Action No.: 2001-14300
E-File Name: CVQ22INGRAMR
Appeal No.: _________________

IN THE COURT OF QUEEN'S BENCH OF ALBERTA
JUDICIAL CENTRE OF CALGARY

BETWEEN:

REBECCA MARIE INGRAM, HEIGHTS BAPTIST CHURCH,
NORTHSIDE BAPTIST CHURCH,
ERIN BLACKLAWS and TORRY TANNER

Applicants

and

HER MAJESTY THE QUEEN
IN RIGHT OF THE PROVINCE OF ALBERTA
and THE CHIEF MEDICAL OFFICER OF HEALTH

Respondents

H E A R I N G
(Excerpt)

Calgary, Alberta
February 23, 2022

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1 Proceedings taken in the Court of Queen's Bench of Alberta, Courthouse, Calgary, Alberta
2
3
4 February 23, 2022 Morning Session
5
6 The Honourable Justice Romaine Court of Queen's Bench of Alberta
7 (remote appearance)
8
9 J. R. Rath (remote appearance) For R. Ingram
10 L. B. Grey, QC (remote appearance) For Heights Baptist Church, Northside Baptist
11 Church, E. Blacklaws and T. Tanner
12 N. Parker (remote appearance) For Her Majesty the Queen in Right of the
13 Province of Alberta and The Chief Medical
14 Officer
15 N. Trofimuk (remote appearance) For Her Majesty the Queen in Right of the
16 Province of Alberta and The Chief Medical
17 Officer
18 B. LeClair (remote appearance) For Her Majesty the Queen in Right of the
19 Province of Alberta and The Chief Medical
20 Officer
21 M. Palmer Court Clerk
22
23
24 THE COURT: Okay. Good morning, everyone.
25
26 MR. PARKER: Good morning.
27
28 THE COURT: Good morning. So how are we doing with the
29 exhibits?
30
31 MR. PARKER: Do you mind if I go ahead, gentlemen?
32
33 MR. GREY: Go ahead with what?
34
35 MR. PARKER: Responding to the question.
36
37 **Submissions by Mr. Grey (Admissibility of Madewell 2 and Rasmussen Studies)**
38
39 MR. GREY: Okay. I'll respond to your question. If I may,
40 Madam Justice. I'm corresponding with Mr. Trofimuk about this. There are a series of
41 exhibits that the respondents want to have marked as full exhibits in the hearing with the

1 exception of the Madewell number 2 study and I believe now they -- now they want to
2 produce the Rasmussen study. My client has no objection to the introduction of any of
3 those exhibits into evidence. We do object to the introduction of the two expert studies, if
4 that is the position. Since it's my objection to the admission of those two items, the
5 procedure, I suggest -- I submit, entitles me to make submissions on that point before you
6 hear from Mr. Parker.
7
8 THE COURT: Okay. Go ahead.
9
10 MR. GREY: Thank you. If Mr. Parker could just confirm the
11 position of the respondents, that they are seeking the introduction of the Madewell number
12 2 study and the Rasmussen study into evidence as full exhibits, is that the stated position?
13
14 MR. PARKER: Sorry, did you want me to speak now, Mr. Grey?
15
16 MR. GREY: I just want -- I'm just asking -- I just want to
17 confirm the respondents' position on the record that my understanding, based on
18 correspondence with Mr. Trofimuk that the respondent is seeking to introduce the
19 Madewell 2 study and also the Rasmussen study that was put to Dr. Bhattacharya on cross-
20 examination as full exhibits in this hearing for the truth of their contents. Is that the stated
21 position of the respondents?
22
23 MR. PARKER: So let's deal with Madewell number 2 first. I put
24 this to --
25
26 MR. GREY: No, Mr. Parker. Mr. Parker --
27
28 MR. PARKER: -- the witness last week --
29
30 THE COURT: No, no. No, no. Stop.
31
32 MR. PARKER: (INDISCERNIBLE) argue. I'm answering your
33 question, sir.
34
35 THE COURT: Mr. Grey. Mr. Grey, let Mr. Parker speak.
36
37 MR. GREY: Madam -- Madam Justice --
38
39 THE COURT: Let --
40
41 MR. GREY: -- I just -- I just asked him to confirm the position

1 on the record. I don’t think it's proper for Mr. Parker to launch into his submissions --
2
3 THE COURT: I didn't --
4
5 MR. GREY: -- as to why these should be admissible.
6
7 THE COURT: Okay.
8
9 MR. GREY: I'm just concerned that he's going to do that.
10 Okay. So that's why I interrupt him. I think as a point of procedure it's my objection and
11 I should get to go first. I just want to confirm the respondents' position on the record and,
12 really, it's a yes or no answer. That's -- that's -- I don’t think we need to hear from Mr.
13 Parker for 15 minutes.
14
15 THE COURT: Okay. Listen --
16
17 MR. PARKER: And --
18
19 THE COURT: Gentlemen, please. This has started off very
20 poorly this morning. As Mr. Grey says, it's his objection and he will be able to speak to
21 the merits of his objection first. However, Mr. Parker, you were asked a question as to the
22 Crown's position with respect to the Madewell 2 and the Rasmussen studies and you are
23 certainly entitled to answer it. And I'm assuming, Mr. Parker, you're not going to launch
24 into your submissions in that answer. Okay.
25
26 MR. PARKER: I'm trying to answer it, Justice Romaine, and --
27 yeah, this is -- anyway, I'll now try to do that. It's unfortunate that we have to start days
28 like this.
29
30 THE COURT: I agree.
31
32 MR. PARKER: What we have told my friend, as he knows, we
33 were there on Friday before you and we said that Dr. Bhattacharya is still under oath. I put
34 the Madewell study to him last week, he hadn't seen it before, therefore he couldn't identify
35 it. I suggested, since he's still under oath, it would be appropriate as an expert to review
36 that document and be prepared to answer questions on it, which he then did in redirect and
37 was available for further cross-examination. I don’t remember off the top of my head
38 whether I put any questions to him on cross-examination. Our position is that Dr.
39 Bhattacharya has now had the time and has been able to identify the Madewell number 2
40 study and therefore it should go in as a full exhibit and then I can speak to Rasmussen when
41 my friend is ready to hear from me on that issue. It's a similar issue. But in any event,

1 those are my submissions in response to my friend on Madewell number 2.
2
3 THE COURT: Okay. So that is the position of the respondents
4 that, since Dr. Bhattacharya has now had time to review it and was able to answer
5 questions, that that exhibit should be in. So, Mr. Grey, go ahead.
6
7 MR. GREY: Thank you. There are a number of reasons why
8 the Madewell number 2 study cannot and should not be admitted as a full exhibit in this
9 hearing, and the same comments would apply to the Rasmussen study as well. The first
10 reason is that it would offend the Court's previous order concerning admission of
11 retrospective expert studies. It's my understanding the Madewell study was published the
12 21st of August of '21. Mr. Parker can correct me on that. I believe that's the date I hear
13 him say.
14
15 MR. PARKER: 27th.
16
17 MR. GREY: Thank you, sir. The 27th of August, 2021. So
18 the position -- our position is that this report is irrelevant to the matters before the court
19 due to the timing of its release, which is after the relevant timeframe prescribed by this
20 Honourable Court by a previous ruling concerning the scope of these proceedings.
21
22 Now, having said that, we did not object to Mr. Parker being given the opportunity to cross-
23 examine Dr. Bhattacharya on the study, however, that in no way can be construed as a
24 waiver of this -- of this restriction that the Court itself has -- has imposed. Secondly, the
25 Court also stated yesterday during its response to objections raised by Mr. Parker about
26 certain studies put to Dr. Bhattacharya on redirect that the Court would not be admitting
27 new studies into evidence that were not included in Dr. Bhattacharya's curriculum vitae.
28 The Madewell 2 study is not there. It's not part of the evidence that's before this court.
29
30 Thirdly, it offends the procedural order. Under the procedural order, the parties were
31 required to disclose all expert reports upon which they intended to rely at trial to the
32 opposing party and the Court in advance of the hearing. The Madewell study is in the
33 nature of an expert report, that is why the respondent wants to adduce it. It has no other
34 evidentiary value, other than that it is -- it is a report that's been prepared by ostensibly
35 scientific experts analyzing certain data and it provides an explanation, analysis -- a
36 scientific analysis and opinion concerning that data, and at least that was the structure of
37 the cross-examination that was put to Dr. Bhattacharya based upon the Madewell 2 study.
38 The -- the respondent seems to adduce this -- the report as a full exhibit now for the truth
39 of its contents, we suggest mainly because the respondent has not produced an expert in
40 epidemiology to counter the expert opinions expressed on this crucial area by Dr.
41 Bhattacharya.

1
2 Fourthly, the Madewell 2 study is hearsay. Its contents are unsworn. This Court knows
3 nothing about the qualifications of the authors of that study and is therefore being asked to
4 assume that they are so qualified. Consequently, this is not only hearsay, it is in the nature
5 of expert opinion hearsay which falls within no exception to the hearsay rule and in this
6 regard would refer the Court to the *Canada Evidence Act* on this point. And there's a case
7 called *White Burgess Langille Inman v. Abbott and Haliburton Co.,* citation is 2015 SCC
8 23, and it sets out steps for the test for the admission of expert evidence. "At the first step,
9 the proponent must establish the threshold requirements of admissibility." Number 1 is
10 logical relevance. Now, although it's logical that the respondent would want the Court to
11 have the study adduced into evidence, we submit that it's illogical that this report should
12 be adduced given the Court's previous ruling concerning the scope of the proceedings and
13 the submissions that Mr. Parker has made concerning another study which the Court has
14 excluded.
15
16 The second part of the test is the necessity to assist the trier of fact. Well, here there is no
17 necessity to have the full report adduced into evidence. Mr. Parker was given ample and
18 generous opportunity to fully cross-examine Dr. Bhattacharya, not only once but twice,
19 and he went into great detail with him and at no time, that -- that I heard Dr. Bhattacharya,
20 did he accept or adopt any part of the Madewell 2 study as his evidence. In fact, he rejected
21 it. Yesterday, when Mr. Parker was given another opportunity to cross-examine after
22 redirect, Dr. Bhattacharya essentially said that he was not sure how the Madewell 2 study
23 had arrived at certain numbers, percentages that are in the Madewell study concerning pre-
24 symptomatic and asymptomatic spread. So there really is no necessity here. The answers
25 that Mr. Parker got from Dr. Bhattacharya are in evidence, they were put to him for the
26 purposes -- they were put to the witnesses for the purposes of -- of impeachment, those
27 answers are in evidence and Mr. Parker can make argument from them or the respondent
28 can make argument from them as part of the -- the respondents' case. There is no necessity
29 for the full report to be magically translated into evidence here by way of sort of a backdoor
30 application.
31
32 The third part of the test is the absence of an exclusionary rule. Well, we have a very active
33 exclusionary rule, a time honoured one and it's the hearsay rule. I can think of no exception
34 to the hearsay rule within which this evidence can be -- can fit and it's clearly hearsay. And
35 -- and then the fourth one is -- is whether or not there is a properly qualified expert. Well,
36 we don’t have that. We have some indication, and it would take a presumption or indeed
37 an assumption of the -- of the expert qualifications of the authors of the Madewell study,
38 but the Court cannot be satisfied to the necessary legal test for the purposes of the *Canada*
39 *Evidence Act* that these people are qualified experts, nor have the applicants been given
40 any opportunity to ask questions of these so-called experts concerning their qualifications.
41

1 The other part of that test is that where the opinion is based on novel or contested science,
2 which is clearly the case here, or science used for a novel purpose the proponent must also
3 show that the underlying science is reliable for that purpose. Well, we have no evidence
4 of that whatsoever. So just based upon the test that's in the *Canada Evidence Act,* this --
5 this report is clearly inadmissible.
6
7 I mentioned earlier that the applicants were provided no opportunity to cross-examine the
8 authors of the second Madewell study, nor was the report even disclosed to us in advance
9 of the hearing. Dr. Bhattacharya, for example, could have been shown this study and given
10 the opportunity to comment upon it in advance of the hearing. Neither the applicants or
11 Dr. Bhattacharya saw the Madewell 2 study until Mr. Parker put it to him in this hearing, I
12 believe on -- it was either -- on either the 10th or 11th of February. This is despite the fact
13 that the respondent counsel presumably had the study for months. So there was no reason
14 at all why it could not have been disclosed as part of and as was consistent with the use and
15 production of expert evidence in this proceeding pursuant to the terms of the procedural
16 order, which are eminently clear.
17
18 Next, the entire study -- the entire study was not adopted by Dr. Bhattacharya under cross-
19 examination. Certain parts of the study were put to him in cross-examination and then
20 again yesterday. As I said, Dr. Bhattacharya indicated he still does not know precisely how
21 the Madewell 2 study arrived at certain numbers, the relevant numbers that Mr. Parker tried
22 repeatedly to have him accept, and so Madewell 2, this study, nor the Rasmussen study
23 does not form any part of Dr. Bhattacharya's evidence, nor does it form part of the evidence
24 in the respondents' case, which was required to be disclosed to us -- to the applicants in
25 advance of the hearing. It is unnecessary for the entire report to become an exhibit. Mr.
26 Parker was granted every opportunity to use the study for the purposes of impeachment.
27 Dr. Bhattacharya's responses are in evidence. There is therefore no evidentiary basis for
28 admission of the study as a full exhibit in the trial. Weighing the procedural prejudice to
29 the applicants of allowing the Madewell number 2 study, an expert evidence piece of
30 evidence into evidence against its probative value, there is no contest. It must be excluded.
31
32 If -- and at this point it's important to note on the subject of adoption, Madam Justice, that
33 even under section 9(2) of the *Canada Evidence Act,* which involves a procedure by which
34 a party is attempting to impeach their own witness, even under those circumstances the
35 Supreme Court of Canada has said in the case called *Taylor, R. v. Taylor,* 2015 ONCA 448,
36 that a prior statement on which a witness is cross-examined under section 9(2) has no
37 intrinsic evidentiary value and should not be made an exhibit available for the trier of fact
38 during deliberations. Now, the analogy here is that even -- even a statement made by the
39 witness themselves for the purposes of impeachment has no intrinsic evidentiary value.
40 Even if that were true, and here that's not the case, even if that were true, that statement,
41 that prior statement would not be admissible as a full exhibit.

1
2 Now, let's say I'm wrong and you find that -- that the position that I have taken here is
3 untenable and that Mr. Parker's able to persuade you that the contrary position is correct,
4 if that is so, then our position would be that if the Court permits this study into evidence,
5 then we see no basis for the exclusion of any study put to a witness on cross-examination.
6 In other words, if the Madewell 2 study and the Rasmussen studies go in, despite the fact
7 that they are hearsay, despite the fact that they were not adopted by Dr. Bhattacharya, then
8 all such studies must go in, including ones shown the respondent witnesses on cross-
9 examination.
10
11 Finally, I'll just say this, I have asked respondent counsel more than once for jurisprudence,
12 statutory authority for the position that merely showing a document to a witness under
13 cross-examination, showing it to them and -- and that they can identify it, that that prima
14 facie creates a magical process whereby clearly hearsay evidence is transformed into
15 proper evidence that can be admitted as a full exhibit in a hearing for the truth of its contents
16 -- the proof of its contents. I've asked repeatedly for authority for that position, none has
17 been provided, none -- so -- and I am aware of none. And if I'm corrected, then I'm
18 corrected, but I'm aware of no such authority that would stand for the proposition that
19 showing a document to a witness, that they've never seen before, even if they identify it,
20 that that amounts to the process of adoption and that that would make a hearsay document,
21 in this case expert opinion evidence, admissible for the truth of its contents. So that's our
22 position concerning the application and, as I said, this is in relation to both the Madewell
23 number 2 study and also in relation to the Rasmussen study. Thank you, My Lady.
24
25 THE COURT: Okay. Thank you.
26
27 MR. RATH: (INDISCERNIBLE) I have a couple very quick
28 points, My Lady.
29
30 THE COURT: Mr. Rath, yeah. Okay.
31
32 **Submissions by Mr. Rath (Admissibility of Madewell 2 and Rasmussen Studies)**
33
34 MR. RATH: Thank you. My Lady, I echo and support all of
35 the -- and -- and adopt all of the submissions of my learned friend with the exception that
36 I heard my friend, you know, saying that -- again, I say this with the greatest of respect,
37 that he accepted the Court's ruling with regard to the John (sic) Hopkins study. While we
38 respect the Court's ruling and abide by it for the purposes of these proceedings, we don’t
39 waive our position with regard to that study in any subsequent proceedings should they
40 arise, and I just wanted that (INDISCERNIBLE)
41

1 THE COURT: Okay.
2
3 MR. RATH: And following on that point, urge the Court is to
4 consider this from the standpoint of fairness. I would like this Court to recall all of my
5 friend Mr. Parker's learned arguments with regard to why the Hopkins study would be
6 excluded and I would also like this learned Court to recall all of my friend's vehement
7 submissions with regard to the CMOH orders 42 and 43 of 2021 being excluded
8 (INDISCERNIBLE) as creating some grave unfairness that would then require him to
9 reopen his evidence and recall expert evidence and subsequently adjourn these
10 proceedings. And I'd also like you to recall the Court's ruling that this was a prejudice that
11 couldn't be (INDISCERNIBLE).
12
13 Now, my friend is essentially attempting to do (INDISCERNIBLE) with this Madewell 2
14 study. He stated this morning that that study was available to them on the 27th of August.
15 It was available to him prior to CMOH --
16
17 MR. PARKER: No, I did not state that. I said it was published
18 on the 27th of August, sir. Thank you.
19
20 MR. RATH: Well, thank you, sir -- thank you, sir. I ask you
21 not -- Madam Justice, to please suggest to my friend that he not interrupt. The fact that it
22 was published means it was available on the 27th of August. That study was available to
23 him on the 27th of August, it was certainly available to him prior to the CMOH orders
24 being available to us, yet here we are with no notice to counsel for all of the intervening
25 months that (INDISCERNIBLE) was available to my friend with no notice to us, no
26 application to the court, no suggestion that this was going to be raised or attempted to be
27 imported into evidence at this late date in the proceedings for purposes well beyond what
28 we intended to raise in the context of the John Hopkins study, which was simply to put it
29 to both Dr. Bhattacharya and Dr. Kindrachuk to ask both of them whether they felt that that
30 study supported -- supported or didn't support their expert opinion. It's clear that my friend
31 wishes a (INDISCERNIBLE) imported into these proceedings as a full exhibit as evidence
32 for the truth of its contents. It has been put to the witness, the witness has indicated on the
33 record that he disagrees with it. He did not adopt it as his own. And for all of the reasons
34 submitted by my learned friend Mr. Grey, this application on the part of my friend to
35 attempt to import this study into these proceedings as evidence at this late date is highly
36 improper, both of the reasons stated by Mr. Grey and all of the reasons stated by my friend
37 with regard to both the John Hopkins study and with regard to CMOH orders 42 and 43-
38 2021. Thank you for your attention, My Lady. Those are our submissions.
39
40 THE COURT: Okay. Thank you, Mr. Rath. Okay. Mr. Parker?
41

1 MR. PARKER: (INDISCERNIBLE) refer to repeated emails
2 requesting statutory or other authority and I haven't seen those numerous emails. I know
3 one was sent to my friend Mr. Trofimuk this morning. It was not cc:'d to me for some
4 reason so I'm not sure if I've missed these numerous emails. I would like 10 minutes to
5 prepare a response to this, we -- in light of the fact that, as I say, we haven't seen -- I'm not
6 aware of these numerous emails and I would like to look into it. But I see you looking at
7 the clock and you don’t seem that keen to do that, so let me try to respond as best I can --
8
9 THE COURT: No, no, no, Mr. Parker --
10
11 MR. PARKER: -- on the fly.
12
13 THE COURT: Mr. Parker, I was only looking at the clock to see
14 how much time we had before we had Dr. Kindrachuk, but we do have a full hour. If you
15 would like 10 minutes, I can certainly give you 10 minutes.
16
17 MR. PARKER: Thank you.
18
19 THE COURT: Okay. Before everybody goes, I don’t know
20 what's happened among counsel this morning, but it is unfortunate that we started out the
21 way we did. You're all very experienced counsel and I just ask you to perhaps keep your
22 emotions in check for the rest of today and the rest of the hearing. Okay. Thank you. Ten
23 minutes.
24
25 (ADJOURNMENT)
26
27 THE COURT: Okay. Thank you. Okay. Mr. Parker, are you
28 ready to respond?
29
30 MR. PARKER: I am. Just waiting for Mr. Grey. There he is.
31
32 THE COURT: Oh, okay.
33
34 **Submissions by Mr. Parker (Admissibility of Madewell 2 and Rasmussen Studies)**
35
36 MR. PARKER: Thank you, Justice Romaine. Just going to start
37 with what the Madewell 2 study is about, first of all, and this is what it says in the abstract
38 under the heading Importance: (as read)
39
40 A previous systematic review and meta-analysis of household
41 transmission of SARS-CoV-2 that summarized 54 published

1 studies through October 19, 2020 found -- found an overall
2 secondary attack rate of 16.6 percent. However, the understanding
3 of household secondary attack rates for SARS-CoV-2 is still
4 evolving and an updated analysis is needed.
5
6 So that's referring to the first Madewell study.
7
8 MR. RATH: Madam Justice, I apologize to my friend, the
9 Court's microphone was on and we're hearing sort of sounds of crashing waves coming
10 over our audio because of the Court mic. I apologize to my friend.
11
12 THE COURT: Me? And until it's time for me to speak. Okay.
13 Thank you.
14
15 MR. PARKER: Can you hear me, Justice Romaine? Stunned by
16 the -- the quietness, I think. Thank you. And so that's the importance of the Madewell
17 second study. Just to be clear, the Madewell first study was a meta-analysis of 54 studies.
18 There were only four, of course, in the sub-analysis. What they've done for the Madewell
19 2 is they have taken those 54 studies, they've removed four of them and they've added 37
20 to them, so they have just under 1.25 million individuals in the main studies. So, anyway,
21 that's the importance of Madewell according to the authors.
22
23 I'm going to deal with the hearsay issue now and in -- in what we do, constitutional
24 litigation, we deal a lot with various studies and articles and -- on numerous subjects that
25 we're litigating and the question is, well, how can we put those into evidence? And the
26 answer is, well, you can't just attach them to your argument, you have to put them in
27 through a witness, a properly qualified witness. And that's what Dr. Bhattacharya has done
28 here, he's put in a 2,300 page report with 165 footnotes, complete with numerous studies,
29 numerous newspaper articles, including Madewell 1 that was in there, I think it was
30 footnote 30. I don’t understand that he's adopted every part of every one of those footnotes,
31 that's not the issue. The issue is that he has put those in, they're in evidence now and he
32 can speak to them, which he's done. He can be cross-examined on those studies, which he
33 has done. But, again, this isn't a question of Dr. Bhattacharya, an expert -- he's not a party
34 here, he's an expert. It's not a question of whether he has adopted every word in these
35 studies and, if he hasn't, they're hearsay and cannot be put into evidence. So we would say
36 that that's simply wrong.
37
38 There are a couple of documents that my friends have agreed to put in as full exhibits, one
39 was criticism of the Savaris article study that resulted in its retraction, another was a
40 criticism of Dr. Bhattacharya's own report on assessing mandatory stay at home orders and
41 so my friends have no problem with those documents going into evidence as full exhibits.

1 There was no argument made that Dr. Bhattacharya didn't adopt every word of those
2 documents. Again, that isn't the test. He's now -- those documents went in because or will
3 go in, we're saying, and that's the basis of our agreement on these with my friends because
4 Dr. Bhattacharya was shown certain documents and, if he identified them, then they can
5 go in as full exhibits and he's able to speak to them and we understand that for certain of
6 these documents that we've agreed to put in, that's the basis of them going in. He's -- he
7 was able to identify them, he spoke to them, they're agreement, they go in as full exhibits.
8 So, again, why Madewell number 2 should be treated differently and treated to a more
9 stringent test that my friends come up with, I'm not sure.
10
11 The Court should not allow this expert to avoid his duty to the court in this manner by
12 ignoring relevant information. I received this study, I believe, from Dr. Kindrachuk in
13 around September 9th. I haven't had a time to check, but I think that's correct. I was
14 referred to this study by Dr. Dean in August, on the 19th of August, when I reached out to
15 Dr. Dean asking if she would provide an affidavit in this matter to assist the Court when
16 she told me we have an updated version of the analysis that has been accepted for
17 publication. I didn't receive it then, I believe, as I say, I received it from Dr. Kindrachuk
18 in -- in early September. Dr. Dean swore her -- or affirmed her affidavit August 27th,
19 which was the date that appears -- that Madewell study 2 appears to be published.
20
21 My friend also took issue with the qualifications of the authors to the Madewell study,
22 which is unusual since they're the same authors on the first Madewell study, which is a key
23 component of Dr. Bhattacharya's opinion. He -- he agreed with that.
24
25 I had said on Friday of last week when we met to discuss scheduling that the respondents'
26 position would be and is that Dr. Bhattacharya has been shown Madewell number 2. He
27 clearly, in our submission, should be familiar with this study since he's given evidence on
28 the subject matter on more than one occasion, one would think a properly prepared expert
29 would keep up to date on the newest and most important studies, particularly one that was
30 an update from one of the key studies to his own report. And so what I had looked at last
31 week, a number of things, one of the things I looked at was a transcript before Justice
32 Kirker when she was talking about not this issue, but another issue during this hearing and
33 that the trial judge would have the usual tools in her toolkit to deal with various issues of
34 trial fairness. This seems to me and it seemed at the time to be an issue that could be
35 addressed by the tools in your toolkit, which is to say, Dr. Bhattacharya, you have now
36 been made aware of the Madewell 2 study, he was shown that on I believe it was actually
37 the afternoon of February 14th, not February 11th or 10th as my friend said. You've had
38 plenty of time to look at it, what is your evidence on it? I do recall, and I haven't had a
39 chance to review the transcripts from yesterday because I don’t have them yet, but I
40 understood when I did show this study to him on February 14th that he indicated that, if
41 these numbers were correct, he would have to revise his own numbers on the pre-

1 symptomatic and asymptomatic, the .7 percent. It's a significant difference, by the way. .7
2 percent is 7 out of 1000. 3.9 percent is obviously just under 4 out of 100. And the 3.9 is
3 the asymptomatic and/or pre-symptomatic from Madewell number 2.
4
5 As I say, I received the study from Dr. Kindrachuk on September 9th. At that point, the
6 evidence had gone in. It seemed -- still seemed irrelevant study to me -- sorry, relevant,
7 not irrelevant, a relevant study and my determination was I would put it to Dr. Bhattacharya
8 on cross-examination, one, I could expect him to be familiar with this study and speak to
9 it or, two, he would not be familiar with this study, which would raise issues as to his
10 credibility, and so that's the choice I made. I did indicate to my friend that this study, I
11 believe, should go into evidence and, if we're not able to put it in through Dr. Bhattacharya,
12 my intent would be to seek leave of the Court, as I've indicated, and put it in through another
13 witness, specifically Dr. Kindrachuk, as he was the gentleman who forwarded this to me
14 last September and Dr. Kindrachuk has spoken at length about the Madewell first study in
15 his report and Dr. Bhattacharya has had an opportunity to respond to that -- those comments
16 in his surrebuttal report.
17
18 In terms of relevance, I've already spoken to this and I said at the outset of the hearing that
19 in terms of questions outside of the second and third wave that those questions and whether
20 they were relevant would have to be looked at in the full context. Some issues and
21 questions arising outside the second and third waves might have relevance to what
22 happened during those waves and the justification for these impugned orders.
23
24 Now, with respect, this Madewell second study is an example of where the Court, in our
25 submission, should consider evidence even though it was published after July 12th, the
26 respondents' filing date, and after July 30th, the date for surrebuttal evidence of the
27 applicants. This Madewell second study is not akin to the large John Hopkins meta-
28 analysis that was released in January of this year and is another study on the effectiveness
29 of NPIs. As I've said previously and with respect, I don't believe the Court needs another
30 study on the effectiveness of NPIs, but this -- this issue of asymptotic, pre-symptomatic
31 spread is critical and this particular study completes the arc of Dr. Bhattacharya's testimony
32 on this, that is we've seen him speak to his own study that was published on December 1st
33 of 2020 and we saw his comments in that study about asymptomatic transmission, then we
34 found out that Madewell number 1 was published 2 weeks later and that cinched his
35 changing view on the importance of the symptomic and pre-symptomic transmission and
36 so I submit that this is an example distinct from the John Hopkins study where a report, a
37 study released just after the relevant time, provides important information the Court on this
38 subject and on the credibility of Dr. Bhattacharya, that is was he prepared, was he aware
39 of relevant information and so we say it should go in on that basis.
40
41 Just a few comments. I had made a note that my friend referred to the Madewell second

1 study not being a footnote to Dr. Bhattacharya's CV. Perhaps he misspoke, but obviously
2 what is in his CV isn't relevant to this issue. My friend has referred to the *Canada Evidence*
3 *Act,* but not the *Alberta Evidence Act*. I have no more submissions on that point at this
4 time. My friend referred to numerous emails to us on this and, again, I don't want to get
5 into a debate on this. I would simply ask my friend to communicate with me at all times
6 on this, as well as my colleagues on this file. I understand we did receive an email from
7 him this morning, again, not sent to me, but I have got it now. It was an email we found
8 last Tuesday on this but, again, I don't think we need to belabour this point.
9
10 Those are the submissions I've been able to come up with at this time, Justice Romaine.
11 I'll be glad to talk to the Rasmussen issue later, or now, if you would like. Maybe I'll just
12 pause at this point to -- to see if you want to hear from me on Rasmussen now or go back
13 to my friends and then come back to me.
14
15 THE COURT: Okay. Let's deal with this study first. I have a
16 couple of questions and one is that you said that you had had some discussions with the
17 applicants over your intention to try to put in the Madewell 2 study into evidence through
18 Dr. Bhattacharya or, failing that, through Dr. Kindrachuk. Can you tell me when you had
19 those discussions?
20
21 MR. PARKER: So the issue with Dr. Bhattacharya I raised
22 during our meeting on Friday, the scheduling meeting.
23
24 THE COURT: Oh, okay.
25
26 MR. PARKER: At the end of that meeting I referred to -- that our
27 position would be that Dr. Bhattacharya is still under oath and has now received the
28 Madewell study on February 14th. He's had plenty of time before he comes back to redirect
29 and, given his role as an expert and given the importance of this subject in the study, we
30 took the position that he should review it and be prepared to speak to it, which he did in
31 redirect and then did in cross-examination. As to the earlier conversations, I don't recall,
32 although I think it was during the court process, I could be wrong on that, but I know my
33 friend took exception with -- with that suggestion that we would now be trying to put into
34 court, with your leave as is required under the procedural order, this study into evidence. I
35 don't remember the details on that, but that has occurred in the last week or so. And again,
36 my understanding was I believe it occurred with you present, but I could be wrong on that
37 and if more details are required, I can look into that, but that's what I recall off the top of
38 my head, Justice Romaine.
39
40 THE COURT: Okay. Thank you. Before I ask for a response
41 from Mr. Grey, I think there's one part of this that's missing that I'm going to have to wait

1 for and that is I would like to check the transcripts as well to see what questions and answers
2 were put to Dr. Bhattacharya with respect to this study, and I refer to the Supreme Court
3 of Canada case called *Marquard,* which I can just tell you that I found in a book during the
4 break on expert evidence where the court said that -- gives the proper procedure to be
5 followed in examining an expert witness on other expert opinions found in papers or books
6 and it points out that, if the witness says no, they're not aware of it, that's the end of it. But
7 if the witness says yes or acknowledges the book's authority, then the witness has
8 confirmed it, so that's sort of pretty standard stuff. But the court goes on to say parts of it
9 may be read to the witness and to the extent they are confirmed, they become evidence in
10 the case. And it makes reference to another case. So I'd like to be able to review the
11 transcripts when they come in, and I haven't received them yet, of both the Friday cross-
12 examination -- is it Friday, of Dr. Bhattacharya? Whatever. The first cross-examination
13 and then the second cross-examination after the weekend and to make reference to this
14 case. So I'm not --
15
16 MR. PARKER: Just on that, Justice Romaine --
17
18 THE COURT: Yes.
19
20 MR. PARKER: -- the Madewell study was -- sorry to interrupt.
21 It was the 14th that we put the second Madewell study to him, not the Thursday or Friday,
22 the 10th or 11th, so that would be --
23
24 THE COURT: Second. Okay. I should have the transcript of
25 that then. It's just the more later transcript I haven't got yet. I'm just saying this because,
26 you know, I'm not going to be able to give you a decision on this this morning. Hopefully,
27 I guess, tomorrow morning when I have a chance to check this and if I get the transcripts.
28 Okay. But beyond that, Mr. Grey, do you want to respond to what Mr. Parker has said?
29
30 MR. GREY: I'd like to be able to, if I could.
31
32 THE COURT: Go ahead. Yeah.
33
34 **Submissions by Mr. Grey (Reply)**
35
36 MR. GREY: Firstly, I'm going to respond to what Mr. Parker
37 just said and then I'm going to highlight some of the correspondence that I'd referred to
38 earlier. Firstly, in relation to the Savaris study, it's very clear that Dr. Bhattacharya was
39 well aware of that and that was part of his evidence so I don’t see how that in any way
40 bolsters my friend's position. It's very clear that there's no law that -- that my friends have
41 referred you to which is supportive of their position and so this idea that there's some sort

1 of convention in constitutional litigation of which myself and Mr. Rath are wholly ignorant
2 is really untenable. I would think in constitutional law especially, where decisions are
3 routinely reported, that my friends would be able to refer us to at least one case that supports
4 their position and there's none so, essentially, I think they're either asking you to ignore the
5 existing law or create new law, and neither of which are -- are -- I think are acceptable
6 positions.
7
8 The idea that we -- that the applicants waived our position regarding the Madewell study
9 because we didn't object to the admission of other studies is similarly untenable. Any
10 waiver in relation to evidence clearly has to be expressed, the Court cannot imply a waiver
11 by a party in this way that Mr. Parker is asking you to do.
12
13 The -- the information about when the study -- the -- the second Madewell study came into
14 Mr. Parker's possession -- the respondents' possession, I should say, is -- is curious. It begs
15 a couple of questions. Firstly, why wasn't it disclosed to the applicants? That would have
16 given Dr. Bhattacharya an opportunity to respond. It would have been consistent with both
17 the spirit and the wording of the procedural order. Mr. Parker has answered that question
18 and that he held onto it for strategic advantage. He was -- and he was entitled to do that,
19 however, in making that decision he limited the use that it could be -- that it's -- it could be
20 put to in this trial. That's -- that is the -- that is the impact of that decision. In fact, I can
21 say without hesitation that if the respondents had disclosed the second Madewell study us
22 and we had had an opportunity to have Dr. Bhattacharya respond to it, this conversation
23 would not be occurring. So -- and the other reason why it's curious is that Mr. Parker put
24 to Dr. Bhattacharya on cross-examination that he had some sort of positive duty to report
25 his knowledge of the retraction of the Savaris study, that he had a duty to report that to the
26 Court and yet here we have Mr. Parker holding onto a study that he planned to put to Dr.
27 Bhattacharya and to adduce at trial as part of his case, but he saw no duty to disclose that
28 to the other side or to make Dr. Bhattacharya aware of it. So I think that, really, none of
29 the submissions that Mr. Parker has made to support their position hold water.
30
31 With respect to the issue of the emails, there was an email that was sent from my office,
32 from me, on February the 15th, 2022 at 2:41 AM. Madam Justice will note that I don’t
33 sleep much during trials. And this says: (as read)
34
35 Good morning. Is the AG seriously taking the position ...
36
37 And by the way, this is -- was sent to all counsel, including Mr. Parker, who was copied
38 on the email. (as read)
39
40 Good morning. Is the AG seriously taking the position that each
41 document shown to the witness on cross-examination, most of

1 which were hearsay, are admissible as evidence? Even ones that
2 the witness has not seen and which he specifically rejected? That
3 is simply not the law. If you have jurisprudence which supports
4 this position, I invite you to refer to same. I have already stated
5 on the record our position that only those hearsay documents put
6 to the witness in cross-examination for impeachment purposes that
7 are adopted by him are admissible as full exhibits. Please provide
8 us with a list of those documents which the AG proposes to adduce
9 as evidence in the hearing.
10
11 And I received a response that provided those exhibits and it was also indicated by Mr.
12 Parker that -- that this was not the position of the AG and that they -- at this time they only
13 wanted the Madewell 2 study marked as -- for identification. And the response also
14 referred to it, the Madewell study, as has not seen. I followed up then on the 15th of
15 February, 2022 at 7:38 AM with this email: (as read)
16
17 Good morning.
18
19 And this was sent to Mr. Parker directly and copied to other counsel: (as read)
20
21 Good morning. We do not consent to the admission of any
22 documents shown to the witness during cross-examination as full
23 exhibits. That position has been made clear more than once on the
24 record. We are entitled to require the court to enter into a voir dire
25 on admissibility in each case. We will put the respondent to the
26 strict proof of establishing an exception to the hearsay rule in each
27 case as it's our right. We will also object to the respondent being
28 given the opportunity to adduce the documents ex post facto and
29 the proper procedure ...
30
31 And I said this repeatedly on the record: (as read)
32
33 ... was to have the witness adopt each hearsay statement in real
34 time in each case. That was simply not done, nor was the witness
35 properly questioned in order to satisfy the test for adoption of any
36 hearsay statements. Providing counsel the opportunity to circle
37 back and do it after concluding cross-examination is, in my
38 experience, quite unprecedented, it's highly prejudicial to the
39 applicants and would be regarded as obvious grounds for appeal.
40 Several of the documents shown to the witness, such as the second
41 Madewell study, are expert opinions that were not disclosed to

1 opposing counsel in advance. These in particular cannot be
2 entered into evidence or even marked for identification without
3 proper qualification and exposure of the expert's cross-
4 examination. Any attempt to enter such reports into evidence at
5 this stage is in clear violation of the specific terms of the
6 procedural order which required the parties to disclose all expert
7 evidence to be relied upon at trial well in advance.
8
9 So that position was stated. Then on February 16th I sent the following email, and this was
10 sent to Mr. Trofimuk but copied to all counsel, including Mr. Parker: sr
11
12 Good morning. We will, of course, follow Justice Romaine's
13 direction concerning admissibility of these documents into
14 evidence. Our chief concern with respect to those documents or
15 portions thereof which Dr. J. ...
16
17 Referring to Dr. Bhattacharya: (as read)
18
19 ... either had not seen or statements put to him on cross-
20 examination for the purposes of impeachment, but which he
21 specifically disagreed with and did not adopt as part of his
22 evidence. We realize that these points of distinction can be made
23 in argument, but we need to speak to this on the record. We
24 maintain our stated objection to admissibility of the second
25 Madewell study as it is in the nature of an expert report and would
26 need to hear further submissions from Alberta counsel concerning
27 why the study should be entered into evidence for the truth of its
28 contents. By the way, we still haven't heard from them about this.
29 It is clearly hearsay and it's already been used for the purposes of
30 impeachment, which was entirely proper, and Dr. J.'s responses
31 are now in evidence in the hearing upon which AG counsel can
32 base argument. We see no need to have the entire report entered
33 into evidence as a full exhibit and we'll need to hear Justice
34 Romaine make a ruling on this point.
35
36 There was an email from Mr. Trofimuk, but I see was copied to Mr. Parker, that's sent to
37 me and in it he states: (as read)
38
39 We marked Madewell number 2 as has not seen, so it would be an
40 exhibit for identification only, not a full exhibit at this point.
41

1 So that was as of February 16th, 2022, 8:02 AM, so that position has changed since then.
2 And, of course, they're entitled to change that position, but what I'm saying is our position
3 has been clear and has been steadfast, while theirs has changed. February 17th, 2022 at
4 7:35 AM I said the -- I sent the following email to all counsel, including Mr. Parker: (as
5 read)
6
7 Counsel, the only real point of disagreement is the second
8 Madewell study. I have stated our position on its admissibility as
9 a full exhibit. Mr. Parker's explanation that it is not an expert
10 report ignores the fact that the only basis for its relevance is that it
11 is a COVID-19 study containing scientific data and resulting
12 analysis of renowned experts. That is clearly why it was put to the
13 witness during cross-examination, but it is still hearsay. That said,
14 I agree that it can be marked for identification so that we can argue
15 the point if indeed Alberta plans to apply to have it entered as a
16 full exhibit. Perhaps you could confirm that intention. It is
17 especially difficult for us to see how the second Madewell study
18 can be admissible in light of the position taken by Alberta concern
19 to Johns Hopkins meta-analysis.
20
21 And then finally, I sent an email today in response to Mr. Trofimuk and this was also copied
22 to Mr. Parker, and this was in response to Alberta's position that they have taken today that
23 the Madewell study and also the Rasmussen study should be marked as full exhibits: (as
24 read)
25
26 Good morning. We only take issue with the admission of
27 Madewell number 2 as a full exhibit offered for the truth of its
28 contents and are prepared to make full submissions on this point
29 today.
30
31 So then, subsequently, we indicated that in response Mr. Trofimuk indicated that they also
32 wanted to adduce the Rasmussen study, which is clearly rejected by Dr. Bhattacharya, the
33 record will reflect that. And so my response was this. This was at 8:55 AM today, February
34 23rd, 2022: (as read)
35
36 So any document ...
37
38 This was sent to Mr. Trofimuk, but this one however was not copied to Mr. Parker. I regret
39 that, but it was sent to Mr. Trofimuk: (as read)
40
41 So any document that the witness can identify is no longer hearsay,

1 but prima face admissible for the truth of its contents? Is that your
2 position? I can find no support for that in the *Canada Evidence*
3 *Act*. In fact, this does not even apply to the witness' own prior
4 inconsistent statements under section 9(2). The ability to identify
5 something does not amount to adoption of someone else's expert
6 opinion, particularly ones that the witness specifically rejects. Dr.
7 J. rejected both Madewell number 2 and Rasmussen. If you have
8 a case that supports your interpretation, then I would ask you to
9 provide same. That might alter our stated position. Presently, I'm
10 aware of no legal precedent supporting your stated position.
11
12 So by my account, they were told no less than five times of our position regarding the
13 Madewell study and they, as I stated earlier, they were repeatedly asked in writing for legal
14 precedent to support their position and, as I said, they have provided none, in fact, Mr.
15 Trofimuk was good enough to state in an email -- subsequent email that they don't have
16 any such authority to cite for your consideration. So I hope that clears up the issue about
17 the emails and the series of communications that went back and forth between counsel on
18 this particular issue. Thank you, Madam Justice.
19
20 THE COURT: Thank you, Mr. Grey. Mr. Parker --
21
22 MR. RATH: Madam --
23
24 THE COURT: Oh, I'm sorry, Mr. Rath?
25
26 **Submissions by Mr. Rath (Reply)**
27
28 MR. RATH: (INDISCERNIBLE) thank you. Just a couple of
29 quick points arising, My Lady. I was very concerned by my friend's submission that
30 somehow or other that within the context of constitutional litigation that the rules of
31 evidence are suspended. I have been litigating as opposing counsel to my friend's clients,
32 the Government of Alberta, for over 30 years at every appellate level in this country,
33 including the Supreme Court of Canada. I have never once heard Alberta express that
34 position and, in fact, I have been involved in cases where Alberta went so far as to say that
35 historical documents cited in appropriate well-recognized textbooks could not be submitted
36 as evidence, that they were hearsay and that for historical documents referred to in
37 textbooks to enter into evidence and proceedings that we had to obtain (INDISCERNIBLE)
38 certified copies of those documents from archives where those documents were housed,
39 which we subsequently did. So this suggestion that somehow the rules of evidence don't
40 apply in constitutional litigation is completely new to me in 30 years of litigation with my
41 friends' client.

1
2 The other concern that I had was that my friend is somehow suggesting that the Madewell
3 study go in because it contains points that are of importance to his argument and that the
4 Hopkins study, you know, shouldn't go in because it deals with the effectiveness of NPIs.
5 The other concern that I had was that my friend is somehow suggesting that the Madewell
6 study go in because it contains points that are of importance to his argument and that the
7 Hopkins study, you know, shouldn't go in because it deals with the effects -- effectiveness
8 of NPIs. Well, the effectiveness of NPIs is crucial to our clients and it's not in. So this
9 suggestion that somehow or other this Court now make a -- a determination on a subjective
10 basis as to which evidence is more important to which party, you know, is completely
11 inappropriate in the circumstances, so we would submit that, you know, all of the Court's
12 previous rulings with regard to these matters be followed.
13
14 And, again, I highlight my friend's submission where he says that if the Court rules against
15 him in this regard, that he's then going to try to put the study in through Dr. Kindrachuk on
16 redirect and, in that regard, we would ask the Court again to remember all of my friend's
17 submissions with regard to the narrow scope of redirect and apply the same standards that
18 my friend asked to be applied to the redirect that he's proposing take place with regard to
19 Dr. Kindrachuk to what his new proposition is with regard to Madewell 2.
20
21 And then I think the Court has the point in spades that my friend has, I think in a very
22 forthright manner and I commend him for that, has admitted on the record that he's been
23 sitting on this study since the 9th of September, he chose not to follow the procedural order
24 by making an application to the Court to have the study admitted into evidence so that the
25 parties could deal with it in -- in the normal course as evidence in these proceedings and,
26 instead, chose to use it for the purposes of impeachment and, as My Lady has suggested,
27 when she reviews the transcript, she'll -- she will see that the attempts at impeachment
28 failed and that Dr. Bhattacharya was very clear in saying that he disagreed with the
29 Madewell study and that he did not adopt the study and, accordingly, does not meet the test
30 for admission into expert evidence.
31
32 And, My Lady, thank you, those are our submissions.
33
34 THE COURT: Okay. Thank you.
35
36 Where are we?
37
38 MR. PARKER: I think you were coming back to me at some
39 point.
40
41 THE COURT: Yes, Mr. Parker.

1
2 MR. PARKER: You were coming to me, but then Mr. Rath
3 jumped in.
4
5 THE COURT: Okay.
6
7 MR. PARKER: Did you want to hear from me?
8
9 THE COURT: Yes. Go ahead, Mr. Parker.
10
11 **Submissions by Mr. Parker (Reply)**
12
13 MR. PARKER: Sure. My friend -- learned friend, Mr. Grey,
14 referred to the Savaris study, the document that they have agreed to go in as a full exhibit
15 is obviously not the Savaris study, that's already a footnote to my -- to Dr. Bhattacharya's
16 surrebuttal report. What they've agreed to go into evidence is a footnote 1 to the Savaris
17 retraction note and they've agreed for that to go in as a full exhibit on the basis that Dr.
18 Bhattacharya said he had seen it before, he was able to identify it. And that's been -- the
19 respondents' position throughout has been that if the witness can identify the document,
20 he's seen it before, he can speak to it, it should be a full exhibit.
21
22 In this case, when we put the Madewell study to -- Madewell's second study to Dr.
23 Bhattacharya, he had not seen it before and we then took the position on Friday, so after
24 numerous of these emails that my friend has just read at length to you, after those had been
25 sent, and in some cases replied to where appropriate, we took the position before you on
26 Friday that Dr. Bhattacharya was still under oath, still subject to redirect and possible
27 further cross-examination, he should not be able to shirk his duty in this way by simply
28 saying, I've not seen this study before. He's now been provided with this study. It's an
29 update to a key study to his report, he should be able to and has testified to it.
30
31 And, again -- and I haven't reviewed the *Marquard* case because I wasn't expecting to be
32 called on in this fashion this morning, but our position was that he had -- now had ample
33 time to review the study and he should speak to it and, having done so, he is in a position
34 to identify it, know what it is, and it should be made a full exhibit.
35
36 THE COURT: Mr. Parker, can I interrupt you? I was going back
37 to you, but it was really for the purpose of hearing your comments on the Rasmussen study.
38 You've given your --
39
40 MR. PARKER: Oh, sure.
41

1 THE COURT: Yes. Okay.
2
3 MR. PARKER: Thank you. I'm so sorry.
4
5 THE COURT: No problem.
6
7 MR. PARKER: Yeah, and on -- on Rasmussen, I -- I had raised
8 that last night as I was going through these exhibits in detail. Mr. Trofimuk has put together
9 the documents and I just wanted to go through and -- and to help the Court and my friends
10 indicate where each of these exhibits, or exhibits for identification, were referred to in the
11 transcript pages and line numbers, and I've done that. As I was doing that, I was reminded
12 that Rasmussen, which I did put to Dr. Bhattacharya I think on the 14th and he said, I
13 haven't seen it before, he knew who Dr. Rasmussen was, but he hadn't seen the -- the
14 document I put to him, and so that would have been marked as an exhibit for identification.
15
16 I was struck yesterday by my friend, Mr. Grey, taking Rasmussen and putting -- he didn't
17 put it up on the screen, that's true, but he read -- and, again, my apologies if I get this wrong,
18 I haven't got the transcript from yesterday yet, but my understanding was he read at length
19 the paragraphs, or the portions of the paragraphs, from Rasmussen that I had put to Dr.
20 Bhattacharya and then had Dr. Bhattacharya speak, that is give evidence on those portions
21 of the Rasmussen commentary.
22
23 It seemed to me that that would then fall into the same category as we say the Madewell
24 second study is, that he's had an opportunity to review this document, look at it, consider
25 it, be asked questions about it, and give his evidence on it. I appreciate that he doesn't
26 agree with Dr. Rasmussen, but he has had the opportunity to review and identify that
27 document and it seemed to me, even though the document was not put to him in the redirect,
28 that it may be appropriate, and I say "may be", it was something that I thought we should
29 discuss with you today that the Rasmussen article should also go in as a full exhibit.
30
31 Those are my submissions on Rasmussen, Justice Romaine.
32
33 THE COURT: Okay. Can you tell me the date of the Rasmussen
34 study?
35
36 MR. PARKER: Yes, it's a commentary and the date is December
37 18th, 2020.
38
39 THE COURT: Okay. So it is within the --
40
41 MR. GREY: May I just respond --

1
2 THE COURT: Yes, of course.
3
4 MR. GREY: -- may I just respond briefly?
5
6 THE COURT: Yes. Yes.
7
8 MR. GREY: My friend talks about a -- a category, that these
9 reports fall into a category. There -- in my submission, there is no such category. And we
10 still have not heard from -- from my friend about why the Madewell study or the Rasmussen
11 study need to be made full exhibits. We have not heard any argument regarding necessity
12 or anything of the kind. The -- the evidence about those studies, Mr. Parker has had the
13 opportunity to cross-examine on both of the them.
14
15 Regarding the Rasmussen study, all I was -- all I did is I went back over the evidence, the
16 -- the cross-examination, that was put to Dr. Bhattacharya and asked him to clarify his
17 evidence concerning the Rasmussen study. That -- that in no way triggers the Rasmussen
18 study to be full evidence in this hearing. There's no case law for that. There's no rule of
19 evidence that my friend has pointed you to, except for this -- this -- his conception of what
20 is the -- the custom and constitutional litigation. He's asking you to create new law
21 regarding -- it's -- it's a violation of fundamental rules of evidence. These studies are
22 hearsay and they're worse than hearsay, they're hearsay in the nature of expert opinion
23 evidence. They're -- they're not even things that are within the personal knowledge of the
24 person who's providing the testimony. They aren't even in the nature of -- of affidavits or
25 -- or statutory declarations. They're -- they're opinion evidence.
26
27 And the admission of the full studies, we've heard nothing from my friends about why the
28 full studies have to be submitted, and the impact of having them go before you is highly
29 prejudicial. We've had no opportunity -- not -- in relation to the Madewell 2 study, not
30 only have the applicants had no opportunity to cross-examine the authors of the report,
31 which is a crucial feature you'll find in the Supreme Court of Canada case that you're going
32 to review, My Lady, but -- but nor were we even given the opportunity to have that report
33 put to Dr. Bhattacharya in advance so that he comment on this.
34
35 We're -- we're just lawyers, we're not scientists. We're doing the best we can to try and
36 grapple with these concepts. What Mr. Parker has done is just made that situation all the
37 more difficult. We need time to -- to get a handle on these -- on these studies and we need
38 to be able to consult and confer with people like Dr. Bhattacharya so that we can understand
39 it. Mr. Parker had that opportunity. He -- he received, based on his own words, he received
40 that study, the Madewell study, from Dr. Kindrachuk. Dr. Kindrachuk was able to explain
41 the import of that to Mr. Parker. We didn't have that opportunity.

1
2 Dr. Bhattacharya was confronted with that on cross-examination for the purposes of
3 impeachment. Mr. Parker was able to do that fully and fully exploit that to his advantage,
4 and that's what he's done, and now he's going for (INDISCERNIBLE) and he's trying to
5 get you to change the laws of evidence to suit his -- his clients' position. And we -- we
6 state and we maintain there is no legal authority -- my friends have referred you to no legal
7 authority that would support this position. It's a violation of fundamental rules of evidence.
8
9 That's our position. Thank you.
10
11 THE COURT: Thank you, Mr. Grey.
12
13 Mr. Rath?
14
15 MR. RATH: You'll be pleased to hear, My Lady, I have
16 nothing further. Thank you.
17
18 THE COURT: Okay. Thank you.
19
20 Okay. As I said, I need to check the transcripts before I make a decision on this. So I will
21 do so and try to give you my decision tomorrow if we get the transcripts in time, and I think
22 we should be able to get the transcripts in time.
23
24 So that leaves us with a minute before Dr. --
25
26 MR. PARKER: Dr. Kindrachuk is wondering if he should log in,
27 Justice Romaine.
28
29 THE COURT: Sure.
30
31 MR. PARKER: Can we let him in now?
32
33 THE COURT: Sure. Why don't we continue with him?
34
35 MR. PARKER: Sure, we'll just do that. One moment.
36
37 MR. RATH: My Lady, just a quick housekeeping matter
38 before we begin. It was with regard to the issue of (INDISCERNIBLE) that I raised
39 yesterday.
40
41 THE COURT: Oh, that's right, yes.

1
2 MR. RATH: Anyways, in that regard, this will be really brief.
3 I wanted to apologize to the Court and apologize to my friend, I misremembered the
4 evidence and I was getting confused with another case we were doing where that was very
5 much an issue and I see that it's not here, so I'd like to apologize for the Court for my
6 confusion.
7
8 THE COURT: Okay. I accept your apology with relief, so thank
9 you, Mr. Rath.
10
11 MR. PARKER: And we have Dr. Kindrachuk present now,
12 Justice Romaine.
13
14 THE COURT: Okay. Thank you. And I believe it was Mr. Grey
15 cross-examining.
16
17 MR. GREY: Yes.
18
19 THE COURT: Okay. Thank you.
20
21 MR. GREY: Yes, Madam Justice. I'm ready to proceed
22 whenever you are.
23
24 THE COURT: Okay. Thank you.
25
26 **KENNETH JASON KINDRACHUK, Previously Affirmed, Cross-examined by Mr.**
27 **Grey**
28
29 THE COURT: Dr. Kindrachuk, you're not on my screen, but
30 will you confirm that you are still under oath?
31
32 A I so confirm.
33
34 THE COURT: Okay. Thank you.
35
36 Go ahead, Mr. Grey.
37
38 Q MR. GREY: Good morning, Dr. Kindrachuk, it's Leighton
39 Grey. Can you hear me okay?
40 A I can, yes. Thank you.
41

1 Q Doctor, you've been qualified as an expert in this proceeding and it's been stated that
2 your expertise in the area of -- specific area of virology; is that your understanding?
3 A That's correct.
4
5 Q All right. Thank you. Dr. Kindrachuk, you've given the Court an expert opinion in this
6 matter and I know that Mr. Rath had referred you to it previously in your evidence. Do
7 you have a copy of that with you, sir, so you can refer to it?
8 A I do, yes.
9
10 Q Okay. I'm -- I'm not going to refer to it very much, but I just wanted to make sure you
11 had it in case you needed to look at something to refresh your memory about --
12 A Sure.
13
14 Q -- something you'd said previously. So, Dr. Kindrachuk, my understanding is that your
15 expert opinion, to some degree, was in response to a January 2021 opinion that had
16 been provided by Dr. Bhattacharya; is that your understanding as well?
17 A That's correct.
18
19 Q Okay. And so in -- in response to your response, Dr. Bhattacharya made some -- some
20 comments and I'd like to put some of these to you and get you -- to hear from you in
21 terms of clarification. Okay?
22 A Sure.
23
24 Q So, firstly, Dr. Bhattacharya states that your -- your opinion does not address the
25 evidence of the relatively low risk of asymptomatic disease spread drawn from real
26 world transmission data and focuses instead on modeling studies that require a
27 substantial number of unverifiable assumptions. Do you dispute that, sir?
28 A Dispute it in the sense that I think he underestimates the role of asymptomatic
29 transmission in disease spread, in particular with the advent of the new variants of
30 concern and their increased transmissibility.
31
32 Q Okay. Dr. Bhattacharya's particular -- his point is based upon -- he says, in particular,
33 that the models that he references and upon which you rely on your opinion often make
34 the assumption that lockdowns actually work in reducing interactions between
35 individuals in a way that reduces disease transmission risk. Do you take issue with that
36 statement?
37 A I do because I take issue with what lockdowns is defining from his perspective --
38
39 Q Okay. Okay.
40 A -- and what -- what essentially is -- fits into the definition of lockdowns.
41

1 Q Okay. So -- and I realize you're not an expert on -- on lockdowns or NPIs, and I know
2 you know what those are better than I do, but, sir, I had heard you yesterday draw a
3 distinction, and I -- I think a very useful distinction, and I think I understood what you
4 meant, between correlation versus causation --
5 A Correct.
6
7 Q -- and I want to ask you about this and please clarify this for me. What I understood
8 when you talked about correlation is you were talking about the -- the subjective way
9 that a person might draw a connection between two particular pieces of data and say
10 that one necessarily leads to the other and you called that a correlation.
11 A Right.
12
13 Q Does that -- would you agree with me that that's more -- more of a -- a subjective
14 analysis?
15 A Yes.
16
17 Q Okay. And then -- but you -- you distinguish from that something called causation,
18 which is also a legal concept and I think the scientific concept is -- is probably similar,
19 but when you're talking about causation, you're talking about an empirical link where
20 you can see a cause and effect relationship, where you know, for example, when you're
21 conducting a certain experiment when you're combining two things, that -- that there's
22 a -- there's a direct relationship, a scientifically empirical relationship, between cause
23 -- cause and effect; is that what you mean by causation?
24 A That's correct.
25
26 Q Okay. So I'm going to suggest to you that what's happening when you look at, for
27 example, modelling or you look at lockdown measures and -- and you say, for -- not
28 you but, for -- for example, the Government of Alberta or the Government of Manitoba
29 --
30 A M-hm.
31
32 Q -- says that -- you know, let's say masking or social distancing or washing of hands or
33 school closures or any of those sort of non-pharmaceutical interventions or habits, that
34 those cause a reduction in disease spread or reduction in deaths, that is more in the way
35 of a correlation, using your words, than a situation of scientific causation; would you
36 agree with that?
37 A Well, so the way that I would look at this is that we can -- we can discuss this in the
38 realm of COVID-19 specifically or we can discuss this within the realm of emerging
39 infectious disease specifically, from the history of emerging infectious diseases.
40
41 Q Okay.

1 A So if we -- if we look back again to the -- the 2010 working paper that Dr. Bhattacharya
2 had written on influenza, he had talked about avoidance behaviours, which would
3 include the things that -- that he has discussed in the past as being akin to lockdowns,
4 which included masking, which included hygiene, which included vaccination, and his
5 take was that -- that there was a benefit from -- or that those behaviours and those
6 avoidance behaviours would reduce the -- the impact of not only seasonal flu, but also
7 the 2009 influenza pandemic.
8
9 So for -- for COVID-19, the work will continue to need to move forward because we
10 are only 27 months into this to better understand all the variables that have played into
11 lockdowns and the -- the true benefit across all the different lockdown and NPI
12 measures that have been employed for COVID-19 but, historically, we can say that
13 there have been benefits.
14
15 So I -- I think we sit in an area where, when we look at this from a precautionary
16 principle, the non-pharmaceutical interventions that have been employed have been
17 based on prior experience with -- with similar pathogens. And, again, the -- the debate
18 is whether or not the employment of those precautionary measures will reduce the effect
19 in a timely manner of a novel disease or whether we will see an exacerbation.
20
21 Q Okay. That's -- that's a very good point, and you wouldn't be aware of this Dr.
22 Kindrachuk, but what you just said about Dr. Bhattacharya's previous statements are
23 actually consistent with evidence that he's given in this hearing. In fact, under cross-
24 examination, Mr. Parker put those very same things to him and, in fact, as I recall Dr.
25 Bhattacharya's evidence, he said precisely what you just said and that there are
26 situations in which these non-pharmaceutical interventions can be useful.
27
28 But Dr. Bhattacharya -- but coming back to the point, though, when it comes right down
29 to it, and I realize that, as scientists, you're doing your very best to predict things that
30 are difficult to predict, but -- but there really isn't -- it really isn't a situation when we're
31 talking about these -- these NPIs where we -- we can be sure to a scientific certainty
32 that -- that they are effective. What -- what we're really doing is we're dealing in -- in
33 probabilities, and that's really what the models are about; am -- am I right in that?
34 A Yes, I think that there is a -- certainly, an employment of precautionary principal
35 probabilities in prior experience.
36
37 Q Okay. Dr. Bhattacharya also stated in reviewing your -- your opinion that it doesn't
38 provide any evidence that Alberta had conducted any validation exercises which would
39 suggest that the models in which they relied to infer the efficacy of NPIs have actually
40 made -- actually matched the real-world evidence provided from scientific literature
41 concerning the low levels of asymptomatic spread. What -- what do you say -- what do

1 you say to that?
2 A So I guess I'm interested in this idea of -- of validation. So validation of the models in
3 through what mechanism, through randomized controlled trials of masking during a
4 pandemic where nearly 6 million people have been recorded to die or have been
5 recorded to have died already? I would argue that there is an ethical and moral
6 consideration as to whether or not trials or validation models can be run in real time
7 where there is not a subsequent impact on the populations that -- that are -- that you are
8 trying to protect.
9
10 Q Okay. Dr. Bhattacharya also says that -- one -- one clear implication of what he says is
11 the small likelihood of asymptomatic and pre-symptomatic disease spread and the
12 higher likelihood of symptomatic spread and there's really argument on that.
13 Obviously, symptomatic spread is a much higher probability than -- than these other
14 categories. You would agree with me so far; right?
15 A Well, there's -- so, certainly, we know that symptomatic disease spread is higher --
16
17 Q M-hm.
18 A -- but if we look back at the second Madewell study, certainly, we're not talking about
19 massive differences between pre-symptomatic, asymptomatic, and symptomatic
20 transmissions, there are certainly differences that are there, but I would argue back
21 when we look at -- at transmission, what is the extent of transmission that is negligible
22 for a -- again, for respiratory infectious disease that -- that is highly infectious? Is one
23 person being able to infect 10 percent, 5 percent of their household? Is that insignificant
24 or is that significant? And I think that becomes a bigger question of are we trying to
25 reduce overall transmission and toll or are we trying to just control a transmission as --
26 as best we can?
27
28 So -- so my concern here is that when we talk about the distinction, yes, certainly there
29 is a quantitative difference in -- that -- that at least has been from the Madewell study
30 that -- that would show that there's a higher likelihood of transmission from
31 symptomatic cases, but I think it would be dangerous to say that spread from
32 asymptomatic or pre-symptomatic patients is negligible.
33
34 Q Okay. Dr. Kindrachuk, one of the studies that's referred to in your opinion is the -- is
35 the Qiu study. Am I saying that correctly, it's Q-I-U --
36 A Yes.
37
38 Q -- from 2021? Okay. And it's my understanding this is a -- a prominent real-world
39 study that's often referred to by people, let's say on -- on your side of the case, have
40 used to argue that asymptomatic disease spread is common. Is that a -- a fair summary
41 of what the -- how -- how the report has been used?

1 A No, I --
2
3 Q And, certainly, it's consistent with the way you've used it in your report, I think.
4 A Sure. What -- what I would say is, certainly. So this is from 2021, so this is April 2021
5 --
6
7 Q Right.
8 A -- and it was being published January 2021, so at -- at -- certainly, at the time, this was
9 one of the pieces to our best knowledge that -- that was able to look --
10
11 Q Okay.
12 A -- at different mechanisms of transmission because it was a systematic review.
13
14 Q Okay. And my understanding of this study is that it distinguishes the likelihood of
15 disease spread by a pre-symptomatic individual from that of an asymptomatic but not
16 pre-symptomatic individual; is that correct?
17 A So -- sorry, say -- can you say -- can you repeat the question or repeat the
18 (INDISCERNBIBLE)?
19
20 Q Okay. My -- my understanding of the study is that it distinguishes the likelihood of
21 disease spread by a pre-symptomatic individual from that of an asymptomatic but not
22 pre-symptomatic individual; is that correct?
23 A Yes.
24
25 Q Okay. And so -- and, also, a -- a primary finding of that study is that, while
26 asymptomatic but not pre-symptomatic individuals are exceedingly unlikely to spread
27 the disease, individuals who are not symptomatic now but will eventually develop
28 symptoms are efficient at infecting others in their pre-symptomatic state; is that a fair
29 statement concerning the Qiu study?
30 A Yeah. I think at this time -- so this would have been, again, pre -- this -- well, let's see,
31 it was January 2021, so this would have been -- so this was up until July 2020, so this
32 would have been pre-Alpha variant. Yeah, it's probably reflective of that period in time
33 specifically.
34
35 Q Okay. And that's one of the -- and I know you know this, that's one of the relevant
36 timeframes for the purposes of this application.
37 A M-hm.
38
39 Q Dr. Bhattacharya says something, though, that I -- I'd like you to comment on. He says
40 that one problematic interpretation of this result, that is of the Qiu study, is that relative
41 efficiency of the disease spread by pre-symptomatic individuals militates in favour of

1 lockdown policies and mass asymptomatic testing and he says that that interpretation is
2 -- is incorrect, and this is getting back to what we were talking about earlier about the
3 difference between, you know, correlation and causation to -- to the -- a scientific
4 certainty, so he describes that as a problematic interpretation. Do you take issue with
5 that?
6 A Yeah, I -- I do. Part of the reason that I take issue with -- with what he says is, again,
7 if we're thinking about this from an emerging infectious disease standpoint and -- and
8 during a pandemic, the question becomes, if we are in a position where there is
9 uncontrolled community transmission, how do we best cut off that transmission in a
10 short enough period of time that we do not see secondary effects or we limit the
11 secondary effects on the population? So that's not only hospitalizations and death and
12 ICU admissions, but that also is economic impacts, (INDISCERNIBLE) impacts, all
13 those things together. So we get into a position of saying so which -- which of these
14 can we extinguish without having (INDISCERNIBLE) effects on all of these other
15 variables?
16
17 And I think that is the issue, is that we continue to talk about asymptomatic transmission
18 as being lower likelihood or low likelihood. That -- that may be true in comparison to
19 people that are symptomatic, but there are some -- there are certainly some caveats here.
20 One is, again, the role of asymptomatic transmission is that there is still asymptomatic
21 transmission. Yes, it is -- it is lower, but we are still seeing ongoing asymptomatic
22 transmission.
23
24 The other concern is, when we talk about this move from -- from pre-symptomatic to
25 symptomatic transmission, we are talking about this as if symptoms are cut and dry,
26 that there is a black white between those symptoms and symptoms. Well, if we look at
27 the overall symptoms of COVID-19, we know that that is a very, very vast spectrum of
28 symptoms that may be present that is dependent on age group, that's dependent on
29 underlying risks, that's dependent on overall disease severity.
30
31 So now we get into a question of saying how well can people distinguish whether they
32 are symptomatic? And that's a behavioural standpoint because, again, we're dealing
33 with a general public that doesn't necessarily know what the symptoms are and nor do
34 we necessarily know what all the symptoms look like for COVID specifically. So I --
35 I take issue with many of the caveats that come with that -- with that way of thinking.
36
37 Q Okay. You make -- you make an excellent point there and I just want to follow up on
38 this, this idea of being able to distinguish between individuals in terms of risk of
39 infection. Isn't it true that distinguishing between an infected individual who will
40 eventually develop symptoms and an infected individual who will never develop
41 symptoms is practically impossible without the benefit of the passage of time?

1 A Yes. The -- the only caveat would be for people that -- certainly, people that are
2 vaccinated, we have a better picture now from the data at least to -- to suggest that there
3 is a lower likelihood that those people will -- will become symptomatic, that, of course,
4 has changed with different variants, but we don't have a marker that can tell us
5 specifically when we look at somebody that is in the asymptomatic or the pre-
6 symptomatic stage of disease whether or not they will go on to -- to display symptoms.
7
8 Q Okay. But we -- we do know and we did know even before vaccinations, when I say
9 "we", I mean you, the scientists, that infected individuals who will develop symptoms
10 tend to do so within a very short interval, 2 or 3 days, after first becoming infected, we
11 knew that; right?
12 A Well, it's -- wouldn't be 2 to 3 days because if we look at -- certainly, at the -- the
13 original ancestral strain, we -- we published a review on this in BMJ, when you look at
14 the period of pre-symptomatic transmission, that was anywhere from 3 to 5 days prior
15 to symptom onset. So the -- the length of time that somebody can be infected to
16 symptom onset is still, I believe 2 to 21 days, but it most commonly is going to fit within
17 probably that 3 to 5 days, maybe even 6 day period, but that has changed also with --
18 with the variants.
19
20 Q All right. I realize you're not an expert on PCR testing. We had Dr. Zelyas give us --
21 testify for us yesterday about those, but you do comment on them in your report and so
22 I -- I do have one question about this, and -- and if you don't feel comfortable answering,
23 just say so. It's true, though, that infected individuals who -- who never develop
24 symptoms may test positive using the PCR tests for the virus for an extended period of
25 time; is that within --
26 A Yes.
27
28 Q Okay.
29 A Yes, we know that.
30
31 Q So -- so we've got these two groups of, let's call them observationally identical
32 individuals are mixed in the population in some unknown frequency that may change
33 over time, right, and so given this information constraint, you know, isn't it so that sort
34 of from a policy point of view, the relevant question is, you know, how likely is it that
35 an infected individual without symptoms, whether pre-symptomatic or purely
36 asymptomatic, will spread the disease to close contacts? Like how -- how certain can
37 -- can we be about that in the context of, you know, pretty restrictive measures placed
38 on the population?
39 A So I -- if I hear the question correctly, it is about somebody that is positive, whether --
40 whether we know -- whether in that pre-symptomatic phase or asymptomatic phase of
41 disease --

1
2 Q Right.
3 A -- whether we know they will go on to -- to subsequently infect those around them --
4
5 Q Right.
6 A -- and what is the likelihood?
7
8 Q Right.
9 A It's a good question. So we can't say a lot without being able to do continual testing on
10 a daily basis to be able to look likely at their -- their PCR values because there is --
11 there at least has been some correlation with -- with CTs from PCR an infectious virus
12 --
13
14 Q M-hm.
15 A -- but I would caution again that when we look at infectious virus, so infectious virus
16 implies that we can actually pull a virus out of the respiratory tract sample and -- and it
17 will actually replicate and infect cells. The presence of an infectious virus does not
18 necessitate transmission. It tells us that we are -- there's an increased likelihood, but it
19 does not tell us unequivocally that transmission will occur. So -- so all this is certainly
20 -- it certainly brings up questions as to how we can ascertain whether somebody is going
21 to be infectious.
22
23 The reason I think for why people are doing this is, obviously, again, from a
24 precautionary principal standpoint of trying to limit infection community, but you are
25 correct, there is a period of time where -- where people are likely going to have an
26 infectious virus. Dr. Cevik had a beautiful systematic review on this looking at
27 infectious virus of cross patients in SARS-CoV-2 infections and looked at the period of
28 time when infectious virus has been recovered from people -- from their respiratory
29 tracts and that coincided with the 10 day -- basically, the 10 day period post-symptom
30 onset. And -- and I think that's where you have continued to see policy that has wrapped
31 around that, but there are people that can have PCR positivity for much longer periods
32 of time and we have to be able to figure out how to discern whether or not those people
33 are infectious or whether that is remnant RNA from -- from during their convalescent
34 phase.
35
36 Q Okay. For the purposes of -- of answering this, let's call it a policy question, it's
37 somewhat crucial for this application. The -- the Madewell study, the 2020 Madewell
38 study, provides an answer, and I think this is referenced in your report, it's certainly
39 referenced by Dr. Bhattacharya, which is that less than 0.7 percent -- there's a less than
40 0.7 percent secondary attack rate in household settings, but the Qiu study doesn't --
41 doesn't really answer that. Would you agree with that?

1 A I would caution on the Madewell study because they did put out a statement on the --
2 well, not the validity but how -- how much people can read into that work and they
3 themselves had recommended to look at the Cevik article, which I believe is the second
4 Qiu article --
5
6 Q Right.
7 A -- for more information, and, of course, the subsequent Madewell study which used
8 more sampling and -- and different measures came up with -- with higher numbers.
9
10 Q Okay. But it -- but it's true that the -- the Qiu study did not -- or does not concentrate
11 its focus on a homogenous environment like households in the way that the first
12 Madewell study did?
13 A Yes --
14
15 Q Okay.
16 A -- I believe that's correct.
17
18 Q Okay. And would you agree with Dr. Bhattacharya that this makes its results harder to
19 interpret?
20 A No, I -- I wouldn't say that. I would say that it -- it certainly -- it -- it makes it -- well,
21 it adds data that we didn't have previously but allows us to -- to incorporate that to the
22 data we already had, which we knew also had caveats, which includes the Madewell
23 study. So I -- I don't think you can necessarily exclude one of these studies to -- to
24 focus on the other, I think we have to be able to look at -- at these studies in concert
25 with one another and -- and the conditions that were undertaken in the studies to come
26 up with some assessments of -- of what we understand.
27
28 Q All right. Dr. Kindrachuk, Dr. Bhattacharya takes the -- or he asserts that there's no
29 established causal link between lockdown policies and COVID case growth and
30 mortality rates. I realize you're not an expert on these lockdown measures so -- but I'd
31 -- but I'd -- I'd like to hear from you on this point if you're -- if you feel comfortable
32 answering some questions about it. First of all, do you dispute that assertion that there's
33 no established causal link, and I think he's using causation in the same sense you did --
34 or you do, between lockdown policies and COVID case growth and mortality rate?
35 Would you agree that that's not established to a scientific certainty?
36 A I would have to -- I think Dr. Bhattacharya would have to weigh out what he is all
37 including in regards to --
38
39 Q Okay.
40 A -- lockdown policies.
41

1 Q Okay. Let's say, for example, prohibitions on gatherings, restrictions of in person
2 worship, and non-essential business closures, what about those types of restrictions?
3 A So you're asking if they are able to benefit in the reduction of transmission?
4
5 Q I'm -- what I'm asking is, using those two examples, or either of them --
6 A Yeah.
7
8 Q -- is it your -- would you say that there's an established causal link between a policy,
9 for example, prohibitions on gatherings, let's take that one, that there's a scientific --
10 A (INDISCERNIBLE).
11
12 Q -- do -- do you understand what I'm saying?
13 A Yeah.
14
15 Q Okay.
16 A The -- the prohibitions of -- of gatherings, I think when we look back certainly at some
17 of the earlier periods or the early reports of the super spread events that were linked
18 back to -- to gatherings --
19
20 Q M-hm.
21 A -- that is why there was a -- again, a precautionary principal was put in place to reduce
22 those gatherings because of the role of super spread events in transmission of SARS-
23 CoV-2.
24
25 Q Okay. So Dr. Bhattacharya asserts that much of the evidence that's in your report and
26 -- and others concerning this causal relationship is based on modelling and not based
27 on real-world evidence and that, therefore, there's really a poor track record there of
28 establishing this causal link. Would you -- do you take issue with that?
29 A Again, I would take issue with it because he himself has used forecasting in his prior
30 assessments on pandemic flu and seasonal flu. So as to why modelling in the past has
31 been a benefit but has not been a benefit here I guess is -- is a larger question to me.
32
33 Q Okay.
34 A And I would also -- I guess I would also bring up the -- again, the -- the prior point that
35 I had discussed which was in the -- again, the middle of a -- a pandemic, and
36 appreciating the -- the breadth of this pandemic because I -- I think that's something --
37 this is something that we continue to see minimized, although it has had drastic health
38 and economic effects, there is a question of do you lead with the public health
39 approaches that have been employed in the past through decades of time to reduce
40 infectious disease spread during pandemics and epidemics or do you -- do you have the
41 time to go through and validate your procedures without putting undue stress on your

1 health care system and costing lives and livelihoods?
2
3 Q Okay. So what -- what Dr. Bhattacharya seems to be saying, though, is that the -- using
4 modelling as a predictor of the -- let's say the -- the efficacy of -- of these restrictions is
5 -- is not a very effective measure and that we have to look more at real-world data.
6 Would you agree with that?
7 A Yeah, there -- there are -- there are certainly caveats in -- in modelling, but I would also
8 say that real-world data analysis is also time consuming, right --
9
10 Q Yeah.
11 A -- so you need to be able to use modelling to do predictive analysis and also be able to
12 do real-world analysis that will not -- it will give you retrospective pictures of what
13 happened, but it'll likely not be able to give you prospective pictures for -- for being
14 able to dictate policy.
15
16 Q Fair enough. But -- but even if they are retrospective, it -- it would still provide useful
17 information to form policy going forward, though. Would you agree with that?
18 A It -- it certainly -- it certainly can --
19
20 Q Okay.
21 A -- as long as it also appreciates the -- the changes in the virus as well, which is something
22 that I -- I think as we discuss on this pandemic, but we have to appreciate that over the
23 -- the span of 27 months, the virus we are dealing with today that's circulating is not the
24 same as the virus that emerged in late 2019.
25
26 Q Okay. Dr. Kindrachuk, the -- there's -- there's -- part of your opinion that you provided
27 to the Court concerns this concept of herd immunity. Do you know what I'm talking
28 about?
29 A I do.
30
31 Q And this seems to be, correct me if this is wrong, it seems to be sort of in the wheelhouse
32 of your area of expertise of virology; is that fair?
33 A Yeah, it certainly -- herd immunity is something that -- that we discuss very frequently
34 when we talk about outbreaks and outbreak (INDISCERNIBLE).
35
36 Q Okay. Good. So -- so Dr. Bhattacharya, he -- he levels a criticism at you and -- and I
37 want to give you an opportunity to -- to comment on this and -- and to clarify. So he
38 says that, "Kindrachuk provides a misleading analysis of the role that herd immunity
39 plays in the control of the epidemic". And by way of clarification, this is what he
40 means, he says: (as read)
41

1 Herd immunity, also known as endemic equilibrium, occurs when
2 enough people have immunity so that most infected people cannot
3 find new uninfected people to infect, leading to the end of the
4 epidemic.
5
6 Would you agree with -- at least with his definition of endemic equilibrium or herd
7 immunity or do you take issue with that?
8 A No. I mean, so -- so we have two different -- two different things going on here, right.
9
10 Q Okay.
11 A So when we talk about endemics and we talk about endemic equilibrium, we have an
12 equivalent number of -- of cases and recoveries, right, so we -- the overall 'R', or
13 reproductive value, is -- is below 1 or at 1, okay, so we're -- we're neither increasing or
14 decreasing transmission. But when we look at endemicity, what we have to appreciate
15 is that endemicity can also occur with massive public health consequences. So two
16 examples -- or three examples we can think of: smallpox was an endemic disease, killed
17 somewhere in the neighbourhood of 300 million people in the 20th century; malaria is
18 endemic; Lassa virus is endemic. All these diseases still have massive public health
19 tolls. This is different than herd immunity because, herd immunity, we are actually
20 able to -- to stop onward transmission of a disease and protect those that are most
21 vulnerable based on immune principles within our population.
22
23 Q Okay. Those other diseases that you mentioned, though, they are clearly distinguished
24 -- or distinguishable from COVID-19, aren't they, though, based upon the way that --
25 what we know now about how COVID-19 impacts the public? Let me put it this way.
26 Dr. Bhattacharya says that, really, COVID-19 is primarily impacts, at least in terms of
27 serious illness and death, primarily impacts persons over the age of 60 who suffer from
28 multiple comorbidities. Do you disagree with him about that?
29 A I do. So I'll -- I'll pull up right now looking at excess deaths in unvaccinated populations
30 in the US from May 30th to December 4th, 2021. When we look at -- at age groups
31 that are impacted, all age groups from 18 plus were -- were impacted in terms of excess
32 deaths. So there is a higher risk for people, again, that are higher age groups, so those
33 above the age of 65, and those with underlying comorbidities, and those that are mixed
34 -- have -- have a mixture of those, but what we have to appreciate is that that -- the
35 disproportionate effects of COVID-19 have also exposed other disparities in our
36 population and that includes rationalized communities and the communities with low
37 socioeconomic status. So when we talk about this idea of who is most vulnerable, it is
38 not as simple as being able to say, well, it's only these people that are above this specific
39 age or have this particular comorbidity. In fact, if we look at the litany of comorbidities
40 now that are linked to higher risks of COVID-19, it is a broad set of comorbidities, so
41 that -- that now makes it difficult.

1
2 Now, when you ask about comparisons back to other diseases and -- and whether or not
3 COVID-19 is different, I will posit that if we compare back to 1918, we can talk about
4 1918 influenza as being devastating, 50 to a hundred million people dead. COVID-19
5 so far, 5.89 million dead recorded, that's also likely under counted based on -- on
6 information we've seen from other countries around the world, but there's also a couple
7 of other things that I would distinguish. One is the advent of antibiotics and the advent
8 of supportive care procedures in hospitals.
9
10 So when we compare back to different diseases, we need to appreciate that 5.8 -- or
11 5.89 to 6 million people dead is not a positive for us in regards to COVID-19. This
12 represents a death toll in spite of all the medical advancements that we have had over
13 the last hundred years, the last century, if not more. So -- so we need to be considerate
14 that this is a true historic pandemic, so when we talk about the impact on populations,
15 let's absolutely be appreciative of all the populations that are disproportionately
16 impacted by this disease.
17
18 Q I -- I think Dr. Bhattacharya agrees with you about several of the points you just made.
19 Certainly, he has testified that -- that the poor are -- are very severely impacted by
20 COVID-19, but he asserts that it's -- it's actually NPIs and lockdowns which most
21 discriminate against the poor and really reduce -- or I should say exacerbate the -- the
22 severity of outcomes for -- for the poor. Would you agree with that?
23 A No, I would -- I would like to see the data to -- to demonstrate --
24
25 Q Right.
26 A -- that there is a -- a causal difference between the impact of COVID-19 on -- on all
27 those communities versus non-pharmaceutical interventions and -- and how that
28 distinguish across NPIs that have been employed.
29
30 Q Okay. Dr. Bhattacharya testified in this proceeding, and he agrees with you, he -- he
31 described it as a -- a terrible pandemic, and it sounds like the two of you agree on that,
32 however, isn't it true, sir, that, in Alberta, the incidents of death, let's say among people
33 under the age of 30, is vanishingly low? And so that -- what Dr. Bhattacharya says that
34 the most significant comorbidity is age. You talk about comorbidities as though they're
35 equal, but the -- the most significant comorbidity by far is age.
36 A For -- for mortality?
37
38 Q Yes.
39 A Certainly, but --
40
41 Q Okay.

1 A -- but I would also posit that are we discussing this under the guise of just mortality or
2 are we talking about morbidity and mortality? Because that's --
3
4 Q We're just talking -- yeah, sorry, go ahead.
5 A So -- so I think when we have these discussions and we talk about the impact of
6 COVID-19, if we don't talk about morbidity, again, we are missing the point. There
7 are numerous diseases that have a very, very low mortality rate but have a high
8 morbidity rate in our communities. We know that those put tolls on our health care
9 systems and we know they have impacts, long-term impacts, on -- on health across
10 individuals and across populations.
11
12 So, yes, there is a -- there is a lower mortality risk certainly that -- that aligns with age,
13 we've seen that. When we talk about morbidity and we talk about hospitalization, we
14 talk about ICU admissions, and -- and, certainly, we -- we get in the guise of long
15 COVID which we're still trying to understand at this point in time, we need to be
16 appreciative of those points as well.
17
18 Q On this point, one of the witnesses who came before you in this proceeding, Mr.
19 Redman, who was a former emergency expert for the Province of Alberta, he compared
20 COVID numbers to -- to pneumonia and he said that -- that, in fact, the numbers that
21 you're talking about in terms of deaths and -- and morbidity and mortality for
22 pneumonia are really very, very similar to the number that we're seeing for COVID and,
23 in that context, he questioned, Well, okay, we've had pneumonia for a long time, it's
24 endemic, and we have these cases every year for pneumonia, but we're not closing
25 businesses and closing schools and restricting people's liberties in order to fight
26 pneumonia. So -- so doesn't that -- doesn't that contradict the -- the position that's taken
27 by people like yourself concerning COVID-19 that we have to restrict liberty in order
28 to prevent spread?
29 A I don't think it contradicts. When we talk about -- you know, if we talk about restricting
30 liberties, I -- I think, you know, we have to talk about the liberties of living safely. To
31 me, that's one of the most important liberties that we have is I should feel safe being
32 able to be in my community, I should be able to feel safe about my relatives who are in
33 high risk categories living in their communities.
34
35 So when we talk about pneumonia, again, without knowing the data from Alberta and
36 being able to compare. If we look at -- so say, to be fair, let's look at influenza.
37 Influenza rates over the last 2 years dropped dramatically across the globe. This is not
38 because COVID-19 has defeated influenza. Influenza certainly is still present, we --
39 we know it's still -- it's still circulating because we do see some cases, but there is a
40 correlation with the different NPIs and, certainly, restrictions and -- and
41 recommendations that -- that have been made from a public health standpoint with a

1 reduction in influenza.
2
3 So if we appreciate that we now have a new disease that has emerged for which we at
4 this point in time we now have vaccines, we now have some therapeutics, though, that
5 is still limited, we didn't have those in -- in early to mid-2020, we had to appreciate and
6 -- and continue to need to appreciate that we have now added a new virus that is likely
7 going to become endemic in -- in our communities.
8
9 So when we talk about tolls and we talk about this not being any worse than other
10 infectious diseases that -- that we already have seen, I would also posit how many more
11 do we want to add on? And what is the number of deaths and the number of ICU
12 admissions or hospitalizations or -- or long-term health impacts that equate to -- to the
13 number of restrictions that need to be employed and how does that -- how does that
14 look across age groups? Because I would like to see the calculation for -- for what that
15 threshold is of where restrictions should be enacted because I think that is -- that is the
16 question this is leading to of how many people are we willing to see get infected and
17 risk severe disease or -- or high morbidity rates to -- to necessitate having to enact
18 restrictions?
19
20 Q That -- that is -- that is part of the question, I agree with you and you phrase it very well.
21 Part of the -- the (INDISCERNIBLE) to that question is how many people are we
22 prepared to restrict as a society in order to prevent all risks of anyone dying? That's
23 also -- you'd agree with me that's a serious question that has to be answered as well.
24 A It's -- it's a great question. We can't look at this as a binary -- there -- you know, yes,
25 no, that things absolutely are going to work 100 percent either way. So if we -- if we
26 look at this from saying do we let everybody get infected? Is that better than having
27 restrictions and lockdowns? There -- there is no golden ticket or algorithm that tells us
28 which of the two of these is best. What we have to basically be able to guide us with
29 this is our prior experience and our understanding of the virus that we have at hand.
30
31 Now, if we look back at, again, the 2009 pandemic, and -- and, certainly, other influenza
32 seasonal epidemics, there have been school closures based on high influenza rates. So
33 does this occur globally or nationally? No, but it certainly does occur. So these are
34 things that have been introduced to control disease spread in the past. They had to be
35 enacted at a much higher -- greater rate during COVID-19 to try and suppress this --
36 this novel virus from transmitting, but we also need to be able to learn from our
37 experiences now to guide our pandemic preparedness and our pandemic response
38 moving forward.
39
40 Q Dr. Kindrachuk, I'd like to come back to this concept of herd immunity. I want to be
41 clear about what your opinion is because you appear in your opinion that's been filed

1 with the Court to assert that herd immunity cannot be achieved and -- and you cite the
2 experience of Manaus, Brazil as a -- as a basis for that. Is -- is that -- is that an accurate
3 statement of your opinion that you do not think that herd immunity can be achieved
4 with COVID-19?
5 A So I don't think that that -- the reasoning behind that is because of the experience in
6 Brazil.
7
8 Q Okay.
9 A I think Brazil and other regions have taught us that, even with high zero positivity, that
10 does not ensure that we are able to negate transmission or limit transmission, we've seen
11 that in Brazil, we saw that in South Africa with Omicron very, very recently. Now,
12 when we talk about herd immunity, when we look at the overall R-naught value of this
13 virus and of -- and of the variants that have been thrown at us, when we look at Alpha
14 and now Delta and now Omicron, the likelihood for us to be able to reach herd
15 immunity is -- is very, very, very low, it's infinitely small. So we are in a position now
16 of saying how can we best control this virus knowing that it likely is going to continue
17 to transmit on -- on a yearly basis? And that's the position that -- that we're left in at
18 this point in time.
19
20 Q Would you agree with Dr. Bhattacharya that the -- the Manaus, Brazil situation is really
21 not analogous to Alberta? I mean, I could take you through the different points of his
22 comparison, but I -- I don't want to do that unless you dispute that. I mean, his assertion
23 is that the -- the Manaus, Brazil situation really doesn't inform us very much about the
24 Alberta experience for a number of reasons, but would you agree with me that it really
25 is not analogous?
26 A It's not analogous in terms of the number of, obviously, societal differences and -- and
27 regional differences, but the guiding principle again is that, even with high zero
28 positivity, again, there -- there are a number of caveats in that study that the authors
29 themselves declared, but the overwhelming -- I think the overwhelming conclusion
30 stands, which is in an area with high zero positivity, it again does not necessitate or --
31 or suggest unequivocally that you are going to be able to control ongoing transmission,
32 and we have not seen that in -- in Brazil through the -- the rest of the pandemic.
33
34 Q Right. But -- but it's true, though, that the -- the herd immunity threshold, this is Dr.
35 Bhattacharya's assertion, the herd immunity thresholds differ sharply by location and
36 time, depending on factors such as population density, living arrangements, social
37 interactions, climate, season, and hygiene, and so it is not a universal constant
38 determined by biological characteristics of the virus alone and so he says that one
39 cannot learn much about herd immunity thresholds in Alberta from the experience of
40 Manaus, Brazil. Would you agree with that?
41 A So I would agree with the -- the caveats, but I would again say that when we look again

1 just at the R-naught of -- of the virus itself, the R-naught, as it is increased over time,
2 would suggest that across essentially most regions of the globe, if not all regions of the
3 globe, that herd immunity is likely unachievable just based on the properties of the
4 virus, the behaviours of the virus itself.
5
6 Q Right. Okay. Dr. Bhattacharya also refers to a similar zero survey conducted in the
7 Dharvi slums in Mumbai, India. Are you familiar with this study?
8 A Yes.
9
10 Q Okay. And he says that -- that this was the focus of an intense lockdown through May
11 and only limited reopening in June of 2020 and he cites these statistics. He says that
12 they found a zero prevalence of 57 percent in early July 2020 and he says one of the
13 researchers who conducted the study conveyed in -- conveyed the hypothesis that the
14 lockdown may have actually intensified the spread of the disease in the densely packed
15 region by forcing residents to spend long days in packed rooms with poor ventilation.
16 So my question is, based on your previous answers about Manaus, Brazil --
17 A M-hm.
18
19 Q -- would this be another example where the Mumbai example would not be very
20 informative in terms of Alberta?
21 A I think, again, there -- there are certainly caveats that can be drawn from that. I would
22 also caution, though, that when we look at -- at Mumbai and we look at -- at India
23 overall, we know what happened in early 2021 as -- as Delta took over. So, again, I --
24 I think we'd have to appreciate that the virus has continued to change and it has -- it has
25 thrown many of our preexisting notions of what herd immunity might look like or what
26 transmission may do over time completely on its side.
27
28 Q Okay. Dr. Bhattacharya also points to an example in Lima, Peru where he says nearly
29 40 percent of the population of Lima, Peru had SARS-CoV-2 specific antibodies,
30 despite one of the longest standing and harshest lockdowns in the world. Are you
31 familiar with that study from Lima, Peru?
32 A Somewhat.
33
34 Q Okay.
35 A Yeah, yeah, it's --
36
37 Q Okay. I -- I don't want to press the point. And -- and as a contrast to this, you know,
38 we're talking about Mumbai and Manaus, Dr. Bhattacharya references Sweden and, in
39 Sweden, seroprevalence, which adopted something more akin to a focus protection
40 strategy which, as you know, Dr. Bhattacharya strongly advocates in favour of, was
41 more than twice as high among ages 20 to 64 compared to those over 65 and he says

1 that this belies the assertion that focus protection is impossible. So my question is this,
2 doctor, is -- is it -- is that your position, is it your opinion that the -- the type of focus
3 protection that Dr. Bhattacharya thinks is very effective, that you think that that is
4 impossible?
5 A I don't -- I think it's ineffective. I think the recommendations that he has continued to
6 make are -- certainly fly in the face of many of the -- the concerns that -- that we've
7 seen with COVID-19 and -- and would likely have disproportionate effects on -- on the
8 communities that are likely most vulnerable to this disease and nor do -- nor did the --
9 nor do those principles have they adapted for being continued emergence of a new
10 variant.
11
12 So I would also offer that, when we talk about focus protections, there is the argument
13 of, well, what -- what is focus protection and how -- in Canada or in Alberta specifically,
14 how have we not utilized focus protection through -- through parts of the pandemic?
15 Because I would argue that it is not lockdown versus no lockdown. We've seen
16 incorporation of restrictions and certainly in different recommendations for non-
17 pharmaceutical interventions, so what are the specific folks' protections that Dr.
18 Bhattacharya thinks are going to be the things that absolutely work in this position?
19
20 Q Okay. But -- so it's your view, if I have this correctly, that from a -- from virology
21 standpoint in terms of reducing infection and spreading of the virus, that these
22 restrictions on liberty are -- are necessary as a prevention strategy in order to have what
23 you described as -- as a safe environment in -- in the population in order to prevent not
24 only disease spread and transmission but also severe health outcomes such as what you
25 described as morbidity and mortality; is that a fair assessment?
26 A No, well, I -- I guess I would take question on the consistent use of the restriction of
27 liberties because, again, I would argue that liberties also includes safety and the
28 wellbeing of those around us.
29
30 Q Right.
31 A So (INDISCERNIBLE) say is that I -- I certainly appreciate that there -- that our
32 primary concern has been to try and reduce transmission and identify areas where
33 there's either ongoing transmission or there are increased risks for -- for transmission.
34 Doing so has had to adapt to the variants and has continued to be an issue as vaccines
35 have -- have rolled out through our communities.
36
37 So I am certainly in favour of trying to restrict the transmission of this virus, but I also
38 appreciate that there concomitant effects on every aspect of our society and that we
39 need to be able to find certainly a balance in being able to do that and being able to
40 identify when we have transmission under enough control that we can reduce and
41 remove those safeguards without increasing the risk to the population.

1
2 Q Okay. So you would not agree with Dr. Bhattacharya that, for example, Alberta ought
3 to have focused its resources, all of its -- Alberta -- all of its resources on, let's say
4 protection of the most vulnerable, those being the -- the elderly and people suffering
5 from multiple comorbidities? In other words, the people most at risk of severe health
6 outcomes or death --
7 A I --
8
9 Q -- you don't agree with that?
10 A I -- I disagree because when you talk again about the people that are most vulnerable,
11 how do you distinguish between those that are moderately vulnerable, vulnerable,
12 barely vulnerable, severely -- you know, severely vulnerable? This is a very wide net
13 to cast, so trying to make that distinction of who is the most vulnerable is not as easy
14 as being able to pinpoint a specific age group when we start to look at the list of
15 comorbidities that are related to COVID-19.
16
17 Q But the statistics, Dr. Kindrachuk, are very clear that COVID-19 poses a very low, a
18 vanishing low -- vanishingly low risk of death to younger people in the population, so
19 let's people under 30 --
20 A But you're considering --
21
22 Q -- you would agree with that so far?
23 A Well, but you're considering again that the only risk from COVID-19 is death. Is --
24
25 Q I'm just talking about that particular metric, though. I'm not saying that's the only one.
26 A We can't -- we can't talk about just that metric with an infectious disease that -- that
27 causes -- that causes damage to -- to the physiology of a person because --
28
29 Q Okay. So -- sorry, go ahead, sir.
30 A -- morbidity -- morbidity is as important as mortality.
31
32 MR. GREY: Okay. All right. Thank you, sir. Thank you for
33 clarifying that point and I thank you for your answers to my questions today.
34
35 A Thank you.
36
37 THE COURT: Mr. --
38
39 MR. GREY: Those are all my questions.
40
41 THE COURT: Yes. Thank you. Mr. Rath?

1
2 MR. RATH: Thank you. I've already questioned the witness
3 and I have nothing -- I have nothing arising other than -- and after the fact objections, all
4 of the legal argument that was put in in the form of expert testimony from a -- from a
5 chemist -- biochemist, but I'll save that for argument.
6
7 THE COURT: Okay. I'm sorry, I'd forgotten that you went first.
8
9 Mr. Parker?
10
11 MR. PARKER: Yes. I will have some brief redirect. It might be
12 -- well, it would be easier if I could have maybe 10, 15 minutes just to --
13
14 THE COURT: Sure.
15
16 MR. PARKER: -- go through my notes. Thank you.
17
18 THE COURT: Yes. Let's take the 15 minute morning break.
19 Thank you.
20
21 (ADJOURNMENT)
22
23 THE COURT: Okay. Mr. Parker, are you ready for --
24
25 MR. PARKER: I am. Thank you, Justice Romaine.
26
27 THE COURT: -- redirect? Yeah.
28
29 **The Witness Re-examined by Mr. Parker**
30
31 Q Good afternoon, Dr. Kindrachuk.
32 A Good afternoon.
33
34 Q I just have a few questions on redirect for you. The first was you were discussing the
35 concept of R-naught and some questions about herd immunity threshold. Could you
36 explain to the Court what R-naught means?
37 A Yeah. R-naught gives us a -- basically an indication of how many people an infected
38 person can potentially infect. So if we consider, you know, something like measles --
39 measles, I believe, is up where in the 15 to 20 area. Ebola is just over 1. Seasonal
40 influenza, I think very similar, between 1.5 and 2. This virus, SARS-CoV-2, has been
41 problematic in the sense that as new variants have emerged, what we have seen is been

1 an increase in transmissibility due to a number of different factors.
2
3 So the original R-naught has subsequently changed over time and every time that R-
4 naught value changes or increases, what we see is that the herd immunity threshold that
5 is required to the amount of immune protection that -- that is found in a community, the
6 -- the amount of that that is required to extinguish transmission moves higher and
7 higher. And at some point, what we get to is that if an R-naught is high enough, then
8 herd immunity alone will not be able to -- to control transmission if -- if the virus starts
9 circulating -- or, sorry, if -- yeah.
10
11 Q Sorry. Were you finished, Dr. Kindrachuk?
12 A Oh, yeah. I'm finished.
13
14 Q Thank you for that. The -- the second question related to evidence you gave yesterday
15 and my notes reflect you were being asked about poor outcomes and you talked about
16 fatalities, severe disease. And then you spoke about Delta in a younger age group. Do
17 you recall that evidence and could you explain what you were referring to if you do
18 recall it relative to Delta?
19 A Yeah. So one of the things that I was bringing up is that when we look back at the -- at
20 the Canadian data, this was something that we -- it certainly was recognized in Ontario
21 very early, since they were one of the provinces that got hit by Delta earlier than other
22 Canadian provinces -- was that what we did see was that hospitalizations among
23 younger age groups increased in specifically that age group as compared to what we
24 had seen previously.
25
26 So certainly mortality still remains highest in -- in higher age groups. That -- that has
27 not changed, but I think what Delta hopefully woke us up in regards to was the fact that
28 if you put younger people in the path -- in the direct path of this virus that people will
29 get infected and people will get sick. And I think we've seen that certainly as we've
30 moved into Omicron as well, is that basically as you have a more infectious virus
31 (INDISCERNIBLE) --
32
33 MR. RATH: My Lady, this is Mr. Rath. I don't want to cut
34 the witness off, but it seems to be that we're straying into fourth and fifth wave evidence.
35 I'm not sure that this properly falls within the scope of redirect. Just (INDISCERNIBLE)
36 --
37
38 THE COURT: Yeah.
39
40 MR. RATH: -- redirect. Thank you.
41

1 THE COURT: Okay. Mr. Parker?
2
3 MR. PARKER: Thank you. I agree that Delta was in my
4 understanding in the fourth wave. The purpose was to address this evidence to get back to
5 a question I had about Alpha, and that's where I was going.
6
7 Q MR. PARKER: And so the question was this evidence you gave
8 yesterday and today on Delta and the younger age group, can you speak to that relative
9 to the Alpha variant, sir, particularly --
10 A You have to look back at -- at Alpha specifically to -- to look at those numbers and how
11 that changed. And one -- one of the issues that we have to appreciate with Alpha
12 certainly would be in regards to the onset of vaccinations. We know that the vaccination
13 program in Canada overlapped with -- with the Alpha wave here and that that
14 vaccination program would have been focused on highest risk groups and certainly the
15 -- those in high age categories during the -- the earliest onset.
16
17 Q Thank you, sir. The next question I had related to your evidence yesterday on -- you
18 were asked about masking and studies in your report dealing with masking. I've had a
19 quick glance at your -- your expert report that you indicate was in response to the expert
20 report of Dr. Jay Bhattacharya. I see that on page 10 and page 16 of that report you've
21 discussed some masking studies. And my question for you, sir, is how you selected
22 studies on masking that you put into your report? Can you --
23 A Yeah.
24
25 Q -- explain to the Court how you did that?
26 A Sure. So --
27
28 MR. RATH: Again, My -- My Lady, I'd like to object on the
29 basis that this isn't proper redirect. Those explanations could have been provided in the
30 report (INDISCERNIBLE) and my friend just seems to be attempting to use redirect to
31 buttress Dr. Kindrachuk's report as opposed to engaging in a proper form of redirect?
32
33 THE COURT: Mr. Parker?
34
35 MR. PARKER: Right. This came out directly of some
36 questioning yesterday by my friend Mr. Rath on masking and he took issue, as I understood
37 it, with the fact that he said there were studies in Dr. Kindrachuk's report on masking being
38 ineffective. So I disagree that this is improper redirect. This arises directly out of the
39 questioning on cross-examination and has not been covered before in the report of Dr.
40 Kindrachuk.
41

1 THE COURT: I agree, Mr. Parker, and I'll allow the question.
2
3 Q MR. PARKER: Do you remember the question, Dr. Kindrachuk?
4 A Yes. So the -- the mechanism of being able to look through masking was to be able to
5 try and find studies that -- that were considered high quality that had been -- been
6 published in journals that -- that are held in -- in high regard and that assessed different
7 parameters in regards to the -- the benefits of masking, whether that was
8 mechanistically just looking at -- at the movement of virus through masks or -- or also
9 incorporating the role of masking in -- in populations.
10
11 So what I tried to do was balance the information across studies that -- that have been
12 employed for -- for COVID, which to be fair at -- at this point in time when the report
13 was written were not that numerous but also balanced that with what was -- would have
14 been provided previously, in particular for influenza.
15
16 MR. PARKER: Thank you, Dr. Kindrachuk. My last question
17 relates to -- and I'll just -- I'll put the Court and my friends on notice here because we're
18 moving to the second Madewell study which Dr. Kindrachuk -- I heard him refer to in his
19 evidence and so at this point, Justice Romaine, as I've indicated previously, I would be
20 seeking leave of the Court to enter the second Madewell study into evidence through Dr.
21 Kindrachuk.
22
23 THE COURT: Okay.
24
25 MR. PARKER: And I'm ready to do so, but I seek your direction.
26
27 THE COURT: Okay. I'm assuming, of course, Mr. Grey and
28 Mr. Rath, that you would object to that; is that correct?
29
30 MR. RATH: I was -- I was going to suggest, My Lady, that
31 your ruling on this should wait until you've taken time this afternoon to review the
32 transcripts and provide your decision with regard to the matters that were argued this
33 morning as I would imagine that they'll be directly relevant to my friend's latest attempt
34 to sneak in a study that he's (INDISCERNIBLE) 9th of September.
35
36 THE COURT: Okay. Mr. Grey, are you there? I don't see you
37 on my screen.
38
39 MR. GREY: I -- I -- oh.
40
41 THE COURT: And what --

1
2 MR. GREY: I'm here.
3
4 THE COURT: Yeah. And what's your position?
5
6 MR. GREY: Well, I -- I agree with Mr. Rath to the extent that
7 I think we need your ruling before -- before the -- the -- I -- I'm certainly objecting to
8 putting in of -- of another expert's report as a full exhibit for the truth of its contents through
9 Dr. Kindrachuk. I don't know through what evidentiary mechanism that could occur, but
10 obviously we need to hear your ruling on the admissibility of the -- of that report, and that
11 may obviate this objection, but the objection to the admissibility of that report as a full
12 exhibit in this hearing is maintained. Thank you.
13
14 THE COURT: Okay. This is what I'm going to do. I was just
15 upstairs. I still didn't see the transcripts so I'm not sure when they will arrive. Hopefully
16 later today. I'm going to allow the question and the response and then depending on my
17 ruling, if necessary we will expunge the question and response from the record. Okay?
18
19 MR. PARKER: Thank you, Justice Romaine.
20
21 THE COURT: Okay. (INDISCERNIBLE).
22
23 Q MR. PARKER: So -- thank you. Dr. Kindrachuk, do you recall
24 referring to the second Madewell study this morning?
25 A Yes, I do.
26
27 Q I'm showing you a document, sir, that should appear on the screen in front of you. It's
28 entitled Factors Associated with Household Transmission of Sars-CoV-2, an Updated
29 Systemic Review and Meta-Analysis. Sir, have you seen this document before?
30 A Yes. I'm looking at it now.
31
32 Q Indeed you are. And you've seen it before we just showed it you?
33 A Yes.
34
35 Q And is this the document you were referring to as the second Madewell study?
36 A This is.
37
38 MR. PARKER: Okay. Those are at this point, I think, subject to
39 your ruling, my questions on this -- sorry, Justice Romaine. Thank you.
40
41 THE COURT: Okay. Those would be your only questions of

1 Dr. Kindrachuk on it? I mean, I anticipated --
2
3 MR. PARKER: Well, I would -- yeah.
4
5 THE COURT: I anticipated that you would --
6
7 MR. PARKER: Sorry.
8
9 THE COURT: -- finish all your questions and then we wouldn't
10 have to --
11
12 MR. PARKER: Okay.
13
14 THE COURT: -- call Dr. Kindrachuk back, but we may have to
15 expunge this part of his evidence. Okay.
16
17 MR. PARKER: No. I'm -- I'm able to proceed further then with
18 questioning at --
19
20 THE COURT: Okay.
21
22 MR. PARKER: -- this point if that's your preference. So I will
23 do that, sir. Sorry, Mr. Trofimuk, can we just put that up on the screen again?
24
25 Q MR. PARKER: So, Dr. Kindrachuk, when did you become aware
26 of what we'll call the second Madewell study?
27 A So I -- I knew from Dr. Dean that she had referenced that they were putting together a
28 subsequent study that was going to be in greater detail than what their first study had
29 been and that it would likely be able to address further concerns. So I -- so this was
30 published -- let me just pull it up -- so it was August 27th, 2021. Just trying to see if I
31 -- don't see the submission date, but it would been prior to August that I knew that they
32 were at least coming up with -- with a subsequent study, but I had no knowledge of
33 what the study was going to say.
34
35 Q Sir, I'm just showing you the bottom of the first page. You referred to August 27th,
36 2021, and the cursor is pointing at that wording, sir. And that's what you were referring
37 to, is the date of publication?
38 A That's exactly it.
39
40 Q And, sir, this was not in your earlier report. Can you explain why it was not in your
41 earlier -- sorry, why this was not in your report?

1 A This would have been published after my earlier report.
2
3 Q Sir, you've reviewed the second Madewell study?
4 A Yes.
5
6 Q And what are your conclusions from reviewing that study?
7 A Well, I -- I've highlighted in -- in my copy of it here the -- the conclusions, which are
8 what the conclusions -- were brought forth from the author from their systematic
9 review. So in symptomatic index cases, they were seeing secondary attack rates of
10 about 20 percent, 20.2 percent specifically, and that was higher than asymptomatic or
11 pre-symptomatic cases, which were 3 percent and 9.1 percent respectively. So --
12
13 MR. RATH: My Lady, if -- if I may, I'd like to reiterate our
14 objection to this, as well as an objection to this procedure. This is not redirect. This is my
15 friend examining Dr. Kindrachuk in chief with regard to Madewell 2. So my objection is
16 as stated, is that this is not redirect, whether it's going to be expunged or not. It's highly
17 prejudicial to the applicant.
18
19 We were not afforded the same procedure with regard to the Hopkins study and this just
20 smacks of -- of my learned friend Mr. Parker applying the rules for thee but not for me
21 principle which he's been applying throughout these proceedings. So I'll -- I'll leave it
22 your hands, My Lady, but I just wanted to state on the record how highly improper I feel
23 this procedure is on behalf of my client. Thank you.
24
25 THE COURT: Okay. Thank you. Mr. Parker, did you want to
26 respond to that? I know I did -- I encouraged you --
27
28 MR. RATH: I think (INDISCERNIBLE) --
29
30 THE COURT: -- to go ahead --
31
32 MR. RATH: Right.
33
34 THE COURT: -- so that we had all of --
35
36 MR. RATH: Yeah.
37
38 THE COURT: -- Dr. Kindrachuk's evidence there, depending
39 on whether or not -- depending on the decision I make. If I make a decision that the
40 Madewell report cannot go in as a full exhibit, then we will expunge portions of this, other
41 than to the extent that -- well, okay. We'll have to discuss what would be expunged. Mr.

1 Rath has objected to the whole of this procedure, which would in essence require us to call
2 Dr. Kindrachuk back depending on my decision. So do you have a response?
3
4 MR. RATH: And, Madam Justice, if I may, if I can clarify my
5 objection. That objection was with regard to the last question, which appeared to be more
6 of the order of direct examination of Dr. Kindrachuk with regard to the Madewell 2 as
7 opposed to redirect aimed at any -- you know, at anything else in these proceedings. And
8 that -- you know, that that's my concern, is what my friend is doing is now taking the --
9 you know, the -- the tiny opening that you've -- that you've left him with, has pushed the
10 door wide open and is now proceeding with direct examination of Dr. Kindrachuk with
11 regard to Madewell 2 and that was my concern and my objection.
12
13 THE COURT: Okay. Mr. -- so you don't object to the rest of it?
14 You object to the question of what he -- what Dr. Kindrachuk thought about -- after he
15 reviewed the Madewell report, his opinion?
16
17 MR. RATH: Well, I'm -- I'm objecting to the -- to the form of
18 my friend's questions that are not in the form of proper redirect. He's examining Dr.
19 Kindrachuk in chief with regard to Madewell 2, which I didn't understand was the purpose
20 of this now being entered. He put it to Dr. Kindrachuk in redirect and his questions should
21 be questions of redirect and he shouldn't be afforded the opportunity to examine Dr.
22 Kindrachuk in chief on the Madewell -- on Madewell 2 which he's appearing to do at this
23 point.
24
25 THE COURT: Okay. Mr. -- I do have to say that Dr.
26 Kindrachuk raised Madewell 2 during the course of his cross-examination, so this is not a
27 new subject but a subject that arose in cross-examination. Do you want to respond to that?
28
29 MR. RATH: And again, I reiterate that -- yes, but this is
30 something that my friend's been planning since the 9th of September, My Lady. So the
31 fact that Dr. Kindrachuk, you know, happened to throw the words Madewell 2 into his
32 evidence at several (INDISCERNIBLE) open this door for my friend to walk through it
33 was of little surprise to us.
34
35 THE COURT: Okay. Mr. Parker, do you want to respond to the
36 objection?
37
38 MR. PARKER: Sorry. I -- I thought we had covered this already.
39 I'm -- so I'm not entirely sure what the new objection is, my apologies, that I'm being
40 asked to respond to. I understood that it was -- this is not redirect. It's examination-in-
41 chief. I don't actually understand that objection. As you've indicated, this was -- Madewell

1 second study was raised by Dr. Kindrachuk in cross-examination and as a result, I'm asking
2 him questions about that in redirect in the form of redirect questions. We recognize that
3 there has been earlier argument about this and we await your ruling, but, sorry, I'm not
4 sure what else I can respond to. My apologies if there's something I missed there.
5
6 MR. RATH: Again, My Lady (INDISCERNIBLE) I've
7 missed as well, because Dr. Bhattacharya raised John Hopkins -- the John Hopkins study
8 several times in his examination-in-chief and that certainly didn't impact on the Court's
9 ruling in that regard. Again, this seems to be rules for thee and not for me. So, you know,
10 obviously we have --
11
12 MR. PARKER: And that was determined as not relevant, Mr. --
13 Mr. Rath. Sorry. I'm going to be quiet until you tell me to speak --
14
15 THE COURT: Yes.
16
17 MR. PARKER: -- Justice Romaine --
18
19 THE COURT: Yeah.
20
21 MR. PARKER: -- so I don't interrupt --
22
23 THE COURT: Okay.
24
25 MR. PARKER: -- anybody.
26
27 THE COURT: Okay.
28
29 MR. PARKER: Thank you.
30
31 THE COURT: Thank you.
32
33 MR. RATH: (INDISCERNIBLE) My Lady.
34
35 THE COURT: Okay. Thank you.
36
37 MR. RATH: You have my objection for the record.
38
39 THE COURT: I do. I'm going to allow the continuation of the
40 questions. I don't believe it's improper redirect, given that Dr. Kindrachuk raised the issue
41 of Madewell 2 during his cross-examination. That's of course all subject to the decision

1 that I will make on whether or not this can be entered as an exhibit. Okay. Go ahead, Mr.
2 Parker.
3
4 MR. PARKER: Thank you, Justice Romaine.
5
6 Q MR. PARKER: Dr. Kindrachuk, I doubt you remember my
7 question?
8 A I -- I -- so let me think back to it. I believe you were asking me what -- what I took
9 away from this study?
10
11 Q That's a -- that's a fair -- that's a fair assessment of what --
12 A So --
13
14 Q -- I asked, sir.
15 A Right. So -- so my -- my direct answer is -- is directly from the -- the results verbatim
16 from -- from authors, which is in symptomatic index cases, based on 20.2 percent as
17 their secondary attack rate, in asymptomatic cases, there was 3.0 percent and pre-
18 symptomatic, it was 8.1 percent. And this -- the authors also say directly that this --
19 this combined 37 new studies and that also -- also encompassed a -- a greater period of
20 time, which was October 20th, 2020, to June 17th, 2021.
21
22 So that would have also included certainly the -- the Alpha variant as well as potentially
23 Delta depending on -- on what regions the studies were conducted in. So all this is to
24 say is that the analysis of secondary attack rates and certainly the role of pre-
25 symptomatic and asymptomatic transmission has been subject to change based on the -
26 - the depth of the studies that have been performed as well as the particular form of the
27 virus that was circulating at that time period.
28
29 Q Thank you, Dr. Kindrachuk. The -- do you see the -- the results or the findings of the
30 Madewell study on SAR secondary attack rates for symptomatic, pre-symptomatic and
31 asymptomatic on the page that I've presently got up in front of you, sir?
32 A Yes. I'm just going to pull open the -- the screen a little bit more. It's pretty small on
33 my side, but I -- I've got the paper up here, so I can -- I can pull it up. Yes.
34
35 Q Sure. Why -- why don't you just explain to the Court where in the Madewell second
36 study the issue of symptomatic, asymptomatic -- sorry, asymptomatic, pre-symptomatic
37 transmission is discussed and the results are shown, if you could just do that, please?
38 A Yeah. So in -- in the table, it is about two-thirds of the way down. It's underneath the
39 index case sex of female and male and it's called index case symptom status, and there's
40 symptomatic, asymptomatic, pre-symptomatic and asymptomatic and/or pre-
41 symptomatic. And beside it, it also indicates the number of studies as well as the

1 references for where -- where those values were ultimately taken from.
2
3 Q Thank you. Do you know what the asymptomatic and/or pre-symptomatic, which says
4 3.9 percent -- do you know what that means in the context of this study, sir?
5 A So -- so my understanding of it would be in cases where they cannot differentiate
6 between asymptomatic and -- and pre-symptomatic in -- in those cases, but that's --
7 that's my assumption. I would have to go back through the paper to -- to clarify that.
8
9 Q Thank you, Dr. Kindrachuk. Those are my questions on this study and those are my
10 questions in redirect. Thank you for your time.
11 A Thank you.
12
13 THE COURT: Okay. Thank you. Mr. Grey, I'm going to offer
14 you the opportunity to -- a limited opportunity of cross-examination on this because you
15 didn't have the opportunity before. So if you have any questions? Again, this is all
16 dependent on the decision that I make on the issue that we discussed this morning.
17
18 MR. GREY: I do not have any further questions for this
19 witness. Thank you, Madam Justice.
20
21 THE COURT: Okay. Mr. Rath, how about you?
22
23 MR. RATH: I have no -- I have no questions for this witness -
24 -
25
26 THE COURT: Okay.
27
28 MR. RATH: -- (INDISCERNIBLE).
29
30 THE COURT: Okay. Thank you. So thank you, Dr.
31 Kindrachuk, for your testimony in this matter and we can let you go now. Thank you.
32
33 A Thank you, My Lady.
34
35 (WITNESS STANDS DOWN)
36
37 THE COURT: Okay.
38
39 MR. PARKER: (INDISCERNIBLE) doctor.
40
41 THE COURT: So I gather we don't have any other witnesses

1 today; is that --
2
3 MR. PARKER: That's correct.
4
5 THE COURT: -- correct?
6
7 MR. PARKER: We have two scheduled for tomorrow, Dr.
8 Simmons (phonetic) in the morning and Deborah Gordon in the afternoon. There is just
9 the outstanding matter of all the exhibits that we do agree on. It's -- it's good to know --
10
11 THE COURT: Oh.
12
13 MR. PARKER: -- that there are many things that counsel agrees
14 on and, you know, I should have listened to Mr. Grey yesterday when he said, Nothing
15 goes quite as fast on this file as we think it will. And so we spent a lot of time discussing
16 an exhibit that we didn't agree on. My suggestion is that since we do agree on I think every
17 other exhibit except Madewell second and Rasmussen that we -- we put together perhaps
18 a letter, we send it to my friend and then we send it to you.
19
20 And what I'm thinking is, as I say, I put -- recognizing that I'm responsible in part for
21 getting us in this situation with the -- not marking regularly exhibits, we've gone back
22 through and made sure that we have got the transcript page numbers where the various
23 exhibits that were -- sorry, for where the various documents that were put to Dr.
24 Bhattacharya were discussed. And so my proposal is we would identify the document,
25 identify if there's any disagreement on it going in as an exhibit or identification and then
26 provide in this correspondence my friends would see and approve the transcript, pinpoint
27 where it's discussed.
28
29 MR. RATH: And, Madam -- that's fine with us, Madam
30 Justice. Mr. Grey?
31
32 MR. GREY: That -- that sounds fine to me. Thank you.
33
34 THE COURT: Okay.
35
36 MR. RATH: And, Madam Justice, I have -- I have one quick
37 housekeeping matter in that regard. We put two graphs to Dr. Kindrachuk yesterday that
38 I'd simply like not to mark as full exhibits but because they were referred to in the
39 transcript, we'd like to (INDISCERNIBLE) identification as -- yeah, to mark them for
40 identification as Exhibit 1 for the applicants --
41

1 THE COURT: Okay. Mr. Parker?
2
3 MR. RATH: -- for identification.
4
5 THE COURT: Mr. Parker?
6
7 MR. PARKER: Yeah. We just need to -- I have no -- no objection
8 to them being marked as exhibits for identification. Could we receive a copy of them,
9 though, is our --
10
11 THE COURT: Yes.
12
13 MR. PARKER: -- request. We haven't seen those yet.
14
15 MR. RATH: Certainly, Mr. Parker. We'd be pleased to do
16 that. Madam Justice, we'd be pleased to. Thank you.
17
18 THE COURT: Okay.
19
20 MR. PARKER: Thank you.
21
22 THE COURT CLERK: Sorry. For the convenience of the Court, because
23 it's going to be sequential of 1, 2, 3, marked for identification as A, B, C, can I ask that
24 counsel put them all together as to who's putting in the exhibit and what letter and/or
25 number we are going to give it? We already have Exhibit number 1, so the next exhibit's
26 going to be number 2, and we have not yet marked anything for identification, which will
27 start as the letter 'A.'
28
29 THE COURT: Okay.
30
31 MR. PARKER: Got it.
32
33 THE COURT: You've got it? Okay.
34
35 MR. PARKER: Thank you. Thank you. That's all.
36
37 THE COURT: Okay. Thank you. Okay.
38
39 MR. PARKER: Thank you, madam clerk.
40
41 THE COURT: Tomorrow morning, what time would be a good

1 start? I see that we have -- I don't have it -- that we have Dr. Simmons?
2
3 MR. PARKER: We believe -- yeah. Dr. Simmons.
4
5 THE COURT: Simmons.
6
7 MR. PARKER: We believe -- Mr. Trofimuk is telling me 9:30
8 should be a safe start time.
9
10 THE COURT: Okay. Okay. 9:30 it is and I'll see you in the
11 morning, and hopefully be able to give you my decision on the issue that we discussed
12 today. Okay. Thank you.
13
14 MR. PARKER: Thank you.
15
16 MR. RATH: Thank you.
17
18
19
20 PROCEEDINGS ADJOURNED UNTIL 9:30 AM, FEBRUARY 24, 2022
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Certificate of Record

I, Michelle Palmer, certify that this recording is the record made of the evidence in the proceedings in the Court of Queen's Bench, held in courtroom 1702, at Calgary, Alberta, on the 23rd day of February, 2022, and that I was the court official in charge of the sound-recording machine during the proceedings.

Certificate of Transcript

I, Michelle Hiebert, certify that

(a) I transcribed the record, which was recorded by a sound-recording machine, to the best of my skill and ability and the foregoing pages are a complete and accurate transcript of the contents of the record, and

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