394:9
394:16 395:4
397:5 399:1
407:1 408:9
412:5,6,10
414:17 419:3
420:3

leapfrog's 5:18
7:13 30:4
56:11 59:5
75:14 77:19
78:12 79:1
93:10 94:1
103:16 180:7
180:17 181:15
200:6,15 220:1
229:3 241:13
242:16 245:7
258:5 274:20
288:17 301:5
302:19 303:9
303:10 345:3
345:10,14
388:5,14,17
389:2

leapfrog.org
76:17

learning 354:7

leave 155:3
282:18

led 25:21 33:6
213:21

lee 2:4 9:18
11:19 132:20

left 40:9 99:6
166:2 287:11
339:1,2,7
340:5 341:4,8
342:1

legal 12:2
252:19 420:19

legislation
393:14

letter 30:1 74:9
91:7 244:17
245:1,5 249:1
249:3 252:17
389:6

level 81:19
97:12,14
142:11 176:6
274:1 281:21
351:7,19

levels 345:6

liberty 350:2
352:18

license 258:6
258:10 259:16
270:19 314:5,7

licensees 154:6

licensing 260:5

lifetime 397:16

light 72:12 73:1
74:4

liked 202:7

likely 82:4
104:14 106:3
106:19 162:10
186:13 280:9
341:9 345:3,4
347:6,8 348:11
349:8 350:8
352:9 353:13

limitations
326:13

limited 83:7,14
95:12 96:1
97:6 131:3,16
131:21 132:4
132:10 138:3
144:11,17
173:8,13
175:14 176:7
176:11,19
177:20 178:10
179:17 180:2
180:11 181:6,8
181:14,19
182:1 184:4,15
188:10 192:6
192:15 204:16
204:19 215:16
216:10 220:4
228:16 238:18
238:20 239:14
239:20 267:5
267:11 268:2
268:12 269:20
271:6 290:8,10
294:21 296:5,8
296:8 298:5,6
339:6 371:20
372:13,19
376:4,11,12,15
377:14,21
378:4,14
379:18 380:10
380:12 385:5
402:7 403:3,11
404:1 405:10
405:14 406:12
406:14 407:1

line 18:2 94:13
109:6 111:2
131:10 133:12
133:15 135:8

148:2 178:12 202:18 208:1 218:8 268:11 315:10 325:16 326:8 328:3,6 331:3 335:20 395:17 397:6 405:11 406:17 419:5
lines 26:13 94:12 95:1 149:3 407:10
link 16:7 111:20 129:11
linked 5:12 27:17 288:17 382:6 402:17
linkedin 35:18 36:4
linking 326:19
list 60:10 156:11 413:5
listed 22:5 304:20
listen 17:6
listening 363:3
literature 60:18 109:4 326:4 327:19 332:7,15 345:15,17 399:12
little 13:4 18:8 23:5 33:13 40:8 44:14 51:11 52:6 54:3,14 61:2 66:13 69:19 70:4 77:13 81:8 110:9 120:20 128:3 143:16 156:3 165:20 166:17 169:6 174:16 181:5 187:12 191:3 192:17 201:2 218:8 239:1,2 244:7 245:20 248:14 253:13 264:10 275:17 286:13 287:11 302:18 308:15 311:5 313:17 322:15 350:1,14 352:18 367:19 378:19 393:11 396:21 400:6 401:15 404:7 409:19
live 16:7
lives 8:11,11,14 8:14 104:16 105:10,10 108:15,16,20 109:15,19 322:6,6 323:10 323:13 326:3 335:13 342:14 346:10,10,13 346:18 348:13 348:18 350:21 351:20,20 352:1,2,4,4 355:6,6,19,19 357:14,19 358:6,7 359:15 359:15 360:7,7
living 183:3
llp 1:13 2:3
local 1:12 74:11
location 279:6
lodge 367:5
logic 213:21
logistical 259:3
long 16:10,13 28:10 47:11 157:19 158:7 160:1 229:8
longer 208:6 212:11 241:17 258:3
look 21:4 24:1 36:5 42:17 43:12 44:14 51:10,11 56:16 60:7 71:20 105:18 107:7 109:2 113:17 116:3 129:4 133:14 136:4 137:10 142:6,7 146:21 148:6 156:7 169:13 177:1 178:5,14 178:16 187:10 187:15 188:7 196:5 197:20 197:21 204:5,8 209:6 216:21 220:17 224:15 231:9 234:4,11 260:8 271:20 279:17 288:6 288:13 290:20 307:9 313:17 318:19 321:2 323:1 324:7 329:6,11 330:4 331:21 333:12 333:13 337:7 338:4,4 340:20 343:7 346:9 347:14 350:20 352:12 358:6 359:5 361:5 369:10 371:4 373:4,21 374:2 379:21 383:9 394:18 395:10 400:1 401:4 408:14
lookback 167:14

looked 96:13 134:12 143:15 172:3 173:12 174:8 196:14 201:12 204:3 224:19 239:19 242:1 261:13 269:7 273:21 295:2 329:8 332:11 371:2 374:5 407:6
looking 28:17 88:21 100:18 103:10 108:20 116:15 118:17 144:8 151:21 152:1 165:21 184:13 187:1 200:3 202:12 203:3,15 220:9 230:9 231:7 269:5 273:3 274:1 276:11 309:1 311:18 315:14 323:20 325:1 327:5 343:14 347:13 376:14 382:17 394:17 403:21 407:19 414:4
looks 24:13 26:13 141:2 143:8 175:2 184:13 188:20 243:2 273:6,18 274:14 287:2 288:3 289:18 290:2 299:4 327:6
loop 132:19 235:18
los 245:3
lose 139:3 246:5 270:9 389:20
lost 8:11,14 96:6 105:10 108:16,20 109:15,19 110:13 158:9 262:12 322:6 323:10 326:3 335:13 342:14 346:10,13 351:21 352:1,2 352:4,5 355:6 355:19 357:19 358:7 359:15 360:7
lot 19:13 61:20 61:21 154:6 193:10 235:21 235:21 244:12 247:17 248:5 279:14 299:11 321:7,7 353:9 384:9 399:16
lots 117:19 262:16 332:3
loud 410:4
love 231:10 321:13
low 143:12 370:7
lower 83:3,6 110:4 171:10 189:1,18,20,21 193:4 212:18 235:3 237:12 237:18,21 281:19 295:5 326:14
lowest 97:14 132:13 135:13 136:1 138:4 143:12 172:4 172:10,16 192:20 203:2,4 223:2,16,20 276:16,18 277:12 281:1 290:11 374:1,8
luc 58:19 59:11
lump 324:17
lunch 139:5 155:5,10,19

m

m 262:17,17
made 90:5 108:7 134:10 176:5 198:1,11 198:13 244:10 246:2 285:19 294:1 305:15 337:5 367:13 418:8
madison 34:1 34:16,17
main 331:2
maintain 292:7 324:6
maintaining 298:14
majority 277:12
make 12:20 15:12,20 29:6 72:17,19 73:21 94:16 96:14 110:1 111:19 123:12 143:21 159:18 160:1 162:2 165:20 180:13 219:10 223:18 224:14 225:1 242:6 246:12 247:9 253:3,6 266:2 266:6,9 296:3 296:17 301:5 301:17 304:12 306:11 312:10 334:1 335:11 350:8 402:19

418:15
maker 221:11 221:14,17,20 221:21
makers 222:2 222:11
makes 14:14,15 28:6 86:8 90:9 207:21 285:3 298:21 331:17 359:3 383:8 391:16
making 87:2 111:17 117:18 120:3 125:1 152:2 176:8 208:18 245:11 247:5 292:5,15 292:21 301:18 308:16 326:15 379:6 389:8 391:15,21
manage 52:9 60:10
managing 326:20
manifested 320:2
manifesting 320:2
manuscript 86:6
march 39:10 106:14 290:1
marginalized 150:1
mark 20:13 23:15 29:7 30:13 42:19 78:15 160:12 185:5 329:19 329:21 355:9
marked 20:14 23:17 29:9 30:14 35:20 42:20 71:4,13 78:17 102:20 113:4,20 128:18 139:15 160:14 163:7 185:7 195:16 205:10 217:3 230:16 234:8 242:10 255:16 272:1 283:10 283:17 286:5 307:1 312:19 321:17 330:1 355:11 356:18 357:5
markings 29:12
marks 11:12 70:14 71:6 155:7,13 158:15,21 229:15,21 283:4,12 356:12,20 362:5,11
marlene 1:16 9:12 12:19 117:6 417:1,16
marty 15:19
maryland 1:14 2:17
masters 34:3
match 372:13
matched 254:14
matches 384:1
material 383:17
math 328:3,7 340:20
matt 6:12,13 12:3 25:12 45:16 140:15 141:3 147:1,3 147:5 154:13 199:9 201:12 231:8 308:11 374:2 402:8
matter 9:6 21:10 161:5 193:17 252:19 304:6 362:18
matthew 1:11 2:12 4:2 5:2,12 6:2 7:2 8:2 9:5 9:16 12:2 416:6 418:11 419:2 420:4
maximum 279:19
mcdonald 148:21
mean 22:14 28:4 33:5 44:4 51:2 64:15 68:17 70:1 76:7 82:21 83:1 86:1 87:14 90:8 95:5 96:18 100:9 108:5 109:2 118:6,18 119:19 123:8 126:19 135:14 145:13 147:15 149:11 153:7 170:2 171:2,6 171:7,10,11 172:1,15 175:10 182:18 187:16 190:5 191:12,19 192:6,19,20,20 192:21 193:3 194:1,5,6,6,15 194:16,18 195:3,7 196:17 198:1 200:8 206:17 211:21 212:11,13,17 214:18,21 216:11 238:7

244:2 245:14
246:11 261:12
264:6 265:6
280:12 288:5
293:11,14
294:12,16,17
295:6 297:6
298:9 303:15
303:15 305:4
305:12,16
318:13,15
319:11 325:5
338:15 341:21
343:14 345:8
369:14 413:10
meaning 63:17
89:12 95:6
189:17 221:10
252:8 345:19
meaningful
53:7 74:19
75:10 189:14
meaningfully
63:1 189:15,17
means 51:8
126:14,16
135:21 138:1
151:7 193:5,7
194:11,12
214:4 238:12
260:18 281:6
305:9 325:12
meant 183:14
183:15,18
186:18 194:4
213:18 214:6
measure 39:21
61:19 82:14,15
93:2 95:2 96:7
97:2 177:10
179:2 180:2
214:20 218:5
249:5,6 254:3
254:19 260:13
260:21,21
290:3,11,12,16
291:5 292:15
294:21 303:21
304:1 327:7
376:16 380:17
381:5 382:21
393:20 401:20
403:8 405:3
410:1
measured
238:5,6
measurement
38:16 99:16
147:8 148:17
149:7 201:15
254:16
measurements
157:17 331:1
measures 39:21
52:16,19 60:16
60:19,21 62:16
62:18 64:17,19
64:20 65:1,3
79:17 82:16
88:10 90:5,8,8
90:10,11 91:8
91:9,16,18
92:14 93:6,12
93:15 94:3
98:15,16,18,20
99:5,20 100:12
100:19 101:2,9
101:12,15,21
102:7 108:14
115:8 144:18
154:15 193:21
215:17 222:12
224:13 225:1
253:14,20
254:5 260:15
261:1 262:8,9
263:5,8,18
264:3,12,17
265:1,2,11
266:12,16,21
267:2,8,9
268:3 270:3,11
282:4,5 289:6
290:17 291:6,7
294:4 300:3
303:3 304:3
310:5 311:1
315:14 317:1
320:5 323:12
325:3,17,18
326:1,18 327:7
327:16 333:18
334:12,21
335:1,13,14
336:1,4 363:10
363:15 364:7
364:14,19
365:21 366:5,7
366:9 367:2,14
368:7,10,11,21
369:17 370:18
371:2,4,10,15
371:18 372:4
372:12,19
374:14 387:8
391:10 394:6
394:10,13
410:2 412:1
413:20 414:2
measuring
394:4
mechanical
331:9
mechanism
259:2 327:6
388:12
media 9:4
11:13 70:14
71:7 155:7,14
158:15 159:1
229:15 230:1
283:4,13
356:12,21
362:5 399:16
416:6

median 293:11 293:14 294:11 305:16 318:15
medicaid 79:18 80:16 151:10 175:19 364:11 365:2 392:17
medical 1:3 7:8 9:6 86:2 95:9 109:15 179:1 217:9 219:21 323:10 352:3 380:16 400:14 419:3 420:3
medicare 79:18 80:15 175:19 364:10 365:2 392:17
medication 92:18 401:5
medications 13:12
medicine 104:13 330:18 348:10 349:7 396:3,4,12,15
medicines 410:12
meet 15:4,6 16:10 176:3 181:18 216:1 274:20 276:3,8 276:20 281:5 281:17,18 289:9 345:13 377:1,13 378:1
meeting 6:7,8,8 6:10,11,14 8:6 16:13 22:21 23:1,4 25:18 112:18,19 113:11 114:6,7 114:11,12 125:17 128:4 128:10,10 129:17 131:20 134:11 138:14 138:20 139:11 139:19 140:19 141:15,19 142:4 144:16 155:21 156:4 156:19,21 161:8,21 162:20 165:16 170:13,16 173:3 180:7,17 181:11 182:1 190:9 191:5 198:17 199:17 201:3 204:18 220:1 256:10 272:16 277:16 307:10,11 308:17 310:13 345:3,4,10 373:6,16 374:3 374:7,13
meetings 26:3 54:2 202:3 375:11 393:19
member 41:14 47:6 258:14 388:21
members 52:20 53:10 54:21 57:10 197:2 206:13 245:7 375:18
memory 28:12 28:14 36:9 68:18 77:11 78:7,8,10 81:2 81:3,5,20 87:7 87:14 133:20 137:7 162:11 177:6 198:19 234:5 235:19 235:20 241:5 408:4 410:13
mention 154:21
mentioned 57:9 90:3 94:21 132:16 139:10 146:1 147:1,5 154:13 162:1 201:12 202:19 215:9 252:11 291:15 297:16 407:18,20 408:1,2,7,13,13 408:15
meetings 26:3 54:2 202:3 375:11 393:19
member 41:14 47:6 258:14 388:21
members 52:20 53:10 54:21 57:10 197:2 206:13 245:7 375:18
memory 28:12 28:14 36:9 68:18 77:11 78:7,8,10 81:2 81:3,5,20 87:7 87:14 133:20 137:7 162:11 177:6 198:19 234:5 235:19 235:20 241:5 408:4 410:13
mention 154:21
mentioned 57:9 90:3 94:21 132:16 139:10 146:1 147:1,5 154:13 162:1 201:12 202:19 215:9 252:11 291:15 297:16 308:11 349:18 358:1 378:9
mentions 257:17
merit 1:18
mess 84:3
messaging 183:8,10
met 15:1 82:2 112:16 156:14 156:18 162:1 181:17 263:2 275:2 277:2 362:20 379:13
meta 332:10
metadata 198:3
method 53:1,12 53:14,15 93:13 208:3,10 327:3 412:18
methodologi... 335:10 336:3
methodologies 81:16 128:5 208:19 306:2
methodology 5:9 7:18 18:11 18:12 27:14,14 27:16 28:5,7 29:20 30:8 56:9 62:15 77:15,20 78:12 80:8,21 81:11 81:14 83:4,5

85:7 87:20,21 88:7,14,17,18 89:1,1,15 90:15 92:1,6,8 92:9 95:19 99:6 105:16 106:5,17,18 111:4 117:11 118:3 120:10 124:8,13 125:11,13,16 149:19 150:6 150:12 151:19 152:19 153:1,2 153:4 168:18 176:18 177:16 186:14 192:18 194:8 206:8 208:15 214:11 219:15 224:19 224:20 229:4 235:1 237:8 245:12 247:18 248:6 258:18 263:11,13,18 265:6 269:18 284:3,10,14 285:1 286:17 286:19 299:18 300:2 301:2,4 302:3,13,17,21 303:9,11,12,15 304:17 306:4,9 324:7,11 360:9 363:15 384:7 384:15 385:3 402:20 403:8 407:3 411:19 413:19 415:8

methods 287:12 304:21 315:15 316:21 319:5

metric 223:21 335:9 338:5

metrics 216:10

mic'd 362:2

michigan 33:15

micro 201:2

middle 115:12

midway 104:8

military 115:1 199:6

mind 70:10 84:20,21 282:21 311:16

minimize 147:8 149:9 154:16 201:16

minimum 92:12 289:9

minority 210:19

minus 52:1 80:10 294:12 305:17

minute 96:5 177:14 180:4 180:15 185:19 205:18 344:4

minutes 139:10 142:4 145:20 188:21

mirrors 108:13

mischaracteri... 385:14

missed 379:15

missing 82:5,6 91:8,17 94:6,8 94:8,15,20 95:2 96:7,15 97:3 100:19 101:21 102:5,8 102:9 199:21 208:4,11 257:15 260:20 267:3 289:2,7 289:8,14,19 291:5 292:7,9 300:12 301:17 302:11 308:2,9 309:2 315:13 316:15 317:4 320:5 374:1

mission 387:18 388:6,14,17

missy 21:21 31:3 58:11,18 59:20 119:12 135:11 200:14 259:20 314:19 317:3 320:10

mistakes 109:15 323:11

misunderstan... 180:5

mobley 44:21 45:3

model 83:10 90:16 112:17 115:7 135:12 143:5,13 145:11 158:4 159:8,11,15 166:6 176:3 177:10 197:3 199:11,20 200:7,16 222:20 239:4 244:11 245:1 304:17 306:16 384:6,16 412:17 415:1

models 81:21 112:12 165:14 176:10 181:11 214:19 415:19

moderate 166:12 168:13 169:6,8 171:20

modify 208:10 209:14

moment 37:9 84:3 239:6 256:14 342:17

monday 231:11
money 42:12 46:14 47:12
month 197:17 197:19 198:1 281:5
morning 9:2 11:17,18
mortality 109:5 110:1,5,7 326:5,6,12,14 326:16,21 327:14,21 328:16 330:8 331:8,18 333:13 337:15 337:20 338:16 341:13 342:6 344:3 345:14 347:6
mortar 241:14
motivate 200:17
mouth 100:9
move 51:10 65:15 93:6 126:5,11 142:11 189:16 206:17,18 244:21 254:10 284:13 285:20 286:3
moved 45:6 53:9 64:12 169:12 175:13 293:9,10
movement 87:1
moving 87:1 117:12 214:9 291:18 317:18 318:10
multicenter 330:10
multifold 215:7
multiple 48:5 48:12 302:5 345:6
multiply 280:14 337:5

n

n 2:1 3:1 9:1
name 9:10 11:19,21 12:2 30:2,3 241:4 337:1,4 358:3 362:16
named 15:9 417:3
names 12:4 20:9
narrow 53:18
national 52:13 54:18 55:10 60:18 64:19 79:17 83:1 214:21 216:11 245:14,14
273:14 287:15 293:11
nationally 289:6 354:1
nationwide 241:20,21
nature 37:14
necessarily 75:4 87:2 94:18 98:11 120:2 144:21 193:11 202:20 212:21 215:1 216:12 217:17 237:12 241:4 250:5,16 268:21 278:4 319:19 332:15 369:18 378:7 405:20 413:11
necessary 210:21 213:11 418:8
need 13:6 14:11 21:15 27:19 28:1 41:14 63:21 72:15 108:8,8,9 113:16 123:11 129:12 136:2 142:13 153:14 163:3 172:8 174:19 178:12 178:13 184:8 185:18 192:5 192:14 202:21 210:14 213:13 225:19 243:6 251:4 263:12 281:4,5 324:13 334:15 340:20 371:4 384:10 390:16 416:15
needed 18:18 18:19 148:6 262:21 293:21 372:1 384:12 418:15
needs 14:12 181:16 293:17 371:5 393:14 412:21 413:14
negate 332:15
negative 132:7 319:18 390:8 406:6
net 148:16,18 149:1,16 150:3 150:7,9,13 151:6,18 152:1 152:4,4,8,14 153:5,8,11,12 153:15 154:21
neuro 179:1
never 93:21 122:2 132:21 251:9 290:5 299:11 306:5

309:17 310:16 371:9
new 2:7,7 64:20 90:10 107:18 107:20 115:8 211:3 212:18 212:21 219:14 221:10 222:20 245:3 303:20
news 186:11
nice 155:19
nine 68:3 362:12 365:21 366:5 367:1 368:9,20 416:7
ninety 279:20 279:21
noble 243:2
nodding 13:7
non 152:4,7,14
noncomposite 392:12
nonimputed 346:6
nonparticipat... 77:20 95:16 99:21 111:5,6 120:3 132:1 133:16,21 144:17 167:8 167:17 174:10 176:20 215:16 216:9 225:10 237:16 268:4,5 271:7 338:16 339:5 406:16 412:5
nonperforming 277:7
nonprofit 151:12
nonrenewal 47:7
nonreporting 99:5 297:19 298:17,18 365:19 372:11 376:18,21 377:4 379:12
nonrepresent... 306:12
nonrepresenti... 237:15
nonresponding 369:9 378:6,13 378:15
nonsignificant 331:11
nonsubmission 402:10
nonsurvey 171:9
nonvoluntary 247:6
normal 141:20 216:14
north 3:5
notable 222:15
notarize 420:11
notary 1:19 417:1,17
note 140:6 178:21 201:2 207:7 209:9 232:8 309:14 312:7 358:16 416:14 420:9
noted 133:6 184:14 190:12 232:13 311:18 390:10
notes 6:11,13 7:14 8:6 23:7 29:8 61:19 108:7 128:10 129:12 139:19 140:19 141:10 141:11,16,19 142:9,20 143:3 144:5,15 145:1 154:11 156:5,7 161:2,7,10,13 162:8,19 172:4 196:7 197:11 198:21 199:1,1 203:12,15 205:2 256:1,4 256:17 257:1 263:12 307:11 307:12 309:21 311:20 373:6,8 373:10,12,13 373:13,14,16 374:15 407:11 407:17,19 408:5,14,21
notice 18:18
notified 20:5
noting 227:12
notion 204:19 320:19
nuance 303:18 309:21
nugget 34:8
number 5:5 6:5 7:5 8:5 11:13 21:1,9,18 43:13 44:6,15 48:16,17 50:3 50:18 51:11 66:2 70:15 71:7 90:21 109:14,18 120:8 125:6 143:3 155:8,14 158:16 159:1 174:19 175:9 179:4,7 229:16 230:1 246:12 274:11,17 277:2 279:17 280:5,6 283:5 283:13 288:21 290:2,15 291:4 293:8,9,10,13

294:11 295:13 305:3,15,18 308:6 315:8,13 315:19 316:13 317:11 318:20 319:5,15 320:4 320:12,13,20 323:10,13 335:7,12 336:8 337:8 341:8,20 347:14 350:21 351:10,11 356:13,21 362:6,12 373:19,20 380:6,21 411:21 416:7 418:18 419:21
numbers 26:19 44:3,3,7,9,9 50:3,11 79:15 103:6 189:21 191:16 192:4 192:13 269:5 275:13 280:10 322:19 323:19 324:5,7 334:2 339:18 341:3 346:9,12 347:5 349:2,12 350:13 353:17 361:13
numerator 274:19
numerical 30:1 248:20,21,21 249:7 342:3 371:16 372:1,7 372:9
numerically 119:18
nurse 410:12
nurses 98:4
nursing 99:17 255:5 365:13 366:21 368:8,8

o

o 9:1
o'clock 156:5 159:2
oath 13:9
object 14:6 15:11 27:20 31:15 50:21 57:18 67:20 73:6 76:3 89:2 90:1 98:5 101:3 121:16 124:10 132:20 134:2 144:19 157:15 170:14 172:7 173:15 173:18 174:4 174:12 182:10 186:19 190:2 190:19 191:17 205:1 208:16 211:10 221:1 223:6 225:18 227:19 228:17 236:10 243:19 252:13 274:7 277:14 279:3 280:11 304:19 331:19 339:20 341:10 347:3 366:3 367:16 368:3 369:12 369:13 377:7,8 378:18 383:1,2 383:13 385:6,7 391:18,19 393:4 394:20 394:21 395:12 395:21 398:9
objection 15:12 49:12 67:20 133:6 367:4,5 368:4,18 370:15 375:5 375:21 378:17 379:10 381:19 383:14 387:20 390:2 392:5 396:1
objections 266:1
objects 325:6,8
observation 301:12,14
observations 281:5 292:9 302:10
obviously 172:18 237:1 303:7 305:18 399:15
occasionally 13:19
occurred 127:9 199:16
occurring 335:18
odd 358:19
offer 243:6 251:4
offhand 67:9 221:5 280:8
office 22:2,9
offices 1:13
official 30:3 38:2,2
oh 11:1 29:13 44:11 70:19 86:21 110:14 122:13 125:7 135:6 137:15 142:21 183:13 183:15 198:3 209:10 245:8 248:3 306:11 321:12 325:15 328:7 332:5 343:8,14

373:15 387:6
414:9
okay 11:1,2
12:7,10 13:18
14:17 15:10
16:19 17:1,4,8
18:21 19:3
20:1,6,11
21:17 22:8,11
23:14 25:7
26:1,8,21 28:4
28:20 29:18
30:10 31:21
32:2,17 33:2,4
33:9,11 34:3
34:15 35:6,13
35:16 36:19
37:8,13 38:11
38:20 39:4,7
39:12,16 40:8
41:20 42:3,14
44:11,11 45:8
46:5,10 47:10
47:15,19 48:8
48:11,15 49:15
50:8,14 52:4
53:11 54:5,14
54:16 55:7,20
56:2,14 57:6
57:13 58:5
59:14,18 60:2
60:5,5 61:14
62:6,11 64:13
65:11 66:1,6,9
66:17 67:8,14
67:16 68:14,14
68:17,17 69:2
69:3,8,10,10,12
69:14,17,20
70:1,3 71:16
72:2 73:17
74:1,7 75:12
75:18 76:1
78:6,14 80:7
80:13,18 81:7
81:9,18 82:12
83:17 85:2,4
87:4,8 90:18
90:19 92:11
96:11 98:13
100:16 101:4
102:14,15
103:9,12,21
106:11,13,16
107:2,14,17
108:1 110:8,8
110:10 111:14
112:6,15 113:9
113:13 114:2,5
114:9,14
115:11 117:3
117:14,17
118:9,14
119:10 120:6
120:20 122:8
123:7,21 124:4
124:6,20 125:4
125:5,13,16,20
126:3,12,17,20
127:20 128:2,8
128:12,16
129:3,7,21
130:4,7,11,21
131:9 132:11
132:14,17
133:3,10,18,19
134:6,14,20
135:2,20
136:14 137:7
137:20 138:4,8
138:17 139:1,2
139:9,21 140:2
140:5,12,14
141:9,13 142:3
142:6,15,18
143:2,15,19
144:7 145:3,18
146:5,8,20
151:14 152:3
152:17 153:14
153:20 154:10
154:10 155:3,3
155:17 156:13
156:17,20
157:4,4 158:7
159:4,17 160:4
160:11,12
161:12,16
162:5,11,16,18
163:2,14 164:7
164:19 165:9
165:18 166:2
167:11,19
168:8,19,21
169:10,17,19
170:1,6,7,19
171:12,15,19
172:12 173:1,6
173:11 174:7
174:15 175:17
176:17 177:1
177:18 178:2,5
178:15 179:14
179:19 181:1,3
182:4,5,18
183:12,17,20
185:3,17 186:2
187:4,18
188:14,18,18
188:19,20
189:6 191:8,15
192:9,16 193:9
193:13 194:14
195:2,8,12,12
195:13,14,19
196:10,16,20
197:5,8 198:5
198:12,15,19
199:9,15,19
201:10 203:3,6
203:10,15,20
204:1,11,15
205:6,7,17
206:4,13,17
207:3,16 208:9
209:2,5,9,20

210:6,10 211:6	259:21 260:3,7	306:18,19	348:18 349:1,6
211:20 212:21	261:3 262:11	307:4,15 308:5	349:14,20
213:7 214:13	263:3,14	308:19 309:6	350:11,17
215:8,13	265:18 268:11	309:13,19	351:12,17,17
216:20 217:9	268:16,19	310:3 311:17	352:7 353:7,10
217:14,17	269:3 270:1,8	312:9,14,15,15	354:14,15
218:3 219:5,7	270:14,20,21	314:8,15,18	355:1,8 356:4
219:13 221:8	271:3,16,19	315:2,12 316:8	356:5,10,11
221:15,18,18	273:9,11,17	316:12 317:2,6	357:9 358:12
224:4 225:8	274:3 275:4,9	317:21 318:6	359:14,17,19
226:1,4,15	276:15,21	318:11,18	360:3,8,11
227:1,9 228:4	277:5 278:3,12	319:2 321:1,1	361:9,18 363:9
229:1,6,7	278:18 280:9	321:11,12,14	363:14,19
230:13 231:1	280:19 281:8	322:8,12,14,15	364:5,16
232:3 233:1,10	281:11,20	322:18,20,21	365:10,17
233:11 234:1,4	282:2,8,18,18	323:6 324:4,9	366:2,5,17
234:11,14	282:19 283:2	325:2 327:1,10	367:6,11 370:4
235:18 236:4,7	284:2,11,17,20	327:13,17	370:21 371:7
236:21 237:6	285:7,11,16	328:12,15,21	371:13 372:15
237:10 239:3,9	286:1,2,3,16,20	329:7,14,19	373:3,9,15
239:12,18	287:8 288:1,10	330:6,16,21	374:11,16,19
240:5,8,10,11	288:16,19	332:17 333:1,5	375:9,14,18
240:12,21	289:16 290:1	333:5,8 334:4	376:2 379:4
241:9 242:7,8	290:10,14	334:18 335:15	380:4,13,19
242:21 246:1	291:2,10,14	336:11,21	381:4,9,15
246:10,16	292:12,19,21	337:2,6,11,12	382:16 383:8
247:2,15	293:4 295:8,9	337:20 338:2,6	384:4 385:1,11
249:10 250:3	296:4,13,15	338:20 339:10	385:19 386:1
250:21 251:10	298:19,21,21	339:17 341:2	388:19 389:9
252:21 253:11	299:6 300:5,6	342:9,12,19,20	391:5,6,13
253:12 254:7	300:15,18	343:4,6,18,21	393:11 394:15
254:17 255:2	301:11 302:1	344:13 345:6	395:4,8 399:6
256:7,11 257:7	304:5 305:4,6	345:16,21	399:14,20,21
257:16 258:1	305:21 306:14	346:3,12,17,20	400:12,20

401:3,10,13,15 403:20 404:17 405:6,13 407:9 408:11,16 409:9,14,17 410:4,9,16 411:1,12,17 412:17,21 413:3,13,17 414:5,11,12 415:15,20,21
old 120:10 258:21 259:9 317:16 319:15
older 87:20 211:2
once 29:1,2 59:16 72:1 190:20 219:20 240:12 371:2
one's 94:7
ones 236:17 270:4 354:11 354:11 398:3
ongoing 67:15
online 281:16
open 74:18 75:9 151:3 315:20 317:12 318:7,8,10
operate 178:21 179:6 180:9
operated 175:20,21 386:11
operationalized 83:9 294:20
operations 45:4 243:10
operative 303:13
opine 77:6 78:11
opining 77:14 78:11
opinion 237:2 369:5,10 399:3 399:4,7
opinions 315:21
opportunity 35:5 247:6 270:21 387:11
opposed 57:17 65:8 225:16 250:16 262:8 264:2 296:18 347:9 351:15
opposing 381:21
opt 243:7,17 251:5,7,10,12 251:18 252:1,4
opted 127:9
optimizes 210:19
option 188:9 241:12 243:7 243:17 251:5 295:13 320:17 373:2
options 158:6 263:1 305:19 319:6 394:18 413:5
order 84:19 92:20 143:1 262:19 414:15
organization 57:17
organizational 330:9
organizations 19:8
orient 164:1
original 208:2 254:20 262:7
originally 140:9 160:8 189:11
outcome 91:9 98:21 115:8 325:3,17 326:18 327:7 327:16 333:18 334:12,21 335:1,13,14 336:1,4 363:10 363:15 364:7 370:18 371:4 417:12
outcomes 241:16
outdated 259:1
outline 386:16 387:7
outlined 413:4
outlines 5:8 29:20 116:16
outputting 327:14
outside 17:1 21:15 243:10 265:13 266:17
overall 193:2 248:15,17,18 282:1 303:2 367:15 370:14
overhead 49:2
overlap 411:11 411:13
oversees 409:3
oversell 351:8
overtaken 247:12
overview 199:10
own 58:6,7 153:16 183:5 198:21 199:1,1 210:18 212:4 237:2 241:15 252:2 256:14 328:8 387:5 388:8 390:13

ownership 309:14

p

p 2:1,1 3:1,1 9:1
p.m. 25:10 114:7 155:15 158:17 159:2 164:9 174:17 186:5 192:1 229:17 230:2 283:6,14 356:14 357:1 362:7,13 416:8 416:19
pack 354:3
package 226:10
pad 33:3
page 4:5 5:5,20 6:5 7:5,8 8:5 12:12 24:9,10 27:5 29:6 43:13 44:2,6 44:15,17 50:4 51:11 52:5,8 60:8,8 63:13 74:9 76:12 77:5 79:9,11 79:14,14,15 84:11 90:21 91:1 102:17 103:6,18 104:6 105:7 110:14 115:13 116:7 116:13 131:2 131:10 133:14 135:4,6 136:6 136:9 145:19 148:9,11,11 149:3,21 163:21,21 164:1,4,5 165:20 174:19 177:9 178:3,15 178:15,19 179:8 184:1 191:13 192:1 196:6 197:21 204:9 206:11 207:6 217:6,10 217:21 218:4,7 218:9 220:10 223:16 226:5 226:16 227:7 229:2 234:16 257:18 273:3 288:20 292:2 297:8,11 307:21 308:3,3 308:5 309:8 316:5 323:1,3 323:20 331:15 347:21 348:3 354:19 364:2,4 373:18 376:15 380:4 400:3 413:18 414:3 414:10,10 418:16 419:5
pages 27:18 44:14 51:18 62:9 78:5 135:3 217:15 219:2 356:8 420:12
paid 42:12 43:15 46:19,21 48:16 50:4
palm 1:2 9:8
panel 6:7,10,14 22:13,20,21 23:2,8 24:19 27:1 52:9,14 52:19 53:5,10 54:1,3,18,21 55:10 82:2,7 112:16 113:11 117:10 125:19 129:17 134:11 140:19 141:15 141:15 146:4,9 146:11 156:15 160:7 161:8 162:20 165:16 170:16 173:3 187:8 191:5 197:2 199:10 202:6,19 205:3 206:14 208:2,9 208:14 211:1 214:8,10 251:8 256:9 283:21 284:8 285:2,5 285:8,13,14,21 287:3,3,15 289:5 291:4 301:3 308:11 308:17 309:3 310:10 315:4 316:21 317:18 318:9 319:16 372:17 373:6 373:20 374:17 375:1,10,18 393:10,18 407:21
panel's 114:11 284:12
panelists 24:14 128:5 132:4,9 134:19 157:9 213:14 214:4 299:3 375:11
panels 208:20 285:5
paper 33:3 105:4,6,8,9,10 105:13,14 106:17 107:19 107:21 108:6 217:18 286:21 287:18,20 295:11 297:3 302:2,16 303:21 304:18

321:10 322:17 324:1 331:17 360:15,15,18 360:19 361:4 361:15,17 400:5 418:16
paragraph 53:2 63:14 72:6,6 73:5 79:16 85:6 91:2 96:12 104:9 207:17 209:7,13 210:14 213:16 289:17 290:21 292:1 297:11 297:12 300:7 302:6,9 348:8
paralegal 15:1 16:17
paramount 282:7
park 2:6
part 39:10 41:15 64:14 75:5,7,8 77:14 77:18 160:6 179:4 182:7 194:7,15 274:1 277:18,18 278:4 301:3 315:19 317:11 319:3,6,12 320:11 327:4 342:2 415:19
participants 166:14,16
participate 74:19 75:10 112:2 120:4 178:10 179:17 181:7 280:21
participated 406:9
participates 210:17 212:1 252:6
participating 167:21 275:12 275:14 339:3
participation 127:9 208:6 209:15 210:15 212:8 214:16 215:12 223:1 246:17,21 249:12,14,16 249:19 252:19 384:21
particular 77:5 217:12 263:21 375:7
particularly 52:5
parties 361:20 417:11
partner 15:19 17:21 19:4
partners 357:19
parts 231:8
pass 215:3 277:13 361:20
passed 276:17 279:19 280:6
passes 109:8
password 129:15
past 63:1 118:16 127:9 127:10,14 138:7 166:9,19 167:2,8 168:10 168:14 170:2 214:19 308:12 309:3
path 285:13
patient 7:20 65:4 85:8,12 88:15 89:12,16 99:18 104:4 109:2 110:5 219:11 223:19 224:12 245:10 253:4 267:1 270:7 282:6 286:11 287:15 304:7 326:5 348:5 351:7,9 365:13 366:10 368:9 386:16 387:7 389:1 390:19 391:9 392:16 394:12 396:11 410:2 410:18 411:3,4 411:7,11,13,14
patients 104:13 106:3 109:8 151:9 244:16 325:15,18,19 325:21 326:9 326:21 348:11 349:8 351:15 366:11 389:5 389:11 391:8 391:10,14 395:5,10 399:16
patrick 157:7,8 161:17 162:7 231:9,15 232:1 256:16
patterns 121:1
pause 10:17 11:11 124:3 222:6,10
paused 158:18 209:10
pay 46:14 47:12
paying 51:3,4,5 386:10
payment 43:12 43:19,20

pays 42:15
pediatric 179:1
peer 85:7,19 86:1,2,11,16,20 88:7,14,18 89:15 90:16 286:16 292:14 302:3,16,19,20 303:11 306:4 306:16 360:15 360:17,18,21 361:2,7,10 389:14
pen 33:3
penalization 385:13
penalize 200:17 234:20 237:4 243:8 317:19 319:12 384:16
penalized 297:1 385:4
penalizes 384:7
penalizing 315:18 317:10 320:8,19
penalties 300:11 301:17 302:11
penalty 10:11 318:13,14 319:18 384:18 385:18 408:8 408:10,19 409:7
pending 14:13
people 73:19 104:3,3 210:16 228:2 233:4 336:14,15,16 336:17 348:4 383:16 395:4 395:19
perceived 157:16 397:17
percent 42:4 45:16 48:19,20 66:3,3,15,18 67:2 68:13 195:6 245:17 246:5,13 265:3 274:14 275:1,5 275:6,6 276:7 276:8 277:3,8 277:15,18,19 278:5 279:18 280:16 281:9 281:10 304:13 304:16,16 306:3 325:15 327:21 336:8,9 337:5 339:14 350:7,16 352:13,17
percentage 42:1 48:17 49:9 50:19 65:18 67:18 68:9 274:15,16 276:18,19 325:14
percentages 26:16,18,19
perception 399:1
perceptions 398:18
perfect 364:5 376:13
perfectly 87:17
perform 186:12 269:10 275:13 277:10
performance 52:16 60:16 79:17 82:21 83:3,6 93:12 94:2 97:7,9 117:20 132:13 147:6,10 148:6 149:5 154:14 154:17 193:17 193:19 201:14 201:17 202:7 203:2,4 205:4 212:14,19 213:1,3 216:17 223:4 224:7 227:13 237:15 238:1,3,15 239:16,17 240:3 253:4,6 261:9 266:18 267:13,20 268:5,8,14,17 269:8 271:9,12 271:14 277:8 278:9,10 289:19 291:7 292:6,16 293:1 293:11 296:19 300:11,20 301:16 339:4 368:20 371:6 371:16 372:8 372:10 378:2 381:5 387:12 401:20 404:12 404:15 405:3 413:7
performances 118:18
performed 52:1 104:16 269:12 269:12 323:15 348:14 367:13
performer 216:13 319:8,9 369:1,1 390:15 397:13
performers 397:9
performing 97:12,13 138:4 143:12 145:7 145:11 153:9

176:6 212:13 261:18 370:6 379:8,9
period 17:19 37:6 55:21 94:12 112:13 146:17 196:21 235:17 259:13 263:6 404:11
periodic 52:13
periodically 71:21
perjury 10:11
person 1:10 32:4 141:20 240:17 407:20 408:6
personally 21:20 119:8 122:2 182:19 381:20 383:3 417:3
perspective 382:18
peruses 24:21 136:15 148:14 184:9 185:20 186:20 210:7 211:14 257:6 344:6
peter 134:16 135:8,11 143:9 143:11,18 190:21 231:9 231:15,20
ph.d. 34:6,8,10 35:7 38:12
phase 263:13
phone 32:4
phrase 131:18 137:21 138:6 138:13,19 182:9,15 191:3 202:15 203:3
phrased 168:20
physically 251:17,17
physician 92:20 93:4 157:11 262:19 326:18 327:11 327:18 328:16 330:8 331:7,10 335:3,8 336:2 337:15 342:6 410:11 414:15
physicians 397:15
pi 37:18,18 38:9
pick 95:11 97:4 223:10
picture 337:3 407:21
piece 58:8 64:11 305:13 400:5 418:16
pieces 224:15 315:9
pikeville 400:14,17,17 400:18 402:6 403:5,6,11 404:1,9,18 405:7
pikeville's 402:7
place 88:1 293:18 299:14 344:15 417:4
places 335:7
plaintiff 95:15
plaintiffs 1:5 1:15 2:2 9:19 10:2 11:20
plateauing 246:21
platform 7:13 242:16
play 23:5,5,6,6 368:1
playing 84:4
please 9:13 10:4,7 11:21 21:19 129:12 140:16 141:3 144:13 164:2 164:15,16 167:3 179:7 184:11 216:4 275:15 286:4
plus 52:1
point 21:8 63:20 96:5 108:7 114:6 122:9 126:8 130:2,5 135:12 136:8 152:18 152:21 156:18 167:20 180:1 203:17,21 224:17 258:5 268:7 279:21 282:9 285:18 296:1 297:21 297:21 298:1 299:5 303:1 316:14 317:17 318:17 328:5 347:6 373:19 374:21 397:4 407:16
pointed 213:10 226:9
points 96:20 142:14 244:13 244:14 256:21 323:9,16 375:12
policies 219:9 223:18 378:8
policy 97:18 241:13
polling 52:19 53:10 54:9

poor 145:11 180:20 241:5 368:15 369:1 371:1
poorly 145:7 367:14
popular 395:17
portion 41:13 41:21 47:8 51:3,5,7 78:11 131:6 139:6 156:8 236:15 306:5 328:14 377:19
posit 341:19
position 299:6
possibility 238:20 359:1
possible 79:12 115:8 132:15 236:4 237:14 237:19 247:8 247:11 251:11 251:17,17 281:1 289:18 319:5 361:16 374:1,7,9 416:18
possibly 141:18 237:17
post 243:13 245:5 252:16
potential 153:8 165:13 246:3 246:15 250:12 262:15 370:16 373:2 374:17
potentially 252:9 391:10
powerpoint 358:14 359:4,6 359:11,13 360:9
pptx 357:21
practice 87:3 99:9,14 161:9 366:20,20 368:7,8
practices 244:10 254:5,8 254:14 310:6 310:11,17,18 316:15 317:4 330:9 365:12 365:13
pratt 1:14 2:16
preceded 313:15
preceding 49:19 148:11
predict 189:1
preeti 6:11 17:20 140:10 140:11 154:12 197:18 272:8 273:8 313:10
preeti's 143:2
preface 128:15 137:2
prefer 232:17 244:16
preferred 232:16
prepare 14:18 14:20 15:5 17:2 416:13
prepared 133:4 359:7 373:14
prepublished 7:19 286:10
prescriber 84:19
present 3:10 41:2 55:16
presentation 226:2 357:15 358:19 359:2,6 359:12,13,14 360:5
presents 224:12
president 39:1 58:12
press 19:8,13
presumably 203:6
pretty 144:10 258:21 272:18 274:4 339:18 340:1 341:20 370:19
preventable 104:14 106:3 109:15 323:10 348:12 349:9
prevention 136:13
previous 141:4 141:6 303:1
previously 134:20 148:12 250:19 291:15 326:7 362:20 366:14
primarily 120:10 125:2 250:11 324:19 333:17 338:4 388:11 411:2
primary 26:7 58:13 61:5,7 151:10 162:3 306:8 364:9 365:1,2 366:12 414:17
prime 35:4
principal 37:18 41:12,18 388:21
print 7:20 286:11
printed 24:6
printout 5:17 78:21

prior 7:9 28:17 34:17 64:8 78:1 81:13 93:14,19 106:17 115:18 116:3 138:2 159:12 184:19 194:7 196:6 209:12 231:2,3 239:4,4,5 316:5 404:8
priorities 123:12
prioritize 123:11 150:10
prioritized 249:12,19 354:8
privilege 15:16
probably 48:6 54:13 60:1 72:15 88:4 105:19 116:1 127:16 144:5 236:2 276:9 280:16 296:7 335:17 345:5 349:19 353:20 411:10,13
problem 104:14 106:4 115:15 120:10 183:8 215:2 246:7 348:12 349:9 376:7
problems 72:16 73:15 116:16
procedure 1:12
proceedings 71:2 155:11 158:18,20 229:19 283:8 356:16 362:9 417:9
process 52:10 54:4 86:14 91:8,16,17 92:14 98:16,17 98:20 99:2,5 100:11,19 101:2,15,21 141:20 287:20 315:14 317:1 320:5 327:3,7 364:13,19 365:21 366:9
processes 240:19
produce 279:6
produced 20:19 24:2 30:17 43:4 44:13 133:1,2 140:7 160:18 185:15 189:11 236:1 255:19 272:4 307:5 357:6 358:16 359:21
product 222:3
products 220:18 221:7,7
professional 1:17
profile 5:12 36:4
profit 151:11
program 59:4 252:5,7
programs 60:18 64:19 285:4
project 46:4
promise 10:10
pronovost 134:16,17 135:8,11 136:20 190:18 231:20 328:18 328:19 332:9 337:21 345:19
proportion 66:10
proportionately 100:6
proportions 151:9
proposal 125:7 125:21 126:4,5 127:1 134:10 170:12,15 200:6 233:17 285:8 318:16
propose 167:7 214:1
proposed 125:10 128:5 134:12 143:5 145:16,21 146:4,6,10 167:13 168:11 206:8 213:20 214:7 234:20 243:5
proposes 135:3
proposing 133:15 144:10 174:10 316:18 316:20
protected 15:15
protects 391:17
protocols 331:9
provide 56:17 62:14 63:7,17 75:19 86:6,6 107:9 159:16 178:8 219:9 220:21 223:17 361:5
provided 145:16 199:9 251:10 361:16
provides 389:2
providing 264:11

provision 274:11
proxy 262:1
psi90 91:9
public 1:20 19:8 28:6 38:17 72:18,19 73:16 74:19 75:10 88:19 206:9,20 213:9 230:10 233:14 233:16 235:1 235:17 237:7 390:11 417:1 417:17
publication 7:20 286:11
publicly 30:4 107:11 111:19 244:11 253:3 289:10 389:17 394:6 395:13
publish 108:2 392:17 393:14
published 85:8 88:3,15 89:16 106:2 322:11
pull 26:21 99:12 329:5
pulled 26:14 103:14 270:19
pulling 147:18 242:2 245:16 414:12
punished 243:13
pure 50:11
purely 92:7
purports 103:10
purpose 70:6 72:7,11,21 74:2 187:5 200:15 273:11 384:16 385:20
purposes 130:12 371:20 387:9
pursuant 1:11 361:19
push 213:15 214:5
pushback 214:7
put 19:8 22:1 54:3 64:7 65:12 82:15 95:4 100:9 105:20 109:17 125:18 127:1 227:8 228:9 230:6 254:5,8 256:17 368:9 368:20 369:2 387:6 394:6 397:19
puts 98:20 228:7,8 264:15
putting 31:3 40:1 169:11 203:2 206:7 213:20 219:18 273:13 392:11 392:15

q

qualifies 153:15
qualify 345:1
quality 40:2 72:18 73:16 74:19 75:9 86:13 123:11 150:3,10 157:17 222:3 243:10,11 244:9 247:3 262:5 387:15 388:11 389:1 389:17 390:11 390:18,21 392:18 398:16 398:19 409:2,3
quantify 281:14 337:17
quarter 265:3
quartile 135:13 136:1,21 137:1 137:4 143:12 171:21 172:4 172:10,16,19 187:12,16 190:18 191:6 191:12 192:20 194:16,17 195:4 196:17
queried 241:3
query 285:14
question 13:20 13:21 14:2,8 14:12,13 32:18 46:12 55:14 61:16 62:21 65:14 66:12 78:6,9 88:12 92:4 102:4 110:14 111:2 136:17 144:13 145:10,15,16 146:5,14,16 149:10 151:16 159:5,19 180:13 184:10 211:8 216:4 221:20 222:9 226:7 239:1 241:3 243:16 247:21 248:2 251:2,11,15,16 264:10 265:15 265:16 266:5 267:18 273:3 273:19,19,21 274:2,11,21 275:2,10,19 276:7 278:19

281:7 282:3 302:8 306:1,15 320:8 329:8 337:13 346:5 347:2,4 348:4 360:14 369:15 370:2 373:12 381:11,13 386:17,21 387:5 390:3 402:14 403:10 405:10 406:7 406:10 412:4 414:14
questionable 292:5,16 293:1 295:10 296:16 297:9 302:10 351:4
questions 5:20 12:21 13:21 16:2 18:17 19:17 21:20 39:20 46:13 61:18 79:8 103:18 210:18 212:2 223:7,8 274:3 276:1,4 276:11 279:4 287:9 307:20 347:19 397:3,5 397:6 405:9 407:6 409:18
quick 137:10 158:14 199:10 229:12 256:17 412:4
quickly 26:14 74:10 380:1
quietness 410:7
quite 58:19 280:9 304:11 351:6
quote 270:18

r

r 2:1,4 3:1 9:1
rabbit 230:8
raise 10:7 131:21
raised 144:16 145:6,15 146:15 405:10
raising 145:10 146:12
ran 374:6,8,9
range 249:3 290:11 305:19 350:15 352:17 379:14,17
ranged 42:2
rate 94:14 109:5,10 110:1 110:2,5,7 325:5,10,12 326:5,6,12,15 326:16 345:14
rates 109:2
rather 151:16 243:7 372:19 379:6,8 385:3
rating 208:18 220:20 222:11 252:5,7 328:16 337:20 389:6 392:3 393:15 394:13 395:14
ratings 58:12 208:18 220:18 244:17 245:2 285:4,4 389:11 392:21 393:3,8 395:11,17 396:16
rationale 267:5
reach 375:11
reaction 212:3
read 24:18 86:6 89:14 136:16 144:9 145:20 170:2 178:5 184:6,7 200:2 205:18 209:7 212:4,5 228:2 234:14,16 236:9,15,17,21 237:1 257:4 297:6 313:19 331:14 344:1,4 357:17 389:14 389:16 401:17 401:17 416:12 418:3 419:5 420:6,8
reader 381:1 383:9
reading 89:10 167:9 190:20 212:3 227:16 402:3
reads 232:10
ready 27:1 185:4,19 207:9 300:8
real 151:16
reality 110:3 353:18
realize 72:14
really 23:10 40:1 68:20 81:2 86:3 87:7 94:8,16,20 128:6 143:20 143:20 188:17 232:9 237:9 251:3 259:1 275:11 295:17 315:19 317:12 317:13,15 318:20 353:12 354:6 369:16 370:10,13 379:3
realtime 1:18 1:19 10:20

11:8 54:7 70:18 248:4
rearticulate 261:20
reason 13:15 44:13 48:11 79:2,4 97:5 104:21 105:3,5 119:2 120:17 140:2 145:4 195:8,10 198:9 201:9 225:14 226:1 262:7 263:21 264:11 265:12,13 266:15,15,20 270:2 307:17 335:16 359:20 360:2 408:5 419:5
reasonable 261:21 262:4 351:19
reasoning 213:11,13 233:7
reasons 265:10 266:11 282:10 299:1
recalibrate 260:14 290:16
recalibrating 291:6
recall 38:21 63:10,11 65:20 67:6,7 79:10 81:20 84:14 85:3 86:18 89:10 112:18 115:20 128:4 128:11 130:1,4 134:16 135:16 138:8 146:7 156:1,4,13,20 157:1 197:1 198:16 200:21 202:12 205:6 206:4,6,7,13 207:1,2 226:19 230:9,11 235:10,13,15 251:6 258:3 259:16 262:13 279:1 295:9 308:16 340:15 349:16 359:14 372:16 374:21 375:3,15 381:13 397:6,9 405:11 411:20
receive 47:14 72:20 91:12 150:1,15 178:9 181:8 241:17 298:8 365:12 372:14 377:20 380:12 391:21
406:12
received 18:18 57:3,7 111:7 125:20 140:3 183:9,11 227:10 339:8 380:16 401:1
receiving 18:8 19:20 20:5 32:11 180:2 206:6 377:4,5 377:9 385:4
recent 27:8,13 54:8 93:17 118:15 166:13 166:16 167:15 168:4 179:5 208:5,12 389:18,19 404:11
recently 53:9 60:17 87:1 165:5 167:13 255:7 329:11
recite 281:16
recognize 20:17 23:20 43:2 71:14 78:20,21 103:7 113:7 139:18 139:19 140:1 152:13 185:10 205:17 206:1 217:6 231:1
234:12 307:7 308:17 335:17 359:11
recognized 208:2
recognizing 341:18
recollection 25:16 77:4,14 80:20 81:7,12 116:19 131:20 137:5,6 138:18 161:20 164:20 173:2,5 177:19 184:8 187:7 188:15 189:7 199:15 203:11 208:13 231:15 236:5 312:2 371:11 374:4
recommend 86:12 161:18 162:7
recommendat... 209:14 210:2 285:5
recommendat... 62:15 86:7
recommended 291:4
recommending 192:14
record 9:3 11:7 11:9,13 12:1

27:13 37:3 70:15 71:8 115:4 133:6 139:7 155:6,8 155:14 158:13 158:16 159:1 188:3 229:16 230:1 266:10 283:5,14 284:21 356:13 357:1,18 362:1 362:6,12 365:8 401:18 404:20 407:18 416:3,4 416:7 417:9 418:5
recorded 1:10 9:5 12:17 129:17 417:8
recording 129:11 130:2 130:10
recordings 17:6
recross 361:21 396:21
red 218:12 332:4
redistributed 100:7,8 260:21 365:20 367:1
reduce 135:14
reduced 326:21
reduction 327:21
reevaluating 115:6
refer 21:19 44:3 95:2 96:7 105:6 131:16 149:12 150:5 363:17 376:6 386:14
reference 194:12 322:2
referenced 1:15 420:5
referencing 77:17 106:16 385:16
referred 89:18 105:10
referring 29:16 83:15 88:21 101:14 105:4,8 105:12 136:20 148:3 150:8 172:5 224:18 249:15 310:1 398:11 408:19
refers 26:18 45:19 53:12 76:19 231:20 232:1 309:12 309:16 348:19
refine 165:13 240:19
reflect 26:19 31:10 43:18 45:21 53:4,6 133:15 161:2 162:8,19 166:21 167:7 175:3,11 184:4 213:1,2 227:14 228:12 310:9 338:11 381:6 381:16 401:21 405:4
reflected 349:20 410:5
reflecting 338:12
reflection 271:8
reflective 302:13 311:2 353:18
reflects 110:19 111:9 161:4 216:18 224:8 274:15 323:21 324:2,4 339:1 339:3
reframe 73:11
refresh 25:16 81:7 115:21 116:19 157:5 161:20 172:9 184:8 188:15 231:14 374:4
refreshed 374:10 384:10
regard 19:4 59:8 156:14 238:17 393:2,7
regarding 11:7 15:6 77:15 78:12 139:5 374:13
regional 122:11 122:12
registered 1:17 1:18
regular 32:6,15
regulatory 243:10 252:18
rejected 86:12 297:13 299:3
relate 151:19
related 18:9 40:1 60:14 262:18 410:15
relates 264:7 410:18 411:2
relation 122:18 347:1
relationship 38:4,5 41:5,5,8 47:4 261:17 332:1,2,14
relative 62:17 100:5 240:13 245:12 303:4 323:17 387:12

relatively 65:5
release 19:13
released 107:11
releases 19:8
relevance 264:5 282:6
relevant 262:18
reliable 60:21
relies 404:8
rely 395:19
relying 395:19
remain 106:10 270:3
remainder 162:18
remained 108:16 303:5 306:9 331:10
remaining 66:3 66:18 368:9
remains 88:9 90:6 337:13
remember 23:8 23:11 25:1,20 32:8 54:7 67:9 68:20 77:7 78:13 79:12 82:10 87:5,10 87:12,15 117:4 119:12 120:5 128:6,9 132:2 134:3,10,13 135:19 137:2 144:6 145:17 146:18 148:5 162:3 165:1,2 165:4,5,7,9,10 165:10 175:13 175:16,17 187:2,5,13 197:4,6,7 204:2 206:15 233:21 234:1 235:11,14,16 236:2 257:3,9 260:4 262:16 263:15 308:18 312:9,11 314:8 314:11,12,13 337:1,3 347:6 347:11,12 348:4,6 359:13 359:16 360:4 372:21 374:6,8 374:12 375:2,6 384:8 385:14 385:15 407:11 407:17,18,20 408:1,3,6,7,12 408:12,18,20 409:4,10,12,14 409:16 411:21
remembered 197:16
remembering 332:9
remind 99:11 117:9 140:10 301:3
remove 318:20 338:13,16,17 338:18
repeat 136:17 144:13 164:2 167:3 184:10 216:3 248:2,3 248:3 267:21 302:8 377:16 386:17 390:3 406:19 412:8
rephrase 101:6 236:12,13 247:21 248:2 249:16 367:18 370:8
report 7:16 91:10 93:10 94:19 118:20 120:17 121:2,2 121:3,5,9,13,21 122:1,6,14 138:1,13,19 144:12,18 174:3 179:5 180:9,10 193:8 193:19 200:18 202:8,20 203:18 204:13 212:17,17 215:20 216:18 220:3,5 224:7 227:13 246:4 247:12 250:14 272:12,17 273:7,14 275:21 277:18 289:7,10 298:4 298:7,7,12,12 299:20 310:6 311:1 315:18 317:11 322:5 354:11,12 372:13 381:5 386:2 401:19 402:12 403:8 405:3 409:8
reported 93:21 94:4 102:12 179:4 261:14 269:6 289:6 339:12 371:18 394:6
reporter 1:17 1:18,18,19,19 4:11 9:11 10:4 10:6,10,15,19 10:21 11:2,4 12:13 37:1 70:17 115:2 138:12 158:9 158:12,14 188:1 365:6 416:9,15
reporters 188:8 193:3

reporting
38:17 61:7 74:20 75:10 94:12 119:2 121:7 123:19 124:3 125:1 126:15 141:21 180:7,17 240:19 244:13 278:4 295:14 295:19 297:14 297:19 298:3 298:15 345:10 372:10 376:18 376:21 377:13 379:7 390:11 402:9 409:5,7
reports 58:18 110:15 220:17 220:21
represent 9:14 71:16 85:16 103:13 130:8 198:3,7 207:5 223:2,15 225:8 264:15 314:16 324:6 329:4 362:17
representation 303:9
represented 235:3 237:11 237:17,20 245:18 262:4 270:15
representing 2:2,12 3:2 9:10 138:11 224:1 301:1
represents 58:6 58:7 80:4 274:16 307:11 323:8
reputable 330:19
reputation 398:8,11,15 399:9,19
reputations 398:16 399:13
request 107:9 206:20
requested 20:9 50:10 86:10 272:17
require 252:16 413:11
required 91:12
requirements 274:21 289:9
requires 176:3
reread 297:5
rescinding 314:5
research 36:15 37:17 38:14 39:10 41:14 60:11 75:3 313:7 329:8 331:20 389:6 389:10,13,14 389:16 409:2
researcher 37:16 38:3 39:18 105:1 157:12 388:20
researchers 50:10 104:13 347:8 348:11 349:8
reserve 361:21
resource 152:9 243:8,9
resources 152:7 235:7 243:12,14 354:7
respect 15:13 56:8 62:12 111:4 121:14 125:1 258:17 331:17 335:3
respond 174:17 188:5 189:2 191:18 213:9 232:6 365:11 365:19 366:15 366:19
respondent 276:16
respondents 171:11
responding 246:13 275:1 277:3 377:6 378:15 379:18
responds 188:20 377:18
response 25:9 164:17 168:6 190:17 316:13 316:19 318:19
responses 214:2 257:17 257:19 261:9 261:15,17 266:18 274:18
responsibilities 39:17
responsible 39:19
responsive 180:12
rest 357:21
restart 223:10 223:12
restate 13:21
restaurant 245:2,5 252:10 252:11
result 335:18 342:6 374:7 385:3
resulted 403:9
results 28:19 95:14 127:10

[results - right]

127:15 189:10
289:10 331:2
332:12
retain 243:15
retained 63:7
63:17 325:7,8
retire 126:9,10
170:13 200:7
retired 64:20
138:8
retiring 90:10
return 420:12
reveal 15:17
213:13
review 17:1,8
17:11 62:1
75:16,16,20
76:1 85:19
86:1,14 140:16
141:5 147:17
172:8 203:6
206:14 219:3
220:12 224:12
262:3 272:19
273:9 333:2,3
361:3 416:14
reviewed 15:2
16:19,21 77:8
85:8 86:2,16
88:7,14,18
89:15 90:16
95:14 148:11
221:14 222:4
226:17,20
236:1 262:20
286:17 292:14
302:3,17,20,20
303:11 306:4,6
306:16 360:16
360:17,18,19
360:21 361:2,7
361:10 389:14
reviewer
222:12
reviewers
86:11,20
reviewing
130:4 207:1
221:7 222:1
226:13,15
233:19 235:11
235:14 236:2
358:2 377:5
reviews 60:18
revise 142:1,6
206:14
revised 184:1
revision 75:14
revisions 86:10
197:11
revoked 258:5
258:10
rewarding
145:11
rid 54:9
right 10:7
14:17 16:16
20:20 21:19
24:2 30:11,18
34:1 35:8,11
36:13,19 39:8
40:14 41:9
43:5 44:10
46:21 47:2,17
48:12,13 51:2
51:4 61:3 62:9
63:8 65:3 66:3
66:15,20 69:17
74:8 76:13,15
76:15,18,20
81:10,14 83:10
83:11,19 84:10
86:12 87:16,20
89:11,18 90:9
90:12 93:18
95:9,16,19
96:2,8,12,19
97:18 98:21
99:2,6 100:4,7
100:12,14
101:2,9,16
102:15 103:16
105:16 110:2
114:11,19
117:15,20
120:11,13,18
121:15 122:1
123:15 125:14
126:2 129:15
131:17 134:21
138:5,20
139:11 140:7
140:21 141:11
142:11,12,16
143:6 144:12
149:6,7,8,14
153:15 155:1
156:11 165:16
166:5,6 167:9
168:10,14
170:3,10 171:8
171:13 173:9
173:13 174:3
174:11 177:6
177:15,21
180:7,14,18
182:2,20 184:5
184:18 185:14
185:15 187:13
187:15 189:18
190:1,10,13,15
190:18 191:16
192:20 193:6,9
194:1,6,8,17
196:3,8,18
199:17 201:21
202:13 203:13
203:18 204:13
204:15,16,21
205:13 216:7
217:10,15,19
218:1,5,13,14
219:16 220:6
220:15 221:21
222:13 223:1
225:3 226:10

226:10,13
227:2 228:15
230:19 231:4
232:4,14
233:13,14,17
238:2,7 239:7
239:21 240:6,8
241:20 242:4
244:5 245:3,12
246:14,18
247:18 249:4
249:11 251:5
251:18 252:19
252:19 253:5
253:16 255:20
256:5 259:6,10
261:5 263:19
264:12,20
265:7,9 267:12
267:14 268:14
268:17 269:1
269:15 272:5
273:20 274:6
275:2,19
276:10 277:17
278:1,5 279:19
279:21 281:1
281:12 282:12
282:20 286:2,8
286:14,18
287:6 288:17
289:14 290:6
290:12,18
292:3,19 293:8
294:15,18
295:1,18
296:11 297:17
297:19 299:4,9
300:16,21
302:3,7,20,21
304:3,6,11
305:7 309:7
310:15 311:7
311:20 314:2
314:21 317:8
319:4,6,9,15
320:13 322:6,9
325:14 327:8
328:17 332:2,6
332:20 333:13
333:14 334:6,8
334:18,20
335:4,19
337:16,21
338:5,13,20,21
339:5,11,18
340:5,8,11,13
340:16 341:4,8
341:14 342:1
342:21 343:19
344:3,11,18
345:7,11 346:9
346:15,18
348:1,20 349:4
350:18 353:9
356:8 357:3
361:14 365:4
366:17 368:13
369:15 371:3
371:16 373:7
377:2 378:5
379:2,14
380:14,14
381:7 382:8,10
382:13 390:16
390:18 400:2,4
401:15 402:11
402:12,21
403:2,3,17
404:15,18
405:11 406:13
407:2,7 409:20
412:10,19
413:1,10,15
414:2,10,15,18
414:19 415:2,5
rights 49:4
rise 46:11,12
risk 47:7
109:10
roginski 3:11
9:10
role 37:16
38:15 39:5
52:1 59:2,10
59:15 62:13,14
63:2 75:13
79:10 218:21
226:12,15
233:19 368:1
rolled 255:1
293:19
rollout 296:20
rolls 282:1
romano 7:14
156:11,14
157:7,8 158:5
158:7 159:7
160:2 161:21
162:1,9 232:1
256:5 257:2
287:5 299:3
room 279:1
305:14,14
407:21
rough 416:16
416:17
round 40:9
53:18 64:8,8
168:14 170:2
rounds 53:17
118:16 166:9
166:19 167:2,9
168:10 179:21
288:2,4 294:3
331:8
rudolph 38:10
38:12
rule 1:11,12
rules 12:11,13
420:14
running 11:4
187:5 188:16
runs 194:5
rural 151:1,4

s

s 2:1 3:1 9:1 262:17
safe 99:9,14 112:3 150:2 254:5,8,14 310:6,10,17,18 316:15 317:4 365:12,12 366:20,20 368:7,7 401:4
safer 104:12 218:19 219:4,8 223:17 226:18 348:10 391:17
safest 74:11
safety 5:16,18 6:13 7:8,18,20 18:12 22:13,20 23:13 24:14 28:7 30:4 40:2 40:4 52:9,17 53:5,21 54:2 54:20 55:9,18 56:4,8,19 59:4 61:3 62:12,17 64:6,7 65:4 70:5 71:17 72:4,11,17 73:1,16 74:3 74:10,17,19 75:6,9 77:1,20 79:1,16 80:3,5 80:10,13 81:17 82:3 84:14 85:7,9,12 88:1 88:10,14,15,17 89:13,15,16 90:11 91:6,11 91:13 104:4 105:19 109:3,3 109:16 110:15 110:18,19 111:8,9,13,18 111:21 114:10 117:11 118:16 121:4 122:15 132:3,8 134:18 140:16,17 141:15 148:16 148:18 149:1 149:16 150:3,4 150:7,9,10,13 150:13,16 151:5,15,18 152:1,4,4,7,14 153:5,8,11,12 153:15 154:21 156:15 157:9 158:1 160:6,8 161:7 162:20 170:16 179:21 190:9 217:10 219:1 244:6,9 245:10 246:20 247:3,6,10,13 247:19 248:8 249:21 253:4 262:5 264:6,8 264:8 267:1 268:8,9,10 270:7 282:7 283:21 284:3,9 284:14 286:12 287:3,15 288:7 288:9,13 291:13 293:20 294:3 296:18 297:2 299:2,10 299:14 301:2 304:8 308:13 309:11,18 310:9 311:6,14 312:5 313:14 314:20 323:12 325:4 339:8 348:5 351:7,9 354:9 368:2,17 369:11 370:14 370:19,19 371:21 382:7 386:16 387:8 389:1,2,12,17 390:1,11,18,21 391:1,9 392:16 392:18 394:13 394:17 395:6 396:5,6,11 398:16 399:18 400:9 401:2 403:7 409:3 410:11,18 411:9,11 412:13
salary 42:15 47:2,4,14 48:20 50:15,16 50:18,19 51:4 65:19 66:15
samaritan 1:3 4:3 5:3 6:3 7:3 8:3 9:6 419:3 420:3
sample 194:19 195:7 245:15 289:9 324:19
sanitizer 279:2 279:14 378:9
sanitizers 278:16 279:5
sara 2:15 9:15 15:9 142:10 416:2
satisfaction 411:3,7,14
saved 8:11,14 104:16 105:11 108:16 322:6 323:14 346:10 346:18 348:14 350:21 355:6 355:19 357:14 358:7 359:15 360:7

saw 50:3 66:2 66:12 156:5 172:3,15 190:9 190:17 191:6 196:6,18 199:2 200:4 202:15 233:13 288:16 305:9 381:21
saying 101:13 106:18 135:16 144:4 152:12 192:10 198:13 224:4,6 227:16 228:1 240:2 276:16 281:6 282:15 301:12 301:17,19 320:10 337:7 345:16 351:14 352:8
says 21:8,9,18 25:12 36:10 43:15 45:13,16 51:14 52:9,12 54:17,18 56:16 56:17 63:7,15 72:14 74:16 79:16 88:18 91:17 100:20 102:2 104:9,11 110:14,18 120:15 127:8 129:11 131:13 135:8,11,17 140:15 141:2 143:9 147:1 149:2,7 156:8 161:17 166:8 166:18 171:2 171:13,20 173:8 178:13 182:7 186:10 187:16,18 188:21 194:11 194:16 200:14 204:15 206:19 210:12 211:21 213:9 218:1,13 218:16,19 219:8 223:16 226:10 227:2 231:8,18 232:19 234:16 243:4 251:3 256:4 257:20 260:13 261:4,7 264:16 272:11 287:11,14 288:1 289:5 290:15,21 291:2 297:12 300:7 302:19 307:10 308:8 308:11 309:10 310:21 315:17 316:13,14 317:10 318:20 333:17,18 347:7 353:3 355:5 357:14 358:6 373:20 380:6,15 381:4 381:16 382:8 382:10,13 383:21 394:17 400:14 405:2 414:14 415:1
scenario 187:10 252:3 370:17 374:18
scenarios 187:9 225:13 342:16 369:15 370:1 374:6
schedule 139:5
scheduled 23:1 32:5
science 34:4
scientist 38:13
scope 51:14,19 51:21 76:9
score 52:9,17 54:20 55:10 56:20 64:18 65:4 83:3,6 90:5 96:15,19 97:2,4,10 102:5,5,6 118:21 119:19 132:13 133:16 133:21 138:4 145:8,9 167:1 167:8 180:8,11 181:8 188:9 200:8 212:7,18 212:21 215:4 218:13,16 222:15,16 223:2,16,20 224:5,7 226:6 226:10 227:2,3 227:6,11,14,17 228:6,12,14 238:19 239:7 245:12 248:12 248:13,15,16 248:20,20,21 249:8,13 250:12,17,20 267:2,8 268:15 271:11 277:12 278:7,8 281:1 282:1 287:16 287:21 293:14 294:11,16 296:13 297:1 298:5,6,8 303:2 305:4,16 308:8 309:2 315:13 319:21 320:5 338:18 339:12 365:12 369:9 370:19 374:1,1 376:4 376:16,20 377:5,5,9

378:14 379:12
380:7,10 381:6
381:12,16
382:7,8,11,14
383:10,11,12
383:21 384:1
385:13 392:15
401:11,13,20
402:1,7,10
403:9,16
404:13 405:1,3
405:11 406:10
412:7,13,16
413:12

scored 406:14

scores 27:15
30:1 64:7
84:18 102:7,10
117:17 118:1
118:16,19
119:21 120:4
121:4 122:14
126:15 132:1
171:3 173:9
186:7,11,13,18
187:19 190:5
190:10 200:19
204:16,20
209:17 212:11
215:11 224:21
238:11 244:17
248:10 249:1,4
250:10 255:10
258:20 262:1
263:7,8 269:17
288:7,9,13
292:8 295:2
298:11 300:10
301:15 309:17
310:5,16,21
319:20 338:14
339:4,7 340:16
344:2,10,15,16
344:17 349:4
351:1,4 353:1
353:18 367:14
367:20,21
368:1,15 369:8
370:6,7,8,10,11
370:11,13,18
371:1 374:9
382:19,20
383:4 385:5
394:8,10
406:16

scoring 39:21
74:9 84:15
99:6 149:19
150:6 249:20
281:15 300:7,9
300:19 301:14
407:3

second 10:18
11:6 22:13
24:17 29:21
59:21 63:14
74:9 79:15
83:14 91:1
115:6 120:7,13
136:14 147:9
149:9 154:16
158:14 163:21
164:4 169:8
182:7 201:16
207:8,17
210:14 222:18
257:4 258:2
260:12 266:3
267:10 297:6
297:12 343:8
344:5 348:3
373:18 380:4

secondary
178:14 214:20
215:11 254:10
262:15 269:16
269:19 270:10
364:10 412:6
412:12,18,19
412:21 413:6
413:11,13,14
415:1,5,9,13,14
415:17,18

secondhand
123:3,5

section 116:16
274:19 289:2
289:13 297:7,7

see 16:7 17:14
20:19 21:2,6
21:12,19 22:3
24:4,6,7,11,15
25:10,14 26:11
26:16 28:1
29:12,14 30:18
31:8 36:11
43:10,13,16
44:20,21 45:10
45:13,17 51:14
52:6,10 53:2
53:20 55:2,12
60:11 63:15,18
65:13,17 72:6
72:7 73:3
74:12,21 79:21
85:10,13 90:20
91:4,14,17
102:1,16 103:4
103:13,19
104:6,9,18
110:4,13,16,20
113:11 114:2,7
114:17 115:9
115:15 116:7
116:10,17
118:12 120:9
125:11 127:8
127:11 129:8
130:17 131:3,6
131:8,14 133:8
133:12 135:8
137:11,14,15
137:16,17
138:16 141:7
142:20 143:3
143:13 145:19

146:2 147:1,5
147:12 154:13
154:19 156:8
160:17,20
161:18 163:10
163:12,16
164:12,17
166:3,9,19
167:14 169:13
170:8 171:3,17
172:1 174:17
175:7 178:20
179:8,8,10,11
183:20,21,21
185:14 186:5,8
186:15 187:16
187:19 188:5
188:12 189:4
191:12 192:1,7
195:20 196:11
196:14 197:10
198:6 199:7,13
199:21 200:9
200:12 201:13
201:19 202:10
204:9 205:15
206:19 207:18
208:7 209:18
211:4 213:16
217:18,21
218:10 219:11
222:7 225:20
229:7 230:19
231:6,12 232:6
232:11 233:12
234:4,16 235:8
235:20 242:16
243:1 245:20
250:1,15
255:20 256:2,9
256:18 257:17
260:9,16
261:10 262:18
265:14 272:5,9
272:12,21
273:4 274:12
275:7 278:14
283:18,21
284:4,15,18
287:5,11,16
289:3,11,19
290:3,21 291:8
292:2,3,10,17
294:12 300:13
306:13 307:4
307:21 308:2,6
308:13 310:4,7
312:15 313:4
315:6,9,15
316:1,5,5
317:13 318:21
320:6,10
321:20 323:2,4
329:19 330:11
331:4,12
332:18 333:3
333:15,18
334:10 338:9
340:5 345:7
346:10,10
348:16 349:10
350:6 354:18
355:5,14 356:7
357:6,10,15
358:8 362:21
363:1 380:5
382:8 383:9
387:11 395:19
396:6 400:9,10
400:12,14,15
401:5,11
402:14,17
413:19 414:1
414:14
seeing 64:10
165:1,4,5
192:4 235:16
235:20 327:8
349:18 354:1
374:20
seek 74:11
395:6
seeking 389:5
seeks 37:1
115:2 188:1
365:6
seem 144:3
189:13 321:12
402:15
seemed 351:4
seems 145:10
275:20 331:3
344:1 408:14
seen 73:8
100:10 118:18
121:1 128:14
130:14 132:21
217:12 242:18
302:6 329:20
332:20,21
351:6,19 352:1
363:13
sees 237:3
selected 245:16
289:6
selecting 361:3
self 272:18
semantics
303:16 403:20
send 316:16
343:21
sending 161:9
164:20 165:7
191:11 196:7
senior 38:13
58:12 396:4
sensational
182:17,18,20
sense 14:14,15
19:11,12 24:17
49:16 50:2
57:1,21 103:9
108:1,3 119:13
119:14 143:21
148:7 186:21
222:19 256:21

280:5 298:21 312:10 329:9 359:3 361:7,11 361:12 390:17 410:9
sensitive 249:4
sensitivity 291:3
sent 15:3 114:6 140:3 165:11 197:18 199:3 256:20 316:16 358:20
sentence 63:14 72:7 73:11 85:20 89:10,12 147:15 148:1,4 179:18 209:13 210:1,2,5,15 211:12,16 212:4,5 237:2 288:1 292:2 331:2
sentences 236:17,21 237:1
sentiment 75:2
separate 84:17 113:18 317:8
separately 113:16
september 4:4 5:4 6:4 7:4 8:4 9:4 133:4 417:14 419:4 420:2
sequence 411:18
sequentially 358:17
serve 41:12
served 393:9
serves 177:6
services 56:16 56:18 60:10 79:18 80:16 157:11 175:19 364:11 365:2 392:17
session 16:20 17:2
set 55:8 56:18 57:1 60:6 92:12 139:2 142:19 163:4 181:15 185:3 195:13 205:7 216:2 233:11 253:12 265:8 267:10 286:2 306:19 312:16 321:3 360:12 373:8 394:10 394:11 405:7 417:4
setting 403:20
seven 100:14 101:2,18 109:7 283:13 326:9 356:13 364:21 366:12 407:15
seventh 328:2
seventy 42:3,4 281:9
several 171:21 378:10
shaking 13:6
share 23:2 73:16 86:9 111:15 119:11 202:6 212:14 213:21
shared 23:8,11 119:4,7 206:15 259:19 393:16
shares 179:6
sharing 389:4
she'll 416:13
sheet 418:8,15 419:1 420:10
shift 32:18 33:12 41:4 69:19 112:7 321:4
short 47:13 71:1 144:10 229:18 283:7 356:15 362:8
shorten 166:8 166:19 168:13
shorthand 1:17
shortly 15:9
shove 213:15 214:5
show 82:11 137:3 230:14 264:14 271:4 288:11 332:4,5 332:14 354:15 381:12 400:7
showed 225:5
showing 165:6
shown 264:7 404:19,21 405:1
shows 198:4,7 382:20
sic 9:9 115:13 234:19 256:5 287:15 357:20
side 59:5 287:11 292:3 338:5,20,21 339:1,2,5,7,11 342:1
sides 61:5
sign 416:12 420:6,11
signature 416:10,11 417:16
signed 44:21 420:17
significance 67:12 282:12

significant 66:9 67:13 72:16 73:14 267:1 270:8 304:3 306:3 334:14 351:2 369:6
significantly 264:19 335:8
similar 110:7 122:9 202:2 221:7 349:19 392:19 394:9
simply 371:3
single 75:20 126:6,8 281:7
sitting 77:5 285:12 409:12 409:13
situation 237:3 245:21 293:18 379:11
situations 253:9
six 49:19 76:5 91:8,17 100:19 101:21 230:1 283:5
sixty 347:18
size 66:8 67:12
sizes 324:19
skills 328:7
skip 115:13 199:5 200:11
slack 21:11
slash 338:8,11 338:12,13 339:3
slawson 2:19
slide 6:8 113:15 114:16 115:15 115:20 116:15 117:1,7,8 118:7 120:7 125:6,7,7 127:6,6 190:13 200:4 359:8 376:8 414:6,7
slides 116:14 134:12
slight 127:8,14
slightly 73:11 171:12 189:1 189:20 371:5
slippery 246:6 246:8
slope 246:7,9 328:3,5
small 94:9 150:19 151:4 166:8,18 167:6 168:9,11 169:9 171:16 207:10 207:11 242:13 247:4 324:19
smaller 53:18 94:11 340:10
social 38:13
solicit 52:15
solid 90:6
solution 146:3 146:6,11,19
solutions 145:21 420:19
solve 115:16 116:17
somebody 203:17 204:19 227:16 307:12
somewhat 254:2 345:1
soon 416:17
sorry 10:17 11:6 16:16 29:13 60:6 61:12 113:16 117:5 130:19 132:6 135:6 142:21,21 152:20 158:9 164:3 175:4 179:8 183:13 183:17 184:20 189:12 207:11 209:10 221:9 242:13 256:13 284:17 343:14 350:5 380:1 387:5 404:4 411:5 414:9
sort 13:7 15:8 15:13 19:21 21:15 45:12 50:16,19 53:18 54:8 57:11 60:15,17 62:19 63:3 64:11 65:2 66:11 72:3 80:5 82:8 83:1 86:14 90:12 97:1 121:3,4 122:16 142:11,12 147:7 148:17 149:6,12,13,15 149:15 154:15 165:13 169:7 171:5 182:20 192:3 201:15 215:3 232:20 237:2 247:9 254:8,21 255:1 257:17 259:2 260:18 269:14 281:21 293:17 293:21 298:11 303:14 305:16 315:10 319:17 331:3 332:6 336:13 337:3 350:14 353:2 369:21 372:1 389:21 398:16 403:19 409:6

409:12 410:17 413:6
sought 287:14
sound 394:19
sounded 211:7 211:12
sounds 13:3 112:19 177:4 210:16 212:1 264:17 319:2
source 80:14 83:20 154:8 221:2 269:19 364:9,10 365:1 365:3 366:13 387:14 395:10 412:12 413:14 414:17 415:1
sources 21:21 79:20 80:12,19 82:17,19 83:19 178:14 214:20 254:10 262:16 269:16 270:10 303:4 394:18
southern 1:1,12 9:8
space 320:21
spaeder 1:13 2:14 9:15 15:19
speak 20:2 56:11 58:8 61:6 75:5 76:9 77:9 86:4 92:1 121:8 122:20 152:6 193:16 220:14 264:9 328:20 363:12 385:8 386:13 386:20 396:2 398:1
speaking 42:8 266:1 303:12 372:16 374:21 395:18
specific 23:7 67:3,6 77:4,14 77:16 78:7,8 78:10 123:10 162:11 213:10 219:1 279:5 318:16 392:15 404:11
specifically 43:21 82:17 121:12,20 123:18 212:12 218:5 260:8 262:16 397:14 408:21
specifications 39:21 61:19
speculate 383:15
speculation 252:2
spent 22:16
spirit 108:13
spoke 17:17 25:17 31:4 375:3,6
spoken 375:15
spreadsheet 8:13 355:14 356:6
spring 26:14 27:4 40:7 177:11 401:1
srinivasan 136:10,11 137:1
staff 6:17 57:10 57:14 58:2,4,9 185:12 219:10 223:18
staffing 93:4 176:2,3,10 181:11 326:19 327:11,18 328:1,17 330:8 331:7,10 335:3 335:8 336:2 337:15 342:7
stamp 44:12
stand 106:20 106:21 213:14 214:4,8
standard 171:21 181:18 220:1 245:14 273:14,16 279:15 281:2,4 281:10,11 294:12,17 295:1,5,5 305:17 327:20 371:19
standards 180:7,18 181:15 216:1 261:19 262:6 276:2 345:3,10 345:14
standing 367:5
star 244:17 389:6,11 392:21 393:3,8 393:15 394:13 395:11,17 396:16
stark 192:4
start 12:12 14:17 17:19 20:12 34:12 39:7 40:6,19 42:18,18 47:5 62:21 72:15 91:16 104:2 113:13 116:15 136:9 139:13 142:21 147:21 148:10 163:20 185:17 197:14 206:1 236:21

248:12 315:8 315:12 321:15 359:10 363:6 392:13 393:6 399:10 406:17
started 39:9 40:7 82:13 106:14 107:20 159:6 255:4 293:8
starting 72:6 91:2 273:2 287:10 322:16 331:3 333:14
starts 24:10 141:21 142:9
startup 296:17
state 9:14 11:21 151:16 288:15 404:20
stated 250:19 345:12 385:21
statement 55:15 56:6 74:14 88:13 91:20 111:11 111:12 119:16 125:3 127:19 189:9 199:16 237:7,13 241:16 308:16 340:21 353:16
statements 106:10
states 1:1 9:7 150:19 247:5 288:15
stating 301:10
statistical 334:15,16
statistically 334:13
stats 26:21
status 26:15 27:3
stay 135:13 271:8 332:5 410:3
stenographic... 417:8
step 27:6,6,7,12 28:9 83:11,14 93:13,16,17 95:19 118:5,15 118:17 120:10 120:13,15 121:14 122:1,1 122:6 126:7,9 126:10,11 127:10,15 143:13 161:18 162:7 166:9,15 166:18 167:6 168:2,9,17 169:5 170:8,13 170:17,20 171:1,6,9 174:11 175:5 175:12 177:20 179:2,12,14,18 182:6 186:7,11 186:18 192:19 194:7,11 200:3 200:4,7,7,16 209:9 225:3,5 225:10,10,16 225:17,20 227:6,11,18 228:8,9 243:5 267:4 271:7 341:12 382:5 403:2,2,6,12,12 404:1,2,6,6,7 404:14,18,18 405:5,5,14 415:4,10,11,12
stepping 61:2 141:14 251:6 258:2
steps 83:11 199:21 402:21
stewart 58:19 59:15 60:3,4 200:14
sticker 163:12
stickers 29:15
stipulate 367:6
stood 214:10 286:18
stopped 260:5 390:7 391:8
straight 192:19 192:20
strategic 63:8,9 63:12,18,21 64:2,3,14,15,16
stream 94:13 109:7 325:16 326:8 335:21
street 1:14 2:16 3:5
strengths 332:8
stretch 87:14 357:4
strike 46:12 97:19 100:21 152:19 203:11 205:6 210:3,4 247:15 258:8 347:1 364:18 395:8
strikes 358:18
strong 210:20 232:17 326:19 386:6
stronger 232:20 233:2
strongly 243:4 244:16
struck 210:1
structural 98:18,21 99:2 100:11 101:15 147:10 149:13 149:15,16

154:18 201:18 297:14 298:2,9 298:14,17,19 298:20 299:6 300:3 302:11 315:14 317:1 320:5 327:3 364:13,19 365:21 366:9
structure 303:2 303:17 306:8
structured 52:21
struggle 149:4
struggled 73:19 183:4
struggling 402:18
student 39:10
studied 89:7 220:12
studies 332:3 332:11
study 330:10 331:21 332:13 332:14 336:11
stuff 49:7
stuttering 151:17
sub 384:20
subject 161:5,6 164:11 186:7 284:2 357:14 409:4
submission 26:15 241:12
submit 86:4 178:13 200:17 202:9 234:21 237:4 404:9
submitted 7:12 93:14,19,19 168:4 169:13 175:21 242:15 274:18
submitting 200:19 215:2 243:8
subpoena 18:8 19:20 20:5 32:1 362:20
subpoenas 32:7 32:9,11 33:1,5 33:6
subsequent 162:20
subsequently 137:3 263:17
subset 53:18 187:1,2,6 194:21 222:2 245:16 281:17
substance 15:17 16:3 19:5 201:4
substantial 306:5 335:4
successes 386:8
suggest 145:21 277:6
suggested 52:18 133:20 187:9 190:18 317:3
suggesting 148:5 191:1 246:12 406:21
suggestion 319:16
suggestions 140:20 315:15
suggests 197:20
suite 1:14 2:16 3:5
summarize 360:7 393:21 394:2
summarizes 360:9
summary 80:4 201:3 389:4 393:16 394:4
super 190:21
supplemental 79:20 80:11,18 83:19,20 84:9 84:10,13
supplementary 82:17
supplied 20:10
supply 18:18 18:19
supplying 146:15
support 37:20 38:16 119:16 202:6 240:6 309:18
supported 205:3 308:12 309:10
supporting 75:4 313:14
supportive 312:4
supports 59:4
supposed 94:20 393:21 394:2
supposedly 245:8
sure 10:6,19 12:20 15:12 29:6 46:9 69:3 69:4 77:7 87:10 94:16 110:12 152:2 159:18 160:1 165:20 170:4,5 176:8 180:13 202:19 216:5,5 219:10 221:8 223:13,18 227:5 228:19 237:9 242:6

266:2,6,9
296:17 297:4
301:18 310:2
329:2,3 334:1
363:18 367:7
376:7 377:12
377:17 384:11
384:13 386:18
390:6 391:5
392:8
surgery 59:13
61:9 325:19
surgical 179:1
surprise 351:14
surprised
132:3,8
survey 26:15
27:8,9,13 28:9
28:11,16,17,18
28:18 29:2
36:10 38:1
39:20 40:2
59:12,13,17
60:15,20 61:3
61:9,17,18
62:2,9 76:19
77:21 79:19
80:17 82:18
84:17 91:12
93:11,14,18,19
94:1,5 97:20
98:9 102:13
110:16,20
111:10,16
112:3 118:20
120:18 121:5
122:19 125:2
127:8,10,15
150:5 152:5
153:10 166:13
166:16 167:2,9
167:14,15
168:4,6,10
169:14 176:1
178:11,13
180:3,10
181:16 186:12
190:8 193:8
200:18,20
202:9 208:5,6
208:12 209:15
210:15,17
212:1 213:11
214:17 215:12
234:21 235:4,4
235:7 237:5
241:12,15,19
243:9,9,12
244:9 245:19
246:4 247:1
249:16,20
250:14 252:8
254:4,11,13
255:8 259:14
261:14,15,18
261:19 262:4
269:7,7,10,11
270:18 273:19
274:19 275:2
275:12 279:4
294:5 298:5
299:12,15
310:7 311:2
318:2 339:13
364:9,20,21
365:11,20
366:11,12,15
371:14,17
377:18,20
384:20 386:3
386:15 387:6
387:10,11
397:5 402:9
404:9 406:9
409:6 410:7
414:18
suzanne 39:3
swear 10:4
swearing
114:21
switch 70:8
112:8
sworn 10:8,16
417:5
synthesized
332:12
system 72:17
73:15 74:9
200:15 241:13
354:8 386:8,10
386:11 388:11
390:13,14
394:13 396:10
systems 34:4,10
34:11 36:15
37:17 38:14
208:19 392:3

t

tab 102:18
128:13 139:13
163:6 195:14
205:8 242:8
286:4 306:20
312:18 321:16
347:17
table 31:1
164:15 165:1,8
194:9 323:3,6
323:7,8 344:8
408:8
tables 108:9
125:6 288:12
tacks 49:9
take 14:10,14
24:17 39:5
51:10 60:7
62:6 70:10
118:21 134:15
136:4,14
146:21 147:3
148:8 153:1,4
155:4 172:13
177:1,3 178:5
178:16 185:19
195:5 205:18

212:14 224:17 225:2 229:11 231:9,17 234:4 234:11 242:21 244:7 246:18 257:4 267:9 274:9 282:21 297:6 300:2 309:14 318:15 319:20 321:2 329:5 333:13 335:12,13 336:4 343:7 344:4,5 350:2 351:1 356:11 366:21 382:5 394:5

taken 1:11,16 9:5 77:10 319:15

takes 240:17

talk 18:6,11,13 18:14 19:5,18 21:6 22:12 32:9,15 33:12 41:4 70:4 82:3 83:18 92:14 93:5 102:16 104:1 110:13 112:11 119:7 123:17,18 128:3 133:6 148:9 149:21 162:16 163:3 253:13 257:12 321:10 322:19

talked 17:14,16 18:8,19 19:7 31:13 32:1 101:8,11 103:15 112:21 120:9 121:15 187:12 216:6 247:17 248:5 253:14 267:11 282:10 286:13 304:2,5,14 306:2 310:14 311:5,6,10 312:1,5 347:7 347:15 348:3 360:21 395:19 399:21 407:10 409:19

talking 43:19 55:21 58:9 76:12 85:20 93:8 117:14 136:21 148:16 149:18 151:19 155:21 224:17 230:4,7 249:7 256:21 271:4 297:19 322:8 339:15 354:11 355:2 356:6 365:14 366:8 366:20 371:8

378:8 380:5,20 381:10 398:3 413:20

talks 78:2 137:1 177:9

target 291:19

technical 158:19 159:4 159:21 393:9 393:18

technically 40:18

techniques 52:21

technology 84:17 262:17

teleconferences 52:14

tell 14:20 18:2 27:6 36:3 37:14 41:11 44:4 69:4 97:11 102:3 105:7 120:20 122:8 131:11 175:10,20 180:5 181:4,10 184:3 207:8 218:8 246:1 256:20 274:15 284:6 300:8 316:17 323:6 339:1 347:14 408:17 413:3

telling 224:3 403:13

tells 101:20 183:13

temporarily 209:10

ten 68:3 124:5 124:5

tenant 19:14

tend 150:1 395:18

tenor 343:21 344:1,7

tep 210:18 212:2

term 47:11,13 92:15 132:4,9 132:12 138:2 173:20 174:2 175:6 182:8 202:20 232:17 240:13

terms 19:14 47:8 59:5 64:9 86:9 98:19 150:3 189:15 215:10 326:3 333:4 337:18 361:2 397:16

test 28:14 36:9 68:18 81:2,3 81:20 137:7 229:14 265:9 328:8 329:9

334:15 369:14 369:21 410:13
testified 54:10 68:2 73:8 168:16 177:14 180:4 362:19 376:17 384:5 386:12,19 400:2 403:15 403:18
testify 13:13 387:18 405:16
testifying 13:10 384:8 397:10
testimony 10:11 13:16 18:5 179:15 204:12,18 238:14 271:5 271:11 349:17 363:3 385:15 405:13,18,19 416:14 418:5 420:8
testing 87:7 328:7
text 187:15 208:2 228:18 315:9
texting 21:11
thank 10:3,15 71:11 84:6 155:18,20 229:1 283:16 357:3 363:5 376:13 396:20
thanks 25:12 31:3 189:2
theirs 307:21
themes 142:8
theories 121:11 121:19
theory 341:3 413:14
thing 13:7 14:10,12 60:7 75:20 121:14 137:10 169:4 172:20 203:7 245:9 262:21 325:12 358:18 398:17
things 14:5 19:14 45:13 49:3 97:17,20 104:1 112:17 130:13 131:2 191:12 207:7 220:15 228:3 278:16
think 29:5 35:7 35:10 40:19 41:7 52:12 54:6 55:17 62:6 63:9 65:2 65:5 68:2,12 73:7,18,18 79:2,4 85:16 88:6,8,20 89:7 89:7,20 90:3 96:14 100:10 104:21 105:3 105:20,21 111:8,12,17,20 112:5,20 113:10,18 114:11 120:8 122:12 128:14 129:5 132:6 137:1 140:2 146:8,9 148:13 149:4,8,14,21 150:2 155:4 157:2 159:21 169:1 172:12 177:15 182:16 182:19 192:5 195:8,10 198:9 198:20 210:14 211:11 213:9 215:7,9 221:2 221:5 222:15 226:1 228:5,7 230:5 233:2,4 237:12 242:6 242:15 243:1 245:18 248:13 250:4,5,8 252:11 255:13 259:3 264:11 265:2,17,18,21 270:5 272:8,17 279:9 282:20 283:20 284:17 288:20 293:16 295:12 297:7 298:10 303:2 303:14 305:14 307:17 309:16 311:6,13 313:19 318:16 320:10 321:2 325:15 328:10 331:20,21 332:2,2 333:1 338:8 344:21 347:16 348:1 349:18 350:1 350:21 351:6,8 352:18 353:8 354:5,8 359:20 360:6,12 363:21 371:3 373:5,10 376:17 378:8 378:19 381:10 381:21 383:3,8 384:5 385:12 386:7 389:4 390:8 391:14 392:9 396:9,18 398:18 404:14 407:7,14 411:18
thinking 64:16 66:13 158:5

309:20
third 91:1 115:7 208:1 257:18 260:11 297:12 299:4
thomas 25:13 44:21
thought 61:14 117:9 192:13 232:19 233:1 245:8 351:3
thoughtful 284:12
thoughts 58:7,7
thread 6:6,18 113:9 196:2,18 231:1 313:3
three 16:14 26:13 47:6 61:10,11,13 66:8,19 67:1 67:17 71:7 86:5 99:4,4,20 101:11,14 114:19 143:8 155:8 162:7 241:8 253:19 254:4 255:11 262:7 263:4,18 264:2 266:16 270:3 281:14 282:10 288:12 293:13 294:11 305:2,3,15 319:5 323:8,16 366:16,19 368:7 373:19 373:20 383:4 414:1,1
thresholds 92:13 94:8,16 257:15
thursday 4:4 5:4 6:4 7:4 8:4 419:4
tie 111:18
ties 312:7
tilly 58:19 59:10,11
tim 197:14
time 11:9,14 12:20 14:3,6,6 14:11,11,11 15:4 17:18 22:16 38:9 39:2,3,8,14,18 40:3,16 41:13 42:1,1,4 45:4 45:17 46:6 49:17 50:15 51:8 55:20 62:6 65:18 67:21 69:20 70:15 71:8 84:15 88:1,11 89:9 90:7 106:15 112:8 118:3 124:9 131:20 155:9 155:15 156:3 157:19 158:16 159:2 162:2 166:6 171:3,7 171:9,10 188:8 192:18 193:3 194:13 213:21 229:16 230:2 235:4,5 240:12 240:18 244:7 246:18 254:17 258:3 262:13 266:4 273:15 275:15 283:5 283:14 293:17 297:21 298:1 299:5 300:19 301:10 303:5 303:21 312:4 313:8 314:4 321:9 323:9,16 332:6 338:7 354:6 356:14 357:1 361:20 362:7,13 377:16 390:4 404:11 409:1 416:7 417:4 420:15
timeframe 420:7
times 15:6 50:9 123:10 296:2 325:12 327:14 334:19 347:8 353:20
timing 107:16 112:20 162:3 198:10 314:6 314:13
title 35:12 37:14,21 38:2 38:2 59:3 307:16 330:7 358:6
titled 273:6
today 13:9,13 13:16 17:2 29:8 32:19 33:7 46:13 77:5,11 79:13 80:9,18 88:20 106:8 108:11 124:21 133:2 165:6 169:4 177:5,19 186:17 189:7 206:4 226:1 245:17 267:14 267:20 268:6 269:18 270:12 271:5 285:12 286:14 293:1,5 294:15 298:2 300:15,17 302:13,14,17 302:20 303:13

304:21 309:1 311:5,19 350:12,13 353:11,12 363:2,3 375:15 384:10 388:17 402:21
today's 7:14 72:17 73:15 256:4,17
together 64:7 206:7 256:17 280:14 324:17 340:19 356:3
toggled 401:5
togias 2:5 10:1 10:1 11:3 16:6 183:15,17 347:17,19
told 21:4 259:21 387:4
toll 48:8
took 161:2 291:11 350:1 352:18
top 14:18 24:4 26:9 30:20 44:14,20 56:17 62:4,5 72:15 129:8 161:17 163:15 168:9 182:2 189:2 194:15 197:14 205:13 210:12 218:1,9 230:20 272:7 287:10 287:11 292:2 297:11 309:1 346:9 373:10 383:21 414:1
topic 112:21 114:21 151:20 286:4 320:19 320:20 375:7
topics 52:20 60:18 110:11 112:8 114:19 145:5
total 48:17 50:3 51:3 68:13,14 99:17 325:21
totally 70:8
touch 31:4
touching 219:11 223:19
touts 302:2
toward 87:1 219:21
towards 21:4 39:13 53:19 65:19 244:21 250:4,6 254:10 257:18 317:19
town 317:16 319:16
trace 81:20
track 198:8
tracked 207:6
tracking 119:18
tradeoff 250:1
train 98:4
trained 98:10
training 97:21 98:9,10,12 219:9 223:17 274:12 276:6
transcript 6:9 12:14 130:5,9 143:16 145:20 147:17 148:9 148:15 172:3,9 172:16 190:21 191:6 202:13 203:1 416:13 417:8 418:4 420:5,16
transcripts 17:9,11
transitioning 35:3
translate 260:18 325:11 372:1
translated 258:20
translates 169:20
transparency 111:13,21 117:20 122:17 386:6,7 388:12
transparent 87:2 111:17 216:1 224:11 224:18 233:6,8 268:8 320:1 391:15
transpire 107:3 107:4
treat 211:2 308:2 391:16
treated 152:2
treatment 115:1 199:6
trend 118:18
trends 349:19
trial 84:7
tripped 387:21
true 106:10 117:19 149:4,5 161:12 162:10 226:14,14 236:2 238:17 245:17 263:9 268:20,21 269:2 293:3 307:17 342:2 349:15 356:5 359:5,21 370:5 372:9 387:13 417:9 418:5
truly 213:14 214:4

trust 220:20 221:4,6,13
trusted 361:5
truth 10:12,12 10:13 237:9 344:17
truthful 13:16 237:12
truthfully 13:13 68:20
try 64:21 142:3 142:7,11,12,15 148:2 162:16
trying 46:18 50:2,9 57:20 65:2 68:11,19 116:17 143:18 144:1 149:14 172:12 181:1 182:16 198:6 222:19 238:2,8 246:19 247:10 253:18 255:14 265:8 275:16 275:18 320:3 339:2 341:12 360:6 366:18 385:14 393:19
tuesday 231:11
tune 77:13
turns 186:12
tv 71:12
tweaked 207:8
twenty 401:14 407:15
twice 29:3 104:14 106:3 106:19 334:18 336:1 347:5 348:11 349:8 350:2,8 352:9 353:13,19
two 11:13 12:5 14:5 21:9 39:14 44:13 52:18 61:7 66:8,19 67:1 67:17 70:15 77:6 83:11 86:5 90:5 98:20 99:15 114:16 115:7 117:15 118:17 141:17 143:3,8 162:7 166:9,19 167:2,8 168:10 172:19 175:5 179:21 193:1,4 196:5 199:7,21 223:7,8 241:18 254:5 258:19 276:8 278:13 279:18 282:10 288:12 293:9 303:3 305:20 308:6 310:19 310:20 311:15 312:5 315:8,9 315:13,19 316:13 317:11 318:20 320:4 320:12,13,20 334:19 335:14 336:5,6 340:15 340:21 341:6 342:16 345:13 345:21 347:8 353:20 356:8 361:4 388:4 402:21
tx 420:13
tying 399:18
type 151:14 154:7 305:11
types 220:18
typical 68:15
typically 26:2 63:12 76:19 129:19 152:9

u

u.s. 247:8
uh 12:15 30:19 32:20 33:14 41:6 44:19 45:11,18 50:5 51:13 52:7,11 53:3 60:9 63:16,19 65:16 72:8,10 76:18 76:21 85:14 89:17 91:3,19 92:16 93:7,9 103:5,17 104:10 110:17 111:1 114:18 114:20 115:14 115:17 116:4,6 118:11 125:9 127:7 129:6,10 129:14,16 130:18 133:9 135:5,7,10 140:18 143:4,7 143:10,14 147:2 166:1,20 187:14 192:2 194:10 228:11 283:3 402:13
ultimate 222:11 224:10
ultimately 46:1 125:14 166:11 166:12 168:17 301:4
unable 162:2
unaware 86:19
unclear 148:3 169:6
under 10:11 13:9,12 63:14 105:15 166:18 168:11 179:12 179:18 184:20 192:18,19

227:11,18 304:20 348:3 373:19 382:6 415:4,10,11,12
undergraduate 33:16
underlying 164:16 394:1 404:10
undermine 223:4 224:5 331:16
underneath 226:17
understand 12:13,16 13:9 14:2 28:21 46:18 48:15 53:16 54:20 55:8 56:18 88:21 93:8 95:15,21 98:19 101:12 134:9 136:5 144:1 152:12 169:4 181:1 192:6,10 192:21 223:14 225:3 227:17 235:1 237:7 244:19,20 253:18 261:16 265:15 266:4,5 275:18 296:17 301:18 312:7,8 320:4 334:1 339:2 349:2 383:16 386:8 387:17,18 388:5 405:17
understanding 27:2 57:13,16 57:20,21 58:1 79:9 92:8 95:17 96:3 106:7 121:6,10 136:20 148:1 151:6 167:1,5 167:10,11,12 168:1 169:11 172:6,14 186:17 192:12 194:9,16 203:16 213:18 214:3,13 244:1 244:2,4 258:8 258:11 259:3 312:3 316:19 346:4 358:13 367:9 376:4
understands 15:13 266:6
understood 171:6 175:10 221:8 369:4 379:20
undetermined 213:2
unfair 322:15
unfavor 238:6
unintentional 308:1
unique 320:11
unit 9:4 11:13 70:15 71:7 155:8,14 158:16 159:1 229:16 230:1 283:5,13 325:20 356:13 356:21 362:6 362:12 416:6
united 1:1 9:7 150:19 247:5 288:15
universal 369:18 370:2 390:18 406:7
universally 98:11
university 5:14 32:10 33:15,21 38:3 40:12 42:12 43:9,20 46:3,5,21 47:2 47:12,17 49:9 157:12
unnatural 13:4
unreliable 94:17
unwieldy 66:12
update 105:11 107:8 108:8 114:21 189:14 259:2 322:8,10 324:2 361:12 361:13
updated 105:13 105:14 107:10 108:8 116:14 231:8
updates 7:17 86:10 284:2,9 284:13
updating 108:6
url 103:3,14 129:15
use 27:3 28:18 52:20 63:12 65:1 72:13 73:2 74:5,16 84:6,18 95:10 126:7 127:10 131:18 132:12 146:19 151:8 169:16 173:19 174:2 175:5 180:20 182:7 200:7 211:16 211:18 215:20 233:9 258:6 327:4 355:18 372:5 376:3 389:16 390:12 394:8 418:16

used 27:10 80:19 81:15 106:1 121:4 122:15 126:15 132:13 138:2,6 202:20 208:3 208:11 209:17 239:5 258:15 284:14 287:21 291:12 324:7 344:21 363:15 372:3,10 412:16 420:16
user's 209:16
uses 27:3 79:17 80:3 153:17 302:14
using 60:20 75:6 80:11,13 80:15 82:17 84:14 110:2 120:15,16 127:14 143:13 154:8 175:4,11 178:14 190:6 194:12,20 199:11 212:7 214:20 215:11 253:2,5,7 260:14 263:6,9 288:7 290:17 291:3 326:11 326:18 386:9 388:11 412:11 412:12 413:6 415:18
usually 24:5 361:3 375:10 394:17 396:7

v

v 1:6 9:7 420:3
valid 60:20 208:6 293:15
validity 210:16 210:18,20 212:2
valuable 264:12
value 50:12,12 95:3,5,7 96:8,8 96:16 153:11 180:1 231:17 231:18 329:13 336:4 338:12 371:16 372:2 380:11 413:10
values 108:8 193:1,4 292:8 341:6,7 342:10 342:11 346:17 352:5 372:5,6 372:9,12
variation 292:7 326:13
varied 288:13
varies 68:11
various 386:13
venn 411:15
ventilation 331:9
verbally 119:4
verify 359:8 420:8
veritext 9:11,12 420:12,19
veritext.com. 420:13
versa 117:6
version 43:10 88:5 116:14 142:20 143:2 356:1,1 363:12 414:13
versions 52:17 54:19
versus 171:7 182:1 297:19 340:13 341:19 352:16,16 407:1
vice 58:12 117:6
video 1:10 9:5 12:17 130:1 198:17
videographer 3:11 9:2,11 10:3 11:9,12 70:14 71:6 155:7,13 158:15,21 229:15,21 283:4,12 356:12,20 362:5,11 416:5
videos 17:4
view 203:21 285:16,18 292:21 296:1 334:14 346:20 354:4 371:5 384:14
virginia 407:11
vis 406:15,15
visions 55:1
vogus 197:14
voluntarily 91:10
voluntary 244:9 245:11 246:2,12,18 247:9
vote 344:14
voting 53:17
vs 419:3

w

w 5:13 137:11
wait 60:6 135:6 142:21 380:1
waiving 416:10
walk 72:4 114:16 128:21 130:13,14

166:16 171:1
197:13 313:18
322:12 352:10
walked 101:1
302:9
walking 170:21
315:5
wallace 330:14
want 12:11,19
13:21 14:17
16:3 20:12
22:12 24:18
28:15 33:12
41:4 49:15
51:11 52:5
57:5,8 58:2
60:7 70:4,9
72:3 73:7 79:8
82:5 85:5
90:19 92:14
102:16 104:1,2
110:10,13
111:18 112:11
113:13 115:12
115:18 117:12
124:10 125:6
126:21 128:3
128:13 130:12
131:1,5,10
132:18,20
133:14 136:4
137:10 139:13
142:20 146:21
148:10 149:8
154:12 155:5
156:3 163:5,19
165:19 175:3,5
175:11 177:1
182:7 185:17
197:9,13 199:6
200:11,18
203:6 204:5
207:5,7 209:6
210:4,4,11
213:8 216:21
217:21 218:4
218:20 223:14
229:9 230:14
242:21 253:13
255:12 259:16
260:8 265:11
266:2,5,9,14
267:17 270:9
271:4,20
284:21 286:3
287:9 288:20
297:6 308:5,15
313:17 315:8
315:20 316:3
318:8 319:17
321:10,15
322:12,16,19
323:1 329:5
331:1,16 333:6
333:6,12
335:21 338:4
341:16 343:7
346:8 355:9
362:1 363:4
367:4 373:4
379:21 383:15
390:15 397:9
397:12,17,20
398:5 400:8
401:4 405:17
407:17 408:17
411:18 412:4
413:18
wanted 37:21
136:19 137:4
152:13 189:16
189:21 203:13
209:11 212:6
221:10 245:1
285:20
wanting 244:21
wants 57:17
58:1 69:4
416:2
watch 17:4
198:17
watching 130:1
way 24:6 56:15
57:12 72:12
73:2 74:4 80:8
98:9 104:17
120:5 121:3
143:11 151:16
151:17 153:12
180:14 181:15
181:21 197:6,7
203:7 211:2,3
213:4 215:4
216:17 228:14
235:19 237:19
247:19 248:8
250:2,17
261:16 267:6
278:1,2 292:3
292:5,15
329:12 343:4,5
348:14 360:21
371:15 374:5
379:4 385:15
396:9 399:3
406:7,9 417:11
ways 216:17
320:2 354:9
we've 11:1
28:15 53:9
73:19 81:15
108:15,19
109:4 200:2
247:17 248:5
266:4 267:11
279:9 282:20
293:6 294:2
302:6,9 306:2
311:5,6,10
312:5 320:16
322:10 323:15
326:4 339:15
351:6 352:1,2
355:2 372:3
410:14

webpage 5:17 78:4 79:1,7 380:2 381:1,12 383:9
website 5:16,18 5:20 27:17 30:5 71:17,19 71:21 75:21 76:2,8,14,17 77:15,19 78:12 79:1,3,6 88:20 100:18 176:14 217:18 219:1 225:6,13 229:3 230:5,8 239:19 288:17 302:19 347:7,13 383:16 393:17 394:16 395:2 400:1,7,10,12 402:5,6
websites 75:15 77:6 103:16 264:14
week 231:11
weeks 272:16
weighed 285:8 368:16
weight 65:5 82:15 303:21 304:11 368:9 368:20 369:1
weighted 90:5 264:19 335:8
weighting 52:18
weights 62:17 100:5 260:14 261:1 264:6,21 290:16 291:6 303:4 365:20 367:1,19 394:8
weird 375:14
welcome 71:10 155:17
went 33:15,21 34:6 230:7 344:8 399:21 400:1
wenthold 234:17 240:14
wenthold's 235:11
west 1:2 9:8
white 105:4,6,8 105:9,10,13,14 106:17 107:19 107:20 108:6 207:20 321:10 322:17 324:1 331:17 360:15 360:15,18 361:14,17
wide 326:21 327:2,21
wider 192:5 332:15
willing 137:12 137:18,21 138:13,14,16 138:19 144:11 144:18 202:8 202:15,20 203:18 204:13 215:20,21 216:18 220:3,5
willingness 174:3,3
wilson 3:3 9:20 20:3,7 25:13 31:11
wilsonelser.c... 3:8
window 245:6 252:17
wine 332:4
wipe 97:14
wisconsin 33:21 34:16,17 38:3 40:10
wisdom 32:14 255:8 336:13
witness 4:2 5:2 6:2 7:2 8:2 9:16 10:5,9,14 10:16 24:21 25:1 28:1 51:2 69:8,10,12,14 69:17 73:9 81:3 89:6 90:3 101:4 124:17 134:3 136:15 136:16 144:21 147:19 148:14 148:15 157:16 170:15 172:8 173:19 174:5 174:13 179:12 184:9,10 185:20,21 186:20,21 190:20 191:18 205:2,20 208:17 210:6,7 210:8 211:14 211:15 221:2 225:19 228:18 229:10 257:6,7 265:17 277:15 279:4 280:12 304:20 331:20 339:21 343:11 344:6,7 361:21 368:6,19 369:14 370:16 375:6 377:9 378:19 379:11 381:20 383:3 383:15 385:8 390:3 391:20 392:6 395:1,13 396:2,20 398:10 416:10 417:3,13 419:2 420:5,7,9,11,15

wonder 135:12 343:8
wondered 373:20
wondering 175:3 198:10
wood 3:4 4:7 5:11 9:20,20 14:6 30:21 32:4 132:20 133:3 225:15 283:3 362:1,15 362:16 365:9 366:4 367:7,8 367:17 368:12 369:3 370:3,20 375:8 376:1 377:11 379:1 379:19 382:2 383:7,18 385:10 387:21 388:2 390:5 392:2,7 393:5 395:3,15 396:13,18 416:15,17
wood's 20:3
word 63:8 100:10 109:17 131:3,5,6 137:11,17 138:14,16 174:9 180:20 180:21 182:12 182:13,19 183:2 191:6 197:9 204:20 211:15,18 233:8 289:14 344:21
words 27:6 100:9 149:14 169:11,21 181:4 183:3 228:7,8,9 388:9
work 26:15 32:6 37:20 38:2,2,13 41:16 46:2 50:11 51:14,21 53:4,6,19 54:18 59:7 61:20,21 86:15 108:9 157:21 183:3 187:21 195:3 217:15 221:18 250:4 285:4 319:19 336:18,19 397:20 398:6 409:3
worked 40:16 53:21 134:20 157:19 158:5 250:6 313:13 322:10
workforce 255:5 368:8
working 17:19 17:21 34:20 39:8,9,20 107:20 115:16 142:9 245:2 291:16 313:7 387:16 388:3 390:20 393:7 397:19 398:1
works 41:11 92:6 140:11,12 349:21
worksheet 179:4
world 86:2,3 306:13
worried 295:10
worries 207:9
worry 104:4 348:5
worse 269:12 275:13 277:7
worst 218:16 382:13 383:5 383:10,12 384:1 401:13
worth 189:2,8 189:13
wow 306:11
write 104:20 272:15 303:20 314:19
writes 164:14 316:5
writing 21:6,10 22:1 301:7
written 12:14 37:3 52:14 115:4 139:6 188:3 210:5 297:20 365:8 393:13
wrong 19:15 284:18 339:2
wrote 88:4 177:5 305:13

y

yeah 12:2 14:15 19:12 27:7 28:4 31:9 31:17,19 32:15 35:9 39:19 41:12 46:17 48:1,13,14 49:3,11 50:1 51:2 53:13 54:15,16 59:9 60:4,14 61:21 62:7,8,14 63:13 64:16 67:6 68:1,4,5 69:1,6,21 70:2 70:9,11,11,12 70:13,19 73:21 76:15,15,15,15

77:12,12,18
82:1,1,1 85:4
87:9,17 92:4
93:21 99:8,13
99:14 100:9
101:14 103:11
104:3 105:20
107:7 111:15
113:1 114:4
116:3 121:1,18
122:13 128:1
135:18 136:6
136:19 137:16
140:2 144:14
147:18 148:7
155:20 157:16
166:15 167:4
167:12,19
170:19 171:12
172:17 174:1
177:18 178:18
183:16 184:13
184:20 185:2
190:12 201:6
206:6,17
207:11 209:4
220:8 221:10
221:12 222:10
229:13 231:2,3
231:17 236:14
241:11 248:1,3
251:15,20
253:8,11 255:3
256:13 259:19
260:19 264:19
266:2 268:1
274:16,17
275:16 280:12
288:6 291:18
304:15 312:7
312:15 314:12
320:3,21 321:3
326:6 333:8,10
336:9 338:15
341:2 343:16
344:5,7 347:20
348:1 350:1
352:11,11,19
353:4 354:21
355:4,7,18
356:1,8,9
358:18 359:3
362:4 363:18
363:21 367:18
374:11 375:13
384:12 385:17
386:18 387:21
393:13 396:14
398:5 406:20
410:10 412:9
year 29:1,2,3
39:14 47:6
48:4,21 50:6,6
68:7,11,11
81:6 93:14,19
93:20 114:11
120:17 121:2,3
121:3,5,7
122:14 123:13
123:13,19,20
126:15 127:9
168:1 169:14
170:3 328:20
year's 404:8
years 40:13
48:5,6 49:19
54:8 55:5 56:7
62:20 63:1
64:1,5 67:12
76:6 77:8
81:16 87:9,9
124:5 232:4
240:18 291:11
299:13 303:19
320:18 372:4
yep 73:4 91:5
112:14 116:18
116:21 118:13
174:20 175:1
178:7 229:10
255:6 281:11
324:12 326:2
350:6,6 376:9
376:12 409:11
yesterday 15:2
16:11,12
yields 345:14
york 2:7,7
245:3

z

z 394:8
zendesk 7:13
242:16
zero 132:14,15
132:18 133:8
133:16,21
134:8 144:11
144:17 174:9
174:11 290:2,5
295:14,18,21
296:7,10,11,12
296:13 305:19
371:9 372:18
373:1 374:1,9
378:20 379:5
406:3,4,13,17
407:1,2,4
413:9
zeros 374:14
zoom 16:7 32:4
114:5 130:4
zuckerman
1:13 2:14 9:15
15:19
zuckerman.c...
2:19

à

à 406:15

Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored in encrypted form and are transmitted in an encrypted

fashion to authenticated parties who are permitted to access the material. Our data is hosted in a Tier 4 SSAE 16 certified facility.

Veritext Legal Solutions complies with all federal and State regulations with respect to the provision of court reporting services, and maintains its neutrality and independence regardless of relationship or the financial outcome of any litigation. Veritext requires adherence to the foregoing professional and ethical standards from all of its subcontractors in their independent contractor agreements.

Inquiries about Veritext Legal Solutions' confidentiality and security policies and practices should be directed to Veritext's Client Services Associates indicated on the cover of this document or at www.veritext.com.