Questions submitted by participants during webinar
The answers provided are relative to a specific point in time and are subject to change as the management and care for COVID-19 patients continues to evolve

1. I would be interested to hear commentary on the cluster of hyperinflammatory shock cases in children published in the Lancet recently, especially since they were not uniformly positive for serum markers of COVID-19. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31094-1/fulltext

   **Answer:** this is an evolving science but an area of great concern

2. What advice do you have for members of the medical staff who are over 65 or have serious pre-existing conditions, who may not be working in high risk areas, but nevertheless are going to be in closed rooms for more than 10 minutes with patients?

   **Answer:** Imperative given the age – associated risk, further enhanced by pre-existing conditions, to respect all appropriate public health measures: masks, hand hygiene, assiduous sanitation of common surfaces. Patients will need to mask and be screened for symptoms and fever before engaging. Expect easy availability of testing for all providers that will add another layer of protection.

3. Is there any benefit to using HEPA or other air filters in waiting rooms or exam rooms in medical offices?

   **Answer:** Per Dr. Ison, the virus is not airborne; the greater risk is human to human transmission

4. Should we stop talking about race as a risk factor but rather exposure to racism as the risk factor?

   **Answer:** Correct; race is a crude aggregator of shared social experiences and thus provides a convenience sample and little more. Because of extensive genetic admixture, there is nothing about race per se that represents a different biology

5. How does the proportion of female, black and Hispanic COVID patients at NM compare to the proportions of those groups in NM patients overall?

   **Answer:** Important question; we will need to curate that answer from hospital personnel
6. Please review the reliability of the various sources (NP, nasal, OP, oral) for testing and provide recommendations for the outpatient setting.
   **Answer:** As discussed this morning; both the location and quality of the sample for testing matter. Remember, the swab should be at least “slight uncomfortable”. The use of saliva and perhaps in the near future dried blood may substantially change our response to this question.

7. For Dr. Ison--Do you think Northwestern will have a saliva test for Covid 19 available in the near future? And do you think there is a reliable, useful antibody test on the market now?
   **Answer:** There is work ongoing for saliva tests but it is not currently available yet. I would recommend review of the Medicine Grand Rounds from May 5, 2020 where a detailed discussion about the different antibody testing platforms was discussed.

8. Does the biobank involve pregnant women/placentas? If not, why not?
   **Answer:** The BioBank is open to all patients with confirmed COVID-19 who give informed consent. There is no exclusion for pregnancy.

9. Which antibody test manufacturer are we using? How well has the test been characterized - Sens/Spec?
   **Answer:** I would recommend review of the Medicine Grand Rounds from May 5, 2020 where a detailed discussion about the different antibody testing platforms was discussed.

10. Any evidence that the different virus strains (NY, Washington, Chicago) more or less dangerous/virulent?
    **Answer:** This is currently under study and is a very important question

11. What about Treatment early after detection or respiratory symptoms not bad enough for hospitalization?
    **Answer:** Clinical trials are being initiated to test this question; candidate therapies under consideration include ARBs and HCQ.

12. Not directly related to Dr. Ison’s talk today but curious what current protocols are for organ donation re COVID?
    **Answer:** Response given this AM.

13. Do we have any insight into outpatient therapies for Covid other that supportive care? I have been seeing some buzz on Ivermectin at low doses.
    **Answer:** There is limited research in the outpatient arena in part due to challenges that are now being addressed, to have patients safely participate in the studies. Any therapy given should
ideally be given in the setting of a study. There is weak data to support use of ivermectin and I would not recommend use outside a clinical study.

14. I would like to hear about Native Americans also.

*Answer:* Disparate outcomes are exaggerated in Native American populations as there are few resources to accommodate work from home, social distancing and even hand hygiene. Infection rates on some Navajo Reservations are > 80%.

15. Obviously, health care access drives a MAJORITY of the disparities between outcomes of Caucasians and AA/Hispanics with respect to COVID19. But, could there also be an underlying genetic component (Genome-wide association GWAS study?)

*Answer:* Important to emphasize that disparities are defined as such after accommodating access to care. It is correct that ancestry, specifically the relative proportion of European vs. African Ancestry may identify the expression of various disease associated genotypes but the contribution to clinical disease attributable to genetic variation is modest when juxtaposed to the Social Determinants of Health (SDOH). It is in fact the SDOH – income, food security, SES, education, built environment- that drive the majority of the noted disparities.

16. Where are the HIV patients? Have the antivirals prevented COVID-19 disease or severe disease in this population?

*Answer:* Addressed this AM

17. Dr. Ison: are you planning on incorporating host genetics into your biobanks/studies?

*Answer:* This is definitely an important question that we plan to incorporate in the convalescent study.

18. Will healthcare workers be offered serology testing? If so, when with this start?

*Answer:* Yes. TBD.

19. On the graph showing IgM, IgG and PCR, it seems that IgG is flat (and positive) throughout. What are your thoughts on that?

*Answer:* I would recommend review of the Medicine Grand Rounds from May 5, 2020 where a detailed discussion about the different antibody testing. The findings are what you would expect with most infections – once you have infection you peak IgG production. There is still limited long term follow-up so we do not know if antibody persists beyond 2-3 months.

20. Are antibodies protective against re-infection in the short-term?

*Answer:* This is the key unanswered questions; are the detectable antibodies in fact neutralizing
21. Is NU collaborating internationally using our patients’ data?

*Answer:* *We are not currently.*

22. Clyde, what can we as a health care community, physicians, etc. do to help those groups that are being affected disproportionately by COVID?

*Answer:* *Excellent question; through NMH we have an outstanding Community Engagement initiative and through IPHAM we have an outstanding research platform. Our ability to engage at the community level with culturally appropriate messaging and then to investigate novel aspects of implementation science would be our best system level approaches.*

23. What is your recommendation for how we should approach genetics studies for COVID-19, reconciling social construct of self-reported race vs ancestry? For example, African ancestry associates with APOL1-mediated kidney disease and potential CVD - is there an approach to tease apart biological and genetic factors from socioeconomic ones that are linked to self-reported race?

*Answer:* *This is the critical question- “nature vs. nurture”? The APOL1 story is the model case study of an inherited predisposition to clinical disease that disproportionately impacts those of African Ancestry. Few other genetically mediated conditions have such a profound clinical impact. Yet the genetic nuances may indeed influence the severity of diseases and vulnerability to pre-clinical disease including inflammation, GFR, LVH, etc.*