

IN THE MATTER OF A HEARING BEFORE THE HEARING
TRIBUNAL OF THE ALBERTA COLLEGE AND ASSOCIATION
OF CHIROPRACTORS ("ACAC") into the conduct of
Dr. Curtis Wall, a Regulated Member of ACAC, pursuant
to the Health Professions Act, R.S.A.2000, c. P-14

DISCIPLINARY HEARING
VOLUME 7
VIA VIDEOCONFERENCE

Edmonton, Alberta
January 28, 2022

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1 Proceedings taken via Videoconference for The Alberta
2 College and Association of Chiropractors, Edmonton,
3 Alberta

4

5 January 28, 2022 Morning Session

6

7 HEARING TRIBUNAL

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10 Dr. L. Aldcorn ACAC Registered Member

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22

23

24

25

26

1 (PROCEEDINGS COMMENCED AT 9:18 AM)

2 THE CHAIR: Good morning, everybody. This
3 is a continuation of the Hearing Tribunal for Dr. Wall,
4 and we are back in session today, and I believe we left
5 off on November 20th with witness testimony with
6 Mr. Kitchen's witnesses. So that's the point at which
7 we will pick up again.

8 I believe the transcript indicates that there's a
9 Dr. Bridle that will be testifying today; is that
10 correct, Mr. Kitchen?

11 MR. KITCHEN: Correct.

12 THE CHAIR: Okay, just a quick
13 housekeeping item, I'd ask everybody to mute your cell
14 phones. And good morning, Mr. Maxston, as well.
15 Perhaps we'll start with you, if you have any comments
16 you wish to make.

17 Discussion

18 MR. MAXSTON: Yes, thank you, Mr. Chair.
19 Before we hear Dr. Bridle's evidence, I'd like to make
20 some comments to you and your colleagues regarding
21 process and scheduling matters. This isn't a
22 preliminary application in the true sense, but to the
23 extent you feel comfortable, my client will be asking
24 for some advice and direction, for lack of a better
25 phrase, I've advised him of my intention to raise these
26 matters before the beginning of the hearing -- or

1 Dr. Bridle's evidence, and I understand he'll have a
2 response.

3 Specifically the Complaints Director has asked me
4 to make comments regarding the scheduling of the
5 closing argument phase of the hearing and next steps,
6 and this arises from Ms. Nelson's recent emails and
7 Doodle poll to everyone, attempting to secure April 4
8 as the date for closing submissions. And the comments
9 I'm making this morning also arise from the Complaints
10 Director's ongoing and very serious concerns about the
11 length of the hearing and the costs that continue to be
12 incurred, and, as you know, I previously raised this
13 with the Tribunal when we were objecting to
14 Mr. Schaefer being called as a fourth expert witness.

15 My client was very, very supportive of proceeding
16 on April 4 with closing submissions, given the
17 considerable amount of time that has been spent on this
18 hearing and I think our understanding that perhaps most
19 people were available that day.

20 And by way of background, and recognizing the
21 difficulties that can sometimes occur in terms of
22 scheduling hearing dates and scheduling witnesses, my
23 client remains concerned about the significant number
24 of witnesses that Dr. Wall has called in terms of the
25 lay witnesses and the expert witnesses. As you know,
26 we've taken the position that the lay witnesses really

1 can't offer anything in terms of this hearing; it's
2 about Dr. Wall's conduct and his regulator, and we've
3 also indicated that we felt four experts was
4 repetitious and was unnecessary.

5 The Complaints Director's concerns also arise from
6 the number of days that have been scheduled for the
7 hearing to receive Dr. Wall's evidence, and, in some
8 cases, days where we haven't been able to utilize the
9 full day, and that, in turn, has made the hearing that
10 much longer.

11 So this leads me to my primary point today, and
12 that is that the Complaints Director, again, is very
13 strongly of the view that closing submissions should
14 only need one day. They are a summary of the parties'
15 positions and evidence, and scheduling closing
16 submissions for one day should be more than sufficient,
17 and, more specifically, April 4 should be sufficient in
18 terms of the amount of time necessary to prepare.
19 There's a lot of time coming now -- or that will occur
20 between now and April 4.

21 So, again, my client is prepared to proceed with
22 closing arguments on April 4, would like that to occur.
23 I know Mr. Kitchen disagrees with that, but the -- and
24 he has some comments he'll make, but the Complaints
25 Director is asking for, again for lack of a better
26 phrase, some advice and direction from the Tribunal

1 about how we're going to proceed and whether we can
2 proceed on April 4, all with a view to maximizing the
3 efficiency of the hearing.

4 I understand again that Mr. Kitchen has some
5 comments in response.

6 THE CHAIR: Thank you, Mr. Maxston.

7 Mr. Kitchen?

8 MR. KITCHEN: Thank you. I have several
9 comments.

10 We've heard a few times about the costs, and
11 that's not relevant. I'm sure it is for the Complaints
12 Director obviously but not for this hearing, not for
13 the Tribunal. Quite frankly, if he doesn't like his
14 costs, there's a way to remedy that, right? We don't
15 have to keep going on this. Nobody is set in stone:
16 Thou shalt, must continue this hearing. So I don't
17 understand why we keep hearing that.

18 It's expensive to prosecute members of a
19 regulatory body when those members put up a legitimate
20 legal defence. Of course it is; that should come as no
21 surprise.

22 So I say that because that can't be considered as
23 a relevant component here. I mean, we could go down
24 the road on how much Dr. Wall has suffered financially
25 through all of this, you know, how much his family has
26 suffered. He's had to hire legal counsel, right?

1 Enormous resources have been spent on his side. I
2 haven't mentioned that because it's not relevant.

3 So a considerable amount of time, yeah, of course,
4 of course it does, yes. This is a significant,
5 significant issue, right? This is a scientific issue,
6 it's a professional conduct issue, it's a matter of
7 truth, it's a matter of integrity and professional
8 regulation, and it's going to take some time. We
9 haven't been at it for 20 days. It's not unusual for
10 trials in the court to go for 20 or 40 days. My friend
11 knows that. I think we've been at it for six or seven
12 days. My friend took three days with his witnesses. I
13 tried to utilize time as best I could. That's why I
14 tried to fit in Mr. Jarvis [sic], and then, of course,
15 we weren't able to continue that. I had witnesses
16 standing by while we went through all of the Complaints
17 Director's witnesses. I had no issue with that.

18 So again, it's not -- it's almost as if my
19 friend's trying to say that Dr. Wall is doing a
20 filibuster; that's not what's going on, okay? I didn't
21 call 16 of his patients; he could have, he didn't. You
22 know, I could call expert witness after expert witness
23 after expert witness, and I could go, you know, go
24 through all the more and -- arguments about why each
25 witness should be allowed in, because there is no rule
26 of court that applies here that caps the witnesses, but

1 I haven't done that. I've brought in four relevant
2 witnesses, expert witnesses, and we're getting through
3 them as fast as we can.

4 There is an enormous amount of evidence though,
5 nonetheless, as you've seen. That evidence has to be
6 synthesized, and it has to be discussed in closing
7 argument. I'm not going to read to you line by line
8 what Dr. Hu said or what Dr. Bridle says today out of
9 the transcripts, but I'm going to have to go through
10 the evidence, because the evidence is what matters.
11 This case is about following the evidence to where it
12 leads.

13 So -- and I've reviewed the evidence obviously for
14 today, and there's a large amount of it, and we're not
15 done yet, and part of the reason I submit there's a lot
16 of evidence is because Dr. Wall's right, he's
17 scientifically right, he's professionally right.
18 That's why there's so much evidence to show that. I'm
19 not going to ask this Tribunal, at the end of all this,
20 to rule in his favour on a scant amount of evidence;
21 I'm going to ask them to rule on his favour on a large
22 amount of evidence. So I'm going to have to go through
23 that evidence, and I'm not going to take four days to
24 do it, but I'm not going to take 4 minutes to do it
25 either.

26 And then I have to get into the legal argument,

1 which is complex, it's long, and this Tribunal deserves
2 and Dr. Wall deserves for the Tribunal to hear a full
3 explanation of how statutory human rights works, of how
4 the Canadian Charter of Human Rights works, of how it
5 applies to the College, of how Section 1 works, of how
6 it's possible to justify these rights infringements. I
7 have to go through a long list of rights infringements,
8 because I have to establish that; it's Dr. Wall's
9 burden.

10 This is not something that's going to be done in a
11 couple hours. It's going to legitimately take me
12 several hours to go through this, and then, of course,
13 you may have questions, and we may have delays, like we
14 had this morning, we started 20 minutes late. It's
15 patently unreasonable to say we're going to get through
16 it in one day.

17 Now, I understand that, you know, the Complaints
18 Director is not a lawyer; I get that, I get that. But
19 I think my friend, because my learned friend, because
20 he is so reasonable, I think he can agree with me, that
21 we're not going to get through a closing argument in
22 five or six hours, which is typically what we have in
23 one day. I could be the entire day before I get
24 through mine, and then he deserves an opportunity to
25 respond, and he might have a lot to respond to. Then
26 I, of course, have an opportunity to rebut, and then we

1 have questions.

2 So it's not unreasonable, in any sense, to say
3 there's got to be two days, and it's not unreasonable
4 to say it's got to be two days in a row. We've broken
5 up the evidence; that's fine. It's not ideal, but
6 that's fine. But closing argument needs to be two
7 days, two consecutive days in a row. And it's not fair
8 to my friend, to be quite frank, if I go the whole day,
9 and then he has to wait four weeks before he gets to
10 respond to it because we've split it up.

11 The last thing I'll say is this: My client and I
12 were available for days in February and March. It just
13 so happens that the only day when everybody else was
14 available is April 4th, and there's no option for April
15 5th, notwithstanding the fact that I have a trial I
16 have to travel to for April 6th. I would have been
17 willing to do April 4th and 5th if it had've been
18 available. If we had've done those two days in a row,
19 I would have done that, because we might only need a
20 day-and-a-half, we might get through on the 5th, and
21 then I could travel that evening. I don't like that,
22 but I would have been willing to do that, but that
23 option wasn't even presented --

24 THE CHAIR: Mr. Kitchen --

25 MR. KITCHEN: -- for whatever reason --

26 THE CHAIR: -- I'm --

1 MR. KITCHEN: Go ahead.

2 THE CHAIR: -- committed to another
3 hearing with another college on the 5th.

4 MR. KITCHEN: No, and there we go. Now we
5 know -- yeah, I understand that. So I don't -- but I
6 don't know why it was always ever presented to Dr. Wall
7 for only one day. I've made my position clear. I've
8 explained to Ms. Nelson that the defence requires two
9 days. So I don't know why it was only presented as one
10 day; it should have been presented as two days, because
11 that's our position.

12 So I can see why my friend is asking for direction
13 here, because right now, as it is, we have a problem,
14 because the Hearings Director is looking for one day
15 when the defence has made it very clear there needs to
16 be two days, which is perfectly reasonable, and he has
17 a right to full answer in defence.

18 So I'm going to keep my calendar as open as I
19 possibly can. I'm open all through May, I'm open
20 almost all of June, I'm open all of July, so is my
21 client. As soon as -- the soonest that everybody else
22 can get two consecutive days, I'm going to be there,
23 unless it happens to fall on the one or two days in May
24 or June or July that I don't have available. So
25 Dr. Wall is obviously not trying to delay this, okay?

26 I'll remind you that the initial delay was the

1 College's -- I won't say fault -- it was due to the
2 College, okay? Dr. Wall filed his expert reports in
3 April 2021, almost a year ago now, and we were gearing
4 up, ready to go, and the College had to say, No, we're
5 not ready.

6 And so here we are, you know, over a year later,
7 after all this happened. That's not on Dr. Wall. He's
8 keen to see this go through, he's ready to see it go
9 through, but he has a right to full answer in the
10 defence, and he's going to assert that, and he's going
11 to require two days for closing argument. Those are my
12 submissions.

13 THE CHAIR: I think before we caucus to
14 consider a response, I will say that I can't speak for
15 the two regulated members on the Panel, but I can speak
16 for myself, and I think I can -- it's probably the same
17 situation for Doug -- we're under significant demands
18 these days. I'm booking 10 to 15 days a month for
19 hearings, so it's difficult to find these periods of
20 time. I know everybody has demands on their calendar.

21 We all just had a month off at -- some weeks off
22 at Christmas, but fair enough, Mr. Kitchen, we will --
23 the Hearing Tribunal will caucus with counsel, and
24 we'll take a -- and I hate to start doing this, but
25 we'll take as short a break as possible, we'll be back
26 in 10 minutes. If not, we'll let Amber know, and she

1 can advise everybody, and then hopefully we can move
2 forward. So if you could -- thank you, Amber.

3 (ADJOURNMENT)

4 THE CHAIR: Well, the Hearing Tribunal and
5 our counsel have considered the information we were
6 presented with. I think our conclusion is that
7 expecting to conclude final arguments and deliberations
8 on the same day is probably not realistic. We also
9 need time, and we also do not want a break following
10 closing arguments until we're able to meet and
11 deliberate on this matter. So I think it's realistic
12 to ask for two days and to find two days that are
13 consecutive. I'm not going to ask people to look at
14 calenders now. Perhaps we can do that over lunch or at
15 the end of the day.

16 I think we should get back on track and get this
17 witness in, but I will say that the Hearing Tribunal
18 has confirmed that they would be willing to meet on
19 April 3rd. We're meeting on Saturday, tomorrow, so if
20 Sunday, April 3rd, is an option, that could be two days
21 in a row. Otherwise, Ms. Nelson will be back in the
22 position of asking people if they could -- perhaps
23 there's been changes to people's calenders, but,
24 anyway, try and find two consecutive days.

25 It is a big -- I appreciate Mr. Kitchen's
26 comments, there is a lot of evidence to cover, there's

1 also some complex legal arguments to be made, and I'm
2 sure Mr. Maxston will have significant submissions to
3 make as well, so we will try to find two days. I'm not
4 going to cancel April 4th at the moment until we've
5 found an option, but we will ask Amber to focus on
6 doing that as soon as possible.

7 I understand that there's costs. These hearings
8 are not cheap. That's the cost of doing justice, and
9 that will be -- potentially it could be part and parcel
10 of any final decision on this, but, in any event, we do
11 not want to be in a position of telling either party,
12 the College or Dr. Wall, how to present their final
13 arguments. So we will look for two days. Hopefully
14 everybody will be able to find something in their
15 calendar that works without us incurring a further
16 undue delay.

17 On that note, Mr. Maxston?

18 MR. MAXSTON: Yeah, Mr. Chair, I just had
19 two comments, and I don't want to belabour this, I,
20 unfortunately, am out of town for that weekend, so the
21 3rd would not work for me, and my second thought was I
22 would suggest that we simply ask Ms. Nelson to send out
23 a Doodle poll as soon as possible, that we not try not
24 to compare schedules. I find that sometimes gets a
25 little cumbersome, as everybody's flipping back and
26 forth. Perhaps we could ask her to send out a Doodle

1 poll, you know, quite quickly with a two-day block.

2 The other comment I wanted to make was to my
3 friend, Mr. Kitchen, and it might assist him in terms
4 of Dr. Bridle, I've spoken with my client, and in terms
5 of the qualification process and your questions,
6 Mr. Kitchen, for Dr. Bridle; my client is prepared,
7 subject to hearing from you in terms of, you know, the
8 basis on which you're tendering your expert, my client
9 is prepared to accept him as an expert witness without
10 you having to go through, in any kind of detail, his
11 qualifications, making again the same -- or submitting
12 the same caveats we have before, that these issues are,
13 you know, compliance issues and not scientific masking
14 issues.

15 I don't know if that will assist you, Mr. Kitchen,
16 or if you want to go through, I'll call it, a typical
17 qualification process, but it might save you some time.
18 I anticipate your -- the basis on which you're going to
19 be tendering your expert witness is going to be, you
20 know, fairly similar to what you've done before, and
21 I -- if we can save some time that way, we're prepared
22 to do that. I'll leave that with you.

23 MR. KITCHEN: Well, thank you, I appreciate
24 that. I think that is probably an approach that I'll
25 take for Dr. Warren tomorrow, and I will send you a
26 proposed qualification today so that, you know, you

1 have notice about it tomorrow, and you can let me know
2 if there's any issues.

3 Today I am going to run through qualification with
4 Dr. Bridle, even though I don't anticipate a lot of
5 objections, and it will be similar to what I've asked
6 with Dr. Dang, but it's slightly different, and so I am
7 going to establish the record for that.

8 THE CHAIR: Okay, well, thank you both.
9 It's 8 minutes to 10, let's just take a quick break,
10 and then we can plow through until lunch. We'll start
11 at 10:00 with Dr. Bridle, okay?

12 MR. KITCHEN: Ms. Nelson, could you just --
13 because I haven't been able to communicate with
14 Dr. Bridle. Could you just let him know that we're
15 going to start at 10 so he has a heads-up?

16 MS. NELSON: Yes, I can do that for you.

17 MR. KITCHEN: Okay, thank you.

18 THE CHAIR: Thank you. And then, just to
19 confirm, April 3rd is off the table.

20 (ADJOURNMENT)

21 THE CHAIR: We're back in session. Just
22 two very quick items before I turn the floor over to
23 Mr. Kitchen. I wanted to ask, Mr. Kitchen, do you have
24 any documents that you plan to share with -- today or
25 table?

26 MR. KITCHEN: No. Dr. Bridle's report and

1 his cv are part of the record, so you should have
2 access to them.

3 THE CHAIR: Okay.

4 MR. KITCHEN: Please let us know if you
5 don't, and that's all I intend. So I mean that could
6 change if my friend brings something in, and then I
7 need to bring something in in -- I don't anticipate
8 that, but certainly for my direct, no documents.

9 THE CHAIR: Okay. And I just would like
10 to tell people that during our first break to discuss
11 your opening comments, one option we did look at very
12 briefly and discarded was the option of having written
13 closing arguments, and we decided that that was not an
14 attractive option for this case, but we did -- we were
15 trying to look at all options, and that was one that
16 was brought up.

17 So with that note, I'll ask Mr. Kitchen to call
18 your witness, and we can continue.

19 MR. KITCHEN: Sure, Ms. Nelson, if you could
20 bring him in, and then we'll -- and then, Karoline, if
21 you can swear him in.

22 (DISCUSSION OFF THE RECORD)

23 DR. BYRAM BRIDLE, Sworn, Examined by Mr. Kitchen

24 (Qualification)

25 Q MR. KITCHEN: So, Dr. Bridle, just to make
26 sure that you know where we're going, I'm going to be

1 asking you what we call qualification questions, and
2 then I'm going to be offering to the Tribunal the
3 qualification I'm going to qualify you as, they'll make
4 a ruling on that, my friend will have a chance to give
5 some comments, and then I'll get into questioning you
6 on substance, but this shouldn't take too long.

7 So to start with, Dr. Bridle, are you a doctor
8 because you have a Ph.D.?

9 A Yes, that is correct.

10 Q What's your Ph.D. in?

11 A It's -- okay, so my training is -- well, I guess is
12 to -- for -- to have a full understanding, I have a --
13 first, I obtained a Bachelor of Science degree in
14 biomedical sciences, then a Masters of Science degree
15 in immunology, and then a Ph.D. in immunology, and then
16 I did a six-year post-doctoral fellowship to become
17 certified as a viral immunologist, and I now hold, in a
18 faculty position, as an associate professor of viral
19 immunology at the University of Guelph.

20 Q Thank you. Your Ph.D., when did you get that and from
21 what university?

22 A So it was from the University of Guelph, and I guess I
23 would refer everybody to my cv, I -- it's been so long,
24 I can't even recall the exact date.

25 Q That's okay. Are you a professor now currently?

26 A Yes, I'm an associate professor.

1 So just so everybody understands what that
2 entails, the initial appointment for people for
3 academics in a university setting is as an assistant
4 professor. And then if we have progressed
5 satisfactorily in our development as a faculty member,
6 we then undergo usually about within, on average, about
7 six years -- no, sorry, five, five to six years after
8 being appointed as an assistant professor, we have to
9 be -- we undergo a very rigorous review process where
10 our performance is assessed independently by at least
11 three world-renowned experts in the field.

12 And if our progress is deemed to have been
13 satisfactory, then typically what happens is we are
14 awarded tenure and promoted to the position of
15 assistant professor.

16 And then the final stage would be full
17 professorship, and that usually is about eight years
18 later with a similar process involved.

19 So right now I am an associate professor of viral
20 immunology.

21 Q Thank you. Have you received any awards or
22 recognitions within the last two years?

23 A Yes. So you want to just limit it to the last two
24 specifically --

25 Q Yes.

26 A -- or last --

1 Q Otherwise, we'd be here for a while.

2 A Okay. So, yes, so I've won several teaching awards.
3 So one of the awards that I received was the equivalent
4 of teacher-of-the-year within my college. It's the
5 most -- like it's a prestigious award that's awarded
6 within -- for, you know, the college that I -- for the
7 college -- among the colleges that I'm involved in
8 teaching in.

9 And what that entails is -- entails -- so I'm
10 involved specifically with training or teaching
11 veterinary students and -- in the field of immunology,
12 general immunology. And so what happens is that, just
13 like an M.D. program, it's a four-year -- it's four
14 years of classes, four-year program.

15 And so for that award, what happens is all of the
16 students in the second, third, and fourth year of the
17 program vote on who they felt the top -- who the top
18 professor is in that program. So that's one of the
19 awards that I won recently.

20 Also what happens at the end of every academic
21 year, the -- these professional students then vote on
22 who they felt the top professor was for that given
23 academic year, but I received that recognition, and
24 that's -- so we get voted in basically as an honorary
25 class president for that class.

26 I also recently received a research award for

1 outstanding research.

2 And I'm just trying to think, I think those are
3 probably key highlights, you know, to highlight my --
4 yeah, the fact that I have been objectively assessed in
5 terms of my teaching ability and research ability and
6 have been recognized in those ways as being above
7 average.

8 Q Thank you. Just give me one second, my phone was off,
9 but my answering machine is on; I'm just going to turn
10 it off.

11 THE CHAIR: I'll just mention,
12 Mr. Kitchen, for everybody, Dr. Bridle's cv and other
13 related information is in Folder E, and it's package
14 number 5.

15 MR. KITCHEN: Yes, thank you.

16 Q MR. KITCHEN: Dr. Bridle, have you -- are
17 you currently performing or overseeing research
18 projects?

19 A Yes, a large number. So I'm known as what's called a
20 research-intensive faculty member. So as faculty
21 members at any university across Canada, our work is
22 divided into three areas, and we all have -- we
23 dealt [sic] on to have unique what we call
24 distributions of effort.

25 So our work is divided among, again, three areas
26 of focus, one is research, one is teaching, and one is

1 service. And so in my case, my distribution of effort
2 is divided as such: 65 percent devoted to research, 25
3 percent devoted to teaching, and 15 percent devoted to
4 service.

5 And just so there's some perspective with that,
6 the sort of average dedication to research, like for
7 the average faculty member across Canada, would be more
8 in the range of 40 percent. So, therefore, I'm
9 considered a research-intensive faculty member, and so
10 that's an emphasis. And as such, I do have a fairly
11 extensive research program and research team that I
12 manage.

13 And so right now, active within my lab, there's
14 sort of three areas of research that I'm focusing on.
15 I do a lot of basic fundamental viral immunology
16 research in which we look at the post-immune response
17 to viruses and, you know, how we protect ourselves from
18 viruses following infection.

19 And then the -- and then there's two more
20 translational/applied areas of research. One is -- in
21 both cases, they're using what we call immunotherapy,
22 and the most common immunotherapy that I do research on
23 are vaccines. And -- and for two purposes: So one arm
24 of this program is focused on trying -- developing
25 vaccines for the prevention of infectious diseases, and
26 then the other one is for developing immunotherapies

1 for the treatment of cancers. Similar technologies can
2 potentially apply to both, certainly scientific, the
3 principles are fairly -- you know, overlap between the
4 two. So I have those three areas of research is my
5 emphasis right now.

6 And I guess I also, for full disclosure, just
7 because it's probably most relevant to what's being
8 discussed today, I did receive two grants to support my
9 research program, infectious diseases, one from the
10 Ontario Government and one from the Federal Government,
11 and those are a specifically to conduct pre-clinical
12 research in the area of SARS-Coronavirus-2 vaccines.

13 Q Thank you, you've answered some other questions I have.

14 And forgive me if this is not the right way to ask
15 this, but are you currently a reviewer or an editor of
16 any academic journals?

17 A I recently served as the guest editor for a special
18 issue of a journal for -- and the journal is known as
19 Vaccines, and that issue is now complete.

20 I do serve -- I'm active as a reviewer for many
21 scientific journals, so that's a regular part of my
22 job, and that comes under the service component that I
23 was talking about. So that service component not only
24 involves service to my institution, but it involves
25 service to the -- well, to the public, but especially
26 service to the larger scientific community.

1 And part of that is I serve as a reviewer on
2 multiple grant review panels, including grant review
3 panels for the Federal Government, and our -- that's
4 our primary source of academic funding in Canada for
5 medical research. So that organization is known as
6 C-I-H-R for short or the Canadian Institutes of Health
7 Research.

8 For that, I have served on multiple committees,
9 including one that looks at grants that are being
10 applied for in an area of cancer research, but probably
11 my most -- definitely my most substantial contributions
12 to that grant review agency has been serving on their
13 virology and viral pathogenesis panel. In fact, I am
14 currently serving a three-year term, invited term, as a
15 reviewer.

16 And I guess, not that I usually like to tout, you
17 know, things like accolades and awards, but, again, I
18 understand that it's important to also -- you're trying
19 to make considerations in this case about my potential
20 to serve as an expert witness, so I'd have to point out
21 that I have received three consecutive citations
22 from -- and so I guess I forgot to mention this when
23 you were asking about awards, because this is within
24 the last two years -- and my service on the
25 virology/viral pathogenesis panel, in which we
26 determined which Canadian research -- researchers get

1 funding in that area. I have received three
2 citations -- consecutive citations from CHR as being
3 one of their most elite reviewers, which is an award
4 given after the -- end of review competition, the
5 chairs of the review panels, and the CHR staff that
6 attended those panels identify the top 15 percent of
7 reviewers for that particular review cycle across all
8 of their panels, and then those top 15 percent receive
9 these citations and try to set that standard for what
10 the other reviewers should try and achieve in terms of
11 the quality of the reviews that they provide.

12 And so as part of my job as well, yes, I routinely
13 provide reviews, it can be to any scientific journal,
14 and I do it for a large number of scientific journals.
15 There's no limitation on that. Any scientific journal,
16 if they feel that a faculty member anywhere in the
17 world possesses expertise relevant to what that paper
18 is about, then they can contact us and ask us if we
19 would like to review. That's done on a voluntary
20 basis; we're not required to do it, but it's done on a
21 voluntary basis. And that is the foundation, the
22 underpinning of how we establish the most rigorous
23 scientific data.

24 So the top scientific data in the world of science
25 is what we refer to as peer-reviewed scientific
26 publications, and so those are -- that's scientific

1 data that has been compiled into what we call a
2 manuscript, and that manuscript goes to what we call
3 peer reviewers, that would be somebody like myself,
4 who -- and we can have no conflict of interest, no
5 connection with the authors of that paper. So that's
6 important to make sure it's fully objective. And
7 then -- in many phases, it's not even disclosed who
8 the -- now with a lot of journals, not even disclosed
9 who the authors are, to ensure that there can be no
10 biases.

11 And then we give our feedback, either we recommend
12 that the paper be rejected because the science is not
13 of a sufficient quality, or we can recommend that it be
14 accepted with different amounts of revision required to
15 try and increase the quality of the science. And so,
16 ultimately, if accepted, that means that -- so what
17 we're talking about when we're talking about
18 peer-reviewed scientific literature, that's the process
19 that's followed. And so, yes, I participate in that
20 and have done so for a large number of journals, and I
21 do it on a regular basis and have throughout the
22 duration of my independent academic career.

23 Q Thank you. When you do your research, you obviously do
24 a lot of it, do you sometimes work with other
25 scientists?

26 A Yes. Yes, my research team is highly collaborative.

1 So, again, if anybody would like to refer to my cv,
2 you'll find that -- so the way authorship works in --
3 certainly in the area that I work in and so the
4 academic realm, there is typically -- and it varies
5 from research area to research area, there's sort of
6 different conventions in the authorship of what
7 typically happens. When you're looking at these
8 papers, you'll often see a large number of names
9 listed, and so those are all the people who contributed
10 in some way to the sciences in that manuscript.

11 And the names that are at the beginning -- so this
12 is the case for sure with all of my citations, the way
13 it works, all the names at the beginning are typically
14 the trainees that did most of the hands-on laboratory
15 work, and then the names that are in the latter half of
16 the authorship are what we call the senior authors.
17 They're the ones that got the funding for the research,
18 that often design the research project, and they
19 oversee the management of the trainees that are working
20 on that and provide feedback and troubleshooting,
21 et cetera.

22 So -- and so when you're looking at sort of the
23 level of collaborative-ness, you want to know who the
24 senior authors are. And one of the -- and immediate
25 ways to identify that is -- I mean, so, obviously, when
26 I'm publishing something, my trainees are readily

1 identifiable typically because they're going to be from
2 my institution. Although with that said, I have many
3 trainees actually who have collaborated with mine from
4 other institutions.

5 But so when you look at that latter part of the
6 list, when you see people, especially from other
7 institutions -- and I mean if there are any other
8 faculty members as senior scientists, those are
9 collaborators, official collaborators.

10 And so, yes, I've collaborated extensively.
11 There's no way I could go through all of them, but I
12 collaborate with researchers from around the world. I
13 guess I can give you an example. So, for example, with
14 a recent publication that we had on SARS-Coronavirus-2
15 vaccines, for example, that was a strategic
16 collaboration with the National Microbiology
17 Laboratory, which is part of the Public Health Agency
18 of Canada, where they conducted part of our research.
19 There were three separate research groups at the
20 University of Guelph where -- that we came together
21 strategically to do this work. So that's one type of
22 example. So, yes, so I've collaborated with scientists
23 in the Government and lots of scientists from other
24 academic institutions, including others around the
25 world.

26 So, yeah, my research team is highly

1 collaborative, so every one of my publications
2 represents some type of formal scientific
3 collaboration.

4 Q Thank you. Have you published any peer-reviewed
5 articles or any other type of publications in the last
6 two years either on your own or collaboratively with
7 others?

8 A Yes. So I'm actually quite proud of that fact
9 honestly, and this is why: So just to understand the
10 setting, what happens is because of the lockdowns
11 related to COVID-19 policy, a lot of research programs
12 had to shut down and for substantial periods of time.
13 And, indeed, my research was declared nonessential, and
14 so the worst shutdown that we were facing originally
15 was a -- it turned out to be six months of interruption
16 to research, really nonessential research.

17 However, again, like I mentioned because I do --
18 because -- so this problem of COVID-19, specifically
19 SARS-Coronavirus-2, the virus that causes COVID-19,
20 because that's in my area of expertise and so many of
21 the -- so much of the research and research tools that
22 I work with were applicable, my group pivoted very
23 rapidly to focus on COVID research, and like I said, we
24 were successful in getting grants available to pursue
25 that.

26 So we have continued our cancer research, we've

1 continued our basic virology research throughout this,
2 but those two aspects have -- you know, we have
3 experienced substantial interruptions to those
4 components and -- but we focused our efforts on
5 infectious diseases on the SARS-Coronavirus-2.

6 And so as a consequence, in fact, the last two
7 years, remarkably despite that -- those, you know,
8 impediments to research, the last two years have
9 actually been my most productive in terms of
10 publications. I -- again, you'd have to look at my cv
11 to get the exact number. I -- what I can tell you,
12 yeah, well -- oh, yeah, so, actually, I do have a
13 fairly accurately grasp. We actually have so many
14 papers that are currently under review that have been
15 submitted that, you know --

16 What I can say for sure is that by the end -- by
17 Christmas of last year, over the last two years, I had
18 published 29 paper -- 29 peer-reviewed, scientific
19 papers in scientific journals that are indexed in all
20 the common databases and -- so 29 publications. And
21 since then, I have had two or three more published. I
22 have had two more accepted, and I have two or three
23 more that are currently under review.

24 So, yeah, so it's been quite productive, and so
25 the reality is -- so, for example, my institution,
26 again, that has garnered attention because the average

1 publication record for faculty, in fact, dropped off
2 substantially, to the point -- in fact, I should point
3 out -- we actually normally have a performance review
4 every two years, and because of this impact, our
5 actual -- first performance review was supposed to
6 occur very early on during the declared pandemic but
7 was cancelled because of this impact at that time. And
8 then we were supposed to have our last review very
9 recently because this has been going on for two years
10 now, and that's been cancelled.

11 So the next time we're going to have a review
12 actually is going to have been -- at this point, it's
13 going to have been a six-year gap, and that is to
14 recognize the fact that it was unfair to evaluate the
15 performance of faculty members who had had such massive
16 interruptions to their research programs and their
17 ability to be productive.

18 So, in fact, you can't expect the review
19 committees to review six years of progress from every
20 faculty member, so what's happening -- so, in fact,
21 it's just been assumed that everybody -- at my
22 institution, that everybody has performed reasonably
23 well, because it actually gets linked to pay bonuses at
24 the end of that two-year period, and so everybody will
25 get the same pay bonus. And then when we have our next
26 review, which will have been a six-year gap, it will --

1 we'll be starting from scratch again in terms of a
2 review.

3 So, yeah, that's where I'm at with the publication
4 record that I am particularly proud of, that my
5 research team has been so incredibly productive
6 throughout all of this, so that's kudos to them.

7 Q Thank you. And just to clarify some of those
8 publications have been related to SARS-CoV-2 and/or
9 COVID-19?

10 A Yes, that's true, yes, we have several peer-reviewed
11 publications dealing with SARS-Coronavirus-2.

12 Q Have you been an expert witness in legal proceedings
13 before today?

14 A I have. So, yeah, to disclose my involvement with
15 those, I was in one that was ultimately not heard -- I
16 was -- I -- so -- and the first one that I was involved
17 with related to Corona -- SARS-Coronavirus-2. I served
18 as an expert witness, was involved with various aspects
19 of that case for many months leading up to it. I was
20 cross-examined for 5 hours and 15 minutes for that
21 case, but, ultimately, that case was thrown out. So
22 I'm not a legal expert, but my understanding,
23 therefore, is that I was not officially qualified as an
24 expert in that case because the case ultimately was not
25 heard, and my understanding is that's a requirement to
26 be considered qualified, but I served as an expert

1 witness in that case.

2 I have -- I've served in an unofficial capacity
3 for hearings that were run like court hearings for --
4 the most recent one was for a physician in Ottawa, an
5 ear, nose, and throat specialist, who was -- and this
6 was due to the vaccine mandates and whether or not
7 they're privileged to serve into hospitals in Ottawa
8 should be taken away because of not accepting, you
9 know, the two jabs in that case, but that was not an
10 official court proceeding, but it was run by lawyers.

11 And then I was also involved in a court case
12 dealing with vaccine mandates that were -- that was --
13 this was for hospital workers in Toronto, and now that
14 one is more complicated honestly. Again, I don't have
15 the legal expertise, but it was my understanding and
16 the understanding of the legal team that had recruited
17 me to provide expert evidence to the people hearing the
18 case that I had to qualify as an expert.

19 What I can tell you is that the -- one of the two
20 experts on the -- serving on the other side, they
21 were -- one was dismissed before the court hearing,
22 their expert report, and then the other one was
23 dismissed during the court hearing. Mine was
24 discussed, and the lawyers accepted my expertise, and
25 my report, my understanding was, had been admitted into
26 court. There was a court hearing. My report was

1 discussed.

2 But then in the final report, what confused
3 everybody is a -- the ruling ultimately was -- left
4 only my report on the table, because the other two had
5 been removed, and so, ultimately, the ruling was based
6 on wording that the lawyers had used to, I guess,
7 develop their case and not on the expert evidence. So
8 the expert evidence ultimately was not considered in
9 the ruling.

10 So, again -- so I was left with I had been told,
11 on one hand, that I was qualified as an expert in that
12 case, and then on the other hand, I was told that maybe
13 not because the expert evidence, ultimately, was not
14 considered. So that's just for full disclosure.

15 Because one of the things that I've got -- that
16 I -- that was brought up is anytime I -- I didn't know
17 from the first case, and I know it has to be disclosed,
18 and I didn't want to get in trouble, so I disclosed
19 that I was qualified as an expert witness in that --
20 the first case, and then I was accused of lying, but I
21 just didn't know because I'm not a legal expert, and so
22 that's been clarified.

23 So that's why, for your full disclosure, I want
24 you to know what's happened. So in that last case,
25 whether or not I was officially qualified, I'm actually
26 uncertain of, but certainly my -- in both cases, nobody

1 disputed my -- the ability to serve as an expert. And
2 in the last one, my expert report was actively
3 discussed in court. That's for full disclosure.

4 Q Thank you. Now, Dr. Bridle, do you know Dr. Curtis
5 Wall personally?

6 A I don't know him at all, no, and I -- so all I know is
7 the name, and, in fact, I still know very little about
8 him.

9 Q Do you have any financial interest in the outcome of
10 this case?

11 A No.

12 Q Do you understand your duty to provide this Tribunal
13 with your expert knowledge and opinions in an objective
14 and neutral manner?

15 A Yes, yeah, and that's -- as a scientist, that's what I
16 am expected to practice on a regular basis as I
17 mentioned, otherwise, the entire peer-review process
18 will be compromised, and I will endeavour to do that
19 today as well.

20 Q Thank you.

21 MR. KITCHEN: Well, those are my
22 qualification questions. Chair, I want to have
23 Dr. Bridle qualified as the following -- I can read
24 this a couple times -- but I want him to be qualified
25 as an expert in the area of viral immunology and, in
26 particular, SARS-CoV-2, COVID-19, and the efficacy of

1 masking, physical distancing, and other restrictions
2 intended to prevent the transmission of SARS-CoV-2.

3 THE CHAIR: Mr. Maxston?

4 MR. MAXSTON: Mr. Kitchen, I'm going to ask
5 you to read that back, I got part of it or most of it,
6 but I just need to hear all of it again, if you could
7 do that.

8 MR. KITCHEN: Yeah, no problem. I'd like to
9 have Dr. Bridle qualified as an expert in the area of
10 viral immunology and, in particular, SARS-CoV-2,
11 COVID-19, and the efficacy of masking, physical
12 distancing, and other restrictions intended to prevent
13 the transmission of SARS-CoV-2.

14 MR. MAXSTON: Thank you, Mr. Kitchen.

15 Mr. Kitchen, I don't want to -- I may have a
16 question or two for Dr. Bridle at this point, but can
17 you clarify what other restrictions you're referring
18 to? I don't want to be too difficult here, but that's
19 a little bit open-ended; I just wonder if you can
20 comment on that.

21 MR. KITCHEN: Sure. I'm going to ask Dr. --
22 what I anticipate asking Dr. Bridle specifically about
23 specific other restrictions, right. I've identified
24 masking and physical distance as specific restrictions,
25 right? But the reality is, and I -- you know, I think
26 we often hear this from the public health people is

1 that, Look, it's a whole, right? You can't talk about
2 these things very well isolated; they need to be talked
3 about as a whole. That's one reason I have that in
4 there is I'm going to have generalized questions, and
5 Dr. Bridle's going to have generalized answers, I
6 anticipate, about COVID restrictions globally or
7 generally. That's one.

8 And two, I'm following along the same lines that
9 you established with Dr. Hu, which I didn't take issue
10 with; you know, you had the catch-all other measures.
11 You know, I figured that was appropriate, so I didn't
12 object, and so I'm following along in the same vein so
13 that we don't get into issues of, well, you know, you
14 can only talk about masking or physical distancing.
15 That doesn't really make any sense. It wouldn't make
16 any sense for Dr. Hu, it wouldn't make any sense for
17 Dr. Dang, it wouldn't make any sense for Dr. Bridle, so
18 that's why I'm putting that in there; not because I'm
19 going to go to specific other restrictions, but because
20 I want to talk about them generally.

21 MR. MAXSTON: Okay, thank you for that. I
22 just have a couple of quick question for Dr. Bridle.

23 Mr. Maxston Cross-examines the Witness (Qualification)

24 Q MR. MAXSTON: Good morning, Dr. Bridle. I
25 wonder if you can answer a couple of quick things for
26 me. You had a discussion with Mr. Kitchen about the

1 fact that you have your Ph.D., I think you're a viral
2 immunologist. Is it correct that you're not a medical
3 doctor then? I just want to be clear about that.

4 A Yes, that is correct. I do not hold an M.D. degree,
5 nor a D.V.M. or any type of medical -- professional
6 medical degree. I'm not a professional --

7 Q And similar to that --

8 A -- (INDISCERNIBLE) --

9 Q -- are you now a member of a regulated profession
10 under, you know, the Ontario regulated Health
11 Professions Act or something similar?

12 A No.

13 Q So you're not a member of a regulatory college like the
14 College of Chiropractors of Alberta, for example, if
15 you were in Alberta?

16 A That is correct.

17 Q Have you ever been a member of a regulatory college?

18 A No.

19 Q I think you touched on this with Mr. Kitchen, but have
20 you advised any public health bodies concerning
21 COVID-19; have you been asked to consult with them?

22 A Yes. So I have -- so, for example, I've had numerous
23 interactions with the National Advisory Committee on
24 Immunization, lots of back-and-forth emails, so, yeah,
25 so that's a great question.

26 So I focus on research. I tend to focus more on

1 the pre-clinical side, feeding into the translational
2 research arm. I have had some of my research go into
3 clinical -- human clinical trials, but that gets passed
4 off to those who work on the clinical research side.

5 So the type of research that I do helps inform
6 public policy --

7 Q Yeah, I --

8 A -- public health policies but --

9 Q I think I --

10 MR. KITCHEN: Mr. Maxston, you need to let
11 my witness finish.

12 MR. MAXSTON: Yeah, sorry, sorry.

13 Q MR. MAXSTON: I just wanted to -- I didn't
14 want you to go down a certain road. I was more
15 interested in whether you, for example, worked with the
16 Ontario Chief Medical Officer of Health or anything
17 along those lines.

18 MR. KITCHEN: And he'll --

19 A No, I haven't worked directly -- sorry.

20 MR. KITCHEN: Obviously, he's going to
21 answer that question, but, Dr. Bridle, you are
22 permitted to finish your answer to my friend's two
23 questions ago.

24 A Okay, sure, yes. Yeah, so when it comes to public
25 health, the type of research that I do and the science
26 that I publish is what is used to inform public health

1 policy. So things like, for example, we've heard a lot
2 about the epidemiological modelling, so what -- so --
3 and what happens is when these epidemiological models
4 are made, there's a lot of assumptions that are plugged
5 into those.

6 And so, for example, the type of research that I
7 do would be important in terms of what kind of data
8 gets plugged into these models when it comes to
9 assumptions like naturally acquired immunity, for
10 example, or vaccine-related efficacy, right, these
11 assumptions that dictate how some of the measures right
12 now are performing, and that then influences the
13 output, which is when we're trying to predict what
14 cases and severe outcomes like hospitalizations and
15 intensive care unit admissions, for example, I get
16 into, just so that the -- everybody has an
17 understanding of sort of where I stand on that
18 spectrum. So my data feeds into that, you know, basic
19 science aspect that informs then these models and how
20 they're run.

21 But to directly answer your question, Mr. Maxston,
22 I have not worked directly with the medical -- with
23 Ontario's Medical Officer of Health. With that said, I
24 have provided letters to them, you know, with my input,
25 but I have not been formally recruited by them to
26 discuss, you know, scientific matters.

1 MR. MAXSTON: Thank you, Dr. Bridle, those
2 are all my questions.

3 Mr. Kitchen, I don't have any concerns with the
4 manner in which you're tendering this witness. I think
5 you've told me you wanted to have a little flexibility
6 in terms of the other restrictions phrased, and I'll
7 object if I need to, but I don't anticipate I would
8 have to do that.

9 MR. KITCHEN: Thank you. Well, Mr. Chair,
10 it's over to you then to let us know if you accept that
11 qualification. I can read it again --

12 THE CHAIR: Yeah, no, that's okay. I
13 think we all got it. Do we need to caucus, Mr. Pavlic?

14 MR. KITCHEN: You're muted.

15 MR. PAVLIC: My apologies, I had a little
16 bubble over my mute button. Yeah, maybe we should just
17 take a very brief minute.

18 THE CHAIR: Okay.

19 MR. PAVLIC: Yeah.

20 THE CHAIR: Thank you.

21 MR. PAVLIC: Thank you.

22 (ADJOURNMENT)

23 Ruling (Qualification)

24 THE CHAIR: We're back in session, and,
25 Mr. Kitchen, the Hearing Tribunal has no objection to
26 your qualifying this witness as an expert in his stated

1 field.

2 MR. KITCHEN: Thank you. Well, then I
3 propose we continue on with questioning, and then if we
4 need to take a break, then I'm sure somebody will put
5 their hand up.

6 DR. BYRAM BRIDLE, Previously sworn, examined by
7 Mr. Kitchen

8 Q MR. KITCHEN: Dr. Bridle, you can hear us,
9 right?

10 A Yes, I can.

11 Q Excellent, all right, well, I'm going to jump right in.
12 First, I want to start with a few basic questions,
13 I know you touched on this in the qualification, but
14 just to clarify, what is the virus that causes the
15 disease of COVID-19?

16 A Yeah, so just to be clear, the virus in question here
17 is known as the Severe Acute Respiratory
18 Syndrome-Coronavirus-2. It's specifically been given
19 that designation 2, because about 18, 19 years ago,
20 there was an outbreak, including in Canada, of the
21 original Severe Acute Respiratory Coronavirus, which is
22 now either just called SARS-CoV or sometimes now
23 referred to as SARS-CoV-1.

24 So this is dealing with the Severe Acute
25 Respiratory Syndrome-Coronavirus-2, which was first
26 identified and that information made public in the year

1 2019 now, late in the year 2019, and this is where we
2 get this term "COVID-19" from. So what COVID-19 is,
3 that's the Coronavirus disease, and then the 19 part
4 refers to that was initially identified in 2019.

5 And, again, yeah, to differentiate -- and this is
6 an important distinction for people to make --
7 SARS-Coronavirus-2 is the virus. COVID-19
8 is the disease. Being infected with the virus doesn't
9 equate with having a disease. To have a disease, one
10 must have signs for -- and/or symptoms of illness. So
11 there's a clinical part to that diagnosis. So, again,
12 one can be infected with the virus but not necessarily
13 have disease, and, in fact, scientific literature right
14 now shows that there's a much larger than previously
15 anticipated and still unknown proportion of the
16 population that has been or can be infected with
17 SARS-Coronavirus-2 and not get COVID-19, the disease.

18 And so a way to kind of make sure that everybody
19 understands that properly, we are all, all of us right
20 now, I can guarantee, are infected, infected with all
21 kinds of microorganisms, including lots of viruses. We
22 think -- we hear a lot about our microbiome, and we
23 often think about the bacteria that coat the outside
24 and inside of our linings specifically, like the
25 mucosal membranes throughout our body or gut, our
26 respiratory tract, reproductive tracts, et cetera, and

1 then, of, of course, our skin.

2 But part of that microbiome is also what we know
3 as the virome, so we actually have probably more
4 viruses in and on our body than we actually do
5 bacteria, and, interestingly, a lot of those viruses
6 are actually -- have infected the bacteria that are in
7 or on our body, and these are known as bacteriophage.

8 So I mean this just highlights that we can be
9 infected with an agent but not have disease, and so
10 that's the distinction here. SARS-CoV-2 is the virus
11 that, in some people, can cause the disease known as
12 COVID-19.

13 Q Thank you. Now, when it comes to the virus and the
14 disease and everything that's been going on in the last
15 two years, what would you say is the most important
16 difference or some of the most important differences
17 between scientists such as yourself and public health
18 doctors such as Dr. Hu?

19 A Yeah, so I can't comment specifically on Dr. Hu, but I
20 can provide some generic feedback, because, again --
21 so, for example, individuals like myself, again, so we
22 train -- we train medical professionals. In my
23 specific case, I've chosen to work with the University
24 of Guelph. I've been offered a position at the
25 University of Ottawa where I would have been teaching
26 students in the M.D. program, but because I felt I

1 could do more sophisticated research at the University
2 of Guelph, because there's more animal models available
3 and the type of research I do, I teach students in the
4 doctor veterinary program.

5 However with that said, I've also had many of my
6 undergraduate and graduate students that I've trained
7 and mentored have gone to medical school as well.

8 And so as a consequence because of this teaching,
9 I'm routinely involved with communicating, for example,
10 I've chaired for many years our department's seminar
11 series committee, and so through that, I host other
12 scientists through my collaborative network. I've been
13 in contact with all kinds of faculty members who teach
14 in these types of programs.

15 So what's important to note is when one has an
16 advanced degree, so, for example, a Master -- so that
17 would be like a Master's degree and especially a Ph.D.,
18 a Ph.D. takes it to a far greater extreme. What one is
19 being educated in in that area is a very deep
20 understanding of a particular area of expertise. So in
21 my case, I have spent years studying in incredible
22 detail the areas of virology and immunology, and
23 although not relevant to today, but also cancer
24 biology.

25 And so the key difference, what people have to
26 understand -- and, again, this -- I mean no offence by

1 this in any way, but it's just to encourage
2 understanding -- is if somebody holds an M.D., and the
3 same would be for a D.V.M., any of these professional
4 medical degrees, what you have to understand is when it
5 comes to the medical doctorate programs, these are
6 undergraduate programs -- they're undergraduate
7 professional programs, right? So people when they get
8 these degrees, they are declared professionals, but
9 they are undergraduate degrees. So that is why, for
10 example, if you see somebody who holds a graduate
11 degree, the graduate degree will always, even if it's a
12 Masters degree, it will always be listed after the
13 undergraduate medical degree, and that's to recognize
14 the fact that one is training at the undergraduate
15 level, whereas the other one is more in-depth training
16 at a graduate level. So literally -- so that's what
17 you'll typically see. So if I were to list my
18 credentials, I would be required to list my Bachelors
19 of Science first, my Masters of Science second, and my
20 Ph.D. last, and what we usually do is we just simply
21 list the Ph.D. because it essentially trumps the
22 others. So that's why you'll typically see -- not
23 people won't list the Bachelors or Masters, and I don't
24 like to do that because, you know, it's not about
25 trying to garner, you know, praise from others, it's
26 simply to recognize that, you know, ultimately we have

1 achieved -- we have -- we've got a Ph.D.

2 So that's why you see -- so the order in which
3 degrees are listed actually is important in the
4 scientific and medical community to recognize these
5 distinctions, and so at the -- so, in other words,
6 individuals like myself, who have deep expertise in
7 immunology and virology, so I would teach in these
8 programs in those areas that are under my expertise and
9 try and get as much of that expertise conveyed to the
10 people who are earning these undergraduate medical
11 degrees.

12 One of the universal concerns actually -- so when
13 I start my teaching -- and I mention this because it's
14 important to understand the full scope of your
15 question -- I -- so I -- one of the things I take pride
16 in, as far as I know to date within the D.V.M. program,
17 doctor veterinary medicine program that I teach, as far
18 as we know to date, it involves the most extensive
19 training in immunology in North America. I can't say
20 for sure, because I don't know what every medical
21 college in North America, what their programs entail,
22 but so far, and has been recognized by my
23 administration, we haven't seen one that's more
24 intensive.

25 And by that I mean, we teach -- I have 30 lecture
26 slots with my students to talk about -- you know, to

1 lecture them about immunology. Included with that is
2 we have what we call independent learning sessions,
3 where they also do some learning on their own about
4 immunology. We also have -- I've incorporated what I
5 call interactive learning sessions where we use a
6 technology called iClickers, where I can put up
7 questions and have the students then provide their
8 feedback so I can gauge how well they are or are not
9 understanding concepts, plus we have review sessions
10 where they can openly ask me any questions that they
11 want.

12 And then the other thing that we have is I run --
13 the class, because it's large, gets split into two, so
14 I run two laboratories split across two halves of the
15 class, so four laboratory sessions in total. So each
16 student gets six hours of laboratory exposure to
17 immunology, so hands-on learning.

18 So I just say that to put in perspective, because
19 in Canada, in the M.D. program, the average M.D.
20 program in Canada provides in the ballpark of ten
21 lectures, only lectures and none of these other
22 aspects, no laboratory, you know, hands-on learning,
23 ten lectures on average in the first year of the M.D.
24 program and less than that for virology.

25 So on the extreme end would be McMaster
26 University. I have had several of my students go to

1 McMaster University and of course to collaborate -- I
2 mean, I did my post-doctoral fellowship there, so I --
3 and I collaborate and still collaborate with people
4 from McMaster, so I know this very well. They're on
5 the extreme low end in Canada actually with five
6 lectures in immunology in the first year of the
7 program.

8 So I say that because when it comes to things like
9 immunology and virology, therefore, if it's just an
10 M.D., then somebody who just holds an M.D. and who has
11 not taken advanced training in these areas would have
12 only the most superficial understanding of these areas
13 of science. And at an extreme, it is possible to get
14 into these programs without completing an undergraduate
15 program. I'd like to point that out because their
16 undergraduate immunology training, for example, the
17 University of Guelph involves about 35 lectures in
18 immunology, so -- but those tend to be in third and
19 fourth year. People can get admitted into medical --
20 and they're not often prerequisites as well. So even
21 an undergraduate student with a Bachelor of Science
22 degree who has taken an undergraduate immunology
23 course, for example, from the University of Guelph
24 would have a much more comprehensive understanding of
25 immunology and virology than the average person at the
26 point of completing their medical doctorate.

1 Q Thank you. Okay, now I've got some questions about
2 your report. In Section 3 of your report, and just for
3 those following along, that's page 2 of 18. So in
4 Section 3, Dr. Bridle, you refer to the SARS-CoV-2
5 virus --

6 A Sorry, Mr. Kitchen, may I just ask a question; am I
7 allowed to bring up my report to refer to it?

8 Q Yes, yes, you are.

9 A Okay, I'm going to be looking -- I'm going to bring it
10 up on my -- I have a second screen here and that is
11 what I'm looking at. So, sorry, which page?

12 Q So I'm on page 2 and 3 of 18 pages, and this is Section
13 3, where you say: (as read)

14 SARS-CoV-2 is not a problem of pandemic
15 proportions.

16 A Okay, just let me get there, page 2. Yes, okay, I'm
17 there.

18 Q You discuss infection fatality rates in this. Well,
19 let's start here: Could you just briefly explain for
20 us, so we know, what is the infection fatality rate?

21 A Okay, yeah, so what -- infection fatality rate, what
22 that tells you is if you have a population and you can
23 confirm that an infection has occurred and how that --
24 and I want to point out how that is determined, what
25 method is used is important, because if techniques are
26 used improperly, one might be erroneously identified as

1 being infected. But so what infection fatality rate is
2 supposed to be is if somebody is genuinely infected, it
3 gives you an indication of what the chances are that
4 that is going to be fatal for that individual.

5 So the best way to understand it is, again,
6 because we're talking about percentages, it's best to
7 put it, give the example of how having a population of
8 100 people, so if you know what -- if you have a group
9 of people that you know for sure are infected with a
10 pathogen, then the infection fatality rate would tell
11 us how many, what proportion of those 100 people would
12 be expected to die as a result of that infection.

13 Q Could you please describe the relative danger of
14 SARS-CoV-2? And I say "relative" because, you know,
15 obviously we're not working in a vacuum here. So if
16 you could tell us the relative danger of SARS-CoV-2.

17 A Yes. So what I'd like to point out just before I start
18 giving the full answer, and I'll come back to this at
19 the end, there is -- what I want to point out is in my
20 report -- just, again, to put it in perspective, my
21 report was submitted I can't remember the exact date,
22 but it was, you know, well -- it was quite some time
23 back in 2021. So I'm going to talk about, because this
24 has been admitted as evidence, I want to talk about
25 what was available to me at that time, but it's
26 important to note that things have also changed quite a

1 bit in the context of the Omicron variant, so I'd like
2 to touch on that at the end.

3 So in terms of what I have in the report, what
4 you'll see is that ultimately I cite a scientific
5 paper, again, a peer-reviewed published paper that
6 estimates -- that estimated at that time that the
7 infection fatality rate for SARS-Coronavirus-2 was
8 likely in the ballpark of 0.15 percent. So, again, to
9 put that in perspective, if a hundred people were
10 infected with SARS-Coronavirus-2, you'd expect 0.15
11 percent of them to die.

12 Now, this is important because when the pandemic
13 was declared, many of us might recall or certainly you
14 can look up the, you know, the headlines, it was
15 declared -- there were concerns at the beginning,
16 because we didn't know a lot about this virus at the
17 very beginning, so what I'm referring to there is
18 towards the end of 2019 when this virus was first
19 identified, we didn't know, you know, what exactly the
20 outcome of infection would be, and there were serious
21 concerns that we might be looking at infection fatality
22 rates as high as 10 percent. So that was stated by
23 many health professionals including Anthony Fauci and
24 many others.

25 Then as time progressed, and we started to realize
26 that it was a relatively limited demographic that was

1 at high risk from this virus, that was rephrased, and
2 the concerns were then that this might be in the
3 ballpark of -- infection fatality rate might be in the
4 ballpark of about 1 percent, and that would be serious
5 if it was at 1 percent, definitely with 10 percent,
6 also at 1 percent. I would argue as an expert in this
7 area, a 1 percent infection fatality rate, that
8 declaration of a pandemic would likely -- would be
9 warranted at a 1 percent infection fatality rate.

10 But this is where it's important is what we soon
11 realized because of the way that the testing was being
12 done, and there'd certainly be flaws with the testing
13 as it's been performed in Canada, what I'm referring to
14 there are the reverse transcript-ase PCR tests or what
15 we often refer to as just the PCR test. "PCR" meaning
16 polymerase chain reaction test, which are -- the way
17 we're using them, they're notorious for identifying a
18 lot of false positives. So that's why you have to keep
19 sort of mentioning and when I'm giving these statements
20 that a lot of -- at its root is when you know
21 somebody's infected.

22 So what we know is that there have been a lot of
23 people who have been infected who never got sick, and
24 so initially our estimates of infection fatality rate
25 were based on people who actively had COVID. Now,
26 we -- again -- so, again, we recognize now that

1 there -- that there -- a lot of people can be infected
2 but for whom this is not even a pathogen. And what I
3 mean by that is because it does not count as disease in
4 those individuals.

5 For example, that's very common in children, and
6 one of the reasons for that is children simply have
7 physically expressed many fewer of the receptors the
8 virus uses to grab onto our cells and infect it. So
9 there's many children who get infected, but the
10 infection is -- never becomes productive enough to
11 cause disease.

12 And so as we've appreciated that, the way this is
13 calculated is, like I said, you have to have -- in
14 order to calculate infection fatality rate, you have to
15 know the number of deaths, and you divide that by the
16 denominator, which is the number of people who are
17 infected. So early on in this pandemic, we -- the way
18 this was being calculated, of course, we've always had
19 quite accurate numbers of deaths, because that's -- I
20 mean, you know, unfortunately, that is a very easy
21 outcome to define and identify and document, and
22 there's really -- there's no controversy about that
23 outcome, that a death is black or white, either
24 somebody's died or they have not. So we have very
25 accurate data about deaths.

26 The problem is we still don't have fully accurate

1 data for the denominator, which is how many people have
2 been infected. But as we have expanded the testing and
3 looking for evidence of -- and, again, it's not even
4 the virus but evidence that the virus is present in
5 somebody's body by detecting portions of the genetic
6 material that this virus would have, what we've been
7 able to appreciate is that the denominator -- the
8 denominators kept growing, in other words, right? We
9 have found that more and more people have been
10 infected.

11 So, for example, there's the great study that was
12 published, actually a Canadian study, a high -- that
13 was published in a very high-impact scientific journal,
14 and it was a clinical trial that was being run out of
15 British Columbia looking -- actually looking at healthy
16 people for evidence of immunity acquired against
17 SARS-Coronavirus-2, so, again, knowing that this was a
18 novel virus. And what it found is that a majority of
19 people who were not sick had evidence of having
20 acquired, especially as time has gone on, so a year
21 after the declaration of the pandemic, a large number
22 of people who were unaware that they were sick with
23 SARS-Coronavirus-2, you know, there was no sickness
24 that they could identify, had evidence of what we call
25 seroconversion, so the immune system having responded
26 to the virus and produced antibodies against it.

1 So what this publication that I cited here did is
2 it accounted for this ever increasing denominator, and
3 so it corrected for the early massive overestimations
4 of the infection fatality rate and came up with one
5 that they felt at that time was more reasonable. And,
6 again, I point out that this publication is from
7 earlier in 2021, much earlier in 2021. And they
8 estimated that the overall infection fatality rate was
9 0.15 percent.

10 So to put that into perspective for people, and
11 this is largely agreed upon, I mean people like
12 Dr. Fauci, for example, have publicly declared themselves
13 that, you know, the flu is often associated -- the
14 annual flu is often associated with an infection
15 fatality rate in the ballpark of 0.1 percent. So an
16 infection fatality rate of 0.15 percent would be like a
17 particularly bad flu season.

18 And the other thing to point out is when one looks
19 at this publication, that's the overall infection
20 fatality rate for the entire population. And in this
21 case, we know that this virus is much more dangerous
22 for a much more restricted subset of individuals,
23 specifically the frail elderly and those who are
24 immunosuppressed. And then we've come to identify some
25 very key predictors of dangerous outcomes of infection:
26 Obesity at the moment is the number one risk factor

1 associated with fatal outcomes, and alongside that are
2 multiple comorbidities. So the average person who has
3 died with SARS-Coronavirus-2 -- with the
4 SARS-Coronavirus-2 infection has had, on average, more
5 than three other comorbidities, meaning other
6 illnesses, other health problems in addition to
7 infection with the SARS-Coronavirus-2.

8 So why this is important is because if you were to
9 remove those individuals from this analysis, you end up
10 with an infection fatality rate for the rest of the
11 population that is well below 0.1 percent, with the
12 extreme being when you go into children. So if we go
13 to the under 18-year-old demographic, the infection
14 fatality rate would be well, well below 0.1 percent,
15 and our own public health data show that, that there
16 have been extremely few deaths. So, yeah, very few in
17 that young demographic. So -- but this is the thing,
18 so that's what I have in the report.

19 Now, what's important to note is that was dealing
20 with data where we were dealing with the original
21 variant and some of the variants that started to
22 emerge, so, for example, the Alpha variant. Those
23 variants we now know, certainly relative to the current
24 Omicron variant -- and I think this is important
25 because presumably I mean with this hearing happening
26 today, I guess we're talking about the relevance of

1 certain COVID-19 policies as it exists today. If we
2 ask somebody today to implement a certain policy,
3 what's relevant is what the situation looks like today.

4 So the Omicron variant is far more infectious than
5 the original variants -- actually I should restate
6 that. It's more infectious than the original variants.
7 The Delta variant was particularly infectious, that's
8 when we first saw a change in the virus towards one
9 that is more infectious and that can spread, therefore,
10 easier, and this seems to have continued with the
11 Omicron variant.

12 And this is very typical of viruses. What I'd
13 like to highlight is -- and so this leads to what we
14 call cases, right? Cases -- and, again, what I'd like
15 to point out is the cases that we are identifying in
16 our public health data are not actually cases of
17 COVID-19; they're cases that were called -- although we
18 often equate them to cases of COVID-19, what they are
19 in reality is they are positive test results, again,
20 for the presence of portions of the virus's genetic
21 material in an individual. So people tested positive
22 by the PCR test for -- and that provides some evidence
23 that they may be infected with a potentially infectious
24 form of SARS-Coronavirus-2. So that's important.

25 And what I'd like to point out is cases in and of
26 themselves are not dangerous. So if somebody were to

1 acquire any of the respiratory pathogens and develop
2 mild to moderate signs or symptoms of illness like
3 other common cold-causing viruses, including other
4 types of cold-causing Coronaviruses, like Norwalk
5 virus, like respiratory syncytial virus, and like
6 influenza viruses as examples, they would be cases of
7 respiratory illness. So that -- and all those cases,
8 those viruses are highly transmissible, but in most
9 cases do not cause -- well, I should -- I'll talk about
10 the cold-causing viruses, in most cases do not cause
11 severe disease.

12 So if we think about the common cold, highly
13 contagious. I mean, we've all seen this, especially
14 anybody who's been in -- volunteered in a school,
15 worked in a school, or has children in school, and in
16 also workplaces, schools especially, I mean, a cold
17 will spread rampantly throughout the school population
18 and in all the homes connected with the school. So the
19 ability to spread rapidly is not in itself a concern if
20 it's only causing, in most people, mild to moderate
21 disease. The reason why I focused on cold viruses is
22 they excluded things like respiratory syncytial virus
23 and influenza viruses, for example, because they
24 actually can be particularly dangerous, not only the
25 same demographics that we're talking about with
26 SARS-Coronavirus-2 but especially in young children,

1 which are quite -- actually protected because of that
2 unique physical, you know, lack of expression of the
3 receptor the virus uses to grab onto our cells that --
4 and it's not confined to SARS-Coronavirus-2, it's
5 unique in that our very young are not susceptible in
6 this case. But all these people are susceptible to
7 potentially severe and fatal outcomes with influenza
8 viruses and the young for sure with respiratory
9 syncytial virus.

10 And so that -- so that's why -- so, yes, so I want
11 people to understand Omicron is more -- because this
12 relates to the infection fatality rate, -- it can
13 spread easier, but it is definitely much less dangerous
14 than any of the previous variants. That is clear.
15 We're seeing that everywhere. I want to -- so what's
16 important to understand this -- is because of the
17 public health messaging, right, that's been out there,
18 and personally as an expert -- I have contentions with
19 this, but I'm just putting out what the public health
20 messaging is right at the moment -- is that the
21 vaccines being used for SARS-Coronavirus-2 have been
22 purported to be -- I mean, originally, they purported
23 to be very protective and protect people from infection
24 and disease and very good at preventing transmission.
25 That certainly has been downgraded, and I would argue
26 that current data suggests that they are not reducing

1 the spread of the disease at all.

2 In fact, the remarkable phenomenon and of concern
3 to me is that we're actually seeing cases occurring
4 predominantly among the fully vaccinated, which might
5 actually be evidence of vaccine-enhanced disease. But
6 I raise this because in vaccinated individuals, this is
7 the messaging, that it's supposed to be, supposed to be
8 reducing their chances of getting infected and their
9 chance of transmitting the virus to others. And yet in
10 all of our school and work environments where it's
11 almost completely people who are vaccinated, so there
12 should be reduced transmission and they're masking, the
13 viruses are still spreading rampantly. So this is the
14 nature of Omicron.

15 But our data also show that while the cases of
16 Omicron have skyrocketed across all of Canada,
17 including Alberta, the most serious outcomes have
18 steadily declined. So there's been a -- there's been,
19 over time, a complete uncoupling of cases and the most
20 severe outcomes. So as we've continued to have
21 these -- and, remember, the first wave early on in the
22 pandemic has been dwarfed by multiples -- recent waves,
23 including the most recent with Omicron, has completely
24 dwarfed the previous wave if you look on the graphs and
25 the number of cases that are occurring. Yet, we have
26 progressively gotten -- gone closer and closer to

1 baseline when it comes to hospitalizations and ICU
2 admissions and deaths, and so that's clear evidence
3 that Omicron is less dangerous.

4 Also biologically, I can explain why this is, and
5 it -- there's two phenomenon that explain why Omicron
6 now is much less dangerous than the previous variants.
7 So -- and this goes hand-in-hand actually with the
8 vaccines. The vaccines, unfortunately, we've delivered
9 them into the muscle, which is called a parenteral
10 route. That tricks the body, the immune system into
11 thinking that there's a systemic infection, not a
12 mucosal infection. Remember, the natural infection is
13 through the airways. And so when the body thinks that
14 there's a systemic infection, what it wants to do is it
15 protects all of the key entry points into the body to
16 protect from future systemic infections.

17 So when it comes to respiratory tract, the only
18 place that these vaccines confer some protection is in
19 the very lower airways, and that's because if a virus
20 gets into our lower airways, there's not much
21 physically to prevent that virus from getting into the
22 blood, and that's because of gas exchange, right?
23 We -- so in the alveolar space, we have blood vessels
24 that come very, very close to the alveolar space to
25 allow the gas exchange, oxygen to go into the blood and
26 carbon dioxide to be released. So that also means that

1 if a virus gets there, there's only the ever so tiniest
2 physical barrier to prevent it from getting into the
3 blood. So our body produces antibodies in the lower
4 airways.

5 So this is the thing -- and I say that because
6 this is important -- the most severe outcomes of
7 infection with SARS-Coronavirus-2 is when the virus
8 goes down into the lungs. When it's in the upper
9 airways, it's not particularly dangerous. When it gets
10 dangerous is when it gets down into the lungs, and it
11 causes a severe pneumonia, then you start getting
12 inflammation in the lower lungs, and that can interfere
13 with things like gas exchange, and it can cause a lot
14 of damage to the physical architecture of the lower
15 airways, which is where all the gas exchange has to
16 occur.

17 And when it gets into those lower -- in the lower
18 lungs, that's where the real problems are when the
19 virus then starts entering the bloodstream, and we get
20 what's called viraemia, and that means the virus can
21 distribute all throughout the body using the blood, our
22 blood, as highways of all the places -- all kinds of
23 different places in our body. So that's where the
24 severe outcome occurs.

25 And that's also why the vaccines with earlier
26 variants were doing, you know, a somewhat decent job at

1 dampening the most severe aspects of the disease. But,
2 as we've now recognized, they weren't preventing
3 infection, and they weren't preventing transmission.
4 And this is why they're having no impact on Omicron,
5 the spread of Omicron, is because -- this is the other
6 key biology you have to understand -- so if the virus
7 doesn't go deep in the lungs, you tend not -- you're
8 going to tend not to get severe disease. It's the
9 difference between bronchitis and pneumonia, and many
10 of us will know that pneumonia is -- has a much more
11 severe prognosis than bronchitis, which is the upper
12 airways. Pneumonia being in the lower airways.

13 So the interesting thing is Omicron now has
14 accumulated a lot of mutations, a lot of mutations, and
15 it has changed how this virus behaves. In one -- so
16 one way it changed it is has become more infectious,
17 but it's also become much less dangerous, because when
18 we talk about viruses, we refer to something that's
19 called tropism. Tropism is a scientific term that
20 means where the virus likes to go in our body. So the
21 original variants like to infect our upper airways and
22 then migrate into our lower airways, and that's where
23 they were dangerous.

24 The Omicron variant also infects through the nasal
25 passages and the mouth and infects our upper airways,
26 but it does not migrate down into the -- deeper into

1 the lower respiratory tract. It now has the more
2 restrictive tropism, meaning it likes to stay in the
3 upper airways. So this explains why the vaccines are
4 now largely irrelevant in the context of the Omicron
5 variant because the protection is in the lower airways
6 and not in the upper airways. And so somebody -- and
7 that also explains why the virus -- whether you have
8 immunity or not is not particularly dangerous because
9 it's restricted to the upper airways.

10 It also explains why everybody can equally
11 transmit the virus, because nobody -- well, sorry,
12 sorry, I -- that's untrue. I'm going with sort of the
13 public messaging that's out there. So I'll tell you
14 what the exception is to that. But it's thought right
15 now that everybody, whether or not they have been
16 vaccinated or not, can transmit at least the same
17 quantity of the virus because it's in the upper
18 respiratory tract.

19 But the reason why I want to point that out is I'm
20 an immunologist and have found it profoundly
21 frustrating that it's not recognized that our immune
22 system actually does its job and functions naturally.
23 The purpose of a vaccine is to simulate a natural
24 infection, try and do the best that we can to simulate
25 an actual infection as accurately as we can to confer
26 immunity. As I mentioned that these -- we've made a --

1 you know, the vaccines going parenterally actually
2 trick your immune system into thinking it's a systemic
3 infection, so we're not getting proper protection of
4 our airways.

5 Somebody who has been naturally infected will have
6 mounted an immune response, and their immune response
7 is going to be far more relevant, especially to the
8 Omicron variant, because they've been infected the
9 natural -- by the natural route. Our immune system
10 when infected by the respiratory tract makes sure that
11 it provides infector mechanisms that can protect all,
12 all areas of the respiratory tract, upper and lower.
13 So I want to point that out.

14 So we don't know a lot about natural immunity
15 because we haven't been looking for it, but somebody
16 who has natural immunity, we can't make any assumptions
17 about their health status without knowing, because if
18 somebody has natural immunity, they're actually going
19 to be the most protected in the context of Omicron, and
20 they're going to be the ones that spread the
21 SARS-Coronavirus-2 to the least of anybody in Canada
22 right now.

23 So I know that's a lot, but it's -- it's a lot of
24 science, again, to understand the importance of the
25 infection fatality rate, what it means, and why we have
26 been seeing it declining, and why we can conclude that

1 the danger of SARS-Coronavirus-2 even more recently has
2 continued to decline.

3 So, again, I'd just like to finish by, again,
4 saying SARS-Coronavirus-2 with the dominant -- the
5 variants out there right now, by far the dominant one
6 is Omicron. It is more transmissible right now and
7 much less dangerous right now.

8 And just to understand as well from the virology
9 perspective, that's typical for a virus. Any
10 pathogen -- so, again, you think about -- so if we
11 think about viruses as organisms, right, if we just
12 take that very like objective approach, and we think
13 about this from the perspective of an organism and an
14 organism trying to survive; it is never to an advantage
15 to any microorganism to cause severe harm or kill its
16 host, because if it does, it's going to render itself
17 extinct.

18 So what happens over time is, arguably -- so we --
19 we often forget about this, as I mentioned, our bodies
20 are loaded with viruses that causes no harm. The vast
21 majority of viruses that we're exposed to in the world
22 do not cause disease. That is where viruses want to
23 get to and for the reason of survival. Because, again,
24 like I said, if they were to infect the host and kill
25 that host, they're rendering themselves extinct.

26 So the natural progression for a virus is to

1 become -- so think about it, if you want to maximize
2 survival, if you want to maximize the number of your
3 kind, right, you can think about any organism, what you
4 want to do is maximize your ability to propagate and
5 minimize your ability to harm your host and especially
6 not kill them. And so that's why viruses over time
7 will naturally progress to ones that are more
8 infectious, because the more hosts they can infect, the
9 more they propagate, right, and the larger their
10 numbers become, but they simultaneously become less
11 dangerous, because if they were to kill all those
12 hosts, they're going to render themselves extinct.

13 So that's what this virus is doing, has been
14 doing. We have the evidence of this. This is the --
15 so this is a natural progression for this type of
16 virus: It's reaching -- starting to approach a more
17 ideal way to live with us by, you know, spread readily
18 among people but not cause substantial harm to people,
19 and it would probably -- likely continue to progress
20 this way ideally, and so that's very important to
21 understand.

22 So, again, just to highlight, being more
23 infectious does not equal more dangerous. Again, I'd
24 like to highlight the common cold is highly infectious,
25 but for most people not dangerous. That seems to be
26 where the Omicron variant is right now.

1 Sorry, Mr. Kitchen, it looks like you're muted.

2 Q Sorry, I muted, because I didn't want to cause any
3 noise to interrupt you.

4 Okay, if I understand you correctly then, we have
5 an infection fatality rate that has changed over time,
6 so I want to ask you a couple of questions about that.

7 You've said it's much less dangerous now. Can you
8 give me a rough number of what the IFR rate is now or
9 in the last few months? And I understand that might be
10 several decimal points, but if you could give us some
11 idea just so we have a number.

12 A Well, actually I haven't seen a good, reliable
13 peer-reviewed publication on that actually, and that's
14 because the Omicron variant, you know, has -- it's
15 quite recent, and, again, that would be the most
16 relevant data. So all I can tell you is that, again,
17 based on what I described for -- relative to the data
18 that I highlighted -- that was highlighted in my
19 report, which is dealing with older variants that
20 unquestionably were more dangerous to the high-risk
21 demographics, the Omicron is much less dangerous. So
22 all I can say with certainty is that it would be well
23 below the previously documented 0.15 percent, but I
24 don't have a specific number that I could give you
25 right now upon which I -- for which I could lean on a
26 legitimate peer-reviewed scientific paper.

1 Q Let me ask you this: Is the survivability rate sort of
2 the other side of the coin of the infectious fatality
3 rate?

4 A Yes.

5 Q Okay, so, you know, the 99 percent --

6 A So sorry, could I just clarify that, Mr. Kitchen?

7 Q Go ahead.

8 A So, yeah, so, in other words, just to make sure that
9 it's clear, yes, absolutely, infection fatality rate, I
10 mean, so if you take the inverse of that, that's the
11 survivability rate. So that infection fatality rate
12 that was updated early in 2021 of 0.15 percent, the
13 other way to put that is that 99.85 percent of those
14 deemed to have been infected with the virus would be
15 expected to survive, and, again, that was with the
16 older, more dangerous variants.

17 Q Okay, so just to clarify, 99.85 survivability rate,
18 that would have been the number in 2020?

19 A So, again, this is -- that publication was -- that I
20 cited was in 2021. It would have taken into account
21 data up until very early in 2021.

22 Q Okay, okay. So the survivability rate being 99.85 in
23 2020, that's gone up since 2020?

24 A Absolutely, yes, in the context of the Omicron variant.
25 So like I said, so in terms of that data, yeah. What
26 I've looking at, in particular, is the public health

1 data. And so, again, there -- so anybody can go to
2 public health websites to see this for themselves. But,
3 for example, I'm in Ontario, but Ontario, I mean,
4 there's nothing particularly unique about our
5 demographic relative to most of the other provinces,
6 especially Alberta, so a lot of our data are very
7 similar.

8 So, for example, like I mentioned public health
9 data, so I'm talking about this is not looking at
10 anybody else's interpretation of the data; this is the
11 public health data, the raw public health data that's
12 available to every Canadian. So you could go right now
13 onto the Public Health Ontario website or Public Health
14 Alberta website and see these data to confirm.

15 This phenomenon, which I get has caused some of us
16 to be worried about, that the vaccines in context of
17 the Omicron variant have actually set up the immune
18 system to respond suboptimally, meaning that there
19 might actually be enhanced potential for infection of
20 those who are vaccinated, right? What we see in terms
21 of public health data is that the cases right now have
22 been occurring for the past month. This happened --
23 this crossover happened at about -- at about -- well,
24 in Ontario it happened on Christmas Eve. In Alberta,
25 for example, the crossover happened a little bit later,
26 up to a week later. But now the -- for the last month,

1 the -- with the Omicron wave, the number of cases have
2 been occurring disproportionately among
3 double-vaccinators.

4 So that then -- so that's the public health data
5 that I'm relying on. So the same public health data,
6 when you look at it -- and so because I know the -- I
7 can -- I know the numbers much better off the top of my
8 head for Ontario, that's what I'll use as my example.
9 So keeping that in mind, simultaneously, the public
10 health data has been looking at the most severe
11 outcomes, and that includes data on hospitalizations.
12 So the way in Ontario we show it is hospitalizations
13 but not including admissions to ICU units, and then we
14 also look at the proportion of people that are in --
15 have been to the ICU unit, and then we also have data
16 on deaths. And so when we look at these outcomes, so
17 as we've seen this huge spike in the -- massive spike
18 in the cases of, again, I don't want to say COVID-19
19 but certainly infection, evidence of infection from
20 SARS-Coronavirus-2, of which a proportion of those
21 would have COVID-19, we have simultaneously seen,
22 again, an uncoupling of the most severe outcome. The
23 number of people admitted into the ICUs and hospitals
24 has been lower, so despite record cases, it's been
25 lower than the previous waves. All the more -- most
26 severe outcomes have been reduced. Again, so I

1 highlight this shows an uncoupling of this idea of
2 infectivity and the most severe outcomes of the
3 disease.

4 And this is important as well because -- well,
5 yeah, I guess I'll leave it at that, yeah. So using
6 public health data, so, again, I can't use that to give
7 you a specific infection fatality rate, current update
8 of one, but all I -- what I can tell you is the same
9 public health data that existed when this 0.15 percent
10 infection fatality rate was estimated, right, compared
11 to the public health data available now, the public
12 health data is clearly showing this is less dangerous.
13 So, again, I highlight that it -- the current rate
14 would be less than .15 percent, but I can't
15 definitively state what it would be.

16 Q I want to make sure we understand this, because I don't
17 think any of us are mathematicians, with a 99.85
18 survivability rate, if 1,000 people were actually
19 infected, statistically, how many of those would die?

20 A The -- so you're saying 1,000?

21 Q 1,000, yes.

22 A Okay, and this is with the assumption of .15 percent of
23 infection fatality rate? Is that what you're --

24 Q Yeah, exactly.

25 A -- wanting me to do? So that would be -- so 1.5 [sic],
26 and based on basic math, if we round up at a decimal

1 point of .52, two people. So I guess the more accurate
2 number, therefore, would be you would have -- because
3 rounding up actually has a substantial -- you're
4 increasing the outcome by -- what is that -- by a
5 third, so 2,000 people infected. In fact, in early
6 2021, you would have expected 1 to die.

7 Q Okay so if 10,000 people are known to be infected,
8 statistically, 15 of those would be expected to die?

9 A Yes -- back in 2021, early 2021. Not --

10 Q Okay --

11 A -- now, not now. It would be -- it would be --

12 Q Right.

13 A -- likely be much lower, but how much lower I can't say
14 definitively.

15 Q Now, you obviously touched on this, but the next thing
16 I wanted to ask you is about the issue of endemic,
17 because you touched on this in your report. Now, I'm
18 now in Section 6 of your report. I'm not necessarily
19 going chronologically through your report, but the
20 issue of endemic, first, can you help us understand --
21 because I know you used that term -- can you help us
22 understand what "endemic" actually means comparative
23 to, let's say, "pandemic" or "epidemic"?

24 A Yeah, obviously with the timing. So an epidemic and a
25 pandemic, you're dealing with an acute scenario,
26 meaning short time frame, where an infection is

1 occurring and spreading, and the difference between an
2 epidemic and a pandemic is the scope, the scope of the
3 problem.

4 So with an epidemic, the scope is much -- on
5 a much smaller geographical scale. So, for example,
6 with the SARS -- the original SARS, Severe Acute
7 Respiratory Syndrome by Coronavirus that caused the
8 disease SARS, which we called, you know, at that time,
9 the Severe Acute Respiratory Syndrome was the disease,
10 that was -- because it was much more limited scope,
11 that was declared in Canada to be an epidemic.

12 So a pandemic is all dealing with the scope. So
13 if it's on a much broader scale, and in this case, you
14 know, if that -- it's on a global scale, then it gets
15 declared as a pandemic. If the dangerous, right, the
16 most dangerous outcome -- because, again, I have to
17 highlight, so, for example, if you have a common
18 microbe that's part of the human microbiota, that's
19 something that can readily be transmitted potentially
20 around the globe, but if it has no dangers associated
21 with it, although it has that same scale, it's not
22 going to be defined as a pandemic.

23 So that's the two things, there has -- there's two
24 things for -- to declare something a pandemic: There
25 has -- it has to meet a certain threshold of danger and
26 a scope, a very large scope of the problem. But, yeah,

1 so that's dealing with things in the acute or
2 short-term.

3 When we talk about something being endemic, we're
4 talking about something long-term. So the -- most of
5 the Coronaviruses that we're used to, the ones that
6 cause the common cold, like I would argue the Omicron
7 variant is likely one that -- and the way it's behaving
8 is starting to fit largely into this category. They're
9 what we would call endemic; they're always with us,
10 right? We're always interacting with them. They're
11 always causing some form of mild disease.

12 So in that context, you know, we would not
13 declare -- so a cold definitely, even in terms of the
14 scope of a cold or the flu -- and the flu is a good
15 example. The reason why the flu sometimes meets this
16 threshold of an epidemic or pandemic is because the flu
17 can be very dangerous, right? So we've heard of flu
18 epidemics, and we -- you know, we -- many of us now
19 have probably heard, in one form or another, of the
20 Spanish flu outbreak in the early 1900s, right, which
21 was declared a pandemic. And we have had a pandemic
22 flu also declared as swine flu in the 2000s, back
23 around 2009. So, you know, that's because they can
24 spread on a large scale. But the flu gets called an
25 epidemic or a pandemic because it is also associated
26 with high fatality rates in those cases.

1 Now, when it comes to the common cold, again to
2 differentiate, the common cold spreads at least as
3 readily as the flu. So in terms of scope, it would fit
4 into the definition of an epidemic or a pandemic, but
5 it's never going to be declared as such because it
6 never reached the threshold of danger.

7 So these viruses -- so what "endemic" means is if
8 it is -- essentially in layman's terms, it would mean
9 these are viruses that we basically have to learn to
10 live with over the long term. So SARS-Coronavirus-2,
11 we can see we've tried -- we've tried all kinds of
12 things to stop it for two years. Not only have we
13 failed, it's -- I mean, it's spread among people better
14 than it ever has in the two years in the form of the
15 Omicron variant, right? And that, we just have to show
16 the number of cases. So that -- the virus has been
17 very successful in bypassing all of our attempts to
18 stop it.

19 The ideal, the ideal outcome, if you're dealing
20 with something that causes disease and you identify it
21 at the epidemic or pandemic stage, meaning short-term,
22 the ideal outcome, right, and the goal that we would
23 always have would be to eradicate that pathogen so we
24 never have to deal with any risk of illness from it,
25 again.

26 But an endemic agent is one in which we have

1 failed to eradicate it, and the virus now is able to
2 bypass any and all the barriers that we put up to try
3 and stop it. So there's no question, no question, in
4 my professional opinion, this virus has all of the
5 characteristics of an endemic pathogen now, including
6 the fact that we can already define it as being with --
7 having been with us for long term, right? It has now
8 existed, and we don't know how long it existed before
9 it was identified, but if we go with the starting point
10 being when it was first identified, it's now been with
11 us for over two years. That alone suggests it's
12 endemic.

13 The fact that our most recent wave was just
14 completely out of control in terms of cases, not in
15 terms of danger, again, show this is going to be
16 endemic, and the reason -- there's several biological
17 reasons. These are viruses that are amenable to
18 mutation. The Coronaviruses will just constantly
19 mutate. That's why we keep getting the cold.

20 Corona -- and to explain this, the reason is in
21 order for a virus to propagate, it has to copy itself.
22 When these viruses copy themselves, they actually -- so
23 you think about this as -- literally if somebody is --
24 if you want to photocopy -- the way I like to explain
25 this, say you have a report, a very large report of
26 hundreds of pages that you want to copy, if you put it

1 on a modern state-of-the-art photocopier, almost all
2 the time, you are going to get a complete, you know,
3 100 percent accurate replication of that document,
4 right, the copy that you pull up; you're going to have
5 all the pages copied. Many of us had familiarity with
6 some of the, as we were developing this technology, of
7 not having to put one page at a time on top of the
8 glass and copy, many of us have had the experience of
9 the early versions of doing the fully automated
10 copying, and it would be very frustrating, because you
11 would end up with, at the end, you would find out, as
12 you take the document back to your office and you start
13 going through it, you're missing page 7, and you're
14 missing page 132, there was a paper jam, you know, that
15 occurred or something.

16 So that's what these viruses are like, when they
17 copy their genetic materials, they actually have built
18 in to -- and this is a survival mechanism -- they have
19 built in, so that copying process, and it's an
20 error-prone process, intentionally error-prone. It
21 incorporates mistakes into the copying the genome, and
22 that's so you end up with different versions of the
23 virus that can probe the environment that it's in, and
24 if that change confers an advantage to the survival of
25 the virus, that subspecies of the virus will start to
26 dominate. That's how this happens. And so that's why

1 we're always going to -- we're never going to be able
2 to stop these viruses from mutating, and that's why
3 they become endemic.

4 So for the flu, for example, the flu is actually
5 way better than Coronaviruses, including
6 SARS-Coronavirus-2, at mutating. It mutates much more
7 rapidly. That is why our flu vaccines are so
8 ineffective from year-to-year, because if we were
9 dealing with the same strains that we were dealing with
10 the previous year, our vaccines would actually be much
11 more effective, because they're based on last year's
12 strains. The problem is we're using last year's strain
13 to educate our immune system to deal with a much
14 different-looking current strain.

15 So it's not as extreme as that with the
16 Coronaviruses, but they do the same, just a -- slower,
17 slower. And so that means that, almost certainly, we
18 are going to be, whether vaccinated or not, no matter
19 what we do, I can pretty much guarantee, and no matter
20 whether we have been naturally infected or not, I
21 pretty much guarantee we are all going to be infected,
22 for the rest of our lifetimes, with the
23 SARS-Coronavirus-2 repeatedly. It won't be as often as
24 the flu, because, again, it takes longer to mutate, so
25 I -- but we will all be infected and reinfected.

26 But, again, based on the course that it's been

1 following, that if it's like these other pathogens,
2 they will be relatively mild to moderate infections,
3 just like all of the other endemic respiratory
4 pathogens.

5 And what we'll have to be diligent about is, like
6 all these other respiratory pathogens, we will have to
7 be diligent to look after the very high risk but
8 limited demographics. So, for example, even the common
9 cold can potentially be dangerous, for example, in
10 babies and the frail elderly, right? So that's what we
11 mean by endemic.

12 And in my professional opinion, this virus is now
13 endemic, and it's going to be with us likely for the
14 rest of our lives. I don't see how now we can possibly
15 render it extinct from the globe.

16 Q So does that mean all of our measures right now to
17 attempt to prevent the spread of SARS-CoV-2 are
18 completely futile?

19 A There's one thing -- well, so I can tell you, the most
20 dominant benefit -- beneficial, you know, strategy that
21 anybody can use with any respiratory pathogen,
22 including SARS-Coronavirus-2, is stay home when you're
23 sick. That applies to any of the respiratory pathogens
24 that we have, and so we -- well, that's the one thing
25 that I really, really, really, really hope the global
26 population will have learned from this declared

1 pandemic is just what I call is basic social hygiene.
2 This has been the most frustrating thing for somebody
3 who has expertise in this area.

4 I see it in my workplace, and, I will admit, I'm
5 guilty as charged at times. As a faculty member, there
6 are certain deadlines that we absolutely -- I mean, we
7 can't push them off. So, for example, I have to get
8 grants in order to pay my research team and run the
9 research that I do. So if there is a grant deadline, a
10 submission deadline, and I say, I'm sick, I'm -- so,
11 therefore, I'm not going to go into work, and I'm not
12 going to submit this grant; the granting agency is
13 never going to give me an extension. I lose the
14 ability to get that funding.

15 So there are times -- and some households, maybe
16 both parents work, so it's very inconvenient if you
17 wake up on a given morning and your child is quite
18 sick. As long as I -- you know, I don't think most
19 parents aren't going to send their kids in if they
20 think it's literally going to be detrimental to their
21 physical wellbeing, they're -- you know, they're going
22 to collapse or something. But if they wake up sick,
23 clearly sick with signs or symptoms, it can be very --
24 very difficult to -- you know, very inconvenient to try
25 and find childcare or cancel your own work schedule so
26 that you can stay home.

1 And so many of us have gone into the public with
2 these -- with all of these pathogens that we're talking
3 about, the flu and everything else. One of the reasons
4 why it spreads so rapidly in all of our populations and
5 workplaces and schools is because we don't acknowledge
6 the fact that we are actively sick, that we're sneezing
7 and coughing, or that we have our kids that are
8 sneezing, coughing, and we send them into these areas,
9 and, of course, that's going to spread the pathogens.
10 Sick people spread pathogens. That's how it works.

11 So what I like to highlight as an immunologist is,
12 for some reason, we've gotten into this mindset that
13 somehow asystematic people are doing this, spreading.
14 And this is there the -- I would say this is where the
15 biggest disagreement -- this is the crux of the whole
16 problem when it comes to some earlier interventions,
17 like masking, is what is actually happening with
18 asymptomatic individuals -- I can explain that, if you
19 want, at another time, because it's not -- just so
20 you're not -- directly relevant to this question, but
21 keep that in mind, because prior to two years ago, the
22 term that we used instead of asymptomatic is we used
23 the term "healthy people". Right, if somebody didn't
24 have signs or symptoms of illness, I mean, if you go --
25 so, you could be asymptomatic with anything, if you go
26 to a physician and you're asymptomatic, and they say,

1 Okay, what are your signs, you know, what are your
2 symptoms. And I mean, so they can assess signs, as
3 what we mean by signs. Signs is something somebody
4 else can see that provides evidence that you're sick.
5 Symptoms are things that you feel that can provide
6 indications that you're sick. So signs and symptoms
7 are used.

8 So a physician cannot see a lot of your symptoms,
9 you have to describe them. So, for example, if you're
10 feeling pain, unless it's severe pain, a physician
11 isn't going to be able to see that you're in pain,
12 unless it's severe, and then we might need facial
13 grimacing that let's them know. Otherwise, you can
14 have a pain that they have no idea, they have no idea,
15 you have to tell them that.

16 So that's why -- if you were traditionally to go
17 to a physician and say, I have no symptoms, they're not
18 going to investigate you for a disease, right, because,
19 again, I'd like to highlight, people who are
20 asymptomatic are healthy.

21 So what I would -- so this is the interesting
22 thing, what I would say is the number one thing that we
23 have done to prevent this has been to not allow sick
24 people to go around others. So the one thing I would
25 say has worked very well is the screening, the
26 screening that ultimately got implemented, which

1 basically is asking, Are you sick, right? And if
2 you're sick, don't go into work.

3 So I would agree, scientifically, rock solid data,
4 because if you're not -- if you're coughing and
5 sneezing, of course, you're going to be spreading a
6 pathogen, and if you're not, you can likely go in -- go
7 in to work.

8 So that's the only thing, that stay at home if
9 you're sick that I would say -- and I would say this is
10 going to be effective all over the place. What people
11 don't realize is, this is fascinating, I would --
12 because I think most of you are in Alberta, so go to
13 your Alberta public health website and start looking at
14 the SARS-Coronavirus-2, look at the -- on the
15 SARS-Coronavirus-2 data page, they actually have a
16 link, the influenza page, go there, and I encourage you
17 to look at the cases.

18 What you will see is huge waves of the flu. They
19 only have the last five years currently showing
20 publicly on your web page. 5, 4, and 3 years ago, they
21 show the classic huge waves of the flu coming through
22 Alberta. And you know what's happened in the last two
23 years? No flu, no cases of the flu. It's not because
24 the flu disappeared; it's because we have told people,
25 If you're sick, stay home. Right? Because we have
26 always left the flu, for some reason, and encouraged

1 people to go to work and go to school, or at least not
2 discouraged them enough when they're sick, and the flu
3 kills people, and the flu is dangerous.

4 So to me, I hope and pray that when this is all
5 done, the people will remember, You know what, if
6 nothing else, if I'm sick, don't go around other
7 people. That is the simple -- that is the -- that is
8 going to help public health enormously moving forward
9 with all infectious agents that we've ever been living
10 with. So, yeah, that's the number one thing.

11 And I know that those of you who are here today
12 specifically are most interested in masking, so let me
13 comment on the masking specifically. I am -- masks do
14 quite a good job at preventing the spread of infectious
15 diseases under a certain circumstance, when people are
16 sick.

17 And (INDISCERNIBLE) so -- (INDISCERNIBLE) -- so I
18 told you, I have to admit, myself, I am guilty as
19 charged about going in to work sometimes when I'm sick.
20 One of the things I try and do is I do try and isolate
21 myself in my office. I do tell people, if they come to
22 my office, I do tell people -- if they come to my
23 office and knock on my door, I tell them, You might
24 want to chat through the door, I'm sick. You know, and
25 when I do have to go around people, I will wear a mask.
26 I have done that, when I've gone in to sick -- and to

1 work sick previously, because these masks are
2 reasonably well-designed to capture the large water
3 droplets that come out of our respiratory system when
4 we cough and sneeze.

5 The only way -- so if somebody's not sick, that
6 means they're not coughing and sneezing, so the only
7 theoretical way that a virus then could come out of our
8 respiratory tract is through what we call aerosols,
9 which are super tiny droplets that the cloth masks and
10 surgical masks that we have been using, they're not
11 designed to filter that out, and so this is an
12 intuitively -- like we even know this intuitively.

13 If you've ever been really sick, so I know this
14 because I have been respectful of those around me, and
15 if I'm actively coughing and sneezing, I will wear a
16 mask if I feel that I have had to go around people
17 because I don't want to miss a critical deadline. And
18 I'll also tell you from my own experience, those things
19 end up slimy and disgusting inside the mask if you are
20 doing a lot of coughing and sneezing. Why? Because
21 they're very good at capturing those large water
22 droplets, and so you have to change the mask quite
23 quickly. I will also tell you that if I'm not coughing
24 and sneezing, they don't get wet and slimy; they're not
25 capturing robust amounts of the moisture that's coming
26 out of our lungs.

1 There's a huge amount of moisture that comes out
2 of our lungs during regular breathing throughout the
3 day. We know -- just that's what happens. So in
4 Alberta, you'll notice like in Ontario, especially
5 during the winter, one of the phenomena are the
6 humidity goes way down, right? Cold air humidity tends
7 to be very low, and so if you don't have a humidifier
8 in your home, typically what happens during the winter
9 is you'll notice that when you wake up in the morning,
10 you will tend to have a much dryer throat than at any
11 other time of the year, and that's because there's so
12 much moisture that's given off, and all night long,
13 it's the air is wicking moisture as you breathe it out,
14 and your body's actually having trouble replenishing
15 it. You end up much more dehydrated in the morning
16 than -- and during the winter than you do at any --
17 during any other seasons. So there's a lot of
18 moisture, and the fact that it's not getting soaking
19 wet tells you that. So, again, a long answer, but I
20 want you to fully understand.

21 So to summarize, in terms of what's been
22 implemented, I think the number one effective strategy
23 has been keeping sick people away from others, and
24 hopefully that continues, and the masking. So if
25 people were to have to go around other people when they
26 have SARS-Coronavirus-2, masks would definitely help

1 prevent the spread of SARS-Coronavirus-2.

2 But in healthy people, I have never been able to
3 recommend masking of people who are not actively
4 coughing, sneezing, you know, who are not sick. So, in
5 other words, if you pass the screening that you're
6 supposed to do every morning before you go in, in my
7 professional opinion, there's nothing a mask is going
8 to do to protect yourself or others around you at that
9 point, because you are not -- you are not and nor are
10 those around you expelling the type of
11 infection-spreading water particles that spread
12 disease.

13 Q So symptomatic masking is rational and effective?

14 A 100 percent. I believe -- again, I hope that that will
15 be highly encouraged for everybody around the world
16 moving forward, that if they are going to make the
17 decision to send their child to school when sick or if
18 they're going to go in to work when sick, for the
19 respect of the health of others, yes, put on a mask,
20 100 percent.

21 Q But is asymptomatic irrational and ineffective?

22 A Yes, for the reasons that I said, because then you're
23 not spreading those large droplets that masks are
24 designed to stop.

25 Like -- so a lot of people don't realize, like
26 when you think about even a surgical mask and you think

1 about a surgeon, right, there's been studies that have
2 looked at this, this context, what people don't realize
3 is what those surgical masks are designed to do. It
4 doesn't sterilize your breath in any way, right? What
5 it does is it stops any large droplets. When a surgeon
6 is working over a surgical area, an open wound, it's
7 making sure that -- now, this is the other thing, any
8 surgeon who is doing surgery ideally should not be
9 doing the surgery if they are sick. But literally what
10 they're there for is to stop large water droplets.

11 It would be to -- and literally, for example, one
12 of the reasons for wearing the mask is drops, spittle.
13 Hey, we've all experienced that embarrassing time where
14 we're talking, and then, all of a sudden, a little bit
15 of spit comes out, and we're like, oh, I hope nobody
16 saw that, right? That's literally one of the reasons
17 why they wear the mask, to make sure large water
18 droplets, including spittle, don't drop out into the
19 surgical wound. So they're not designed, like I said,
20 again to filter out with any kind of efficiency the
21 aerosols, which are these super tiny water droplets
22 that are far tinier than the pore sizes in these masks.

23 And so, again, to highlight this, there's
24 something else that's important, because, again, this
25 comes back to the idea of symptomatic versus
26 asymptomatic or what I would call healthy people. Now,

1 what happens is in order for somebody to get sick, they
2 have to initially be infected. As I pointed out, the
3 infection does not necessarily equal sickness or
4 disease. And the other thing that's important to note
5 is infection certainly does not mean immediate disease.
6 Because you have a pathogen in your body, so you might
7 be -- so when people get sick, this is what happens,
8 when we do get sick, this is the sequence of events:
9 We have to be exposed to a certain threshold of the
10 pathogen, which is not once. Our bodies, we have
11 innate -- like we have physical barriers that
12 immediately protect us from infection. For example,
13 one of the things we have in our airways, our airways
14 are lined with mucous. That's one of the reasons why I
15 just said we have so much moisture coming out of them,
16 we're constantly covering all of the membranes
17 throughout our respiratory tract with mucous.

18 So if we have a pathogen come into our body, for
19 example, one of the immediate lines of defence is that
20 mucous, it will get buried in the mucous, and that
21 mucous constantly gets removed from the body. Even if
22 you're healthy, if you never clear your throat, you're
23 eventually going to have to clear your throat because
24 our airway is full of -- or your cells with these
25 specialized hairs on them, we call them cilia, and
26 their job is literally to, like fingers, to move this

1 mucous up. Because if you think about it, since our
2 airways are constantly producing mucous, if we didn't
3 have any way of getting that mucous out of the body,
4 under gravity, the force of gravity that would migrate
5 down into our lower airspaces, and we would literally
6 drown. They would fill up our lower airways, and we
7 would no longer be able to facilitate gas exchange. So
8 these little hairs push the mucous up and out of our
9 body. That's why, you know, it may end up getting --
10 accumulating in our throat so we can cough it out, or
11 if it's in our nose, we'll end up, you know, with the
12 mucous accumulating where you've got to blow it out of
13 our nose.

14 Now, if it's a pathogen that has been able to
15 bypass those barriers, our immune system has set up
16 what are called sentinel cells. These are cells that
17 are strategically located at critical entry points for
18 pathogens into the body, so they're distributed all
19 throughout our airways underneath the mucosal surface,
20 below that -- you know, the mucous that's on the
21 surface of our cells. And if a pathogen can get by
22 that, these sentinel cells very quickly identify that
23 there's a pathogen and start our immune response to
24 start clearing this.

25 Now, there's two parts to an immune response. One
26 is we call it the innate response. So, first of all,

1 we have to understand, actually there's three
2 technically in terms of timing. The one is physical
3 barriers that I just talked about like the mucous or
4 cell barriers, right, that a virus would have to get by
5 to get into the body. Those are always present. There
6 is no immune response that has to be mounted. That's
7 why, for example, burn victims, that they lose a large
8 amount of their skin, are highly prone to infections
9 because they've lost that physical barrier.

10 Now -- so in the lungs, these sentinel cells, if
11 the pathogen gets past these initial physical barriers,
12 and so that's why you have to have a certain threshold.
13 One viral will not cause disease; you have to bombard
14 these natural barriers with high numbers of the virus,
15 so you have to have it delivered to you, you have to
16 inhale a threshold dose, and that changes depending on
17 the infectivity of the virus.

18 But so you have to -- if you get that threshold
19 dose and your physical barriers can't deal with it, you
20 have those sentinel cells that will immediately start
21 detecting that virus and starts penetrating in -- and
22 starts infecting cells past those physical barriers,
23 and that they will start -- and trigger a whole series
24 of events that lead to what we call innate immune
25 responses, so those are very rapid, short-term
26 responses. And then if they fail to clear the

1 pathogen, then we mount the types of responses that
2 we're trying to get with these vaccines.

3 We call them acquired or adaptive immune
4 responses, and the key effector mechanisms there, the
5 key weapons are T cells, which could kill off
6 virus-infected cells so they can't serve as virus
7 replication factories and antibodies, which can block
8 viruses from getting into other cells. Now, those
9 latter things can take up to -- it takes about two
10 weeks for those T cell and antibody responses to peak,
11 so the innate response is very fast.

12 And so if you have an infection of the lungs, one
13 of the first things these sentinel cells start to do in
14 terms of communicating is they get these cells to
15 produce the mucous, to start producing lots of it,
16 because it -- we've got a virus that's bypassing this
17 barrier, so let's make this barrier even more rigorous,
18 a thicker mucous layer. And so that's why when we get
19 an infection, as the virus starts replicating -- this
20 is important -- so, in other words, early on in
21 infection, yes, so if we were to take somebody who was
22 infected early on, would we be able to detect the
23 virus? Yes. Is that virus a replication-competent
24 virus particle? Yes. Is it going to be able to infect
25 and cause disease in other people? No, for two
26 reasons: (a), a person has to reach a threshold level

1 in your own body such that you're delivering such a
2 large enough quantity of the virus for another person
3 to inhale that threshold dose to get them sick. The
4 second reason is you could even have potentially a
5 large amount of the virus in your body, but if you're
6 not sending it out of your body, you're not going to be
7 able to infect anybody else, and so this is the thing.

8 So our immune system -- so viruses take advantage
9 of this early immune response for the transmission
10 process. So because what happens is this mucous
11 secretion starts increasing, and so that means we have
12 a lot more mucous being brought up into our throat and
13 into our -- and our nasal passages, right, producing a
14 lot more of this. And so the body, to try -- you know,
15 what it wants to do is get rid of as much of the viral
16 particles as it can, because the fewer virus particles
17 it has left in the body, the more easily it's going to
18 be able to clear that infection.

19 And so the way our immune system gets it out of
20 the body is it causes us to cough out all this mucous
21 that's accumulating, all the liquid that's full of
22 these viral particles, and we sneeze it out of our
23 nose. That's literally -- we're trying to dump as much
24 of the viral particles out of our body as we can. That
25 is when we become an infection hazard to other people.
26 And that's why I say these masks are awesome at

1 stopping the transmission when this transmission is --
2 when there's the high risk of this transmission, and
3 that's when people are actively coughing and sneezing.
4 As long as you have the virus contained in your own
5 respiratory tract, you know, you're not doing that.

6 So in theory, you can -- so this is actually kind
7 of interesting. Much more so than viruses like the
8 influenza viruses that we live with, the
9 SARS-Coronavirus-2, there's been a lot of literature
10 suggesting, therefore, that one of the ways the virus
11 might spread is through aerosols, right? And so
12 that's -- because if you're not coughing, and you're
13 not sneezing, then the only way the virus theoretically
14 can get out of your body is being carried on the small
15 water droplets that come out of our -- come out with
16 our breath, right, with every exhalation we give.

17 So then that means that the masking, therefore, if
18 somebody is not symptomatic, the only thing that it
19 could potentially have to stop in terms of the virus
20 leaving the body would be these aerosols. And like I
21 said, while -- you know, I've got lots of figures and
22 pictures to show that, you know, the pore sizes of
23 these masks are not designed, they're not nearly small
24 enough to stop these viral particles from getting
25 through, that the water droplets that could potentially
26 have the virus on them, the pores are way, way, way too

1 big to stop that.

2 Now, granted, so, for example, I noticed in
3 Dr. Hu's report that he mentioned that -- actually
4 maybe it wasn't even his report, but some have pointed
5 out that it -- and I agree, it's not like it's one
6 pore, if the virus gets past one pore, it's out of the
7 mask. So, example, the surgical masks actually have
8 three layers. So what it is more like is it's having
9 pores all offset from one another. There's a whole
10 bunch of pores that the virus would have to navigate.
11 It would be like going through a maze.

12 So what these masks can do with aerosols is it can
13 slow down the transit time it takes to navigate this
14 maze of large pores that are all offset before it
15 leaves the mask, but it doesn't stop it from leaving
16 the mask. And, in fact, what ends up happening, this
17 is the predominant thing, this is also in my figures is
18 because it has to navigate this sort of complex maze to
19 get through all the open doorways, that provides
20 resistance, and any gas will follow the path of least
21 resistance. And that's exactly why when we wear our
22 masks, the vast majority of what we exhale never even,
23 unfortunately, gets through the filtering material,
24 again, which isn't designed to filter out these
25 aerosols, but rather bypasses it.

26 And we've all seen that phenomenon; I mean, you

1 know, I wear glasses, especially now is not a great
2 time, so I encourage anybody, put on a mask with
3 their -- so what's especially -- what I especially
4 recommend, if you -- so I have this every time I go to
5 the grocery store, go outside for a little bit, let
6 your glasses, you know, accommodate to the temperature
7 around, right, so they get nice and cold; then go into
8 a store, go into a warm location and put on your mask,
9 right, put on your mask and step through the door into
10 a warm location. Now your glasses are such that any
11 moisture that's coming out is going to readily
12 condense. I find it so frustrating because I can
13 hardly shop. It takes me about 10 minutes before I can
14 start shopping because I'm constantly taking my glasses
15 off and wiping them because of all the fogginess
16 happening. That's the aerosols, and that's, of course,
17 because of the mask. Even with the pinch piece, if you
18 have a good mask, a surgical mask that have the middle
19 pinch piece, very difficult to get a seal properly
20 around your nose. And so when you exhale, because
21 we're slowing down the progress of the air through the
22 filtering material, it'll just simply exit alongside
23 the nose; that's where we see the fogging.

24 Now, the other place a lot of people don't realize
25 is even the surgical masks are not designed to fit
26 properly around -- by -- in front of the ears, and so

1 you almost always have these large, relatively large,
2 triangular gaps at the back of the mask where it loops
3 over the ears. And so literally when we exhale with
4 these masks, the vast majority, when we exhale, fires
5 up past the nose and out past the ears, and so there is
6 no filter. And then, like I said, the limited amount
7 that does come through the filter, it's not designed to
8 stop these aerosols.

9 Like I said, if it did -- like, again, I can take
10 off my glasses right now, and, for example, watch
11 (UNREPORTABLE SOUND), I just breathed on my glasses,
12 and you can probably see it's fogged quite a bit
13 compared to my other lens, right? That's one exhale.
14 So you can imagine if I was wearing a -- had been
15 wearing a mask and go -- in some cases, I've had to,
16 you know, because of these requirements, if I'm wearing
17 a mask, there's not much aerosol coming out in just one
18 breath. You can imagine how much liquid would
19 accumulate in your mask if it is, in fact, filtering
20 that out. If it's filtering it, it means it has to
21 stop them from getting out in the air, from going
22 through. If it's not getting into the air, then it's
23 staying in the mask, the masking material. But I can
24 wear these masks, if I'm not coughing and sneezing, I
25 can wear them, and my mask will not get wet.

26 So, again, it's just intuitive to the point

1 where -- I like to use -- I'll just finish with this,
2 an example which I think is helpful to consider this.
3 Early on in the pandemic, in fact, every time I went to
4 get my hair cut, and thankfully I was able to, you
5 know, after quite some time, because my hair was
6 horrible, like many of us, for the longest time, but,
7 you know, when I actually first went and understanding
8 this, out of respect for the hairdressers, I tried to
9 explain this to them and actually asked them if they
10 wanted me to take my mask off, because if they were
11 worried about aerosolized transmission, right, the mask
12 for filtering this stuff, I tried to point out to them,
13 If it's my breath that you're worried about, do you
14 want me to take my mask off. Because they always cut
15 my hair from behind, right, and that way, if they're
16 afraid of my breath, I'm directing it away from them.
17 And they -- you know, but, no, because of the policy,
18 said no, no, no, no, everybody has to be masked to
19 keep -- you know, to keep us safe, and I tried to
20 explain.

21 And so the best way is -- again, to envision this,
22 again, if you go out in the winter time, cold air, and
23 you put your mask on, you'll see exactly what I'm
24 saying -- I put a picture of this in my report --
25 you'll -- because you can see these aerosols, because
26 these tiny water droplets, when it's really cold, will

1 condense, right? Again, if water -- the gaseous water
2 as -- when it's cool, it will turn into liquid. And so
3 winter time is a great time because you can see the
4 aerosols condensing in the cold air around you. And so
5 when you breathe out in the winter, you'll see the --
6 it blasts up, you see this fog essentially as the
7 aerosols are condensing, blasting up past your nose and
8 out past your ears just like I said.

9 And I've shown people, if you're a hairdresser,
10 what it does is it encases your head in this huge cloud
11 of aerosol, all right. I've tried to point this out to
12 my hairdressers is that if you are genuinely afraid of
13 my breath, you know, as an asymptomatic individual, do
14 you not realize that the whole time your hands are
15 immersed in my aerosols by you forcing me to blow them
16 around my hair instead of away from you.

17 So I'd just like to highlight that, because,
18 again, that's kind of science meeting the reality that
19 we currently have and how the two just simply don't
20 align. So I'll --

21 THE CHAIR: Dr. --

22 A -- just stop there.

23 THE CHAIR: -- yeah, Dr. Bridle, I think
24 it's now 10 after 12, Mr. Kitchen. I think it's time
25 for a break.

26 MR. KITCHEN: Yes, I agree, however, I do

1 want to ask one question.

2 Q MR. KITCHEN: And, Dr. Bridle, I invite you
3 to answer this in 5 minutes or less, and we can come
4 back to it after the break, but I want to ask this
5 question, because it's connected to the conversation
6 we've had. Dr. Bridle, so you've said now that where
7 we're really at is endemic, but I think the burning
8 question we all have is was SARS-CoV-2 ever actually a
9 pandemic? Right? You said declared pandemic, and you
10 said that there was a (INDISCERNIBLE) severity for it
11 to actually be really a scientifically a pandemic. So
12 was SARS-CoV-2 ever a pandemic, and if so, when did it
13 cease being a pandemic scientifically?

14 A Okay, yeah, that's an interesting question, but I can
15 keep this short, yes. Sorry about that, you're getting
16 the typical, you know, scientific, we like to make sure
17 that all the details are relayed. But in this case,
18 so -- this is -- the pandemic was declared again,
19 assuming that the -- sorry, Karoline --

20 (AUDIO/VIDEO LOST)

21 MR. LAWRENCE: Sorry, can we just -- sorry to
22 interrupt, Dr. Bridle -- I think we've lost a Tribunal
23 Member --

24 A Oh, okay.

25 MR. LAWRENCE: -- Dr. Martens, I don't see
26 her. Could we just --

1 MR. KITCHEN: Well --

2 MR. LAWRENCE: -- (INDISCERNIBLE) for a
3 minute. Oh.

4 MR. KITCHEN: Dr. Martens, if you need us to
5 break, we can, you know, we --

6 THE CHAIR: Dr. Martens is here.

7 DR. MARTENS: No, yeah, I came back, yeah,
8 sorry.

9 A Okay, great --

10 THE CHAIR: Thank you, Mr. --

11 A -- I don't think I said anything --

12 THE CHAIR: -- Lawrence.

13 A -- that you missed, Dr. Martens. Did -- what was it --
14 yeah, I think I was just starting to answer, so I'll
15 just start again --

16 THE CHAIR: Sure.

17 DR. MARTENS: Yeah, just when you were going
18 to answer the question, yeah.

19 A Oh, okay, great.

20 DR. MARTENS: Thank you.

21 A Yeah, so this pandemic was declared with, again, on the
22 initial concern that the infection fatality rate might
23 be as high as 10 percent, and, again, as I've said, an
24 infection fatality rate certainly between 1 and 10
25 percent. I don't think there's very many scientists
26 around the world that would agree that that would be a

1 pandemic situation provided the pathogen is genuinely
2 dangerous, because then you're, you know, talking
3 about -- well, the infection fatality rate, that is an
4 indication that it's going to be dangerous to far too
5 many people.

6 But the reality is, just like I said, as we have
7 come to appreciate the size of that denominator, which
8 we didn't know at the beginning, we now know that
9 the -- the real infection fatality rate is in the --
10 was in early 2021 in the ballpark -- and we're not even
11 sure it's the full estimate because we don't have a
12 full understanding of how big the denominator was. But
13 at that time, it was estimated to be about .15 percent.

14 So to put that in perspective again, that was
15 dealing with the earlier variants, which is when the
16 pandemic was declared, in that context. And, again, at
17 .15 percent, that is not a problem of pandemic
18 proportions. It is -- it just simply is -- that's a
19 fact.

20 And so it's not a case -- and then, again, that's
21 for the entire population. And if we go to the
22 demographics that we know, which is the vast majority
23 of the people that are in the -- and the lower-risk
24 demographics, it would be much lower. Again, I can't
25 say exactly how much, but it would be lower.

26 So, again, to put that in perspective of .15

1 percent, that is in the same realm as a bad flu season
2 and -- for which we never declare that to be a
3 pandemic, despite the fact that, you know, the flu
4 spreads around the world, nor is it declared an
5 epidemic, even though it certainly meets that
6 definition in terms of its spread throughout Canada.

7 Now -- so the thing to understand -- and now, as I
8 point out, as far as Omicron, it would be even lower,
9 but that's because there's been some biological changes
10 as well to the virus, right, that's made it less
11 deadly. So if I was going at .15 percent, because
12 that's dealing with the earlier variants where -- which
13 were relevant when the pandemic was declared, just to
14 clarify, it's not that we went from an infection
15 fatality rate of 1 to 10 percent to .15 percent, right,
16 because that would require some kind of biological
17 change or effective intervention that's completely
18 stopping those deaths. And, no, it's the initial
19 estimate was, the initial concern was that it was that
20 high.

21 So what happened is the mathematics became more
22 accurate by the time this paper was published. That
23 same math applied to the beginning of the pandemic.
24 So, in other words, if we knew by early 2021, you know,
25 what the accurate -- if we had those same accurate
26 numbers at the beginning of the pandemic, the pandemic

1 would not have been declared; it would not have been a
2 problem of pandemic proportions. As I've pointed out,
3 the flu is -- equals this, a bad flu season.

4 So, in my opinion, and based on our own policy,
5 health policies in Canada, this would not have
6 qualified as a pandemic. It qualified as a pandemic
7 because we thought the infection fatality rate was much
8 higher than what it really has been and what it has
9 proven to be.

10 And the point that I'd like to make as well is,
11 because a lot of people have probably heard of this
12 term with the emergency use authorization in Canada for
13 the vaccines, in Canada, we called it the authorization
14 for interim use, but it means the same thing.

15 And the reason why that's important is because
16 that's something -- and this whole -- actually, this
17 whole concept actually we have right now of overriding
18 constitutional freedoms, and we're hearing about this
19 all the time, what a lot of people don't realize is,
20 you know, this imposition where the Government can
21 start dictating things and overriding potential
22 individual, you know, constitutional policy rights is
23 often -- is based on the perception -- like the impact
24 of something on Canada. Technically it has to
25 incapacitate the ability for Canada to operate in a
26 certain way.

1 So a classic example would be if we were at war.
2 At war, that's where you can have overriding executive
3 decisions, right, and if Canada is at risk of being
4 destroyed, being overtaken, right, being taken over.

5 So at a 10 percent or even 1 percent, that would
6 have a dramatic impact on Canada, you know, death rate;
7 that would have a dramatic impact on Canada to be able
8 to function as a country. But at 0.15 percent, we've
9 never done -- like I said, we have that for the flu
10 routinely.

11 So, again, I hope that helps put it in some
12 perspective. So, again, based on the science, the
13 publications, my, you know, summarized answer to you,
14 Mr. Kitchen, is that, with the math corrected, this has
15 not been an issue of pandemic proportions, true
16 pandemic proportions.

17 MR. KITCHEN: Thank you. We'll leave it
18 there for lunch.

19 Mr. Lees, I'm fine if you want 45 minutes or an
20 hour, an hour-and-15, I'm fine either way. As much
21 as -- we'll definitely finish today. I think we're
22 going to be a while yet, but we will finish today.

23 THE CHAIR: Okay. Let's take an hour;
24 let's come back at 1:15. I think we all -- we went
25 straight through from 10:00, so I think an hour is
26 fine, and we'll see everybody at 1:15.

1 And do we need to caution the witness in any
2 respect, Mr. Pavlic?

3 MR. KITCHEN: You're muted.

4 MR. PAVLIC: I've got it now.

5 Other than --

6 THE CHAIR: Okay.

7 MR. PAVLIC: -- he's not supposed to
8 discuss his evidence with his counsel or anyone else --

9 THE CHAIR: Yeah.

10 MR. PAVLIC: And I'm sure --

11 THE CHAIR: Thank you.

12 MR. PAVLIC: -- Mr. Kitchen has given that
13 warning in advance.

14 THE CHAIR: Okay, we'll see everybody at
15 1:15. Thank you.

16

17 PROCEEDINGS ADJOURNED UNTIL 1:15 PM

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1 Proceedings taken via Videoconference for The Alberta
2 College and Association of Chiropractors, Edmonton,
3 Alberta

4

5 January 28, 2022 Afternoon Session

6

7 HEARING TRIBUNAL

8 J. Lees Tribunal Chair

9 W. Pavlic Internal Legal Counsel

10 Dr. L. Aldcorn ACAC Registered Member

11 Dr. D. Martens ACAC Registered Member

12 D. Dawson Public Member

13 A. Nelson ACAC Hearings Director

14

15 ALBERTA COLLEGE AND ASSOCIATION OF CHIROPRACTORS

16 B.E. Maxston, QC ACAC Legal Counsel

17

18 FOR DR. CURTIS WALL

19 J.S.M. Kitchen Legal Counsel

20

21 K. Schumann, CSR(A) Official Court Reporter

22

23 (PROCEEDINGS RECOMMENCED AT 1:16 PM)

24 THE CHAIR: We will be back in session for
25 the afternoon, and just before I ask Mr. Kitchen to
26 continue, I just remind you, Dr. Bridle, that you are

1 still under oath.

2 A I understand, thank you.

3 THE CHAIR: Okay. All right, Mr. Kitchen.

4 DR. BYRAM BRIDLE, Previously sworn, Examined by

5 Mr. Kitchen

6 MR. KITCHEN: Thank you. And, Chair, I'll
7 try to be mindful of the time. If we get an hour or so
8 into it, and we're still going, I'll try to find a good
9 time for a break.

10 Q MR. KITCHEN: Dr. Bridle, thank you so much
11 for all that information prior to the lunch break, but
12 to continue where we left off, the question I had is we
13 talked -- you talked about how isolation works, masking
14 for asymptomatic doesn't work, and then we didn't get
15 into any other restrictions yet, but I'm very curious,
16 if isolation at home does work, and you said,
17 intuitively, it does, can you give some insight as to
18 why Omicron is still spreading the way it is unabated?

19 A Yeah, so, first of all, just to clarify, meaning
20 isolating at home when symptomatic, right, when
21 actually sick. I don't recommend that people have to
22 stay away from others if they're not sick.

23 So, yeah, in terms of the Omicron, you know, so
24 it's a multi-faceted answer, I guess. And so, first
25 of all, I guess I'll start off with the, you know, the
26 related topic of the vaccines, because that was

1 purported to be -- you know, we were hoping that was
2 going to be the number one strategy for stopping the
3 spread of this. And then the idea being, you know, the
4 concept was that only those who were vaccinated would
5 not be capable of transmitting the virus, and those who
6 were unvaccinated would be capable of transmitting the
7 virus, and, hence, you know, the isolation, kind of
8 segregation that's been occurring in society.

9 But so one needs to understand a little bit about
10 vaccines to understand that aspect because that's
11 critical, because, again, like I said, that was
12 supposed to be the number one strategy for stopping
13 transmission.

14 So these COVID-19 vaccines -- so, again, I mean,
15 I'd like to highlight and my record shows for itself,
16 being a publication record, that I've been actively
17 publishing in the area of vaccinology during the
18 declared pandemic. I am a vaccinologist. So, again,
19 you know, my expertise is in viral immunology, and
20 specifically I focus heavily on vaccinology.

21 So I am actually strongly in support of the
22 concept of vaccine mandates, but these COVID -- current
23 COVID-19 injections look nothing like and they perform
24 nothing like any historically mandated vaccines. And
25 that helps to understand a large part of the question
26 you're asking.

1 So what I mean by that is we're all probably
2 familiar with the vaccines that are mandated during
3 childhood, so the childhood -- what we call the
4 childhood series of vaccines. So that's things like --
5 things like the mumps, measles, and Rubella vaccines,
6 the ones we -- you know, we get for tetanus that get
7 updated every 10 years and so on, chicken pox as of
8 2010.

9 And so all of these previously mandated vaccines
10 have a quality that we refer to, as immunologists, as
11 conferring sterilizing or near sterilizing immunity.
12 And what that means is technically if somebody's
13 vaccinated, they can still get infected because
14 infected means you the get the pathogen in your body.
15 But what sterilizing and non-sterilizing --

16 THE CHAIR: Dr. Bridle, Dr. Bridle --

17 A Yes.

18 THE CHAIR: -- you're frozen.

19 MR. KITCHEN: He's not frozen.

20 THE CHAIR: Yeah, he's back now.

21 A Okay, do I need to repeat anything?

22 THE CHAIR: Just the last sentence.

23 A Oh, okay, thanks. So previously mandated vaccines
24 confer what we call sterilizing or near-sterilizing
25 immunity. And so sterilizing immunity means like, in
26 all cases, a pathogen can still get in your body. So a

1 respiratory pathogen like SARS-Coronavirus-2, obviously
2 we can still inhale it. If we had sterilizing
3 immunity, it would mean that we have the appropriate
4 type and quantity of antibodies in our upper
5 respiratory tract to be able to fully neutralize that
6 virus, meaning the antibodies would bind to the virus.

7 And that's one of the reasons why we've been
8 targeting the spike protein. The spike protein is the
9 thing that sticks up on the surface of the virus that
10 grabs onto the receptor on our cells, the same receptor
11 I was telling you about earlier that children express
12 at much lower concentrations, which is why they're
13 inherently protected.

14 So if you have an antibody that binds to the spike
15 protein, then that spike protein can't grab onto our
16 cells. And if the virus can't get into our cells,
17 there can be no replication whatsoever and, therefore,
18 no risk of disease and no risk of transmission. That
19 would be sterilizing immunity.

20 Near-sterilizing immunity means that the virus,
21 probably there would be a lot of neutralization of the
22 virus, but the virus might still be able to infect a
23 limited number of cells that we would have sufficient
24 additional immunological mechanisms to clear that virus
25 from the infected cells, things like T cells, which are
26 very good at this, and it would clear the virus again

1 before it would replicate to that -- to a quantity that
2 would reach what I referred to previously as the
3 threshold dose required to infect somebody else. So
4 that would be what we call near-sterilizing immunity,
5 meaning you can get some infection yourselves, limited
6 replication, but you're not going to get sick because
7 there hasn't been enough replication to cause illness,
8 and you're not going to transmit, because, again, you
9 haven't reached that threshold dose that needs to be
10 delivered. So that's what all our historical mandated
11 vaccines look like; they do this.

12 Oh, and the other thing they do is they -- they
13 not only confer this type of immunity but for very long
14 periods of time. So when you think about it, once we
15 are done our childhood vaccination series, except for
16 the, you know, update every 10 years for things like
17 diphtheria and -- for example, the -- and tetanus, we
18 never have to be vaccinated again, we don't have to get
19 boosters. So we call that robust or long-lasting
20 immunity. So that's the nature.

21 Now, we're all probably seeing -- you know, we're
22 already, in Canada, rolling out -- well on our way to
23 rolling out third doses. We've actually been
24 implementing fourth doses in some long-term care
25 facilities where there's been a complete inability to
26 control the spread of the Omicron variant. Israel, you

1 know, of course, is large -- most of their population
2 has got four doses.

3 So this highlights something, this is three to
4 four doses in well under a year. So that -- so,
5 clearly, they don't -- they don't have the duration of
6 immunity; they don't provide the, you know -- a
7 reasonable length of protection. That alone means
8 these vaccines will never be able to stop the
9 transmission of this virus, because there's no way we
10 can get the whole world vaccinated and under three
11 months, such that the people, you know, no longer -- we
12 haven't reached the point where people have lost
13 protection. Otherwise, if you get only -- if it's only
14 through part of the population by three months, by the
15 time you're vaccinating new people, the people who were
16 vaccinated at the beginning are going to be susceptible
17 again. So that's one of the problems.

18 The other problem is that -- I already explained
19 this, that the immunity is -- just really protects the
20 lower airways. And the Omicron variant, we're talking
21 about a version of the virus now that preferentially
22 stays in the upper airways, so there isn't that --
23 those aren't those neutralizing antibodies in the upper
24 airways conferred by this vaccine that would confer
25 that sterilizing protection.

26 So on that basis -- oh, and the other thing is

1 that there's been so many mutations in the spike
2 protein of the Omicron variant that the immunity
3 conferred by this, which is spike-protein specific, is
4 largely irrelevant. A lot of those antibodies can't
5 even physically bind to the spike protein anymore
6 because it's changed too much.

7 So for all those reasons, that's one of the
8 reasons why we're seeing the vaccine [sic] circulate
9 freely, because it's largely then the unvaccinated that
10 have been -- that have been -- or have continued to be
11 asked to isolate and have been basically -- you know,
12 segregated from society. So they are, you know, stay
13 at home, not being able to go into the workplaces and
14 so on.

15 So the fact -- and like I said, I've said this
16 before as well, some of the -- for those in school
17 settings or work locations, we're talking about people
18 where almost everybody is vaccinated, but the virus --
19 like I said, despite that, we had this record peak for
20 cases with the Omicron variant. So that's one of the
21 reasons, because the vaccines, unfortunately, have
22 failed to meet their goal.

23 If these conferred long-lasting sterilized or
24 near-sterilizing immunity, I may have had to have
25 retracted my earlier statement about this becoming
26 endemic. We may actually have had a chance of

1 eradicating this virus. But, you know, because of
2 these weaknesses in what an ideal vaccine should be --
3 I should even point out that even the very definition
4 of a vaccine was altered about a year ago to
5 accommodate these inoculations that we're providing,
6 because, again, the definition of a vaccine was one
7 that conferred sterilizing or near-sterilizing
8 immunity. They were originally designed to not blunt
9 the most severe forms of disease but actually prevent
10 disease and prevent transmission to others. So that's
11 why -- that's a primary reason why we're seeing this
12 virus continue to circulate.

13 So now when you think about that, it's annoying
14 that the vaccines are now largely irrelevant in terms
15 of their ability to stop transmission; at the same
16 time, we have kept -- we have remained -- keeping the
17 vaccinated individuals from workplaces, we continue to
18 require them to wear masks and do the physical
19 distancing. So -- and, again, the fact that we've been
20 doing this all along, but the waves of cases just keep
21 getting progressively higher, although, like I said,
22 the virus is progressively less -- that's the good news
23 in all this. As that happens, the virus becomes -- has
24 become less dangerous. So despite the spread, there is
25 less potential harm to people. So I always want to
26 remind people I don't want to be instilling unnecessary

1 fear.

2 But nevertheless ever increasing cases, and since
3 the focus is on cases, that means that we've been
4 trying to stop our cases. And, again, I won't say
5 cases of COVID-19, that is what we ultimately want to
6 prevent, but what we're actually measuring, again, are
7 positive test results for potential infection with
8 SARS-Coronavirus-2.

9 So what it tells us is that the masks and the
10 physical distancing, despite the fact that we have not
11 only maintained that all the way through but actually
12 removed the vast majority of people from the population
13 who are unvaccinated tells us that that combination of
14 those critical three, which are supposed to be the
15 three things to -- to end this pandemic, the
16 vaccination, the masking, and the physical distancing,
17 you know, that's real world evidence, you know, that
18 we've all seen that really we can't -- argue doesn't
19 exist, right, because we see it in our workplaces and
20 schools. It clearly shows those aren't working. They
21 can't be working while we're actually having, during
22 this process of maintaining those three strategies,
23 while removing most of those who are unvaccinated from
24 those scenarios, when you actually see ever-increasing
25 peaks in the, you know, recent waves, that clearly
26 suggests that these are not working efficiently, right?

1 They're not -- they're certainly not efficient
2 solutions to resolve the problem as we have it.

3 That's why many people are working right now on
4 trying to develop vaccine strategies that ideally would
5 be sterilizing or near-sterilizing because that would
6 provide, potentially, an ideal way to prevent this.
7 But then one even argues whether it's necessary if the
8 virus isn't dangerous enough because -- this is
9 something I teach my students -- one of the questions I
10 get asked all the time, with all the vaccine
11 technologies that we have, why don't we have a vaccine
12 for the common cold. Well, the reason is simple, no
13 medical intervention, no medical intervention comes
14 with zero risk. So you always do a risk-benefit
15 analysis.

16 And so the primary reason why we have never
17 developed a vaccine against the cold that we try and
18 implement is the cold in the vast majority of people
19 again is not a major issue. And so if people aren't at
20 substantial risk of harm from a pathogen, we're not
21 going to introduce an unknown potential amount of harm
22 from a novel medical intervention, and so that's why
23 we'll never have vaccines for the common cold.

24 But, nevertheless, I just wanted to bring that up
25 there, that that might be a viable strategy, if needed,
26 if we were to get a future version of the -- you know,

1 future variant or strain of the virus that were to
2 attain more dangerous characteristics again. But with
3 the current tools that we have, we have seen the
4 Omicron variant, the spread, the transmission go
5 completely out of control. So, yeah, I'll end it
6 there.

7 Q MR. KITCHEN: Well, thank you. But let's
8 talk about prevaccine, let's talk about 2020. My
9 understanding is, you know, the vaccine really didn't
10 start to get up to -- until January of 2021, so about a
11 year ago, you know, and the time that's really
12 relevant, of course, for this case is, you know, from
13 May 2020 till December 2020. That's when the
14 chiropractors were allowed to work, that's when
15 Dr. Wall was working, and that's when there was a
16 mandatory mask requirement in place by the College.

17 So let's talk -- and as far as I can see, that's
18 prevaccine. So let's talk back then. What's your take
19 on why these measures, no vaccine, why measures like
20 physical distancing and masking didn't work back then?

21 A Okay, so this leans heavily on what I already
22 explained. So pathogens are a spread, there's risk of
23 spreading it to somebody else when we're actively
24 releasing large enough quantities from our body to meet
25 the threshold dose needed to infect, bypass the initial
26 physical barriers, and initiate disease -- or initiate,

1 sorry, what we would call a productive infection that
2 would result in disease, because, again, disease is
3 when there's the onset of signs and symptoms.

4 And so the reason why these largely haven't
5 been -- weren't effective there, so outside of the
6 scope of vaccines, is because we were keeping people
7 out of the workplace who weren't sick. Again, I keep
8 emphasizing that. If you're not around sick people,
9 you tend not -- you're going to tend not to get sick.

10 And again -- so, again, these masks do a
11 reasonable job at preventing the spread of illness when
12 somebody's coughing and sneezing. That's what they're
13 really designed to do, that's what the pore size is
14 designed for in these masks.

15 And, otherwise, if -- so then the only argument
16 that remains then for why these masks attempt to
17 restrain the virus if somebody's not symptomatic would
18 be, again, the concept that they have -- the assumption
19 that they have a high enough dose of the virus in their
20 respiratory tract but are not yet sick because of it
21 and, therefore, exhaling large enough quantities, a
22 threshold dose, through aerosols, right? That's the
23 only physical way that a healthy person could,
24 therefore, be spreading this, and as I've explained
25 because of the pore size. And, more importantly, the
26 pore -- really, the pore size is irrelevant if you

1 don't have a proper fitting mask, such as the vast
2 majority is exiting the body unfiltered. You know, the
3 virus isn't going to respect the masking, nor --

4 And then when it comes to the physical distancing,
5 this is a complex process because some physical
6 distancing theory can help if you can control, if you
7 can control, because this is the thing, physical
8 distancing was primarily implemented -- and, in fact,
9 it's largely -- one can even argue what should be the
10 appropriate distance. Many studies would suggest that
11 an appropriate distance would only be 1 metre rather
12 than 2. So it's a rather -- beyond 1 metre becomes
13 rather arbitrary if you can -- if you pick a number
14 beyond that.

15 But what people need to understand is that the
16 reason this physical distancing was also selected was,
17 in the context of sick people who were actively
18 transmitting the virus by coughing and sneezing, it's
19 this idea of large water droplets again. And the
20 reason why 1 metre has always been recommended as the
21 minimum distance to try and minimize your chance of
22 getting infected -- so I would definitely recommend if
23 somebody is around somebody who is coughing and
24 sneezing, I would never recommend that you -- if you
25 want to keep yourself healthy, I would recommend that
26 you never go within 1 metre of their personal space,

1 and the further away you are, the less risk there is.
2 And that's because people -- you know, when we cough
3 and sneeze, the large droplets that we dispel land on
4 the ground approximately a metre away from us, up to a
5 metre away, so that's where that came from. But,
6 again, that's for people who are symptomatic and
7 meaning they're actively coughing and sneezing and
8 projecting these large water droplets.

9 Otherwise, we're talking about aerosols. And when
10 we're talking about aerosols, aerosols can travel very
11 large distances, massive distances, in fact, depending
12 on the environment. So, for example, there's very few
13 indoor places anymore, like work environments, that
14 have modern -- and even houses, you'll notice, most of
15 the -- most modern buildings now have air circulating
16 all the time, and so that creates currents, air
17 currents, all the time in our homes. We're often
18 unaware of these, but, you know, you know that you can
19 get the test kits to look at smoke detectors or even
20 smoke. If you ever put the smoke in a room, for
21 example, in air vents and so on, you can often see that
22 there are these air currents that are circulating. So
23 we can't see that, so where these aerosols go is going
24 to be dictated by the air currents that are around us.

25 So as an extreme example, and I've pointed this
26 out to people, you know, kind of in a half-joking way,

1 only half-joking because it is actually serious, so,
2 you know, I, from time to time, I've used -- you know,
3 I use a bus. I've got a bus stop not far from my home,
4 and again the best time -- the best time to see this,
5 there's two ways to actually visualize this, one is
6 observing smokers and the other one is observing people
7 breathing but in the winter time, where you -- again,
8 you can see the aerosols because of the condensation in
9 the cold air.

10 And so one of the things that I always, always do,
11 because I'm a nonsmoker myself, is if somebody's
12 smoking, I always stand upwind from them, right? There
13 is no defined distance at which smoke dissipates to --
14 and which it's safe, if there's a wind. If you can be
15 5 metres downwind of somebody at a bus stop, and you're
16 going to be inhaling their smoke if the wind's taking
17 it that way, because, yes, these aerosols dissipate,
18 but if you have a wind that's moving quickly, you're
19 going to be inhaling, you know, a reasonable amount of
20 smoke, secondhand smoke. So many of us recognize that,
21 and so if we don't want to inhale the smoke, we stay
22 upwind, and that's what I'm talking about with these
23 aerosols and air currents carrying this.

24 And so it's the same thing, if you have somebody
25 that's, for example, let's say, unmasked and breathe
26 out, if you -- if there's -- if the air is what we call

1 stale, is not moving, you're going to see a cloud that
2 forms in front of their mouth, and it's going to
3 dissipate as it moves out. In that case, the aerosol's
4 probably going to dissipate, pretty low concentrations,
5 right, per volume of air space at not too far a
6 distance. But, again, if you're standing, you know, 3
7 metres downwind of the person and, you know there's a
8 reasonable breeze, those vapours, you can see them
9 coming right by, right by your face. And so you're
10 actually inhaling, you know, reasonable concentrations
11 of the air being expelled by that individual. So
12 that's how, you know, is -- that's a good way to look
13 at it.

14 And so it's the same thing, so -- and worse, this
15 is the other thing, so I point out again that, in
16 fact -- so you combine that, we're talking about
17 aerosols with the masking, and the very frustrating
18 thing there is -- again, I try to point out -- if I'm
19 standing at a bus stop, and there's people sort of
20 downwind of me, and I want -- and if I were to feel
21 that I had to protect them from an aerosol, I would
22 actually rather have to take my mask off so I'm
23 projecting the aerosol ahead when then maybe it gets
24 dissipated, you know, down in front of the crowd of
25 people. By putting on the mask, I'm actually making
26 sure that I'm blowing lots of unfiltered air out past

1 my ear and actually firing it basically in the
2 direction of the people, right, or right beside me. So
3 that's what I mean.

4 So this is the problem, this is the problem when
5 it comes to the mask. We're not properly control --
6 and, in fact, it -- when you think about it, it's --
7 it's not logical, we don't think logically, because we
8 think about -- we've all seen our breath in cold air,
9 so we think if we're going to control our breath -- I'm
10 going to use the example, bad breath. If you want to
11 avoid somebody detecting bad breath, one of the things
12 you do you don't breathe on them, right? So you find a
13 way of making sure the breath goes some other way.
14 Even if you're looking at them, some people will sort
15 of breathe out the side of their mouth, change the
16 shape so it kind of directs it away from the person.
17 And this is inherently because we know that we can't
18 alter the direction that it goes, but so we're always
19 thinking of breath coming out from our mouths.

20 And so what the interesting thing is what people
21 often do, out of reflex, is in order to -- when they
22 have the masks on, in order to avoid having any of
23 these aerosols hit them or their breath hit them, they
24 tend to look away from them. And as I pointed out,
25 because of the -- what the direction -- the air -- the
26 air actually coming out, you know, by the ears, by

1 looking away from somebody, you actually redirect the
2 unfiltered air in their direction.

3 So an example, in my workplace, we were actually
4 told -- because it turns out that our hallways are less
5 than 2 metres, so we were actually -- what we were
6 actually asked to do was if we passed one another in
7 the hallways, we'd go belly to belly or chest against
8 the wall, like kind of inch our past one another with
9 our backs turned. And all time we're do -- all I --
10 you know, all I'm doing by doing that is, you know, at
11 least if I have the mask on and I'm looking at the
12 person, I'm directing the air away from them. As soon
13 as I turn my back on them, again, I'm directing air
14 toward -- in their general direction.

15 So this is the problem, and this is why we've had
16 trouble with the masking and controlling the spread of
17 aerosols, and why distancing, why distancing is quite
18 arbitrary in the context of aerosols. So, again, there
19 have -- there was a published scientific study in a
20 peer-reviewed journal that clearly showed with these
21 aerosols, they can travel -- they can travel, again
22 with the air currents, up to 30 metres, you know, if
23 they're carried on an air current that's swift enough
24 and going in a certain direction rather than swirling
25 air.

26 So it's all dependent on air currents, it's

1 dependent on the direction that the unfiltered air is
2 going. So we're talking about -- again, again, I would
3 say -- you know, I saw Dr. Hu's report, I agree 100
4 percent with him on the efficacy of masking with
5 symptomatic individuals, you know. But we're talking
6 about -- but, again, what you asked is people who are
7 going into the workplace who are asymptomatic, masking
8 to prevent the spread of aerosols and control the
9 direction in which they're going is not -- does not do
10 the job, not in the context of aerosols. So that's why
11 this virus has been spreading.

12 And I'd like to point out again, if you -- if
13 we -- if that is true, if the masks -- if the virus, it
14 could potentially spread on aerosols, and there's
15 some -- lots of studies have suggested that maybe it
16 can and -- but masks were doing their job, then we
17 would expect that people would have been protected.
18 But like I said, the actual -- in the study that was
19 published looking at immunity in healthy individuals,
20 people who never had any evidence that they were
21 infected or knew they were infected with the
22 SARS-Coronavirus-2, showed many healthy adults
23 acquiring immunity for the virus, and so that's been
24 occurring despite the masking.

25 Q Well, I need to ask you a couple questions about
26 asymptomatic transmission, because -- and symptomatic

1 transmission for that matter. Let me ask you this: Of
2 all the transmission of SARS-Coronavirus-2 or
3 SARS-Coronavirus-2, roughly how much comes from
4 asymptomatic people and roughly how much comes from
5 symptomatic people?

6 A So the subtotal of scientific literature would suggest
7 very little comes from asymptomatic individuals. It is
8 not zero. There is some asymptomatic transmission that
9 can occur.

10 One of the studies that often gets highlighted was
11 a -- again, it was a peer-reviewed scientific paper
12 published in an high-impact journal. It was actually
13 studied in a huge population in China, about 10 million
14 people, and the conclusion from that study was among a
15 sample size of 10 million people. They found no
16 substantial evidence of asymptomatic transmission.

17 And, again, it's not surprising, because, again,
18 for all the reasons I already explained, so I won't go
19 into them again in any detail, but just very quickly,
20 you have to have the virus in your lungs at a
21 sufficient quantity to be -- such that your body is
22 releasing enough to exceed that threshold dose needed
23 to cause illness in somebody else, and that almost
24 always requires active expelling of the virus from the
25 body through coughing and sneezing, but not always.

26 There is the theoretical scenario where you could

1 have somebody who's still not actively coughing and
2 sneezing, so they don't know that they're sick, it
3 might be a little bit threshold dose. When it comes to
4 biology, anything is possible. I'll never say anything
5 is impossible. So it is certainly theoretically
6 possible, and, in fact, I would argue it is a real --
7 real thing, but it would be high -- it's highly
8 improbable, meaning a rare event.

9 And there has been like a lot of agreement,
10 generally speaking, including among major public health
11 bodies, like the World Health Organization, there's
12 many organizations that, after a while into the
13 pandemic, we're starting to recommend just end the
14 testing, testing for evidence of SARS-Coronavirus-2 and
15 asymptomatic people for this very reason, because, you
16 know, again, we recognize you're testing healthy
17 people.

18 And what was being recognized though -- so
19 although there's very few cases, documented cases of
20 clear-cut transmission from asymptomatic people of
21 infectious viruses that may be at a dose that can cause
22 disease, it's definitely not a substantial driver of
23 this pandemic in any way, shape, or form.

24 So even, I'd like to point out -- so I notice
25 that -- you know, like Dr. Hu cited some peer-reviewed
26 scientific articles, and that's great, because, again,

1 that's the, you know, best type of evidence for this,
2 but even there, the important thing is looking at what
3 was actually measured.

4 So when you actually look, when they were
5 measuring some of the -- in some of those masking
6 studies, it was -- they were looking at, again, doing
7 genetic testing essentially, like PCR testing, to look
8 for evidence of the genetic material from the virus,
9 and so this -- you have to be very careful again
10 because -- okay, so this requires a little bit of
11 background in terms of measuring, measuring, how you
12 measure whether a virus is being filtered.

13 So with this PCR test that we've all probably
14 heard about, it's called polymerase chain reaction.
15 What it is is this concept that we can use little
16 pieces of genetic material that recognize sections of
17 the genetic material from the virus, and so if the
18 genetic material from the virus is present in a sample.

19 So, for example, if you put a mask on an
20 individual like -- and you ask them to breathe, and you
21 capture those samples, you can run this test to look
22 for evidence, you can ask is there any evidence of the
23 virus based on genetic material being present. And
24 when you do that, this test can detect small segments
25 of the genetic material from the virus, and then it --
26 this gets amplified, you run it for a number of cycles.

1 And if genetic material is present, you keep amplifying
2 it with each cycle, somewhat exponentially, until you
3 get enough of it, you can literally visualize it in a
4 test. So you can ultimately amplify it to such an
5 amount that you can visualize the genetic material, and
6 then you say, okay, so that genetic material seems to
7 have been present.

8 The problem with this is and the problem we've --
9 you know, I don't -- I can't comment on why this has
10 happened, because it's -- it's against all historical
11 standards, but we have relied on just the PCR test in
12 Canada for some reason, and we have arbitrarily picked,
13 in most cases, cycle cut-offs.

14 Because what happens, when you go to very high
15 cycles, your amplify -- you can -- what can end up
16 happening is you can end up amplifying background, you
17 get background signals we call it. And so you think
18 you see a causative result, but it's actually just
19 background. And we've been calling, running these
20 tests and calling -- so, for example, in Ontario, up to
21 38 cycles, if you can then detect a signal from this
22 test, we're calling that a positive test result for
23 SARS-Coronavirus-2.

24 But this is how it's supposed to work: We do
25 actually -- PCR is not a gold-standard test for
26 detecting it. Like it's a fabulous technology, but

1 like anything, all technology, it has limitations. It
2 is able -- what it's not able to do is detect -- it's
3 not able -- it's only going to tell you if a portion of
4 the genetic material -- material is present. It can't
5 tell you if there are replication-competent, intact
6 virus particles, in other words, virus particles that
7 have the potential to infect somebody.

8 But we do have a gold-standard test for that, a
9 virology assay. Remarkably, we abandoned this early on
10 in Canada. And specifically what's supposed to happen
11 is in order to validate your test, in order -- in other
12 words, in order to say, okay, my test, the results that
13 I'm showing in this test are proving -- or are
14 suggestive, highly suggestive that what I'm detecting
15 is infect -- or are virus particles with the potential
16 to infect somebody else. What you do is you take your
17 sample, and you split it into two, and with one, you
18 run your PCR test, and you determine at what cycle
19 number you get a positive result.

20 And in the other one, you do -- that uses
21 gold-standard virology test, which is actually a
22 functional test. What you do is apply the sample to
23 cells. You let these cells grow, you grow them on
24 plates, and we grow them for what's called confluence,
25 which means the entire bottom of the plate is covered
26 with these cells; you can't see the plate at the bottom

1 of the plate anymore.

2 And then what you do is you add your sample.
3 These are a special type of cell, we call them
4 permissive cell lines, and what they are are they are
5 cells that are stripped of all their anti-viral
6 properties, they're not able to protect themselves from
7 viruses, so that if there is a virus in your sample, it
8 can very efficiently infect these cells, and it will
9 start replicating and spreading, and it will kill the
10 cells. We call this cytopathic effect.

11 So what you do is you look at your cells under a
12 microscope, and you make sure, before you add your
13 sample, that the entire bottom of the plate is covered
14 with the cells, then you add your sample. If there's
15 any replication-competent virus there, which also
16 means, therefore, that it would have the potential to
17 infect and cause disease in somebody else, when you
18 look under the microscope later, you will see those
19 cells removed from the -- those cells have been killed
20 off, and now you'll be able to see the bottom of the
21 plate. And what you do is you find the cycle number at
22 which your samples no longer cause any damage to that
23 cell layer, and then that is how you prove,
24 objectively, the cutoff for your PCR.

25 And what's interesting is we actually did this --
26 I did. Our micro -- National Microbiology Laboratory,

1 which is part of the Public Health Agency of Canada.
2 It's located -- it's one of our -- it's a Containment
3 Level 3 and 4 facility in Winnipeg, Manitoba, they did
4 this at the beginning of the pandemic, and -- which was
5 the appropriate thing to do, and remarkably -- and this
6 is published, this is a peer-reviewed published paper
7 that they issued early on in the pandemic. And what's
8 remarkable there is they set the cut-off at 24 cycles.
9 Now, that doesn't mean anybody running a PCR test has
10 to have their cut-off at 24 cycles. The -- the actual
11 cycle cut-off, any person running this test should,
12 first, establish what the cut-off is for themselves, with
13 their particular protocol, their set of reagents, and
14 their particular technical expertise.

15 So the cycle number should act -- for the cut-off
16 should change from laboratory to laboratory, but
17 everybody should be able to show you that gold-standard
18 virology assay and the results from it to provide the
19 rationale as to why they picked that particular
20 cut-off.

21 But nevertheless, it -- because it's not going to
22 stray too far from that. And so my point is the
23 National Microbiology Laboratory showed that the proper
24 cut-off in their hands of the PCR assay was at 24
25 cycles. In other words, this paper, if you go and you
26 read it, our own public health scientists that

1 published this, what they found is that if the PCR test
2 came up positive at cycle numbers higher than 24, those
3 samples, they were unable to infect the cells in that
4 gold-standard virology assay with those samples.
5 Meaning, there was no evidence of replication-competent
6 or -- virus particles that had the potential to infect
7 anybody else.

8 So if they were running the diagnostic tests, for
9 example, to the PCR, therefore, they would set the
10 cutoff at 24. They would say anybody with a positive
11 test result up to 24 -- and they wouldn't have to run
12 this assay again, you don't have to do it every time,
13 and it makes no sense to do so -- they would then, with
14 high confidence, be able to say anybody who tests
15 positive up to a cycle number of 24 almost certainly
16 has infection of -- replication-competent viruses in
17 their body with the potential to infect others. But
18 the reverse of that conclusion is anybody with the test
19 result that is cycle number above 24, they would have
20 to conclude that those people are not able to infect
21 anybody else.

22 And so this is the problem, because a lot of the
23 publications that relied on this genetic test, and,
24 therefore, there is, without the gold-standard test
25 being run in parallel, there's no way to tell whether
26 their positive results were false positives, or even --

1 the thing I like to point out, there are genuine
2 positive tests but that do not -- but -- in which those
3 individuals, so they're genuinely detecting, they're
4 truly detecting genetic material from the virus, but
5 those people actually aren't infectious, and that's
6 actually people who have mounted immune responses.

7 This is very important to understand, because what
8 happens is one of the things our immune system does --
9 I didn't go into the details, but some of you may
10 recall when I was explaining kind of line of defences,
11 I mentioned that once the virus penetrates the physical
12 barriers and starts affecting cells, we have these
13 sentinel cells which will detect infection and trigger
14 these subsequent immune responses.

15 Well, these sentinel cells, one -- and a couple
16 other cell types, what they're designed to do very
17 on [sic], in order to detect these viruses is they
18 gobble them up, they actually consume them. We call
19 this phagocytosis, right? So they actually basically
20 eat, consume the virus, and then what they do is they
21 take the virus, and they break it into pieces, and then
22 they take these pieces, and they actually take it to
23 the draining lymph node, and they show it to our B and
24 T cells, to say, Look, here's a dangerous pathogen that
25 you need to go and try and clear from the body.

26 And then we get our B cells and T cells activated.

1 The B cells are the ones that then produce the
2 antibodies. And you know that this process is
3 happening when your lymph node swells, because if those
4 B and T cells are being activated, they start
5 proliferating in large numbers, so we have an army, an
6 army that's designed to go and recognize the pathogen.

7 So that's why if you're sick, like you have a
8 throat infection, you can often palpate the lymph
9 nodes, right, just behind your jaw, or your physician
10 does that. That's what they're looking for for
11 confirmation, because your lymph node is swelling; that
12 means you're actively mounting an immune response
13 against the pathogen, and it's clear evidence that
14 you're infected.

15 But, so, this is what you have to understand, this
16 is the key, to get to that process, we have to have
17 cells that gobble up the virus and carry it to the
18 lymph node and show pieces of it. These cells will
19 hold on to that so that virus is no longer
20 replication-competent. It's inside the phagocytic
21 cells and -- but it -- they will hold onto this for up
22 to weeks, even sometimes months, and that is to make
23 sure that there is always a supply of the target that
24 the immune system needs to respond to to protect the
25 body.

26 So it can take -- usually it doesn't take months,

1 but certainly, for sure, at least two to three weeks,
2 they'll be holding onto this material in case -- and
3 that's the case, the immune system has to keep
4 responding, in case they have to keep getting more
5 effectors recruited, depending on how virulent the
6 virus is.

7 And so in many cases, that -- then what you get is
8 you get a true positive test result with the PCR.
9 There's actually, you know, viral particles present --
10 or partial viral particles, at least pieces of the
11 general genetic material present in the body, but as
12 you can imagine, that's not ever going to infect
13 anybody, right? It's inside the cells of our immune
14 system that use that to educate the rest of our immune
15 system.

16 So this is why it's important to understand how
17 this works. Yeah, so I'll leave it at that.

18 Q Thank you. All right, so I need to go back to -- you
19 established that SARS-CoV-2 spreads by aerosols; we've
20 established that the masks don't stop aerosols; we've
21 established that they do tend to stop the bigger
22 droplets, we've established that asymptomatic spread is
23 rare. And that leaves the question then, forgive me,
24 but if I'm listening logically to what you're saying,
25 then, when symptomatic people wear a mask, they'll end
26 up spreading SARS-CoV-2 through aerosols; is that

1 correct?

2 A Yes. Again, there's evidence this virus can spread
3 through aerosols. So one thing, just to clarify what
4 you said just a moment ago, the -- so, yes, there's
5 evidence that the virus spreads by aerosols, but I also
6 want to make it clear, the virus is going to spread
7 very efficiently through the large water droplets with
8 the coughing and sneezing as well, as well as contact
9 media transmissions.

10 So I notice in Dr. Hu's report, you know, he had
11 mentioned that as well -- he had mentioned all three --
12 all three occur. He placed more emphasis on the large
13 water droplets and the contact transmission, so I don't
14 disagree. I just want to make that clear. But again,
15 those are symptomatic individuals; we're talking about
16 large water droplets and contact transmission, those
17 are people who are actively -- you know, actively
18 releasing large amounts of the virus.

19 And so with a contact transmission, actually I
20 have additional concern there, because I agree that
21 contact media transmission is an issue, and that's
22 where I'm concerned when we -- when we're old -- when
23 we're making people use these masks only in the context
24 of aerosol media transmission, because, again, those
25 who are actively sick are isolated, what we're doing
26 with these masks, because of the contact -- or

1 potential contact is where we -- people are constantly
2 handling their masks, right? So if there is any spread
3 of virus, we're actually bringing their hands to their
4 mask.

5 I have been -- I am unable -- I wear a mask on a
6 regular basis, clearly for some of the, you know,
7 surgical work that I do as part of my research program.

8 I -- when I'm doing the surgical stuff, I do tend
9 to be very careful, you know, very mindful of that.
10 And even there, it's very difficult not to touch a
11 mask, but you're taught, you know, when you're doing
12 surgical work not to touch it. But, otherwise, unless
13 you're doing surgery, I'm not able to -- especially if
14 I'm -- unless I'm focused on it all the time, I'm not
15 able to avoid touching my mask. In fact, the average
16 person cannot talk for any substantial period of time
17 and not have to touch their mask because it causes
18 bunching of the mask, you know, and it pulls off the
19 chin or it pulls off the nose. So there's very few
20 people who get through an eight-hour workday without
21 handling their masks over and over and over and over
22 again.

23 And worse, many people, unlike a surgery, where
24 you would then discard your mask, and then if you have
25 another surgery, you would put on a fresh one, there's
26 a lot of people who keep reusing their masks over and

1 over. So that potentially enhances the contact media
2 transmission. So I just want to be clear on that, that
3 it's not just the aerosol, it's contact media
4 transmission and large droplets. And wearing a mask
5 for the large droplets can handle that, but you don't
6 want to be handling the mask or else you're promoting
7 the contact via transmission. But, again, I highlight
8 that's symptomatic people, and we're screening those
9 individuals out, so they're not supposed to be in the
10 workplace, so that leaves, therefore, just the aerosol
11 media transmission.

12 And so, yes, I agree with you that in the context
13 of the aerosol transmission, an asymptomatic person
14 leaving their home and then donning their mask to try
15 and prevent the aerosol media transmission for all the
16 reasons that I just cited prior to this is not going to
17 be effective at preventing transmission by that route.

18 Q The question that I'm left with and I think many people
19 are if they have the masking in place, and we have the
20 screening in place, and yet what we've seen in the last
21 year-and-a-half that we've had masks, because we didn't
22 have it the first few months of the declared pandemic,
23 the last year-and-a-half that we've had masks, we've
24 just seen the spread increase and increase and increase
25 and increase. And yet, what you're telling me is that
26 it is effective with symptomatic people because it --

1 somewhat because it stops their droplets and spittle.

2 And I'm left with that question, right, of if
3 masks are somewhat effective with symptomatic people,
4 and symptomatic people are supposed to be removed, and
5 it seems like they sometimes are, and yet we still have
6 all this increase in spread, all right, so people --
7 nonscientific people like me are left scratching their
8 head.

9 A Would you like me to address that point?

10 Q Yes.

11 A Yeah, so it's for the reason that we've been talking
12 about is the aerosol media transmission.

13 Q Okay.

14 A So I've cited in my report, there's a large number in
15 there. I mean, that's exactly what was looked at. So,
16 again, just to make this clear, there's a big
17 difference between SARS-Coronavirus-2 and the viruses
18 that we're familiar with. This is why I took some time
19 to investigate it.

20 So what seems to relatively unique about the
21 SARS-Coronavirus-2 is this aerosol media transmission.
22 That's something else they should clarify. Previous
23 viruses historically -- because -- so this is again
24 why, initially, the masking seemed to make sense, but
25 only in the context of symptomatic individuals is
26 because we assumed that the primary mode of spread was

1 the coughing and sneezing and contact media
2 transmission. So that is pretty much what most of the
3 previous viruses and our other viruses that we're used
4 to causing respiratory infections, they usually fall
5 into that category.

6 For the flu virus, for example, that is the
7 primary way by which it is spread. It's not
8 recognized. In fact, it's well recognized that the
9 influenza viruses don't spread very efficiently via
10 aerosols. So that's what's unique to this virus.

11 So, again, like all our historical studies and the
12 masking studies, again, this is a strategy that is
13 designed to stop those kind of respiratory pathogens,
14 and that type of transmission, but not aerosol
15 transmission, and so that's why we've been seeing this.
16 And that's why I say when you take sick people away
17 from other people, that's the most effective way, but
18 the problem is with the aerosol transmission, people
19 are still able to go out there, right, and transmit
20 this virus.

21 And the issue here is with the -- yeah, the
22 masking in particular. So this is something that I
23 hadn't highlighted, which I think is important, because
24 what it comes down to then is what would a protective
25 mask look like or what would really protective masking
26 look like in the context of aerosol media transmission.

1 So as a researcher, this is something that they
2 deal with all the time. My entire laboratory is rated
3 as a Containment Level 2 laboratory, so all of my
4 entire research space. So this is because we work with
5 what's called Containment Level 2 biosafety hazards.
6 So -- and there's a certain amount of protection
7 that -- that we implement to protect us. So these are
8 not particularly -- these are not dangerous; these are
9 not dangerous pathogens; these are not disease-causing
10 agents, or, at most, if somebody were to get a large
11 dose of them, it would cause mild disease at the most.

12 But so -- but what we have to do all the time when
13 we are -- design a research program, I -- we're
14 constantly policed in the sense that I have to get a
15 biohazard permit in order to conduct my research. So I
16 have to describe how I'm conducting my research and
17 what protections are in place to make sure that people
18 aren't put at unnecessary risk from the Containment
19 Level 2 to agents that we work with.

20 The SARS-Coronavirus-2 -- and so I'm very
21 familiar, therefore, with biosafety strategies, right,
22 and personal protective equipment that one would use in
23 these scenarios. And like I said, I've done
24 collaborative research on the SARS-Coronavirus-2.

25 For the one publication that we published recently
26 dealing with the novel vaccine, that involved a

1 challenge study with the SARS-Coronavirus-2, where
2 animals were vaccinated and then challenged with the
3 virus. So that work is done, and it can take -- what
4 we call Containment Level 3. So SARS-Coronavirus-2 is
5 considered a Containment Level 3 pathogen.

6 Now, this is interesting because this then says --
7 so we have -- the Public Health Agency of Canada has
8 told us what the appropriate protection is against a
9 Containment Level 3 pathogen, and I have that in my
10 report. So, in fact -- not people to look at it, but
11 if you want to take a note and look at it later, I
12 would refer everybody to Figure 7 on page 13 of my
13 report, because what I've done there -- what I've shown
14 is a picture of a stereotypical personal protective
15 gear that one would wear to protect themselves against
16 infection with a Containment Level 3 pathogen.

17 And so what I can tell you is -- I mean, it would
18 be laughable if I ever put on a surgical mask or a
19 cloth mask and then asked to go in and challenge our
20 animals with a SARS-Coronavirus-2 wearing that. I
21 mean, I would get myself in serious trouble. I'd
22 probably have my biohazard permit revoked for showing
23 such lack of understanding of personal protective
24 equipment, because I'd be putting myself at incredible
25 risk of being infected with the SARS-Coronavirus-2,
26 because a lot of the procedures that we're doing create

1 aerosols. So if you're pipetting, which is a -- it's a
2 scientific tool for allowing us to deliver precise
3 quantities of fluid; that's known to create aerosols.

4 So a lot the work and manipulation we do -- and
5 we're working with high doses of viruses as well,
6 remember, in those kind of settings with lots of
7 potential for aerosol production, so I'm very familiar
8 with what it takes to protect one from a pathogen
9 that's been aerosolized.

10 And if you can refer to this picture, the first
11 thing you'll notice is the individual has the pathogen
12 in a tube, a closed tube, and these tubes will only be
13 opened inside this special unit that their arms are
14 inserted into. It's called a biological safety
15 cabinet. And if you can see the picture, you'll notice
16 that just in front of the individual's elbows, there's
17 a grate. There's a solid stainless steel surface
18 inside the hood, and what's in the front of it is a
19 grate.

20 And what happens is this has special air flow, and
21 what happens is air actually blasts up from this grate
22 and then up into the cabinet and then goes through a
23 HEPA filter -- actually a number of HEPA filters.
24 HEPA -- so unlike the masking material in the low-cost
25 masks like the surgical masks and the cloth masks,
26 which have very large pore sizes, HEPA filters have

1 extremely small pore sizes that are designed to filter
2 out most pathogens. And so what that air, therefore,
3 is -- so what it does is creates a wall of air in front
4 of you that is basic -- essentially sterile air. So
5 you actually run these things for 20 minutes, so if
6 there's any contaminants in it, after 20 minutes, the
7 air that's running is essentially sterile. So then
8 when you put your arm -- you put your arms in slowly,
9 because you don't want to disrupt the air flow too
10 much. By doing so, you're literally going through an
11 air barrier, so no aerosols can come out of that
12 cabinet.

13 But in case any does, however, say for example,
14 that individual were to make a mistake and insert the
15 arm too quickly to disrupt that air flow excessively
16 and allow a little bit, potentially, of aerosol to come
17 out, that's why they have the rest of the personal
18 protective equipment, the gloves and the gown, is to
19 minimize the potential for contact media transmission.
20 You don't want spills on your personal clothing, right,
21 such that, you know, if you go home, you know, you
22 might be touching your clothing, then touching other
23 things, so that's to protect against that contact media
24 transmission.

25 But you'll notice they don't -- they aren't
26 wearing a cloth mask or a surgical mask; they're

1 wearing a mask -- and as you can see, very different --
2 this is actually a requirement interestingly. I would
3 not be able to go into this facility with the mask
4 that's in this picture. And so if you notice what the
5 difference is between the individual wearing that mask
6 and me, I've got a beard. And so this is very
7 important to note. So if you look at their mask,
8 you'll see it has elasticized material such that it
9 provides a tight seal along the skin everywhere. And
10 then around the hair, you'll see a headband. And then
11 what you see is you see a tube coming out from the back
12 of the -- the headpiece, and what it goes to is a
13 little unit that mounts on the belt at the back of this
14 individual, and this actually actively filters air.

15 So what that -- what that has is has a fan in it,
16 and it has HEPA filters, and so it's actually drawing
17 in air from the environment, from the room this
18 individual is in, passing it through HEPA filters and
19 then into that hood and specifically the face mask area
20 so that what they're breathing is HEPA filtered air.

21 And like I said, so this individual -- so often,
22 people working in these facilities are required to
23 shave so that their mask can actually make proper
24 contact, right? Because right now, I'm allowed to wear
25 a cloth mask right now, and I'm not -- and I like to
26 have a beard, and it's winter time, and I'm not

1 required, but I'll tell you the -- and because I know
2 of the futility of masking in the context of aerosols,
3 but the reality is, you know, if I were to wear a mask
4 right now, I mentioned about how air would escape past
5 the ears and the nose, well, also around my beard
6 because the beard is holding the mask away from my
7 skin, and I can guarantee that my beard has far larger
8 pore sizes in it than the masking material.

9 So I just want to point that out, because that's
10 our own government agency that's designed for telling
11 us how we safely interact with Containment Level 3
12 pathogens, of which SARS-Coronavirus-2 is, that is how
13 one would protect themselves from aerosolized mediated
14 transmission of a Containment Level 3 pathogen, and as
15 I'm sure you can appreciate, it's not a cloth or a
16 surgical mask.

17 Again, I can't emphasize enough that if I were to
18 try to enter this facility and conduct this type of
19 research with that, I would almost certainly have my
20 biohazard permit rescinded and my ability to conduct
21 that type of research removed, at least temporarily,
22 until I underwent training to demonstrate that I
23 understand how to truly protect myself from a
24 Containment Level 3 pathogen.

25 And this isn't just for the individual of course.
26 The key thing, in any of this strategy should be both

1 protecting the individual and also the people around
2 them. You don't want a researcher coming out of a
3 Containment Level 3 facility potentially spreading
4 Containment Level 3 pathogens to the public.

5 Q Is there any logical or scientific reason to think that
6 masks are more effective at preventing transmission of
7 the virus by asymptomatic people in one place than
8 another?

9 A No, no. They're physically -- they're operating based
10 on the same physical principles. Now, I have seen the
11 argument made that maybe the environment can
12 potentially put an individual at greater risk. So, for
13 example, in the health care environment, again,
14 masking -- the physical protection conferred by a mask
15 doesn't change based on the environment that they're
16 in, but the potential risk of exposure does.

17 So a health care worker working with actively
18 infected individuals certainly might be at increased
19 risk of potentially being exposed. All the more reason
20 why I would argue that they actually need proper
21 protective equipment, so beyond the cloth mask, like
22 something that would actually be designed to filter out
23 this, and those are things that could not be worn for
24 long durations of time. That would, for example, be
25 like a rubber mask that could be fit-tested, again, to
26 seal on the face; you wouldn't be allowed the beard,

1 and would have -- potentially the filters mounted to
2 it. But you'll find that those devices, very difficult
3 to breath with those devices for long periods of time.
4 But that's the type of thing that might be appropriate
5 in those settings. So, no, this type of masking isn't
6 going to help in different settings.

7 But what I want to point out is -- so one of the
8 things I noticed actually in Dr. Hu's report is that he
9 brought this up in terms of health care workers. I
10 mean, I'm no expert with chiropractors, but I agree
11 with him that a health care worker working -- and he
12 used the example of people who are -- were known to be
13 actively infected and potentially infectious with
14 diagnosed COVID-19. Where, I guess, I differ on
15 this -- and, again, I'm not an expert in the world of
16 practicing as a chiropractor, so I could be
17 corrected -- but my understanding is that the average
18 chiropractor is not being expected to work with a
19 symptomatic COVID patient, diagnosed with COVID-19, so
20 I would -- especially in that case, I wouldn't have a
21 concern.

22 If -- so if a health care worker is working
23 with -- is asymptomatic, and the patient they're
24 working with is asymptomatic, having a mask just
25 doesn't seem to make logical sense to me. A mask that
26 is designed to effectively prevent transmission because

1 of lack of sickness doesn't make sense to me.

2 Q Forgive me, you've answered so many of my questions, I
3 have to do a bit of a review here.

4 Okay, so I'm going to ask a couple questions here
5 about aerosols and droplets, and then I think maybe we
6 can leave that behind, because there seems to be
7 contention on this. Would you say that the balance of
8 the available academic literature supports aerosol
9 transmission?

10 A So this is interesting, the -- it's debatable. This
11 aspect is debatable about the aerosol-mediated
12 transmission. Certainly without the act of coughing
13 and sneezing, it would be difficult to get a, again, a
14 threshold dose needed to infect somebody out with the
15 aerosols, and there was -- earlier on, in order to
16 explain this spread and the spread despite masking,
17 that that's where a lot of the publications were geared
18 towards were showing this aerosol-mediated
19 transmission, that's been questioned now as well. So
20 it's actually a little bit difficult to say
21 definitively, based on the scientific literature, it's
22 an active area of debate I would say.

23 And like I said, especially because, as we now
24 have two years of experience and despite this strategy
25 having been implemented throughout the duration, right
26 from the beginning, but the ongoing spread of

1 increasingly --

2 (AUDIO/VIDEO FEED LOST)

3 MS. NELSON: Sorry, I don't mean to
4 interrupt, but Dr. Martens has dropped off the call, so
5 if we could just pause until I get her back, please --

6 A Yes.

7 MS. NELSON: -- that would be great.

8 Q MR. KITCHEN: Thanks, Dr. Bridle.

9 Dr. Bridle, I welcome you to continue.

10 A Okay.

11 Q But I just want to make sure I have this right, are
12 there three potential or likely areas of methods of
13 transmission: Droplet, aerosol, and contact; is that
14 accurate?

15 A Yes.

16 Q Okay.

17 A Now, I guess, yeah, in the context of SARS-CoV-2. If
18 we're talking about pathogens in general --

19 Q Right.

20 A -- (INDISCERNIBLE) like sexually transmitted diseases,
21 but, yes, certainly SARS-CoV-2, for example --

22 Q Yes.

23 A -- those would be the three primary potential modes of
24 transmission.

25 Q Okay, well, let me ask you this, and, again, you can
26 continue going on about aerosols and droplets and all

1 that, but I -- what, if any effect on contact
2 transmission do masks have?

3 A Potentially increasing it for the very reason that I
4 said. I have -- I mean, I'm not going to excuse any
5 individual, because there might be individuals who,
6 miraculously, are able to wear a mask for very long
7 periods of time and never touch it. I'm not going to
8 say that's an impossibility, but I have watched
9 hundreds of people throughout this pandemic, you know,
10 because it's an area of interest of mine, because
11 everybody's been instructed to not touch their masks
12 because of the acknowledgment that there's
13 contact-mediated transmission. I know it's in Dr. Hu's
14 report that he -- you know, he mentioned that as a key
15 potential way to transmit.

16 And I have yet -- I have yet to observe any
17 individual who has not touched their mask multiple
18 times within certainly let's say within an hour. I
19 have not once seen anybody not touch their mask
20 multiple times during a one-hour span. And, again,
21 it's just natural with these masks. There are masks
22 that are designed to stay in place. Again, if you
23 refer to Figure 7 that I have in my report, that type
24 of mask will stay in place; it's got very firm
25 headbands, and it's designed to, you know, to seal.
26 It's got -- you'll notice that the material, if you'll

1 notice the material, it's elasticized, and it's
2 flexible. So, for example, this individual would be
3 able to talk, you can envision his jaw moving up and
4 down, and all the material that's attached to the
5 plastic face shield, it is flexible -- or not flexible
6 but loose enough that it allows that movement.

7 And see the differences with the mask, if I'm
8 talking to you -- if I put on a mask right now, as I'm
9 talking to you, within -- I don't exact time, but
10 probably within 30 seconds, the mask, again, will have
11 migrated off my nose or off my chin, and I'll have to
12 do an adjustment. So unless you're sitting with these
13 masks, never use -- never chewing, like not chewing on
14 gum, not talking, it's going to be very difficult. And
15 even at that, you know, people get itchy noses and so
16 on. And depending on how they take their masks on or
17 off, there's actually -- I mean, there's proper
18 training procedures even for putting masks on and off.

19 Especially for surgery, right, you want to keep
20 everything sterile, you want to keep your gloves
21 sterile, you want to keep any masks that you put on
22 sterile, right? So the proper thing would be just to
23 handle the mask by the straps that go over the
24 earpiece, right, and nothing else. But people, all the
25 time, are grabbing their mask, you know, or taking
26 their mask and grabbing it, you know, and stick in

1 their pockets or whatever. This is not the way these
2 masks were designed to work.

3 Again, originally, remember, these masks came out
4 of the concept of surgery and trying to make -- keep
5 surgical fields as clean as possible. And if you watch
6 how a surgeon dons and doffs their surgical equipment,
7 including their mask, it's very different from what the
8 average individual is right now, because we haven't
9 trained, we haven't trained the general public in that
10 kind of, you know, what we'll call sterile technique.

11 So, no, wearing a mask in an inappropriate
12 environment can potentially cause more harm. Again,
13 I'm not concerned. I'm not concerned about that
14 contact media transmission if the person isn't
15 symptomatic.

16 Q Right, so but, you know, I've heard you say, obviously,
17 the masks don't work for asymptomatic, but I've heard
18 you say they kind of work for symptomatic because
19 they'll stop the droplets, but, in your opinion, do
20 masks -- are they a net contributor to spread or a net
21 inhibitor of spread when you balance out the
22 contribution to contact spread with the reduction of
23 droplet spread?

24 A Okay, so I would think that the net would be
25 potentially enhancing for the -- again, for -- again --
26 and if it's an asymptomatic individual. And the reason

1 is if there is any --

2 Q Hold on, asymptomatic or symptomatic?

3 A The -- well, in both cases, right, they're going to do
4 something for the -- well, again, if somebody's not
5 sick, then I'm just not worried in general. If
6 somebody is shedding the virus, if that's the scenario
7 where somebody is shedding a virus, I think it's going
8 to have a net negative result. And that's because,
9 again, it's not designed to filter out the aerosols.

10 What happens when people put a mask on, there's
11 well-established behavioural changes that occur, right?
12 When we feel -- when we feel more protected, we tend to
13 behave -- it's human nature to tend to behave in
14 riskier ways.

15 So it's interesting, this is interesting: I play
16 hockey, for example, I'm an ice hockey goaltender.
17 Now, so one of the things is if you want to -- if you
18 want a contact game -- or, sorry, a contact-free game
19 of hockey, one of the general rules of thumb is you
20 don't have people put on -- you put -- you have them
21 put on the minimal amount of safety equipment. And
22 what will often happen is because, following -- what
23 often presents a very danger to the elbows is the elbow
24 pads, but a lot of people will not wear the shoulder
25 pads, because that's not a particularly risky area.
26 And one of the reasons is is because it's

1 well-established behaviour, if you load yourself up
2 with armour, you tend to be more risky in your
3 behaviour, potentially more aggressive in a sport like
4 that. And it's not different than everything.

5 And so what happens is when people -- when -- this
6 is the problem, see if people mask, and they understand
7 the limitations, they understand what they're designed
8 for, where their strengths are and where their
9 weaknesses are, you're fine. But the general messaging
10 that people have received is that these masks are
11 fabulous at preventing the spread of this. And so when
12 you have that program in your mind, As long as I have
13 my mask on, I'm not a risk now to anybody else, and
14 they're not a risk to me; what you inevitably see is,
15 on average, masked people will tend to interact closer
16 than people who are unmasked, and that's just the
17 reality.

18 And so if there is aerosol mediated transmission,
19 if you're, on average, interacting in closer vicinity
20 with somebody, there's the potential for greater
21 aerosol mediated transmission than if you're not
22 masked, you don't feel that, you know, (INDISCERNIBLE)
23 extra protection.

24 And so that's what I argue, as a scientist, I
25 mean, when I wear it, I know that it is -- you know, so
26 I wear them because I have to when I go to the grocery

1 store and everything, but I recognize that they're not
2 properly protecting against aerosol mediated
3 transmission. And so if there can be aerosol mediated
4 transmission, of which is active debate in the field,
5 you know, I recognize -- I'll stay in my -- you know,
6 far away from individuals. So that's one -- that's one
7 potential harm.

8 So, yes, the net effect on average is the average
9 person who is masked won't maintain as much distance,
10 and so if they are transmitting, that could potentially
11 be an issue. And then the other is that the contact
12 that I just mentioned with the mask.

13 So, again, I simply -- I just am not concerned
14 about asymptomatic or healthy people, period. But --
15 so -- but if anything, the net result of masking --
16 that's what I'm saying is especially if you're
17 symptomatic, that's where the mask can stop the
18 droplet -- the droplets, but there especially, you have
19 to be very careful. Again, you know, if you're going
20 to the workplace in, like I said, that I have, I have
21 multiple masks that I change regularly, and, again, I'm
22 mindful because I've been trained in this concept of,
23 you know, sterile technique in the microbiological
24 world and thinking from that perspective; because
25 especially if you're symptomatic, you are spewing
26 droplets into that mask, and it's getting soaked, and

1 it will soak through. This is material that's
2 absorbant. You can think, especially with a cloth
3 mask, it'll soak right through. And you can see
4 that -- the wet stains. And so if you're grabbing that
5 mask, you're going to dramatically enhance contact
6 mediated transmission and -- and you have to be, again,
7 mindful that when you have that mask on, although it's
8 effective with the large water droplets, you don't want
9 to go closer to people than necessary.

10 So, yes, you have to be very careful with masks:
11 You have to recognize the strengths, their limitation,
12 and you have to maintain other strategies that are
13 independent from the mask. And by that, I mean, again,
14 recognizing the inherent weaknesses of the masks and
15 so, you know, not grabbing them, you know, not touching
16 them and then, you know, touching others and that type
17 of thing.

18 Q So in your opinion, is this part of the reason why,
19 after a year-and-a-half of masking, the cases and the
20 infections just keep going up?

21 A Yes, yeah. It's ineffective in the context of
22 controlling the spread of SAR-Coronavirus-2. Again, I
23 can't emphasize that enough. I use my own workplace as
24 an example. We've prided ourselves on the fact that
25 well over 99 percent are vaccinated, and I can tell you
26 that the messaging both from the president of my

1 university and the Medical Officer of Health, who has
2 presented in multiple town halls, have told us,
3 although, again, it's -- this is -- it's often
4 difficult to comment as a scientist, because there's
5 the publicly acknowledged message, and then there's my
6 message as a scientist, but --

7 So their message has been that the vaccines are
8 excellent at protecting people, break-through
9 infections are very rare, and it either prevents
10 transmission or reduces that -- the number of viral
11 particles that get transmitted, so excellent at overall
12 trying to prevent transmission. So that's my campus
13 community, more than 99 percent fall into that
14 category.

15 And -- but everybody is still doing the exact same
16 masking and the physical distancing, and yet
17 SARS-Coronavirus-2 has ripped through our community.
18 We recently had two -- two of our residences with
19 outbreaks, declared outbreaks of -- so, you know --
20 and, again, I always find it difficult. So the public
21 messaging was those are outbreaks of COVID-19. What
22 they really were outbreaks of people identify -- who
23 had positive test results for SARS-Coronavirus-2. I
24 can tell you the majority of the students, you know, we
25 had no deaths. The vast majority of the students had
26 mild cold-like symptoms for a couple of days.

1 I can also give you the example at my son's high
2 school, the same Medical Officer of Health recently
3 declared an outbreak at his school. One of the cases
4 was confirmed, where sequencing was done, to confirm
5 that it was Omicron. And so the whole school was shut
6 down, right, and everybody went home. In that case,
7 the individuals both had -- they reported mild
8 cold-like symptoms for three days and then recovered.

9 But the whole point being in that school again,
10 this is high school, so they've been actively promoting
11 vaccination. It's not nearly close to a hundred
12 percent, like in the university, where it's been --
13 people are not allowed on campus if they're not
14 vaccinated, but a large profession, and masking every
15 day, right?

16 So this is all evidence -- and so that -- and
17 again, I'll emphasize again, Omicron, that wave in
18 terms of the number of people who tested positive for
19 SARS-Coronavirus-2, it dwarfed, I mean, it shattered
20 all previous records, you know, that we had in all
21 previous waves, and this is despite not only the
22 masking and the physical distancing that was there from
23 the beginning but added to it what we hoped was this
24 super strategy of vaccinating everybody. So even with
25 that thrown on board, the masks have not stopped the
26 spread.

1 So my professional opinion is and has been from
2 the beginning that the way we're using these masks is
3 not appropriate, it's not going to stop the spread, and
4 worse, that there are harms. Again, I am not concerned
5 in the context of symptomatic [sic] people, the masks
6 necessarily promoting harm of spread because they're
7 asymptomatic, they're not sick, but there are inherent
8 harms to the mask itself, to individuals wearing them.

9 Would you like me to talk about that at all; is
10 that something that's relevant?

11 Q Well --

12 A I have that in my report. I have it in my report if
13 you're interested.

14 Q No, and I see that. Well, I mean, you seem to talk
15 about -- well, let me ask you this: This fact that
16 masking potentially actually increases the spread of
17 SARS-Coronavirus-2, would you identify that as a harm?

18 A Yes.

19 Q Now, I know you identified the harm of low oxygen
20 levels, but you also, which I found interesting, you
21 mentioned the harm of muffling speech and inhibiting
22 communication between individuals. Do you identify
23 that as a significant harm?

24 A Yes, yeah. So I live in the world of special needs. I
25 have two children with special needs, one of them does
26 have speech difficulties. He has Down Syndrome, so I'm

1 around individuals with special needs all the time.
2 I've interacted as a parent supporting work done by a
3 speech therapist. And one of the things that I can
4 tell you that has been particularly difficult, his
5 speech through the speech therapy and also through
6 sheer hard work, especially through my wife, his speech
7 has dramatically improved, but this improvement has
8 largely happened over the last couple of years. You
9 know, he's in his formative years, he just turned 12.

10 It was exceptionally frustrating for him early on
11 in the pandemic and frustrating us as parents to
12 observe, because what a lot of people don't realize
13 that when it comes to Down Syndrome, a lot of
14 individuals have difficulty speaking. The best way to
15 explain or for people to experience what it's like if
16 an individual has Down Syndrome to try and speak is
17 there's physical reasons for this. They tend to have
18 smaller than average mouth cavities and larger than
19 average tongues, size of tongues, often length. So I
20 mean, my son, if he sticks out his tongue, a little bit
21 like a snake, so long, but also very thick, and this
22 combines to make it hard for them to speak like many of
23 us. Again, it's difficult for him to physically get
24 his tongue behind the teeth or the roof of the mouth,
25 for example, because of the length and because of the
26 size. So it's like if we were to stuff a couple of

1 marshmallows in our mouth and then try and talk, it
2 muffles the speech.

3 So he had difficulty being understood at the best
4 of times, and with the mask on, that further muffles
5 the speech. So he went through a period where he
6 progressed so well with his communication in school,
7 and all of a sudden, for a long period of time, his
8 teachers lost the ability to understand him for quite a
9 while, and he had to learn with the mask to speak
10 louder and to learn to annunciate even better to get
11 that back.

12 So it was very hard for that -- to see that step
13 backwards. You know, you have to understand for an
14 individual, especially a young person, to lose the
15 ability to communicate your thoughts and feelings
16 becomes very difficult. So that's just an example on
17 that side.

18 Even in terms of muffling the speech, so, again,
19 I'll give an example to try -- you know, to try and
20 convey, you know, an example of -- that we might be
21 able to familiarize ourselves with. I personally like
22 watching professional basketball. The Toronto Raptors
23 are my favourite team. If anybody has watched the
24 Toronto Raptors, one of the things that you'll know is
25 that their coach, Nick Nurse, has got himself into
26 trouble multiple times throughout the pandemic. He

1 always wears the mask, and he's always taking his mask
2 off, and he gets in trouble for it, you know, people
3 from the public complain that he's not wearing his mask
4 or not wearing it properly. And the reason he gives
5 every single time is he's the coach, he's trying to get
6 critical instructions to his players, and they can't
7 hear him or understand him. And you'll see it, it will
8 be in the heat of the moment of a game, and he's trying
9 to get instructions to his players, and that's when he
10 pulls his mask off and is giving instructions to his
11 players, and then he'll put it back on.

12 And that's the case, you know, we've all -- I'll
13 tell you in the context of teaching, we've really had
14 to adopt the whole concept of using microphones,
15 because it's even very -- more difficult to project our
16 voices to the back of the classroom. So, yeah, muffled
17 speech definitely has that in impairing the ability to
18 communicate.

19 MR. MAXSTON: Dr. Bridle and Mr. Kitchen, my
20 apologies for interrupting, but I think we've gone a
21 little far afield of the qualifications of this expert
22 when we're talking about communication. We're here to
23 talk and hear from him about transmission and efficacy
24 and those kinds of things. I'm not trying to be
25 unsympathetic to your comments, Dr. Bridle, but I think
26 you haven't been called as an expert to talk about

1 those things.

2 A Can I comment about the specific comments I had in my
3 report?

4 MR. MAXSTON: I'll leave that up to the
5 Tribunal. It depends on what question Mr. Kitchen asks
6 of you, but, again, I'm not trying to be difficult
7 here, but you were qualified to speak about the
8 transmission and efficacy of masking and physical
9 distancing, and I don't think we're here today -- I'm
10 not trying to be difficult, but I don't think we're
11 here today to talk about communication problems --

12 A Okay --

13 MR. MAXSTON: -- and those types of things.

14 A -- and I respect that. I'll wrap up then with
15 something that definitely is in my realm of expertise,
16 so --

17 MR. MAXSTON: I'll let Mr. Kitchen decide
18 what he wants to ask you next maybe, but I just wanted
19 to be clear we shouldn't go too far off what you were
20 called to testify about. So I might have an objection
21 to what you're about to say too, if it's going to be in
22 the same vein.

23 MR. KITCHEN: Well, let me jump in. I have
24 two comments: One, Mr. Maxston, let me know if you're
25 going to apply to strike that, because we'll have to
26 deal with that. Two, it doesn't take expertise to do

1 what he's doing: He's observing reality as a
2 scientist. You know, if he told me that clouds were
3 made out of water droplets, it's the same as saying
4 that masks muffle speech. So I don't think it requires
5 any expertise, but, nonetheless, I take your point.

6 Q MR. KITCHEN: So, Dr. Bridle, let me ask you
7 this: What would you identify as the three most severe
8 harms of masking? Oh, hold on, you're muted.

9 A Okay, yeah, I listed quite a few. Let me just go to
10 these points if you don't mind.

11 Q Yeah, I'm on page --

12 THE CHAIR: Excuse me, Dr. Bridle, what
13 page are you on in your report?

14 A Actually, I'm looking for the page right at the moment.
15 Okay, so page 8 would be one. So page -- I've listed
16 my concerns about the masking and potential harms on
17 page 8, and then also I would like you to refer to page
18 14, where I have some additional ones, and one that I
19 would highlight perhaps is one of my biggest concerns,
20 as Mr. Kitchen had indicated.

21 First of all, related to this, there's something
22 that I was hoping to have the opportunity to say, it's
23 directly related to this, in the expert report from
24 Dr. Hu that I was able to look at, there was an
25 accusation made against me actually with respect to
26 these harms. Can I just address that for a moment?

1 Q MR. KITCHEN: Well, that's fine with me, but
2 my friend might take issue with that, and I can
3 understand why.

4 MR. KITCHEN So, Mr. Maxston, I was going
5 to ask him a question on that. If you want me to hear
6 him [sic] ask the question, I can do that if that's
7 helpful to you.

8 MR. MAXSTON: Well, that might be helpful.
9 I think it's fair for your client to comment on
10 Dr. Hu's report, but I think it depends on the extent
11 of your question or the type of your question.

12 A Okay, what I would like to do, if you don't mind, I'll
13 just read something of the report and then see if
14 you're okay with me just commenting on it. Just let me
15 find this when it comes to the dangers.

16 Q MR. KITCHEN: Well --

17 A Okay, yeah, so the comment that I want -- the thing I
18 want to comment on is in the -- Dr. Hu's report on page
19 8, the one, two, third paragraph down. He says: (as
20 read)

21 Lastly, both Dr. Dang and Dr. Bridle make
22 unsubstantiated claims that there are
23 numerous harms associated with masking.

24 And then states: (as read)

25 There are no known harms associated with
26 masking.

1 So that is what I was hoping to respond to.

2 Q Yes, well, I'll let you respond however you like,
3 but -- well, let me ask you, I take it you would say
4 that claim is inaccurate?

5 A Yes, and I provided scientific citations to demonstrate
6 that that I'd like -- there is one in particular I'd
7 like to highlight that is clearly within my realm of
8 expertise, and it's a serious concern that I have.

9 Q And I want to hear your comments to that, and I --

10 A Okay.

11 Q -- invite you to, but I want to also ask you this:
12 That claim coming from a public health doctor, is it
13 merely inaccurate, or does it rise to the level of
14 willful ignorance?

15 A Well, yeah, that's -- yes, that's why I wanted to
16 comment on it, and also accusatory, indicating that
17 we -- you know, that we -- suggesting that we have
18 failed to -- or that I have somehow failed to
19 demonstrate harms associated with masking.

20 And, yeah, because there's numerous -- there are
21 numerous potential harms with masking. So I guess
22 this -- yes, and so I'll highlight. So if you like, I
23 can pick three. I can think of two right off the top
24 of my head, and I can look through the list.

25 But I guess what I would do is bring people to the
26 attention of those two pages, because I list numerous

1 potential harms on page 8, and I mention several more
2 on page -- as I said, page --

3 Q 14?

4 A -- 14. So it isn't that I failed to identify, and
5 these are substantiated, and I have peer-reviewed
6 scientific publications to back them up, so this --
7 yeah, that's what I just wanted to mention is that is,
8 I feel, a very untruthful statement and accusation
9 against me.

10 So let me go on to some of the major concerns.
11 I'll start with the hygiene hypothesis. So I just had
12 been asked to comment on harms with the mask, so this
13 one focuses on children. But what people need to
14 understand, and I wrote an article about this early
15 on -- after one year into the pandemic. I wasn't
16 concerned when we were told it was two weeks, you know,
17 and that was the original warning, even if it was a few
18 months.

19 But after a year, I expressed this serious
20 concern. It used to be called the hygiene hypothesis,
21 but the concept is this is that we're designed to
22 interact and interface with our microbial world. It's
23 absolutely required for proper physiological
24 development. For example, many people have shown --
25 and this has been shown with what we call
26 gnotobiotically delivered animals, so animals that have

1 no microbiome whatsoever. Behaviours are fundamentally
2 altered. They have the -- the development of the
3 central nervous system is altered. But one of the key
4 things is the immune system does not develop properly
5 if we don't have proper interaction, as we are growing
6 up with the microbial world.

7 So a lot of people don't realize when we're
8 born -- so, first of all, when we're born, we are
9 immunologically naive. Unless there was some kind of
10 in-utero infection, meaning infection of the fetus
11 while in the mother, then when born, the vast majority
12 of us are immunologically naive: We have not been
13 exposed to anything in the microbial world up to that
14 point.

15 But further -- so that means that our immune
16 system learns to interact with the immune system
17 following birth. Further, and because of that -- and
18 actually because of that and to have that opportunity
19 to learn what is dangerous and what is not dangerous in
20 the microbial world, our immune systems do not reach
21 full maturity, they are not fully developed until about
22 the age of 16, and the vast majority of that
23 development occurs between birth and the age of 6

24 And what we know is that if and especially young
25 people are not allowed to be exposed on a regular basis
26 to the microbial world, their immune system does not

1 develop properly, specifically the ability to
2 differentiate between the non-dangerous microbes that
3 we encounter all the time and the genuinely dangerous
4 pathogens. And it's only the latter we want to respond
5 to, because if you can imagine if we -- if our immune
6 system is what we call dysregulated, and it thinks that
7 non-harmful microbes are worth responding to, that's
8 very dangerous, because we have non-harmful microbes
9 all over and inside our body.

10 An individual who responds inappropriately, for
11 example, to -- and it's -- and it's many things, it's
12 in our environment, it's even the food that we sample,
13 the air that we breathe, the dust particles that we're
14 exposed to in the environment. If we're not adequately
15 exposed and our immune system learns to tolerate these
16 things, not respond, then we can end up with problems
17 like chronic inflammation in certain locations.

18 So, for example, if somebody were to develop a
19 food allergy, right, that food is something we should
20 be tolerized against, that you're going to have chronic
21 inflammation in the gut when exposed to it, or if you
22 haven't been properly exposed to the environment, so,
23 for example, a lot of people who are mainly -- you
24 know, grow up in urban areas might have more of a
25 propensity towards things like hayfever, because when
26 young and their immune system was learning to

1 differentiate the dangerous things in our environment
2 from the non-dangerous things, they weren't exposed to
3 some of these things that you're exposed to in a rural
4 environment.

5 And so what -- and so this is very important, and
6 the reason why this is important is because one of the
7 things that masks are exceptionally good at filtering
8 out are large particles, like I said, large water
9 particles, that also includes dust particles, so
10 environment -- things we are exposed to in the
11 environment that are not dangerous and also bacteria,
12 especially bacteria. And a lot of this development is
13 not actually around the virome that populates the body,
14 but it is, in fact, the bacterial.

15 So, for example, in these gnotobiotic animals that
16 have no microbiome whatsoever, if you want to correct
17 the behavioural deficits that they will develop and the
18 immunological deficits, we can repopulate their gut,
19 for example, with a lot of these what we call like
20 probiotic bacteria, the same ones you would get in
21 yogurt, like lactobacillus, for example, so it's
22 largely these bacteria, these non-harmful bacteria that
23 allow us to, you know, to educate our immune system.

24 Without that, what happens is a child's immune
25 system tends to become dysregulated, never learns to
26 differentiate properly, and individuals are at a much

1 enhanced risk of developing autoimmune disease --
2 anything that's disassociated with an improperly
3 regulated immune response. So allergies, which is
4 responding to non-dangerous things in our environment
5 and causing inflammation against them; asthma is when
6 you're responding to inert things in the air that you
7 inhale and responding inappropriately to those, that
8 cause asthma; and autoimmune diseases.

9 And so, and we know this is the case, because so,
10 for example -- and this is largely looking at those who
11 grew up largely in urban centres versus those who grew
12 up on farms. Those who grew up on farms are much more
13 exposed on a regular basis to a rich microbial
14 environment. And so those who grew up in these urban
15 area -- or, sorry, rural areas have a much lower
16 incidence overall of allergies, asthma, and autoimmune
17 diseases.

18 And so by -- so, again, by putting these masks on
19 children, first of all, they're not at high risk of the
20 most severe outcomes of SARS-Coronavirus-2, and I've
21 already explained one of the physical reasons, they
22 just don't -- simply don't express the receptors at
23 nearly the concentration that adults do in their lungs
24 that the virus uses to infect. But we have put masks
25 that are effective at isolating their lungs from the
26 microbial environment, and we, of course, isolated

1 them, kept them away from their friends, a lot of
2 family members, and a lot of social interactions.
3 Literally, for children, it's a good thing to get
4 dirty, to get dirty, to have dogs lick their faces, to
5 hug other people, that their immune systems need to
6 interact with other microbiomes in order to develop
7 properly. So that is an immunological concept that
8 long-term masking -- and, again, nobody has any
9 concern. I mean, kids get sick, and maybe they're at
10 home, relatively isolated for a couple of weeks. It's
11 not a problem if it's a couple of weeks or it's a
12 couple of months. But once we start -- I wrote my
13 article first about my serious concerns about that a
14 year in. A year is getting too long. A year is a
15 substantial amount of immunological development in a
16 young person. And now we're at two years with no
17 current end in sight. So that is a serious potential
18 harm. By masking children, we are potentially, there's
19 no question, we're going to have an unknown number of
20 children with allergies, asthma, and autoimmune
21 diseases in the future, and they're going to have those
22 for the rest of their lives because we masked them for
23 two-plus years. So that's one.

24 And then I guess another one that I would mention
25 is this idea of carbon dioxide, because this is just
26 intuitive, so, you know, fire fighters have the

1 equipment to do this. At my university, we have the
2 ability to do this, look at CO2 levels, and we often do
3 that when looking at how we adjust the air change rate
4 in our rooms, especially the work rooms we work in a
5 lot, like the laboratory space that we're in, the
6 animal research rooms that we're in.

7 And so if you monitor the carbon dioxide level in
8 front of your mouth without a mask and then with a mask
9 on, it goes up. And this makes intuitive sense,
10 because what you're doing by putting a mask on your
11 face is you are restricting, you know, the free flow of
12 oxygen. What you're doing is you're creating an
13 additional dead space. When we exhale, when we exhale,
14 there's always dead air. We cannot get all of the air
15 out of our lungs, and we can't get all of the air out
16 of our mouth. That's dead air. When we inhale, that
17 dead air, when there's not been fresh air exchanged,
18 gets inhaled back into the end of the lungs.

19 By -- so by putting on a mask, you're extending
20 that dead air space a bit, and so it does increase the
21 carbon dioxide level a little, not a lot, a little, and
22 this creates a condition of very mild hypoxia, it's not
23 severe hypoxia, but if you have high carbon dioxide,
24 then the net result is you have slightly higher --
25 lower oxygen levels. But, again, slight changes in
26 oxygen concentration we know can have profound

1 physiological consequences.

2 So, for example, on the positive side, endurance
3 athletes, especially if they know they're going to have
4 to compete at a higher elevation will often go to train
5 in areas with a higher elevation. There's not a
6 massive change in the oxygen concentration, but by
7 going there for a long period of time, being exposed to
8 that lower oxygen concentration and training in that
9 environment, their body gets more efficient at the
10 oxygen exchange. Then they can perform better in the
11 sporting activity at a higher elevation.

12 But so we're kind of expecting this from
13 individuals. So we're putting masks on -- again, I'd
14 like to emphasize, masks make sense if you're going to
15 wear it to go into work for, you know, a little bit of
16 time because you have to meet a deadline, but you're
17 sick. They make sense when you're doing surgical
18 procedures. You're doing a limited procedure, you
19 leave, you take the mask off. They're not designed to
20 be left on for long periods of time and exposing people
21 to chronic low levels of hypoxia.

22 And, again, I'd like to highlight this is just
23 kind of intuitive in the sense that -- like I know for
24 myself, if I wear -- and I wear masks all the time
25 except for surgical intervention stuff, but if I wear a
26 mask for several hours, I start developing a headache,

1 constant thing and consistently. I need to take a
2 break; I need to get out in the fresh air.

3 And I would encourage anybody, if -- just focus,
4 put on the mask and go outside, because often that's
5 where the air, you know, seems the freshest and
6 everything, keep your mask on and take several deep
7 breaths, right, and pay attention to what it feels
8 like. Then take that mask off and take in a big deep
9 breath; it feels so refreshing. And that's why,
10 because we are impacting, albeit to a small degree, our
11 ability to gas-exchange, by taking off that mask, we're
12 removing some of the dead air space that we've created;
13 we're reducing the dead air space.

14 And this has -- because we've never done this for
15 such a long period of time, we simply don't actually
16 know the extent of harm that we might be causing,
17 especially to developing children again, I'd like to
18 highlight, right, this constant, prolonged exposure to
19 low-level hypoxia it might be causing.

20 So I think I'll leave it at that, if that's okay,
21 Mr. Kitchen. I -- I mean, I could look through and
22 provide another one, but those are probably my two top
23 concerns at this point in general.

24 Q Thank you. I am going to try to bring you through
25 pretty quickly, I want to give my friend a chance to
26 cross-examine, and we are down to, you know, roughly

1 only two hours left.

2 MR. KITCHEN Well, Mr. Maxston, let me ask
3 you this because I want to be mindful of this. How
4 much time do you think you're going to want for
5 cross-examination?

6 MR. MAXSTON: Mr. Kitchen, I expect I'd
7 be -- and this is not a criticism of Dr. Bridle, but he
8 seems to give expansive answers -- so thank you,
9 Dr. Bridle, for that -- I would anticipate 20 minutes,
10 maybe a little longer just because of the nature of the
11 answers, but I don't think I'll need terribly long.

12 I'll leave it up to you in terms of how much you
13 think you'll want to be, but it may be time to take a
14 break right now as well, given how long you've been
15 asking questions.

16 MR. KITCHEN: Yeah, yeah, I agree.

17 THE CHAIR: Yeah, it's, by my watch, 5 to
18 3, so let's take 15 minutes, and we'll come back at 10
19 after 3 and resume then, okay?

20 MR. KITCHEN: Thank you.

21 THE CHAIR: Just a reminder, Dr. Bridle
22 you're still under oath.

23 (ADJOURNMENT)

24 THE CHAIR: And, Mr. Kitchen, we'll turn
25 it back to you.

26 MS. NELSON: Sorry, Mr. Kitchen, we can see

1 you talking, but we actually can't hear your audio.

2 MR. KITCHEN: Sorry, I have a mute button on
3 my mic, so I apologize, so you missed --

4 MS. NELSON: No worries.

5 MR. KITCHEN -- the last 10 or 15 seconds,
6 sorry.

7 Q MR. KITCHEN: Dr. Bridle, I just have some
8 specific questions about comments that Dr. Hu has made
9 both in his report and in questioning.

10 Dr. Hu has stated that every country that has
11 imposed masking has experienced decreased transmission
12 of COVID; do you disagree with him?

13 A Yes, I do. I'll point out again, you know, like -- you
14 know, my expertise isn't epidemiological per se, but as
15 a researcher, I certainly am qualified to look at the
16 scientific literature and interpret some basic data.

17 I do know of numerous countries where the opposite
18 is true. And, in fact, when we look at the United
19 States, we see states where that trend is the opposite
20 as well. I know that Dr. Hu did not like the example
21 of Sweden, but I mean that is an example. He didn't
22 seem to cite any science to -- he just said it's, you
23 know, complex to interpret the reasons for observing
24 differences, but, nevertheless -- and he didn't dispute
25 either that Sweden is a classic example of, you know, a
26 country where they went the natural immunity route, and

1 seem to have done just fine, and there's other
2 examples. But, yeah, so, in other words, that all we
3 need is one example to say that that is not true. So I
4 do disagree with that overgeneralization.

5 Q You just called it an overgeneralization. So is that a
6 fairly absolute statement?

7 A Could you remind me what page of that report is it on,
8 just so I can look at it myself?

9 Q I'm quite sure he said that in questioning, not in his
10 report.

11 A Oh, can you repeat --

12 Q I do know --

13 A -- (INDISCERNIBLE) --

14 Q -- that he said it --

15 A -- so could you repeat it again, please?

16 Q So he said that every country that has imposed
17 mandatory masking has experienced decreased
18 transmission of COVID.

19 A Okay, so, yeah, that's not an overgeneralization,
20 that's incorrect. Again, when somebody has said
21 "every", and all we need is one example where they
22 didn't do it, and the -- you know, the outcome has been
23 fine, like Sweden, so that makes it not just an
24 overgeneralization, it makes it incorrect.

25 Q Do you find it unusual that he makes such an absolute
26 statement?

1 A Yes. So in the sciences -- so I even mentioned this
2 before when I was giving examples of -- when we were
3 talking about asymptomatic and transmission, right,
4 I -- there is asymptomatic transmission. It's not
5 common, and it's not a driver in this. And when I
6 mentioned, when I talked about that, is when you're
7 dealing with biology, there are no absolutes. Biology
8 is not an absolute science. It's not black and white.
9 It's not like mathematics, it's not like chemistry,
10 it's not like physics.

11 Biology, there are general ways that, you know,
12 biological systems function, and there's almost always
13 exceptions to the rule. So there's what the dominant
14 biology is, and then there's always exceptions to the
15 rule. So very rarely, if ever, can you make definitive
16 statements like that when it comes to biology,
17 especially when you're talking about fairly complex
18 biology. Because here, we're talking about -- we're
19 not even talking about one biological system, like
20 people, like humans; we're talking about the
21 biologic -- the biology of people interfacing with the
22 biology of a virus in the context of a complex
23 environment. So there's absolutely no way you can make
24 absolute statements like that in the context of this
25 current medical scenario.

26 That's -- so, again, that's the -- you know, so as

1 a scientist, that's not the appropriate scientific
2 approach. One has to be open to the fact that there
3 are exceptions. What we always have to do, and also to
4 explain, the way science and medicine is supposed to
5 function is we should -- we need to weigh the weight of
6 the overall evidence.

7 Again, because there often are not absolutes,
8 often things are not intuitive or common sense, what
9 often happens is -- I mean, so it's very clear in
10 science, if somebody put -- as soon as -- so the first
11 time a paper is published, that's obviously the first
12 report on a given scientific issue, so it sets the
13 tone. At that point, that becomes what the scientific
14 community agrees at that point in time, early point in
15 time, seems to be the reality. If the subsequent
16 scientific literature is all in agreement, that's
17 something that usually then gets enshrined in science
18 as a -- as, you know, sort of as a classic paradigm in
19 science. But as soon as you have disagreement, say the
20 second publication find -- finds something different,
21 at that point, you automatically need additional
22 research to be done to sort out the problem.

23 And so at the end of the day, it's never about --
24 and so especially one thing to keep in mind, you know,
25 my advice to everybody with this is there's a lot of
26 science that has accumulated over the past two years,

1 and, therefore, it's always about the weight of the
2 science. They're not about citing one paper or, you
3 know, two papers or selective papers. One has to look
4 at the overall weight of the evidence, like on scales,
5 and see what the balance of that evidence is. So,
6 yeah, just by the very nature, we can't, in this
7 scenario, make such conclusive statements.

8 Q To give Dr. Hu, to properly and fairly characterize his
9 position -- and my friend can interject if he disagrees
10 with me -- Dr. Hu has said the evidence for the
11 effectiveness of masking in reducing the spread of
12 COVID-19 in a health care setting is overwhelming, and
13 there's heaps and mounds of it. And then he says in a
14 non-health care setting, well, it's less clear. He
15 makes no distinction between asymptomatic or
16 symptomatic; he simply says in a health care setting,
17 it's guaranteed to work, we know absolutely it works,
18 there's just no question, maybe there's a question
19 about the community.

20 What I've heard you say is, Well, look, it doesn't
21 work at all for asymptomatic people, it's just -- it
22 just doesn't -- it's not even relevant, it's not even
23 logical because they just don't spread it because
24 they're asymptomatic, there's no asymptomatic spread.
25 So, you know, you two, as experts, you're kind of
26 talking at cross-purposes.

1 So I want to ask you about the health care
2 setting, okay, and then the non-health care setting,
3 because that's how he's done it, okay, to be fair to
4 him.

5 So he says that the evidence for the effectiveness
6 of masking in the health care setting is, quote,
7 Overwhelming, and, quote, There's heaps and mounds of
8 it. Would you agree with that or disagree?

9 A Yeah, we wouldn't be here today hearing this case if
10 there was universal agreement and if it was
11 overwhelming evidence. This is an area of active
12 debate. It's an area of active research. I looked at
13 Dr. Hu's report, because the other experts have
14 provided that. Where the misunderstanding comes in is
15 this concept of asymptomatic transmission and this
16 misnomer, this concept.

17 Where it's been most exaggerated, for example, is
18 children. We've mislabelled children as somehow being
19 these individuals that rarely get sick but are
20 overflowing with large quantities of this incredibly
21 pathogenic virus, right, so they can spread it to
22 others. That's simply not the case.

23 So, again, I highlight, Dr. Hu and I are not far
24 off in our view of masking. We're in complete
25 agreement that masking makes sense if you're
26 symptomatic, and it can very much help as a tool to

1 curb the spread if you're symptomatic, and you're
2 choosing to go around other individuals in that state.
3 But not asymptomatic.

4 I mean, this is again, intuitively, I guess, you
5 know, again, to put it in a perspective that maybe the
6 average layperson could appreciate, knowing what I told
7 you about the Omicron variant, where the reality is the
8 average flu is more dangerous than the Omicron variant
9 for the vast majority of the people, especially the
10 very young, for which SARS-Coronavirus-2 is not
11 particularly dangerous, but, you know, we've never
12 implemented this, if this asymptomatic transmission was
13 always such an issue, and we were to accept this now as
14 a paradigm, we'd have to apply this to every -- every
15 infection -- we would never -- we would never know if
16 somebody is ever, quotes, healthier or unable to
17 transmit to anybody else. There would be no way of me
18 knowing of somebody else who has no signs or symptoms
19 has, you know, in their lungs, respiratory syncytial
20 virus or a flu virus or Norwalk virus or any of the
21 viruses that we face. So just from that perspective,
22 it's counterintuitive.

23 And this is definitely within the realm of
24 immunology, and it comes largely from a
25 misunderstanding -- and, again, you know, with all due
26 respect, the average physician who has been in a

1 position of authority, you know, to implement policies,
2 and this is one of the reasons why -- a lot of people
3 don't realize it, and this is an area I have expertise
4 in as well because we have an emergency preparedness
5 plan in our university for responding to a pandemic.
6 We were required to implement this by the Government
7 following the 2009 flu, declared swine flu pandemic,
8 where people realized that there was initially -- the
9 response was one of panic and realizing that we really
10 did not have a coordinated response, we hadn't really
11 prepared for such a scenario. Now, that turned out --
12 that fizzled and that was not a true pandemic.

13 But so all the -- the Government made all publicly
14 instituted -- institutions, including my university,
15 come up with a pandemic preparedness plan. Our country
16 came up with a pandemic preparedness plan. Every
17 province and territory was required. We threw these
18 out within the first week to two. At my institution,
19 we threw it out within five days of the pandemic being
20 declared, and we haven't been following any defined
21 plan since.

22 And that applies at the Federal level as well.
23 We -- like, if you look, we still don't know what the
24 goalposts are. We don't know what the finish line is
25 before we declare that we're out of this. In fact, the
26 goalposts have kept moving.

1 And what I can tell you is that in those pandemic
2 preparedness plans, none of them looked like this at
3 all. They relied on the more traditional ways that we
4 approach this kind of problem, which was you treat
5 people who are sick as sick, and you keep them away,
6 especially from the vulnerable populations, and you
7 focus your protective efforts and your protective
8 measures on the high-risk demographics if, if, and when
9 a pathogen shows a predilection towards causing harm in
10 limited demographics. And so, you know, we haven't
11 reached that point here. You know, we didn't follow
12 those kind of plans, and so this is where we've come in
13 with these other approaches.

14 And what I do want to point out then is --
15 actually to get back on track, Mr. Kitchen, can you
16 remind me what your core question was? I was just
17 coming to it, and I wanted to find something in the
18 report here.

19 Q Well, like I said, Dr. Hu says, end quote, heaps and
20 mounds of evidence supporting the effectiveness of
21 masks in --

22 A (INDISCERNIBLE)

23 Q -- a health care setting --

24 A -- yes, and so -- so, no, that is a point of
25 contention, and so his report even highlights this. So
26 one of the things -- I mean, he hasn't -- he hasn't

1 cited heaps and mounds of evidence. It's a limited
2 number of citations.

3 And this is -- so this is something that I want to
4 deal with head-on just so that people, when
5 interpreting the two reports, can understand. He
6 accused me of solely leaning on outdated documentation,
7 or maybe not solely but certainly leaning on outdated
8 documentation when it came to my report. People are
9 free to look at my reference section. I have lots of
10 updated citations in there.

11 I want to highlight that, in fact, after accusing
12 me of using outdated literature, the two things that he
13 most emphasized when talking about this -- when talking
14 about this concept of masking, the first one was a
15 citation from 2011. So he actually set the record for
16 the oldest cited paper with respect to masking and
17 citing the one from 2011, a Cochrane review. And so --

18 Oh, and the other thing he said is he accused me
19 of using examples from other viruses. And I want to
20 point out that this 2011 one is the oldest -- second
21 oldest reference of all the reports about masking and
22 dealt with influenza virus, not SARS-Coronavirus-2.

23 And one where he spent half of a paragraph
24 highlighting it was actually to describe what he felt
25 was, you know, sort of break-through work that was
26 done, and it's a study that was done in the early

1 1900s, which shattered records in this in terms of the
2 oldest citation, and that certainly wasn't dealing with
3 the SARS-Coronavirus 2.

4 So he's got that aspect wrong in terms of arguing
5 that he's got the updated literature. And, in fact, I
6 just want to highlight this as well, because this is
7 overstated again, he actually said in his report, on
8 pages 1 -- at the very end of page 1, the final last
9 few words, onto page 2, he said: (as read)

10 A vast majority of literature [this means his
11 literature] is from the years '20 to '21 with
12 emphasis on literature published in 2021.

13 So I actually went to his reference section, because,
14 again, I do lots of review of, you know, scientific and
15 medical documentation, and I excluded some of these
16 because they're not peer-reviewed articles. A couple
17 of them are websites. One of them was a website where
18 he -- that described the 2011 paper, the source of the
19 2011 paper that he got.

20 And so, in fact, it turns out that of his
21 citations, 19 of his citations about masking, of those
22 19, 11 were from 2020 to 2021. That's 58 percent. So
23 that's not a vast majority of the literature. And he
24 then emphasized that most of it was from 2011. Well,
25 in fact, only two of those is 11 -- sorry, two, the
26 emphasis was on literature published in 2021, but only

1 two of those 11 papers were from 2021, 18 percent of
2 the papers cited since 2020 were from 2021.

3 And so I think it's important, again, otherwise,
4 it gives a misconception that somehow he's captured the
5 recent, cutting-edge data, and I have -- again, people
6 are free to look through -- I've got plenty of
7 citations from 2020 to 2021, so that's not the case.
8 It's not -- this isn't the case of somebody having --
9 understanding current literature, and somebody else,
10 myself, not understanding the current literature and
11 only focusing on historical literature. I want to
12 point that out.

13 Further, he even states in this, if I can find it
14 here, and this is important because this is a very
15 important thing for us to understand, because we're all
16 hearing public messaging, and we're all trying to sort
17 through this information and understand, and there is
18 lots of misinformation, there's genuine information,
19 and there's been messaging that's been changing over
20 the course of this. And so this is very important
21 because one of his critical sources of information
22 about this are public health officials, especially
23 Dr. Theresa Tam, and that's why I'm hoping I can just
24 find this here quickly. Where is it?

25 Q He mentions Theresa Tam on page 8. I don't think he
26 mentions her anywhere else.

1 A Okay, thank you. Oh, Dr. -- sorry, I mean Dr. Tan,
2 sorry. Do you see the reference to Dr. Tan?

3 Q T-A-N?

4 A Yes.

5 Q 'N' as in "nothing"? No.

6 A Medical Officer of Health. Give me one second, because
7 this is an important point.

8 Q Okay.

9 A Let me just pull up the document here.

10 Q Do a search on it.

11 A Sorry for the extra time, but I just want to make sure,
12 because this is important.

13 Q I don't find anything for T-A-N.

14 A Okay, sorry, yes, that's why, I meant Theresa Tam. I'm
15 getting her Medical Officer of Health, her name messed
16 up here, it's Theresa Tam, Dr. Theresa Tam --

17 Q Yeah, page 8.

18 A -- so this is on page 8 just before the summary, the
19 subheading "Summary", and this is when talking about
20 that that I made unsubstantiated claims, that there are
21 numerous harms associated with masking, there are no
22 harms, but we've already discussed that.

23 And then -- this is very important, because --
24 this is very important here, so what he states in that
25 last sentence: (as read)

26 Indeed, public health experts, including

1 Dr. Theresa Tam, have walked back any
2 statements alluding to the potential harms
3 and increased infection risk of masking.

4 There's no scientific documentation there, so
5 peer-reviewed literature, and what this is -- so what
6 he means, what he means, and if we're blunt about it,
7 is that Dr. Theresa Tam has completely contradicted
8 herself in the context of this pandemic.

9 And specifically what he's referring to when he
10 talks about walking back in his statements, it was that
11 a lot of top public health officials, including
12 Dr. Tam, Dr. Fauci in the United States, and others and
13 agencies like Health Canada were actually discouraging
14 the use of masks and widespread use of masks earlier on
15 in the pandemic and widespread use of masks earlier on
16 in the pandemic, and that was because of the scientific
17 evidence available at the time.

18 So, yes, they later walked back the statements,
19 and I can tell you that I have yet to know what the
20 scientific foundation is for Dr. Theresa Tam walking
21 back that statement. And I point out, as you can see
22 by the wording here, you can ask yourself, it's not
23 scientific, I don't know what walking back a statement
24 actually means. She never rescinded the statement.
25 Yes, I will agree that she downgraded the -- I guess,
26 the importance she placed on that, you know,

1 down-playing of masking as an effective protective
2 strategy in the context of SARS-Coronavirus-2 early on,
3 but she never rescinded it. She did, indeed, dampen it
4 or walked it back to some degree. And, again, I have
5 yet to see, she hasn't produced any peer-reviewed
6 scientific literature that I've seen.

7 Now this -- so this becomes very critical, because
8 I'm not going to say -- I can tell you there's lots of
9 literature to suggest there's harms of masking, and it
10 doesn't work, and, again, this comes down to the whole
11 disagreement is about asymptomatic transmission. And,
12 again, I highlight that in the studies that are cited
13 to support this, the vast majority of those studies are
14 defining transmission based on PCR positivity, not
15 proof -- not demonstrating with using the functional
16 virology assay that I said, that there is definitively
17 replication-competent viral particles in the sample,
18 especially at a concentration that would meet the
19 threshold required to cause infection in other
20 individuals.

21 So a lot of those studies actually agree,
22 potentially, with the outcome that made -- where they
23 measured what they did, but they didn't prove that
24 there was transmissibility of the sample that they were
25 collecting. And so that's what it comes down to is how
26 we interpret asymptomatic transmission in this.

1 Because like I said, we are all in uniform agreement
2 that if somebody is sick, this makes some sense.

3 And then the other thing is, which I was very
4 surprised, because often scientists who have been
5 speaking out in a way that's perceived to be against
6 the narrative, one of the arguments that constantly
7 comes up is, well, you haven't proven your point with
8 the randomized controlled trials.

9 So I want to explain to everybody, a lot of
10 people, when it comes to clinical medicine, consider a
11 randomized controlled trial to be the be-all and
12 end-all. It's where you actually look at a relevant
13 clinical setting, and you have your treated group and
14 your placebo group or untreated group. If you're
15 talking about masking and SARS-Coronavirus-2, it would
16 be a compilation in the context of SARS-Coronavirus-2
17 with the potential for it to be transmitted, and you
18 would have a population that's masked and a population
19 that is unmasked, that would be the negative control
20 group, and then you actually see if there is an effect.
21 So for everything that has not been accepted in the
22 public health narrative, it's because there hasn't been
23 a randomized controlled trial.

24 Let me give you an example. The same Dr. Theresa
25 Tam told all of Canada that the concept of vitamin D
26 reducing the potential for infection is fake science.

1 I can believe -- I'm an immunologist. I'm even left
2 with -- I've actually sent a letter to my
3 administration university telling me [sic] that am I
4 going to get in trouble if I continue to teach
5 immunology like I have during my whole career, because
6 I can tell you vitamin D is a critical component of the
7 immune system. There are -- it functions at such a
8 basic fundamental level with so many aspects of the
9 immune system.

10 Without it, it would be like if somebody is
11 familiar with cars and a car engine, it would be like
12 if you have a high-performing race car, say, a
13 Formula One race car, there's no question, if you
14 deactivate one of the cylinders in that engine, it is
15 not going to perform as well as if it had that cylinder
16 functioning. It's not going to be competitive in the
17 race.

18 And that's the case with vitamin D. I mean,
19 there's thousands and thousands of papers -- I can tell
20 you -- I can give you 77 citations right now that show
21 the benefit of vitamin D in the context of
22 SARS-Coronavirus-2. That's why we have -- one of the
23 reasons we have our annual cold and flu season. As an
24 immunologist, I often don't refer to it as the cold and
25 flu season, I refer to it as the low vitamin D season.

26 THE CHAIR:

Dr. Bridle, I'm not sure that

1 vitamin D was really relevant --

2 A No --

3 THE CHAIR: -- to --

4 A -- no, I'll probably be back to it immediately, yes,
5 thanks, I appreciate that. So my next comment
6 immediately ties it in.

7 And the point being that it was declared that a
8 randomized controlled trial, therefore, was needed to
9 prove the effectiveness of vitamin D in the context of
10 SARS-Coronavirus-2.

11 And so that's where this ties in. So when you
12 have an area where there is definitely, clearly, far
13 more debate going on and the science is -- it's why you
14 have even more reason for a randomized clinical trial
15 if you really want to sort out this issue.

16 Now, what I was honestly shocked by is in Dr. Hu's
17 report, he acknowledged that but then went on to
18 proceed to argue that a randomized controlled trial
19 could not be done because this is such a cut-and-dry
20 topic, because everybody is in such uniform agreement
21 that masking works in the context of SARS-CoV-2. Well,
22 clearly, that is not the case. If nothing else, my
23 expert opinion disagrees with his expert opinion.
24 There's evidence of nonuniform agreement right there.
25 And when scientists disagree, we need further research
26 to work it out.

1 Now, I want to highlight something, because this
2 is very important to understand, randomized controlled
3 trials has been -- that's been the basis for promoting
4 anything to do with treating or protecting from
5 COVID-19. So what we get to here, and I just want to
6 go to this now -- I thought I'd have these better
7 marked -- so I want to get to this where he talks about
8 the randomized controlled trials, and I think this is
9 in his rebuttal section. And it talks about -- he uses
10 a -- an analogy there. Let me see here. Okay, yes,
11 right here: (as read)

12 With respect to the evidence for
13 effectiveness of masking [this is on page 7],
14 Dr. Warren states that in the absence of
15 evidence for randomized controlled trials in
16 meta-analyses ...

17 And then it continues on, and that's -- so that's what
18 he's responding to, this idea of randomized controlled
19 trials. So he admits it is correct that there are a
20 few randomized controlled trials on masking, and
21 there's none in the context of SARS-CoV-2 as -- so
22 we're talking about a fundamentally different virus.
23 Then he says: (as read)

24 There is an overwhelming burden of evidence
25 from other studies showing the benefits of
26 masking. Furthermore, it's not ethical to do

1 RCTs on masking given its significant
2 benefit.

3 Well, we've just talked about, there's potential harms,
4 potentially even in the context of symptomatic --
5 asymptomatic people, maybe more harm than good. And it
6 doesn't, for all the reasons I've explained, doesn't
7 help spread SARS-CoV-2 by the aerosol route. So none
8 of that fits into play here.

9 And then he goes on to give an analogy that
10 this -- to say why the randomized controlled trials
11 can't and should not be done with masking. He says
12 this is like parachute-jumping out of an airplane. We
13 wouldn't run a study right now, right, none of us would
14 ask for a study to be run asking people to jump out of
15 a plane with a control group that is not given a
16 parachute, right, and to the test the idea that
17 parachutes stop people from dying when jumping out of a
18 plane.

19 Well, this is not a fair comparison whatsoever.
20 Worse, he got upset about one of the other experts. He
21 actually says here: (as read)

22 Notwithstanding the factual error on page 6,
23 it is fallacious and unscientific to equate
24 death rates by age in the context of a global
25 pandemic with those of car accidents, with,
26 at a minimum, it is a false dichotomy and

1 then [et cetera, et cetera].

2 So he was really upset with the use of an analogy to --
3 due to car accidents with deaths caused by an
4 infectious agent in the context of a pandemic but then
5 goes on and uses his own completely, arguably even far
6 more inappropriate, analogy to argue that RCTs have no
7 role to play when it comes to considering the benefits
8 of masking.

9 And what do I mean by this? It's intuitive, I
10 agree, we're not going to run a study to determine
11 whether jumping out of a plane without a parachute
12 increases the risk of dying upon impact with the
13 ground, and we don't have to. That experiment has
14 naturally been run multiple times. If people -- if
15 somebody jumps from a large height, if they want to
16 commit suicide, they know they can jump from a large
17 height. Anybody who falls, plunges to the ground from
18 a large height will experience death. We've had people
19 with parachutes jump out of planes, and the parachutes
20 failed to deploy, and they've died. So this is not a
21 comparison.

22 The equivalent with -- the RC with masking would
23 be that we know that, in the control group, if they do
24 not wear the mask, they are going to die. Yes, that
25 would be unethical. We do not know that. In fact,
26 we're debating that very fact and whether it's actually

1 doing anything to protect these people from harm. And
2 so I would actually propose that the precise thing that
3 we do need scientifically to sort this out and
4 especially if we're going to force people to follow
5 this rule, we need to run a randomized controlled trial
6 and sort out the science once and for all.

7 So again, you know -- I mean, I'm not going to
8 apologize for the long answer, it's a thorough answer,
9 and so, no, this is not a clear path. And I'm sorry,
10 Dr. Hu has not cornered the market on, you know, the
11 fact that, you know, being be able to state that
12 everybody knows this, and everybody agrees on this
13 fact.

14 Q MR. KITCHEN: Thank you, Dr. Bridle that
15 answers several other questions that I had.

16 Since we're in that area on his report, on page 5
17 of your report in the last sentence of your section on
18 asymptomatic transmission, you kind of make a summary
19 statement, you say: (as read)

20 There is no substantial evidence to suggest
21 that people who are asymptomatic represent a
22 substantial risk of causing COVID-19 related
23 hospitalizations or deaths in others.

24 Now, as you know, Dr. Hu takes issue with this issue on
25 page 7 of his report. He says that you have no
26 scientific evidence for this statement. He also says

1 the fact that you would make such a statement, quote,
2 proves a lack of understanding of asymptomatic
3 transmission and its deadly effects on the community.

4 I have a couple questions on this. My first one
5 is do you think there's any scientific evidence to
6 support this statement that you made?

7 A Okay, that I think I can answer quickly. People, first
8 of all, can read page 5 of my report, see the citations
9 that I have there, and then refer to everything that
10 I've explained today.

11 I understand the science -- so again, with all due
12 respect, when it comes to asymptomatic transmission,
13 what we're talking about is we were talking about
14 fundamental, hard core immunology -- or, sorry,
15 virology at the interface with immunology. That is
16 precisely my area of expertise. I'm a viral
17 immunologist. This has nothing to do with public
18 health or anything like -- it has public health
19 implications, but the science behind this, this is how
20 a host immune system interacts with a virus that
21 dictates whether or not the outcome is going to be
22 potential transmission and infection and causing
23 disease in others. And I mean people can take my
24 expert, you know, commentary or not. Like I said, I
25 have the citations there, and I've talked at length
26 about the science, the precise mechanisms governing

1 this.

2 And just so that you understand, I don't know if
3 people can see, but I actually appreciate being asked
4 the question, because I've got that very thing marked
5 up, so I'm glad I actually got to talk about this,
6 because, again, I have been called upon to review lots
7 of literature, grant applications, scientific
8 publications, right, manuscripts people want to publish
9 in peer-reviewed journals. And sorry to be blunt here,
10 but this -- this report from Dr. Hu was and --
11 generally unprofessional, disrespectful in tone, very
12 much highlighted here. That's why I have this actually
13 underlined, because it's quite offensive. He uses
14 language that is offensive, accusatory. He makes
15 assumptions. He's hypocritical in areas of his report.
16 And I can give examples of all of these so -- if I
17 wish, and this is one of them. And he makes
18 demonstrable -- you know, many claims that lack
19 evidence, lacks citations or that are only backed up by
20 hearsay evidence, and then makes these kind of
21 statements, right, that as an expert in this area --
22 and I'm sorry, but looking at the expertise, I am quite
23 confident that I have deeper expertise in the area
24 directly relevant to understanding asymptomatic
25 transmission or lack thereof. And he's actually
26 arguing that I am provide -- that I have no scientific

1 evidence. That is a lie. That is a lie. I provided
2 the scientific evidence today. I have all these
3 citations. I'm looking at page 5 of -- and I see all
4 kinds of citations listed here and a description of the
5 science. And he says this proves -- somehow this
6 proves a lack of understanding. Like this means me,
7 that I do not understand this.

8 This is unprofessional. I don't do -- write this
9 way in any of my reports, so I'm sorry, this group
10 needs to understand this. I have been involved in a
11 lot of court proceedings. I have been involved in a
12 lot of scientific proceedings. This is not a
13 scientifically or medically acceptable document for
14 interacting with other scientists or medical
15 professionals, and this highlights it.

16 So thank you, because I didn't know if I'd have
17 the opportunity to share with the group, but this
18 statement is -- there's several others, and I'm not
19 going to take the time, but if anybody has a question,
20 I can prove what I just -- my overview of his report,
21 but that is, certainly I had listed, as the most
22 egregious statement against myself.

23 We have to respect one another as scientists and
24 physicians. I do respect Dr. Hu's perspective. Like I
25 said, I agree with much of his science, and I've
26 acknowledged the peer-reviewed publications that he's

1 used as valid, you know, acceptable scientific
2 publications. I think we need to be very careful, and
3 this stepped over the line, in my opinion, in terms
4 professionalism in this kind of environment.

5 Q Thank you, Dr. Bridle. I am almost done. I know this
6 might be obvious, is there an important difference
7 between correlation and causation?

8 A Yeah, absolutely. A massive difference. The burden of
9 proof is vastly higher for causations. Correlation can
10 contribute to the overall determination of causation,
11 but causation means that you know for sure that one
12 thing influences the outcome of another thing, directly
13 influences it, not, you know, has a direct impact on a
14 certain outcome.

15 So, for example, we know that SARS-Coronavirus-2
16 is the causative agent of the disease we call COVID-19.
17 If somebody is not infected with SARS-Coronavirus-2,
18 they will not get COVID-19, and if we infect them with
19 a different virus, they will not get COVID-19. It's a
20 causative agent, right? So it's a cause-and-effect
21 relationship.

22 A correlation means that something trends in the
23 same direction as something else, you know. And a
24 classic example -- and so I talk about this quite a
25 bit, because when I teach actually my immunology
26 students, because it is important to understand the

1 difference, so, for example, when it comes to -- you
2 know, one of the correlations that does -- that is
3 related and does have some link through causation, as
4 we get older, people tend to have a greater risk of
5 getting cancer. And there's two reasons:
6 Scientifically one is we get exposed to more potential
7 mutagens that can cause cells to turn cancerous; also
8 our immunological function declines, and our immune
9 system is very good at controlling cancers, right? But
10 there's many other things that correlate with age as
11 well, right?

12 So I don't know -- for example, as you get older,
13 there's also a greater use, on average, of dental
14 implants, right, as people lose their teeth, but that's
15 not a causation to have cancer, for example. So that
16 would be an example of a correlation, right, somebody
17 getting older, where if something gets -- as they get
18 older, there's an event that happens more frequently
19 among that population, but that event doesn't
20 necessarily mean that it's the cause of another event
21 that increases in frequency in that older population.
22 So, yeah, there's a huge difference.

23 Q Dr. Hu stated in his report that, quote: (as read)

24 A very, very, very large number of health
25 care workers in Italy contracted and died
26 from COVID in early 2020.

1 He concluded that part of the reason that happened is
2 because the Italian health care workers ran out of
3 masks. Now, in your opinion, is there a causal link
4 between masking and what happened to the Italian health
5 care workers, or is there only a correlation link?

6 A Do you have a page number for that so I can take a
7 quick look?

8 Q That I think was in his examination. It's not in his
9 report, but I can --

10 A Okay, I didn't recognize it --

11 Q -- invite my friend to --

12 A -- that's fine. So, yeah, I -- yeah, that's fine, I
13 can comment on that. I heard the question.

14 So, no, that's clearly not. So, again, if -- in
15 that case, when you're talking about a clinical
16 scenario, a complicated clinical scenario where there's
17 other things happened, so what I mean by this is it's
18 very different from a lot of the, for example,
19 preclinical experiments that I run. I can run
20 experiments in very controlled environments.

21 So, for example, if I run a study in mice, these
22 mice are all genetically identical. They are all the
23 same sex. They are fed the same food. They're housed
24 in the same environments. They -- and so we can divide
25 them, and we can have one treatment differ between
26 them, one thing. And so it's very easy then to

1 attribute an effect to that one thing because
2 everything else is controlled.

3 So in the scenario that Dr. Hu was talking about,
4 the only way that you could potentially allude strongly
5 to causation is with a randomized controlled trial.
6 That's the whole point. And so the reason it's so --
7 what randomized controlled trials are is they take
8 account for these real life settings. So in the real
9 world, when you're dealing with a clinical scenario
10 where you're talking about an outbred population,
11 you're talking about males and females, you're talking
12 about old and young, you're talking about different
13 lifestyles, different historical exposures to
14 pathogens, et cetera, et cetera, and, therefore,
15 different immunological programming and -- you know,
16 and you're dealing with a pathogen and different
17 potential exposures to that pathogen across that
18 population, you're talking about many, many
19 uncontrolled variables.

20 So what a randomized controlled trial is you try
21 to account for all those variables by getting those
22 variables equally distributed as much as possible among
23 the two groups. That's why it's called a randomized
24 trial: You literally random -- you can take two
25 people, they randomly get associated to either the test
26 arm or the control arm. And the idea of it's

1 totally -- if it is truly random, then at the end of
2 the day, both arms of your trial should have people
3 that represent the whole -- all those variables that
4 exist in the real world should be --

5 THE CHAIR: Dr. Bridle, could -- I'm
6 not --

7 A Yes.

8 THE CHAIR: -- sure that this is really
9 relevant. Could we get back to the question, please?

10 A Oh, yeah, well, it is relevant because this is the way
11 that Dr. Hu could have made his conclusion and should
12 have.

13 And so with the relevant -- and so what I'm saying
14 is with this randomized controlled trial, you equalize
15 all those variables, it's very large because of all the
16 variables, and then when you run those kind of studies,
17 that is what allows you to draw strong conclusions
18 about the potential causation of a variable, which, in
19 this case, is masking.

20 In the scenario that you just posed, there's no
21 way causation could be attributed to masking. There
22 were far too many uncontrolled variables that were not
23 accounted for.

24 Q MR. KITCHEN: I've only got one more
25 question on this and then one final question, and then
26 I'll be done.

1 Dr. Hu in his testimony, so in his questioning, he
2 described the lockdown restrictions imposed in Alberta
3 in November and December of 2020, so a little over a
4 year ago now. He stated cases went up after the
5 lockdown, but eventually later on cases went down. He
6 then concluded that the lockdown did not cause the
7 initial rise in cases, but that it did cause the
8 eventual drop in cases. In your opinion, is this a
9 logical or scientific conclusion?

10 A No. So actually he had the latter part of that
11 argument in his report highlighting -- trying to
12 highlight that these lockdown measures, including
13 masking a key component, had contributed to the
14 dramatic decline in cases.

15 So more recent history demonstrates that that is
16 patently false, that that's just the reality. That was
17 looking sort of -- taking a snapshot in time. So
18 again, first of all, it's correlative at best.
19 Secondly, I -- at least it was in the report. I didn't
20 see any peer-reviewed scientific -- I didn't see any
21 citations attributed to his comments there. That's one
22 thing that I had noted. And further, it's one snapshot
23 in time; it was looking at the tail end of one of major
24 waves of the pandemic -- waves of positive test results
25 for SARS-Coronavirus-2.

26 And what I would like to highlight is that since

1 he highlighted that snapshot in time, we have had a
2 record-shattering wave of the Omicron variant, where
3 all the historical stuff that was being I guess
4 highlighted as the reason for that decline, right, it
5 was still in place, coupled with the fact that the vast
6 majority of people were then vaccinated to add
7 additional -- an additional layer of protection, we had
8 record-shattering cases of Omicron.

9 So clearly, like -- and so again -- and I mean,
10 I'm a scientist and when I have the data, make certain
11 statements when there's overstatements or things
12 misstated. I don't think it's incorrect for me, as a
13 scientist, to declare something like that as being
14 patently false.

15 Q Thank you.

16 MR. KITCHEN Those are all my questions on
17 direct examination. So, Mr. Maxston, I've managed --
18 (INDISCERNIBLE) --

19 THE CHAIR: Mr. Maxston (INDISCERNIBLE),
20 would you like a few minutes?

21 MR. MAXSTON: I think, in fairness to Madam
22 Court Reporter, we should take at least a 10-minute
23 break. Again, I don't expect to be particularly long,
24 but Mr. Kitchen may have some redirect, and I think we
25 should take -- just take a 10-minute break if you're
26 comfortable with that, Mr. Chair.

1 THE CHAIR: I'm fine with that. It's
2 3:55, so we'll come back at 10 after 4. Thank you.
3 (ADJOURNMENT)

4 THE CHAIR: Okay, I think we're all back,
5 so Mr. Kitchen has completed his direct, and we'll ask
6 Mr. Maxston to continue.

7 MR. MAXSTON: Thank you, Mr. Chair.

8 Mr. Maxston Cross-examines the Witness

9 Q MR. MAXSTON: Good afternoon, Dr. Bridle. I
10 wanted to begin by saying that I was very displeased to
11 hear your expert testimony on the effects of aging. I,
12 however, will not use that to attack your credibility,
13 I tend to agree with it, I have to admit, but,
14 nonetheless, I thought that was something we should all
15 not take into account in today's hearing.

16 I have a couple of clarification questions for
17 you, Dr. Bridle. When I looked at your cv, and then I
18 Googled you at the University of Guelph, I just want to
19 be clear that your position is at the University of
20 Guelph in the pathobiology department at the Ontario
21 Veterinary College; is that accurate?

22 A That is accurate.

23 Q And that's part of the Doctor of Veterinary Medicine
24 program; is that correct?

25 A Yes, that's correct, yeah, as alluded to before, a lot
26 of my teaching is actually of the students enrolled in

1 the Doctor of Veterinary Medicine program.

2 Q Right.

3 A Yeah.

4 Q You had some discussions with Mr. Kitchen where you
5 talked about what was occurring at Guelph University.
6 Over the course of the pandemic, have there been any
7 requirements at Guelph University for you as staff or
8 perhaps students to mask if there's in-class settings
9 or teaching?

10 A So just -- so, yes, just to clarify, not just students
11 and staff but faculty as well. So actually I'm
12 technically not a staff member. So just so people
13 understand, yeah, there's three categories of people at
14 the university: Faculty, who are the professors is
15 what we're referred to; the staff -- we're represented
16 by the University of Guelph Faculty Association is kind
17 of the best way to distinguish; then there's our staff,
18 and many of them are affiliated with fundamentally
19 different unions; and then there's the student
20 population.

21 But all three populations, yes, there have been
22 masking policies that were implemented at the
23 University of Guelph, yes.

24 Q And did you comply with those masking policies,
25 Dr. Bridle?

26 A I did. I respect the law, and I respect rules, and so

1 even though I -- you know, what I've shared with you
2 today, I respect those rules and adhere to them, yes.

3 Q I think you mentioned as well that when you went for a
4 hair cut, you or the barber or the hairdresser had to
5 wear masks, and that, I'm assuming, was because of the
6 Chief Medical Officer of Health order or something like
7 that; would that be correct?

8 A That is correct, yes.

9 Q So you observed that as well, that masking requirement,
10 I should say?

11 A Oh, yes, I acknowledged that masking requirements have
12 been implemented in many places, yes, including my
13 public health area, yes.

14 Q Yeah, and more to the point, when you went to see the
15 barber or to get a hair cut, you complied with those?

16 A I did so I'd get my hair cut, yes.

17 Q I think you were very fair in saying, Dr. Bridle, that
18 there were I think some fairly significant areas where
19 you and Dr. Hu were, I think you'd even said, a hundred
20 percent in agreement, and I think that was in the
21 context of masking and persons who are symptomatic and
22 the benefits of masking. I think that's what you said
23 anyhow.

24 I think, isn't it fair to say, that for a
25 chiropractor, that person treating a patient can't
26 definitively know whether the patient is symptomatic or

1 asymptomatic; would you agree with that?

2 A Well, okay, so from a technical -- from a technical
3 standpoint, nobody can know without screening or asking
4 whether somebody is symptomatic. So again, as I
5 explained earlier, but I can explain again because it's
6 a common area where people don't quite understand the
7 distinction, so a sign is something that somebody
8 external to the individual can identify, can use to
9 identify that somebody is sick. A symptom is something
10 that a person experiences that's associated with
11 sickness.

12 So specific -- so nobody -- so, in other words, by
13 definition, nobody upfront can identify whether
14 somebody has a particular symptom, but you can identify
15 if somebody has a particular sign. And again, so --
16 and I can't comment beyond that in terms of
17 chiropractors. I -- that's not my area of expertise.
18 I'm not sure exactly how it works, but --

19 So, for example, in my field of expertise, that's
20 why we've been using the prescreening, and again it's
21 asking the questions. By asking the questions, if
22 people have -- are experiencing any symptoms or showing
23 any signs, then they are not to go in, you know, to the
24 workplace, my workplace, for example. I can't comment
25 on what happens in a chiropractor's office though.

26 Q Okay. I'm not going to take you through all the

1 exhibits that are in front of the hearing relating to
2 mask mandates and mask requirements, but -- and I'll
3 indulge -- hopefully my friend will indulge me a little
4 bit, rather, I'll just tell you that there have been
5 some exhibits from entities like Alberta Health
6 Services and the Chief Medical Officer of Health in
7 Alberta which set out mandatory masking and social
8 distancing, and I'm talking about the typical blue
9 medical masks, not N95s and things like that, and that
10 you referred to Dr. Tam as well.

11 It's probably fair to say, isn't it, that you
12 disagree with those type of mandates?

13 A In the context of asymptomatic individuals, yes. I
14 agree with them in the context of symptomatic
15 individuals for all the reasons that I've stated
16 earlier.

17 Q I'm wondering -- and again you may not have had the
18 chance to review this in detail, I'm not going to take
19 you towards it -- but one of the key documents in this
20 hearing is a Pandemic Directive that the College of
21 Chiropractors created that, among other things,
22 required social distancing and masking.

23 I'm assuming that, in your work, you do have
24 contact with members of regulated professions, perhaps
25 physicians, maybe lab techs, CLXTs, others. Are you
26 familiar with generally the concept of self-regulation

1 for professionals?

2 A Yes, I have, yeah, multiple clinical colleagues, so,
3 yes, through them, I understand this to a certain
4 degree.

5 Q And I don't want to go into a lot of detail, but if you
6 were to look at the Ontario Regulated Health
7 Professions Act, which I understand is an omnibus
8 legislation, it sets up a college like the College of
9 Physicians and Surgeons, the CPSO, and is it your
10 understanding that that organization sets up
11 registration requirements for physicians that they have
12 to meet before they can become registered as
13 physicians?

14 Sorry, you're muted.

15 A So I -- honestly, I can't comment in much detail on
16 that. I mean, I know that my clinical colleagues are
17 licensed by a body, for example, in Ontario, like you
18 said, like the College of Physician and Surgeons of
19 Ontario, but the actual licensing process and the
20 administrative structure and how that's managed, I --
21 I'm sorry, I don't have the expertise to comment on
22 that.

23 Q Yeah, and fair enough. I didn't want to take you
24 there; I was just trying to, you know, get your sense,
25 I mean, in your work, that you're aware of the fact,
26 for example, that a physician has to register with the

1 CPSO before they can practice as a physician.

2 Are you also generally aware that, again, a member
3 of the CPSO has to have annual, continuing competence
4 requirements, has to meet recordkeeping requirements,
5 and those type of things established by the CPSO?

6 MR. KITCHEN: Mr. Maxston, look, we all know
7 where you're going, and tomorrow I have a member of the
8 CPSO up, and I'm not going to object. You're going to
9 ask him these questions, I'm not going to object
10 because he's a member of the CPSO. Dr. Bridle --
11 (AUDIO/VIDEO FEED LOST)

12 THE CHAIR: You've gone -- you're frozen,
13 Mr. Kitchen.

14 MR. KITCHEN: -- have him talk about
15 regulated members when he's not one.

16 MR. MAXSTON: Mr. Kitchen, you just froze
17 there a bit, so I'm not going to proceed with that line
18 of questioning then, that's fine.

19 Q MR. MAXSTON: In your -- as your job and in
20 your area of expertise, I'm assuming you've looked at
21 the Ontario equivalents to, broadly speaking, the
22 Alberta Chief Medical Officer of Health masking and
23 social distancing requirements; is that fair to say?

24 Oh, I think you're muted, sorry.

25 A It's not showing that -- can you hear me?

26 MR. KITCHEN Yeah.

1 Q MR. MAXSTON: Yeah.

2 A Okay, yeah, so I -- yes, yes, is my answer.

3 Q Would it, keeping in mind your comments to me about
4 your visit to the barber and what happened at the
5 university, your university in terms of the masking
6 requirements, would you think that it's important to
7 comply with CMOH orders?

8 A So could you clarify that question? What do you mean
9 exactly, like in which context? I mean, if I want to
10 get food from a grocery store to feed my family, of
11 course, I think it's important to comply so that I can
12 get food.

13 Do I think that I need to be masked in those
14 scenarios? No. Do I take every opportunity to not
15 wear my mask where it's allowed? Yes. You know, so
16 I'm not quite clear. That's how I would answer that.
17 Maybe a more specific form --

18 Q No, I was looking -- I'm sorry, I was looking to ask
19 you some questions about the masking components of
20 Medical Officer of Health orders, but I think you
21 answered that before when we talked about the policies
22 at the University of Guelph.

23 MR. MAXSTON: Those are all my questions for
24 you, Dr. Bridle. Thank you very much.

25 A Okay, thank you.

26 Mr. Kitchen Re-examines the Witness

1 Q MR. KITCHEN: Dr. Bridle, I just have two
2 questions in redirect. When you wear a mask because
3 you have to to get groceries or work (INDISCERNIBLE),
4 do you do so willingly or is it (INDISCERNIBLE)?

5 THE CHAIR: Mr. Kitchen, you're frozen,
6 and you broke up with your question.

7 MR. KITCHEN Okay, I apologize, I'll ask it
8 again.

9 A I did -- I heard the question, but did the rest of the
10 members would like -- would you like them repeated?

11 MR. KITCHEN No, Karoline didn't hear it,
12 so I'll have to ask it again. I apologize.

13 Q MR. KITCHEN: When you wear the mask, you
14 just referred to wearing it to do groceries, you
15 referred to wearing it at work, at the University of
16 Guelph; when you wear it, do you wear it against your
17 will?

18 A 100 percent, yes.

19 Q Do you think the prescreening questions that are pretty
20 typical in your office and would be typical in
21 Dr. Wall's office and any other chiropractor's office,
22 do you think those questions are pretty effective at
23 keeping symptomatic people out of the offices?

24 MR. MAXSTON: Mr. Kitchen, I'm going to have
25 to object to that because Dr. Bridle has already said
26 he knows nothing about chiropractic clinics, so I

1 really don't think he can answer that question, at
2 least --

3 MR. KITCHEN Okay.

4 MR. MAXSTON: -- the second part of your
5 question anyhow.

6 MR. KITCHEN: Point taken.

7 Q MR. KITCHEN: Dr. Bridle, let me ask you it
8 this way: You have -- you said you have prescreening
9 questions for your laboratory; do you think those
10 prescreening questions are effective at keeping
11 symptomatic people away from the laboratory?

12 A Yes, absolutely. So as I explained, symptoms are
13 something that somebody experiences, and the only way
14 to understand whether somebody's experiencing them is
15 to ask questions.

16 So, for example, if you go to a physician, that's
17 what they're designed to do, there are certain signs
18 they can look for. So a sign, again, would be
19 something -- so, example, when they take your
20 temperature, they're looking for evidence of fever.
21 That's something they can objectively assess
22 themselves. You don't have to tell them that you have
23 a fever, and then that's something that's a sign -- or,
24 sorry, a -- yeah, a sign, therefore, of sickness.

25 Symptoms -- and symptoms can precede, can precede
26 a lot of the signs. So that's the best way to actually

1 screen is for symptoms, which is something somebody is
2 experiencing and an objective third party cannot
3 directly observe. So the only way to get that out,
4 whether you go to a physician or anything else is by
5 asking the relevant questions.

6 And the -- so, for example, so the one that's used
7 for my workplace was designed in consultation with
8 physicians, who are experts at asking the relevant
9 questions about symptomology, to assess whether
10 somebody is sick -- and in my experience, that has been
11 very effective. For the first time since those
12 questions were implemented at the university, and it's
13 the first time in the history of my laboratory that I
14 have consistently not seen, not even once, one of my
15 lab members come into work sick, whereas it was a
16 relatively common occurrence prior to that.

17 Q Is there any logical reason to think that if Dr. Wall
18 was to ask the same questions of his patients that it
19 would be any less effective for him than it is for you?

20 MR. MAXSTON: I'm going to object to that
21 too, Mr. Kitchen; it's just beyond his scope.

22 MR. KITCHEN: I disagree. I think it's
23 perfectly legitimate. The way I asked it was is there
24 any logical reason to think it would be any different,
25 so that's not a scope question.

26 MR. MAXSTON: I don't think Dr. Bridle can

1 even comment on whether it's logical or not when he
2 doesn't know what happens in a chiropractic office or
3 what the specific requirements were for any screening
4 that Dr. Wall carried out. I just think it's too far
5 afield of what he can comment on.

6 MR. KITCHEN: Well, Chair, I put it to you;
7 I think it's a perfectly legitimate question.

8 THE CHAIR: Okay, we will caucus and get
9 back to you as quickly as we can.

10 (ADJOURNMENT)

11 THE CHAIR: The Hearing Tribunal has
12 discussed the matter, and we've decided to allow the
13 question.

14 Q MR. KITCHEN: So, Dr. Bridle, I'll just
15 re-phrase it -- or not re-phrase it, re-ask it.

16 Is there any logical reason to think that if
17 Dr. Wall, in his chiropractic office was using the same
18 questions that you've been using that he would have
19 different results?

20 A There would be no reason to expect different results.
21 The expectation, what we were expected to do with ours
22 is make sure -- let's put it this way: As long as the
23 questions are comprehensive enough and thorough enough
24 that a -- the average physician would be able to make a
25 reasonable assessment as to whether or not somebody is
26 or is not infected, that that's going to be an

1 appropriate questionnaire.

2 And just I guess maybe to help for you to
3 interpret, one of the things that the -- well, yeah,
4 let's just leave it at that. That's ultimately the
5 litmus test: Physicians are the experts at diagnosing
6 disease, and if they've designed a questionnaire that
7 would allow them to get the same information that they
8 would out of the individual, should they be a patient
9 in their office, and they're screening for disease,
10 yes, that questionnaire would be university applicable
11 irrespective of the environment.

12 Q And my friend can object to this if he wants, but would
13 you agree with me that those are administrative
14 controls; is that an appropriate term to call those?

15 A Yes.

16 MR. KITCHEN: Those are my questions on
17 redirect.

18 THE CHAIR: Okay, thank you, Mr. Kitchen.
19 I think we'll just take a few brief minutes for a break
20 just to see if the Panel has any questions for
21 Dr. Bridle, so we'll be back with you as quickly as we
22 can. If you could put us in our break-out, thank you.

23 MR. KITCHEN Thank you.

24 (ADJOURNMENT)

25 THE CHAIR: Okay, I think we're all back.
26 Thank you for your patience.

1 Dr. Aldcorn does have one question she would like
2 to ask Dr. Bridle.

3 The Tribunal Questions the Witness

4 Q DR. ALDCORN: Hi, Dr. Bridle. Just
5 regarding the IFR, you commented that in 2019, there
6 was a prediction that the -- that there could be as
7 much as 10 percent with regards to COVID-19 in terms of
8 those who are infectious who get the disease, right?
9 And then you mentioned, in early 2021, studies had
10 shown that it was about .15 percent, and now even less.
11 So I'm curious to know if there's any research or
12 studies or -- to the best of your knowledge, if you
13 knew that there was any percentage given in the time
14 frame that we're concerned about, which would be from
15 May to December 2020.

16 A Yeah, in that -- so that study that I cited in my
17 report includes that time frame. So it would include
18 everything from -- I was assessing everything from the
19 beginning up until -- so the very earliest that it
20 would have included data, and I'm not even certain --
21 I'd have to go back, and I have -- and double-check,
22 but the earliest would have been, you know, like maybe
23 January 2021, but the data would have been all from the
24 start of the declared pandemic up until the end of
25 December for sure.

26 It wouldn't have anything much newer than that,

1 because the way publications work, the publication
2 process, just so you can understand the timing
3 therefore, is normally what happens is when we have a
4 manuscript ready, we submit it to a journal. And then
5 what will happen is an editor will be assigned, then
6 they'll try and recruit reviewers. Once they've
7 identified reviewers for it, that paper gets sent to
8 the reviewers. So there's a review process.

9 Normally reviewer -- so that process -- that
10 process right there often takes a week, and then the
11 review process always takes a minimum of two weeks,
12 depends on the journal. Some like report back in two
13 weeks, some three weeks, and sometimes they don't get
14 them back when requested from reviewers, and they have
15 to solicit them and try to remind the reviewers to get
16 it in.

17 But so the point is, ideally then, they're going
18 to get those initial reports after one month from the
19 initial submission, and almost always, it's very, very
20 rare for a manuscript to be accepted immediately with
21 no revisions. So almost always, if a manuscript is
22 going to be accepted, it is with revisions, and then,
23 depending on how much revision they feel is necessary,
24 that's going to dictate the -- dictate the time the
25 authors have to go back and revise their manuscript.
26 So for example, if they had to generate new data or run

1 new experiments, it's going to be -- it could be months
2 they're given.

3 But for an article like this though, it would
4 usually be a matter of weeks, and then that revised
5 version goes back, and then, often, their reviewers
6 have one final review, and then if they're satisfied
7 with the changes, they'll approve it, the manuscript
8 will be accepted. And then, at that point, it's called
9 what we call in press, and then a short time thereafter
10 it will be published. So --

11 Q So, sorry, so just -- so the question then, it was
12 released or -- in some capacity in 2021. It --

13 A Exactly.

14 Q -- was based on the information from 2020 --

15 A Exactly because --

16 Q -- so the --

17 A -- even though it was several months into 2021, the
18 data that they would have had available when they first
19 submitted it would have been for -- mainly from that
20 duration you're talking about.

21 Q Sure. So in the latter stages of 2020, would we have
22 had -- would you or the population or whatever have any
23 idea that 10 percent wasn't the number that we were
24 looking at in the middle of 2020?

25 A Yes, yes. Yeah, that was very quickly obvious. So,
26 again, what I mentioned is it wasn't a prediction that

1 the infection fatality rate would be 1 to 10 percent;
2 it was that initial like immediate concern that it
3 could potentially be that. It wasn't like any kind of
4 modelling was done. This was high profile public
5 health officials, like Fauci, like Theresa Tam,
6 expressing this potential concern, but we very
7 quickly -- it didn't take much time before we knew, we
8 really started to narrow down the high-risk
9 demographics.

10 And so we knew very early on, again, that the
11 highest risk demographics were the frail elderly, those
12 who are immunosuppressed, those who are obese, and
13 those who have multiple comorbidities. And for the
14 rest of the people, we knew, so very earlier on, that
15 the risk of fatality from infection from this
16 particular virus was quite low, yes.

17 DR. ALDCORN: Thank you.

18 A No problem.

19 MR. KITCHEN: I'm going to ask for
20 permission to ask a follow-up question.

21 THE CHAIR: Okay.

22 Mr. Kitchen Re-examines the Witness

23 MR. KITCHEN: And I'll give you the
24 question, and then you can let me know if you're okay
25 with it.

26 Q MR. KITCHEN: Dr. Bridle, what do you mean

1 by "very early", right? Because it came in March 2020.
2 So the Pandemic Directive came out in May of 2020, so
3 it's important that we know what you mean by what's
4 "very early", that we knew it wasn't going to be as
5 high as 1 percent.

6 MR. KITCHEN And, Chair, is that okay that
7 he answers that?

8 THE CHAIR: Mr. Maxston, do you have any
9 objection?

10 MR. MAXSTON: I don't object.

11 A Yeah, so that's a good question. It was prior to the
12 implementation of the policies that we knew that, in
13 the low-risk demographics, it wasn't going to be
14 anywhere close to 1 percent infection fatality rate.
15 So prior to May, right? The virus was first identified
16 in late 2019. It was only -- it only took a couple of
17 months to start identifying that this was -- so
18 basically what we refer to this as is this is a
19 virus -- we talk a lot about discrimination, you don't
20 want discrimination -- but this is a virus that very
21 much discriminates. And we knew that within a couple
22 of months, meaning, a potentially, a very dangerous
23 virus that would have a high infection fatality rate,
24 would indiscriminately kill people.

25 This virus is very discriminatory. We knew within
26 a couple of months of the -- when it was -- after the

1 virus was first identified. So by "very early", I mean
2 like by January, by the end of January 2020, we already
3 had a good idea that there was a limited number of
4 demographics that were at particularly high risk from
5 this virus.

6 THE CHAIR: I think we should leave it at
7 that. We're talking in generalities now.

8 MR. KITCHEN: I'm going to ask for
9 permission for one more question.

10 Q MR. KITCHEN: Because I want to -- I want
11 you to be able to answer Dr. Aldcorn's question.

12 At what month in 2020 did scientists know that the
13 IFR was going to be below 1 percent?

14 MR. MAXSTON: Mr. Kitchen, I'm going to have
15 to -- I don't want to be difficult here, but that is a
16 very vague question. When we say scientists knew,
17 which scientists, when, how did they know? I think
18 we've explored this a little bit, but I'm reluctant to
19 let it go much further than that, because it's just a
20 broad topic to begin that -- and, of course, in
21 fairness to Dr. Bridle, he can't speak to what other
22 people thought.

23 So I think my request to you is that you've
24 explored this enough, and I think you shouldn't go any
25 further, and I hope you're comfortable with that.

26 MR. KITCHEN: I'm going to ask Dr. Bridle --

1 Q MR. KITCHEN: -- when did you know?

2 A I was quite confident that -- about that by the end of
3 January 2020.

4 MR. KITCHEN: And I'll leave it there. I
5 think that was helpful for answering everybody's
6 questions.

7 THE CHAIR: Okay, I think that brings
8 today to a conclusion. We'll be back at 9:00
9 tomorrow morning. Mr. Kitchen, you can discharge your
10 witness, and thank you very much, Dr. Bridle, for a
11 very long and informative day.

12 A Thank you. Take care.

13 THE CHAIR: So we're back on at 9 with
14 your witness tomorrow morning, Mr. Kitchen, that's
15 correct?

16 MR. KITCHEN: That's right.

17 THE CHAIR: Okay. Very good, well, we
18 will recess until tomorrow morning. Thanks everybody,
19 and we'll see you then.

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21 PROCEEDINGS ADJOURNED UNTIL 9:00 AM, JANUARY 29, 2022

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1 CERTIFICATE OF TRANSCRIPT:

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3 I, Karoline Schumann, certify that the foregoing
4 pages are a complete and accurate transcript of the
5 proceedings, taken down by me in shorthand and
6 transcribed from my shorthand notes to the best of my
7 skill and ability.

8 Dated at the City of Calgary, Province of Alberta,
9 this 21st day of February, 2022.

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Karoline Schumann, CSR(A)

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Official Court Reporter

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