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## Memorandum

To: Trialists

Fr: Curtis Meinert

Re: More on counting

I have written previously on counting; most recently in mid 2019 (Counting 101; 25 June 2019 and Counting 102; 10 July 2019).

I have oft said counting is the hardest thing you do in trials. It is hard enough to count people enrolled. It is harder when you need numerator and denominator data, for example as when comparing treatments for differences in event rates over time. Now you have not only the difficulties of defining when a person is counted as enrolled, but also the difficulty of deciding who is counted in the numerator when calculating event rates by treatment group.

But, if you think that is hard, put yourself in the shoes of WHO and CDC people responsible for counting coronavirus cases and calculating the case fatality rate from the infection.

The case fatality rate for COVID-19 has been variously reported and most recently as 3.4 per 100 cases by the WHO.

Here is what President Trump had to say about the case fatality rate in an interview with Sean Hannity on Fox News, 4 (Wed) March 2020:

*Well I think the 3.4% is really a false number. Now, this is just my hunch, and, but based on a lot of conversations with a lot of people that do this — because a lot of people will have this and it's very mild. They'll get better very rapidly, they don't even see a doctor, they don't eve[n] call a doctor. You never hear about those people. So you can't put them down in the category, the overall population in terms of this corona flu, or virus, so you just can't do that. So if, you know, we have thousands or hundreds of thousands of people that get better, just by you know, sitting around and even going to work, some of them go to work, but they get better, and then when you do have a death like you've had in the state of Washington, like you had one in California, I believe you had one in New York, you know all of the sudden it seems like 3 or 4 %, which is a very high number, as opposed to a fraction of 1%. But again, they don't, they don't know about the easy cases because the easy cases don't go to hospital, they don't report to doctors or the hospital, in many cases, so I think that that number is very high. Personally, I would say the number is way under 1%.*

After reading President Trump's essay on counting, I am certain I do not want him counting in trials I do.