ONLINE SUPPLEMENT

Updated Guidance on the Management of COVID-19

From an American Thoracic Society/European Respiratory Society-coordinated International Taskforce

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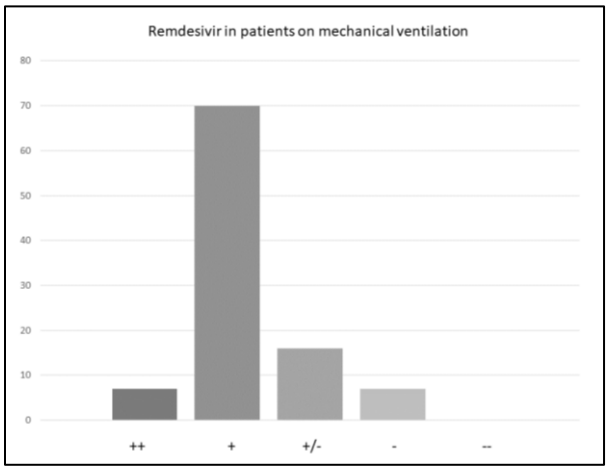
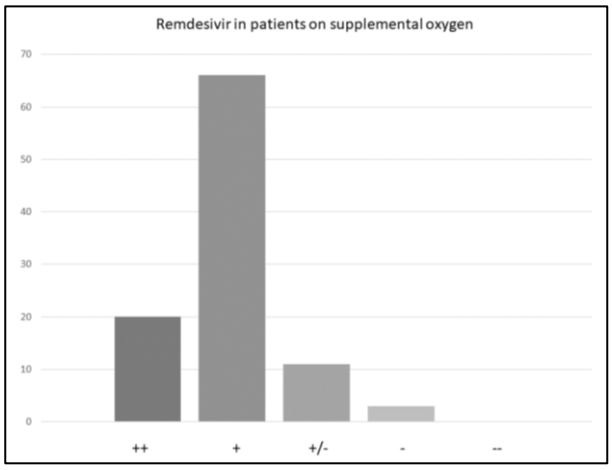
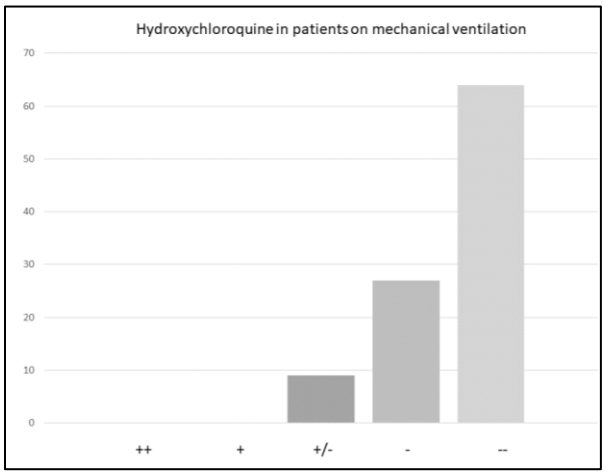
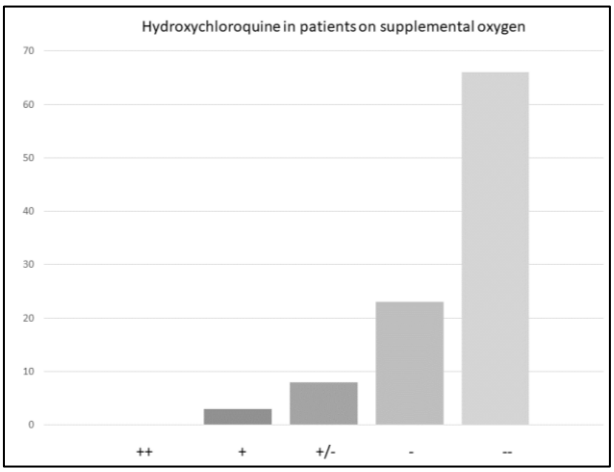
FIGURE S1: Distribution of responses for consensus suggestions

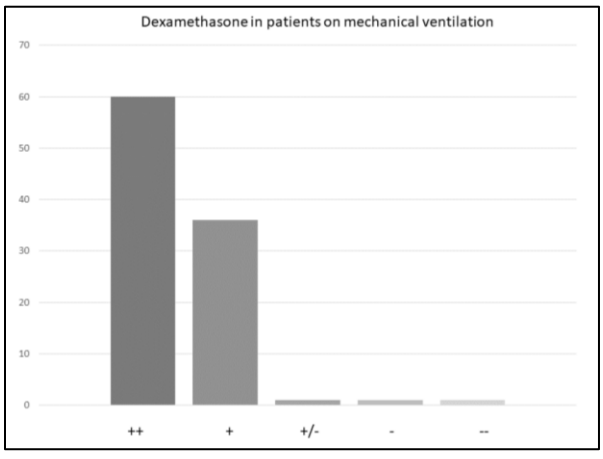
Key: + + = strong suggestion for the intervention; + = weak suggestion for the intervention; +/- = no suggestion for or against the intervention; - = weak suggestion against the intervention; -- = strong suggestion against the intervention.

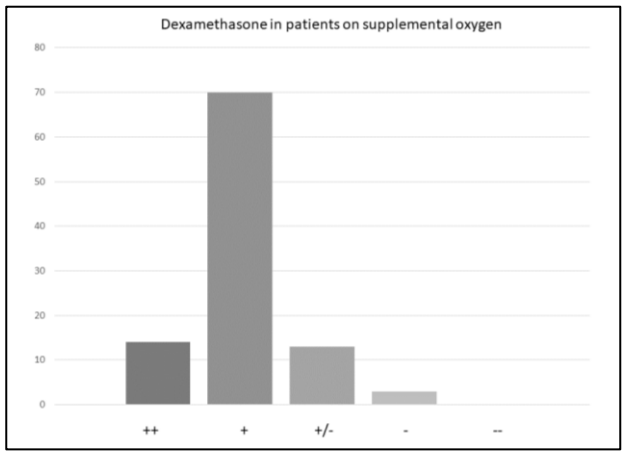


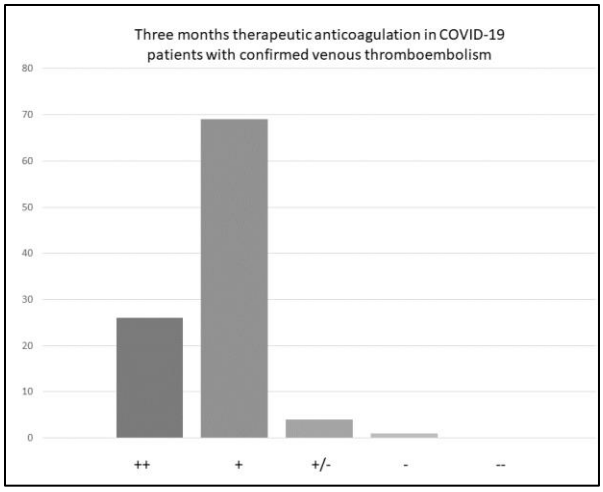











Three months therapeutic anticoagulation in COVID-19 patients with confirmed venous thromboembolism
80
70
60
50
40
30
20
10
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+
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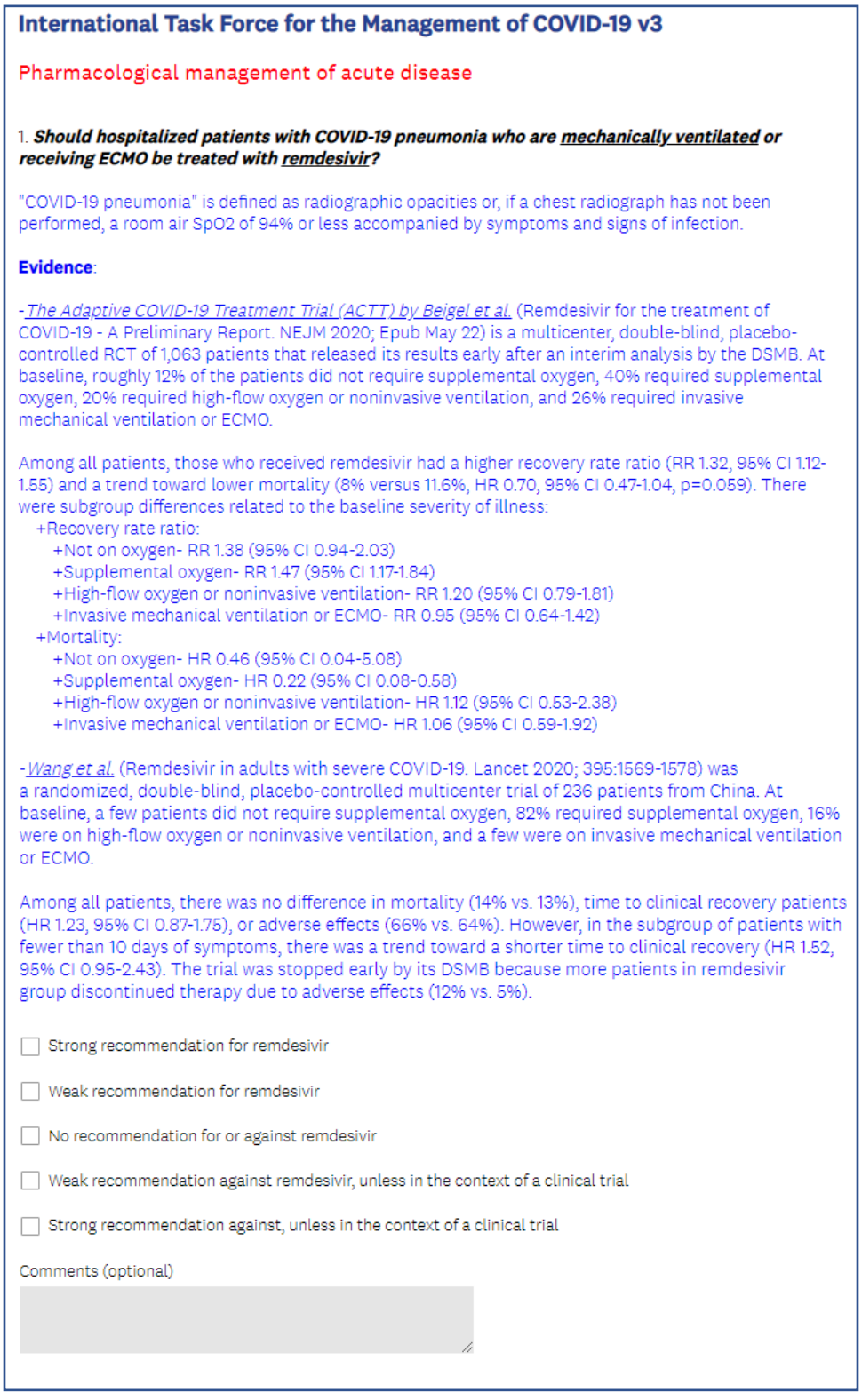
FIGURE S2: Three sample survey questions from the CORE process



International Task Force for the Management of COVID-19 v3

Pharmacological management of acute disease

1. ***Should hospitalized patients with COVID-19 pneumonia who are mechanically ventilated or receiving ECMO be treated with remdesivir?***

"COVID-19 pneumonia" is defined as radiographic opacities or, if a chest radiograph has not been performed, a room air SpO2 of 94% or less accompanied by symptoms and signs of infection.

Evidence:

- *The Adaptive COVID-19 Treatment Trial (ACTT) by Beigel et al.* (Remdesivir for the treatment of COVID-19 - A Preliminary Report. NEJM 2020; Epub May 22) is a multicenter, double-blind, placebo-controlled RCT of 1,063 patients that released its results early after an interim analysis by the DSMB. At baseline, roughly 12% of the patients did not require supplemental oxygen, 40% required supplemental oxygen, 20% required high-flow oxygen or noninvasive ventilation, and 26% required invasive mechanical ventilation or ECMO.

Among all patients, those who received remdesivir had a higher recovery rate ratio (RR 1.32, 95% CI 1.12-1.55) and a trend toward lower mortality (8% versus 11.6%, HR 0.70, 95% CI 0.47-1.04, p=0.059). There were subgroup differences related to the baseline severity of illness:

+Recovery rate ratio:
- +Not on oxygen- RR 1.38 (95% CI 0.94-2.03)
- +Supplemental oxygen- RR 1.47 (95% CI 1.17-1.84)
- +High-flow oxygen or noninvasive ventilation- RR 1.20 (95% CI 0.79-1.81)
- +Invasive mechanical ventilation or ECMO- RR 0.95 (95% CI 0.64-1.42)

+Mortality:
- +Not on oxygen- HR 0.46 (95% CI 0.04-5.08)
- +Supplemental oxygen- HR 0.22 (95% CI 0.08-0.58)
- +High-flow oxygen or noninvasive ventilation- HR 1.12 (95% CI 0.53-2.38)
- +Invasive mechanical ventilation or ECMO- HR 1.06 (95% CI 0.59-1.92)

- *Wang et al.* (Remdesivir in adults with severe COVID-19. Lancet 2020; 395:1569-1578) was a randomized, double-blind, placebo-controlled multicenter trial of 236 patients from China. At baseline, a few patients did not require supplemental oxygen, 82% required supplemental oxygen, 16% were on high-flow oxygen or noninvasive ventilation, and a few were on invasive mechanical ventilation or ECMO.

Among all patients, there was no difference in mortality (14% vs. 13%), time to clinical recovery patients (HR 1.23, 95% CI 0.87-1.75), or adverse effects (66% vs. 64%). However, in the subgroup of patients with fewer than 10 days of symptoms, there was a trend toward a shorter time to clinical recovery (HR 1.52, 95% CI 0.95-2.43). The trial was stopped early by its DSMB because more patients in remdesivir group discontinued therapy due to adverse effects (12% vs. 5%).

- ☐ Strong recommendation for remdesivir
- ☐ Weak recommendation for remdesivir
- ☐ No recommendation for or against remdesivir
- ☐ Weak recommendation against remdesivir, unless in the context of a clinical trial
- ☐ Strong recommendation against, unless in the context of a clinical trial

Comments (optional)

International Task Force for the Management of COVID-19 v3

Follow-up of COVID-19 survivors: Pulmonary and cardiac testing

7. ***Should adults who were hospitalized with COVID-19 pneumonia undergo routine post-hospital pulmonary function testing within 30 to 60 days to establish a new baseline?***

"Routine" testing refers to the testing of individuals whether or not they have new or residual respiratory symptoms.

"Pulmonary function testing" refers to one or more of the following: measurement of spirometry pre- and post-bronchodilator administration, lung volumes (plethysmography or helium dilution), or diffusion capacity. It does NOT include the six-minute walk test or supplemental oxygen titration.

- [ ] Strong recommendation for routine post-hospital pulmonary function testing within 30-60 days
- [ ] Weak recommendation for routine post-hospital pulmonary function testing within 30-60 days
- [ ] No recommendation for either approach
- [ ] Weak recommendation for no routine pulmonary function testing
- [ ] Strong recommendation for no routine pulmonary function testing

Comments (optional)

8. ***Should adults who were hospitalized with COVID-19 pneumonia undergo routine post-hospital computed tomography (CT) of the chest within 30 to 60 days to establish a new baseline?***

"Routine" testing refers to the testing of individuals whether or not they have new or residual respiratory symptoms.

- [ ] Strong recommendation for routine post-hospital CT of the chest within 30-60 days
- [ ] Weak recommendation for routine post-hospital CT of the chest within 30-60 days
- [ ] No recommendation for either approach
- [ ] Weak recommendation for no routine CT of the chest
- [ ] Strong recommendation for no routine CT of the chest

Comments (optional)

79 **TABLE S1:** Comments from two rounds of the CORE process

Question 1
Round 1
No evidence of benefit in this cohort but risk vs benefit likely to favour the latter until we have big RCTs
Delayed use of Remdesivir in ventilated patients may be associated with less efficacy. Airway viral load high may be indication for use of anti-viral medications.
Evidence for benefit is better for patients on supplemental O2 but not those on invasive ventilation or ECMO so in context of limited remdesivir availability this should be considered in determining which patients to treat; As per IDSA guidelines
no differences in the remdesivir group. it could be weak against but probably more evidence is needed
Glorified tamiflu without the benefit of being oral.
I do think timing is important. What might be a strong suggestion for a patient in the first 5 days, becomes a weaker suggestion as time goes on.
Depends on availability of drug locally too.
Should be given if there is still high viral load detectable
however, it seems to be effective early in the course of the disease only. In patients on ICU the effect is very small
The patients on mechanical ventilation and ECMO had the weakest signal, the studies have not really answered the question whether we need to consider Remdesivir in these patients
There is only one study supporting the use of Remdesivir
The study showed benefit in those patients receiving supplemental oxygen, but not in those on mechanical ventilation or ECMO. The median of days from symptoms to randomization was 9 days for the overall population. The different response based on severity could be related to a different stage in the disease where response to antiviral therapy may differ. (Pericas JM. Eur Heart J. 2020 Jun 7; 41(22): 2092–2112))
Need to await the results of the definitive clinical trials that are in progress. Current wide scale use of Remedsivir simply not properly evidence supported.
Round 2
If the drug is plentiful and is earlier might be considered.
Little downside at this point.
Also depends on the timing of symptom onset. We only offer remdesivir to patients with 10 days or less of symptoms, which is considered to be within the most active viral stage of disease.
Should be administered early if used.
There is no benefit in mortality or recovery rate associated with Remdesivir
Question 2
Round 1
Data so far published is poor and proper RCTs are needed
Yes if HFNOT or CPAP required
The primary difference is resolution of symptoms

Would be a strong suggestion if there was an unlimited supply of remdesivir. Also, many patients with COVID who only need NC O2 are sent home if stable, so they would getting IV meds would be difficult.
Need to await the results of the definitive clinical trials that are in progress. Current wide scale use of Remedsivir simply not properly evidencce supported.
Report NNT to save one live
Round 2
Not much else to offer them, other than dexamethasone.
Also depends on timing of symptom onset.
Benefit with remdesivir for both recovery rate and mortality
Question 3
Round 1
Benefits don't outweigh the risks at this point.
The PETAL network trial for Hydroxychloroquine was stopped early for futility.. So it should not be used
The main adverse effect, i.e. cardiac arrest due to arrhythmia, is decreased in the ICU due to monitoring.
Press release by the chief investigator of the RECOVERY Trial in United Kingdom reported no evidence of benefit of hydroxychloroquine in hospitalized patients with COVID-19
Round 2
Lack of definitive evidence of benefit
Question 4
Round 1
I there is no continuous cardiac monitoring, the harm outweighs the potential benefit.
Round 2
Lack of definitive evidence of benefit
Question 5
Round 1
the suggestion is for the specific dose of 6 mg PO qd x 10 days, no higher or longer
28-day mortality is an insufficiently short period of time to assess for the likely increased adverse effects from steroids. The placebo arm mortality is also much higher than being reported in high quality centers who have not used steroids.
benefits outweigh risks
I recommend changing "systemic corticosteroids" to specifically dexamethasone.
as long as we have not seen the full paper of the recovery trial, I cannot / will not take these data into consideration. Especially because mortality in control group is almost double the mortality in our ventilated covid patients. Therefore, I base my suggestion on data fully available to professionals.
We need to see these peer-reviewed data before formally changing guidelines.
with the caveat that we need to see these data published before formally incorporating steroids into treatment guidelines.

The results are very intriguing, at this time we don't have the peer reviewed article out- if we have all the details then it might be a stronger suggestion
Paper has not yet gone through peer review. Side effects and subgroup analyses not available. For example, subgroups in late corticosteroids ARDSnet trial, more neuromuscular weakness was seen in treated group.
Report NNT to save one life. Need to know the effect, when combined with remdesivir
This has not yet been peer reviewed and making a suggestion on data that has not been peer reviewed is not wise
1 trial, not yet published in peer-reviewed literature
I would change the stem to specify the low dose of 6 mg dexamethasone daily for up to 10 days and only after day 7 of illness. These are likely of interest.
Given the lack of peer-reviewed publication, I am wavering between no suggestion and weak suggestion for. If the peer-reviewed paper comes out before we submit this we should find out if people would change the strength of their suggestion for steroids before submitting.
Round 2
28/day outcome too short to be clear on risk benefit
There seems to be little downside.
Also, "Dexamethasone in Hospitalized Patients with Covid-19 — Preliminary Report," The RECOVERY Collaborative Group, just published in NEJM July 17, 2020.
Need to see three pulses or other dosages
Strong evidence support its use
specifically at the dose used in RECOVERY
Question 6
Round 1
for the dose of systemic steroids used in the trial
Treat only if elevated markers for "cytokine storm"
benefits outweigh risks
I recommend changing "systemic corticosteroids" to specifically dexamethasone.
Report NNT to save one life Need to explore HFNO vs standard oxygen therapy
Recommend to monitor/control blood glucose during dexamethasone therapy.
This has not been peer reviewed yet.
1 trial, not yet published in peer-reviewed literature
I would change the stem to specify the low dose of 6 mg dexamethasone daily for up to 10 days and only after day 7 of illness. These are likely of interest.
Round 2
Need to have long term follow up. Need to compare with tocilizumab
Supported by the RECOVERY trial
Question 7
Round 1
too early to do. would wait at least 6 months if not longer.
Insufficient data and should anyway be based on symptoms.

useful to establish a new base line ; will reassure patients ; would include six minute walk test as most patients have fatigue and are short of breath ; normal oxygenation will be reassuring
Althoug PFT can be used to evaluate the severity of pulmonary damage and dynamic change during recovery, but no evidence to suggest lung function could guide better care of patients during recovery.
Would recommend PFTs in COVID-19 patients who had ARDS
the time period required to perform the PFT depends on the severity of the disease. The most severe, the soonest. Mild patients could perform PFT in a perior longer than 60 days
it can be more than 30-60 days depending on the severity of the disease and the post covid symptoms
Only if persistent symptoms are present
although no scientific evidence it impacts treatment / outcome, follow up of a novel disease might identify patients with unexpected complications and is important from academic perspective / for future patients.
unless it is part of a clinical research study, resource allocation in already over-burdened systems and screening for safety of patients and staff must be considered here
Spiromety is not good enough, most of my patients have deterioration of diffusion capacity only
I don't think all hospitalized patients need to be screened for residual symptoms. there is no data to suggest that these patients are any different than other viral pneumonia patients
Is a new disease and its resolution is not known.
Need better evidence before making this decision
I think that we should stratify according to the severity of COVID19, the presence of symptoms and the availability of resources. I would not make a general suggestion for all the patients. For instance, maybe we could say that we suggest performing PFT to those patients who needed to be mechanically ventilated or needed noninvasive respiratory support therapies (HFNC or NIV) due to COVID19 pneumonia. The same idea could be applied to CT scan, TTE or exercise test.
Better identify a subgroup more likely to have residual dysfunction
Limited value except for symptomatic patients e.g. exertional dyspnoea and/or oxygen desaturation, or those who were critically ill e.g. COVID-19 ARDS. From our limited experience, majority of mild cases would have normal lung function at 3 month. However, interpretation can be challenging without baseline (pre-COVID) lung function data.
no evidence that COVID-19 causes more fibrosis following full recovery than other pneumonia
We know that ARDS survivors can improve spirometry for up to 1 year. There is no management change associated with any level of spirometry abnormality that has been defined.
There are a number of issues to consider here. 1) obtaining PFTs in the midst of the pandemic is very hard, as most are just canceled and only urgent ones being done. This wouldn't classify as urgent to me, and that is because 2) the results would be of academic/research interest but 3) wouldn't really change patient management; PFTs are not a patient-centered outcome that either patients or panelists ended up ranking as one of the highly important long-term ICU outcome variables.
Round 2
need pre procedure covid 19 testing and use PPE by Health care workers if till positive
No evidence helps improve putcomes

May be too early since we know even pneumonia patients without ARDS do not return to normal function for several months. This could lead to significant additional resource use without clear benefit
Useful to have early measurement but timeline may be too early to interpret and provide meaningful prognostic information. There are potential risks in a 30 day period of transmission. I would wait for 12 weeks
PFTs should be indicated only in patients who remain symptomatic
Resource dependent
Question 8
Round 1
radiation exposure risk is not merited, no clear benefit for routine imaging
Should only be based on clinical symptoms.
useful baseline imaging- technique would use HRCT , non contrast , inhalation and exhalation protocol as published in 2018 IPF diagnosis guideline
it can be more than 30-60 days depending on the severity of the disease and the post covid symptoms
There is limited evidence to suggest that even significant fibrotic ARDS can improve over time, and this needlessly exposes patients to radiation.
see above
I would wait at least 3months after infection.
should be done as part of clinical research
I would favour a later use of HRCT unless there is a clinical indication other than follow up. This decision should be made in context of symptoms and PFTs
Risk benefit ration is negative
Most patients who did not require high oxygen requirements recover fully with no residual scarring on radiographs. So, I do not think we should routinely scan everyone post discharge.
Patients with persistent pneumonia on imaging many need further workup (i.e. for organizing pneumonia) to determine whether therapeutic interventions may be justified.
Need better evidence before making this decision
Probably restringed to those with altered PFT
Likely low yield in mild cases.
30-60 days likely too early for clinically relevant evaluation. May lead to overuse of diagnostics or consideration of treatment
We know that pulmonary infiltrates can persist in ARDS survivors for up to 1 year. There is no change in management associated with persistence of infiltrates and potential harm (financial and medical if incidental findings are encountered.)
If in the context of a research study with standardization of acquisition, data collection, etc. but what would we do with the results? I think patients should have medical follow-up to assess symptoms, check oxygenation, and 6 minute walk test as more useful, patient-centered outcome measures.
Round 2
strong suggestion against IF this was already obtained while in hospital within the preceding 30-60 days
No value in changing outcomes

There is a risk associated with radiation exposure that I don't think is justified.
I feel this is too early even as a baseline and will lead to unnecessary radiation and imaging. I would prefer 12 weeks
Resource dependent
routine exposure to radiation incurred from CT is not merited
Question 9
Round 1
No evidence this will alter therapy or outcome.
useful to know it is normal and if not will need appropriate management with cardiology team
Might want to reference this study: Global evaluation of echocardiography in patients with COVID-19 European Heart Journal - Cardiovascular Imaging, jeaa178, https://doi.org/10.1093/ehjci/jeaa178
not recommended for every patient, to decide based on complications during admission or severity of the disease
No evidence either way to guide care. If persistent cardiac dysfunction is suspected, TTE should be performed, but asymptomatic screening is not indicated (as in general practice)
see above
Unless there was indication for cardiac problems.
Reasonable to assess pulmonary pressures at an earlier stage compared to CT scan - I suspect ongoing pulmonary hypertension would be informative for intensity of follow up required.
There is no evidence of myocarditis or other cardiac damage associated with COVID-19 infection and routine TTE is not recommended
Need better evidence before making this decision
Should be individualized
I think this should be driven based on clinical assessment. However, maybe there are more treatment options for systolic dysfunction than what we might find on PFT/CT so I am putting this as a weaker suggestion.
Round 2
strong suggestion against IF this was already obtained while in hospital within the preceding 30-60 days
Should have had echo during hospitalization. If not abnormal, unclear benefit of routine use after discharge
This is less invasive and more meaningful - may still wait 12 weeks but early assessment not unreasonable
Yes, it is non-invasive
Question 10
Round 1
This is an expensive test and no evidence this will improve outcomes.
not cost effective ; not available in routine clinics
ideally it would be very adequate. However, it should be limited to those patients presenting symptoms, since it is a time consuming test.
it would definitely provide some interesting information, but it is not available for everybody

See above comments on TTE, PFTs, and CT.
this is more invasive than PFT and CT and therefore applied with care and after specific patient consent, or with unexplained symptoms
Will need to exhaust other workup such as pulmonary or cardiac first.
I do not see value outside of a clinical research study (compared to simple 6MWT)
Need better evidence before making this decision
Again, as per earlier comment, likely low diagnostic yield for mild cases. Symptomatic cases should be recruited into pulmonary rehabilitation therapy.
Only for cause
Round 2
Unlikely to be informative at this stage
Question 11
Round 1
No evidence specialist care will improve outcomes.,
Would recommend routine referral to dedicated clinic for patients who were intubated or on ECMO
Only if pts have post ICU syndrome, or other residual deficits. Pts who had a low supplemental oxygen need and no residual deficits would not require this.
No evidence for multidisciplinary clinic. This is burden to patients and increases healthcare costs. Need more evidence before widespread implementation.
While a specialty clinic may be preferable it would be dependent on supply and demand. My preference would be to select those patients with specific symptoms or physiological / radiological criteria. I do acknowledge that it may be that Covid-19 has subtle issues that could be missed (e.g. pulmonary hypertension or fibrosis) but it is not clear at this time and we need a practical approach also
Due to the unique nature of COVID and the isolation faced by a number of hospitalized patients the rates of PTSD, anxiety and other diagnosis so a MTD follow up for PICS might be appropriate
This is not uniformly available.
This could be the solution for my previous comment. If we send to the patients to the multidisciplinary clinic (the first visit may be during the hospitalization period), physician's could easily determine which additional tests could be beneficial in every patient.
Will have to be balanced against existing primary and specialist care workload, especially in region with many COVID-19 cases.
Most important: Assess the cardiovascular risk post-CoVID and decide on a prophylactic anticoagulation.
No data to support effectiveness of a multidisciplinary clinic though they are gaining traction, have appeal, and have some benefits in qualitative studies. Standard of care would be primary care f/u with subspecialty referral as needed. I think this is really two questions: 1) no suggestion regarding multidisciplinary clinic routinely for all patients; 2) strong suggestion to at least f/u with primary care!
Round 2
No evidence this will improve outcomes
Would recommend for ARDS patients in general

Given evolving understanding of post-covid issues probably wise to link with a specialised clinic if possible
Resource dependent
Question 12
Round 1
No evidence this will improve outcomes
referral for severe lung function impairment and especially for those needing supplemental oxygen with walking
Strong suggestion for referral based on symptoms regardless of lung function
it should be reserved for those patients with miopathy or breathlessnes
depending on the post covid testing results and symtoms
only based on symptoms and prediction that symptoms may improve with PR.
Probably question should be symptoms and lung function abnormalities - rehab really addresses symptoms rather than physiology in my opinion
Should be symptom-based referral and will need to align with the patient's exercise goal. Pulmonary rehab will likely benefit severe cases, e.g. cases with prolonged ICU stay.
Most pulmonary rehab programs remain closed at the time of this questionnaire. Current US rehab programs are limited to the benefits given to COPD and denied to other restrictive lung disease including ARDS survivors.
I would base this on symptoms, and maybe oxygenation and 6MWT but not sure we can obtain PFTs to base it on this. And also,PR has a lot directed at medications etc and if someone doesn't have pre-existing lung disease, that part is not useful. Those patients with only post-COVID lung impairment and not pre-existing chronic lung disease might benefit equally well from a more general exercise rehab program, we just don't know.
Round 2
Hasn't been studied much in this patient population.
The major cause of disability post-COVID-19 is unclear and may not be pulmonary. Therefore multidisciplinary evaluation and appropriate selective referral rather than routine referral would seem more appropriate
I would favour referral based on symptoms not lung function.
based on symptoms more than PFTs
Psychological problems only identified in a por-active way
Question 13
Round 1
No evidence this will tell us anything about future risk
This is a research question -The presence of antibody will indicate person has been exposed to the virus and/or had the infection. The clinical utility of the awareness of presence of antibody in a person with documented covid -19 pneumonia need to be determined in clinical studies.
If a person had COVID-19 diagnosed by the NP PCR, I don't see how serology adds anything to management or prognosis.
in the context of a study

It is not yet clear whether negative serologic testing indicates a lack of immunity, or whether immunity wanes or is preserved (but without circulating antibodies). Therefore, such testing serves no purpose currently.
Data are needed to support this.
only for scientific purpose after consent
This is an important consideration in order to understand correlation between immune response and reinfection risk
Sensitivity and specifity of the antibody tests are to limited to draw conclusions out of the test
Despite the diagnostic accuracy of the serologic tests may not be as good as we expect, this kind of test may help us to determine how far we are from the herd immunity.
Not really useful. Does not provide evidence for acquired immunity as compared with patients with negative serology but a history of proven COVID
Maybe difficult to interpret the result due to variable performance of the serological test. Limited clinical value.
Testing needs to be repeated after 3-6 months since many patients loose their titres. The presence or absence of antibodies does not rule in/out immunity.
Depends on the reason. Do they want to be convalescent serum donors or is this just to see if they have mounted antibody response? Has no known prognostic value at this point
Because we do not know the protective ability of antibodies at this time, further data will be needed. Since the feasibility of testing the entire population for antibodies will be excessive and expensive, a targeted testing program may decompress the downstream trials that will probably show benefit.
I would recommending serology in the context of a clinical study so that we can begin to understand issues around immunity. Or, if we had data to know that ab means protection from re-infection, then I would recommend routine serology
Round 2
No data to support this', no clue if serology means immunity
Not sure how this would affect management in the short or long term.
Could provide interesting knowledge about the immune state after the infection
Currently would perform in the context of a research study as we don't know what the results mean clinically - would immunity be assumed when it actually isn't present? It could provide the wrong message possibly.
Extremely poor test characteristics (see recent NYtimes article about this), lousy sensitivity/specificity, and no clear bearing on future immunity. Totally useless.
Agree for the purposes of following immune response -
This should be done in the context of a clinical study only
It si not clear the potential usefulness of this test.
Question 14
Round 1
Waste of money. No evidence serology tells us anything about future risk.
This is a research question.The presence of antibody will indicate person has been exposed to the virus and/or had the infection.The clinical utility of the knowledge of the presence or absence of the presence of antibody need to be determined in clinical studies

Unless in the context of a seroprevalence/epidemiological study
No clear evidence this is helpful.
See prior comment. Uncertain interpretation of test results would make this without good clinical benefit.
Data are needed to support this.
only for scientific purpose after consent
This is a broader argument of population testing versus targeted testing. At a minimum family contact would benefit and be high yield.
I would suggest PCR over serological tests
Why? They are presumed COVID-19 infected with that history. Unless it is needed for epidemiologic reasons or the patient is being discharged with persistent positive viral shedding, has no clinical implications
Because we do not know the protective ability of antibodies at this time, further data will be needed. Since the feasibility of testing the entire population for antibodies will be excessive and expensive, a targeted testing program may decompress the downstream trials that will probably show benefit.
Round 2
Better PCR
Probably not pertinent until vaccine available. In that setting, should be evaluated earlier and vaccinated with confirmation of antibody response
Would recommend depending on evolving understanding of serology specificity etc
sensitivity and specifity of antibody testing is too low
Question 15
Round 1
Repeat infection, or at least reactivation of infection, has been documented and we have no clue if prior infection confers immunity and if so, for how long.
important to know the status of active infection for preventive measures to be taken by health care workers with PPE as well as minimise risk of spreading the infection to others in the hospital/clinic environment
Since it is not clear how protective antibodies are, I don't think we should go out on a limb and say not to screen.
It may be more beneficial to generalize this to all patients with prior COVID pneumonia who subsequently test negative for viral RNA, as it is unclear if antibody positivity truly is necessary for immunity.
Also depends on timing from initial infection. Longer elapsed time since acute infection should prompt greater intensity of screening.
No data to show this approach is safe. In fact recent data from UK suggest only short term protection from earlier covid
We cannot apply this logic at this time without knowing efficacy of antibodies in immunity
I doubt screening is needed, but have no data to support that.
The practice of pre-hospital screening may not be applicable to countries with low disease prevalence and limited resource.

Do we know that the presence of antibodies means that someone cannot get re-infected? and at what titer?
Round 2
It is uncertain whether patients can become re-infected or when, so continuing routine screening in them seems prudent.
Too early to comment - if symptoms of Covid would not agree in view of potential overlap in infectivity and serology response in early stages
Antibody psitivity is not sensitive enough to allow to leave the normal routine for in personal medical appointments
Question 16
Round 1
Needs an RCT on risk vs benefit.
clinical and logical judgement as there is no data to support the decision long term studies needed
recommendartion to mantain anticoagulant therapy until d-dimer is below a reasonable level (ie 2-3 times normal)
No proven benefit to continue anticoagulant, and risks are very well known. In addition, thrombosis mainly develops during severe disease. I am not aware of any data showing development of thrombosis after discharge.
I am not aware of data to support this suggestion
At present there is no data to support the continuation of anticoagulation post hospital discharge
No strong data either way, but risk/benefit analysis seems to indicate more risk than benefit.
This assumes that they have no documented indications for anticoagulation while inpatient
There is no data.
There was a group in Southern California that we're comparing thromboelastogram to ddimer and there was no correlation- the coagulopathy fr covid May change faster than the dimer level
Round 2
No data
Unclear how to balance the risks and benefits of anticoagulation in this situation.
Needs RCT
Clinical trial needed
Biologic sense but no data yet on risk and benefits
Thrombosis rates are not as prevalent in Asia. This may be genetics or environmental - we are not certain why
It is not recommended to stop anticoagulants immediately after discharge in patients with risk factors for thrombosis.
Question 17
Round 1
Needs an RCT
long term studies needed
We don't know the optimal duration and there can be adverse events from anticoagulant therapy, so 3 months seems the most reasonable suggestion now.

This would qualify as "provoked VTE", potentially, and thus a "minimum" of 3 months is needed, with clinical judgement to be used (as with all VTEs currently) regarding extension of that anticoagulation course.
May need longer depending on specific features and 3-month evaluation.
Again data is not available. My concern would be duration of risk of hypercoaguability so I would favour 6 months pending further data
VTE should be treated as in any other disease process
Follow the antithrombotic guidelines
Round 2
unless contraindications
Favour longer as risk of thormbophilia timeframe remain unclear.
yes , duration of anticoagulants depends on the clinical evaluation
Question 18
Round 1
Should be dictated by clinical assessment
should be based on a case by case basis assessment
Would recommend routine screening for all patients who required invasive ventilation or ECMO
Only if in the ICU, intubated for an extended period of time, or if there is concern for new cognitive deficits.
Brief screen is likely appropriate in many patients, but not all.
Only after patient consent for scientific purposes
Reasonable to assess cognition given associations in acute setting
Not clear what would be done with the data.
As mentioned before, I would suggest to screening in a multidisciplinary post-COVID clinic to determine which tests should be performed in each patient.
Key to recognition of a problem is that we need a therapy that makes a difference. To date, we have no therapy for this common ARDS sequela.
One issue here is that patients may not perceive symptoms thus routine screening for cognitive dysfunction is more valuable. However, a big limitation in interpreting results is what was the pre-existing baseline??
Round 2
Should be component of multidisciplinary evaluation but no data currently on benefit or issues found
Issue again is timing of assessment rather than merit of the assessment
Depends on the symptomatology and antecedents
Question 19
Round 1
No evidence this improves outcomes
should be based on a case by case basis assessment
Same as above; Would recommend routine screening for patients who were intubated or on ECMO
to individualize for every case

Only in those patients who required intensive care.
Only after patient consent for scientific purposes
It is reasonable to assume this would be valuable and have a significant impact if identified
Due to isolation of these patients, screening might be needed
only ICU patients
Can be by Primary Care physician
We have therapies for anxiety, depression, and PTSD.
I think maybe just the people who had been in icu
Round 2
Important consideration and requires early recognition
Depends of the history of the patient and symptoms

Question 20
Round 1
No evidence this improves outcomes
should be based on a case by case basis assessment
Same as above; Would recommend routine referral for patients who were intubated or on ECMO
Mental health services are already overwhelmed, and routine referral, without clear indication, is not warranted or appropriate. If pt has post-ICU syndrome, PTSD, etc, then a referral is absolutely indicated.
Not routinely.
No evidence, large burden for patient, health care costs and possibility exists it increases anxiety.
I feel this can be addressed in post-covid clinic with onward referral as needed
Need more data to make this determination
only ICU patients
We have guidelines that exist for screening for depression by primary care with validated tools. This is a core function of primary care and is not limited to mental health counselors.
Round 2
Only screen positive patients should be referred, not routine