

(The survey instrument was translated to Chinese prior to distribution)

Round 2: Survey for doctors

THANK YOU for helping us identify essential knowledge and skills to fight the COVID-19 pandemic. Your input will be extremely valuable to all doctors, nurses and other healthcare professionals around the world.

We need your help one last time. Please help us to decide:

- **How important is it to include each item in a course for doctors treat patients with COVID-19, prevent spread and protect the staff?**

You are the expert in this field. What knowledge and skills would you have liked to be taught before you started working with COVID-19 patients?

This questionnaire should not take more than 10-15 minutes.

QUESTION 1

The items below are your answers regarding *treatment of patients with COVID-19*.

Please rate each item from 1- 4 according to how important it is to include the item in a COVID-19 course to teach doctors how to treat patients with COVID-19.

Remember: Please rate the importance of including them in a course, rather than the importance of knowing or doing it (example: if all doctors already know how to do it, then it is not as important to include it in a course).

Not at all important Less important Important Extremely important

Airway

1. Performing tracheal intubation
2. Performing airway suction

Breathing

3. Understanding and using mechanical ventilation
4. Understanding and using non-invasive ventilation
5. Performing oxygen therapy including high flow
6. Knowing methods to improve ventilation (e.g. prone position ventilation, lung recruitment, respiratory physiotherapy etc.)

Circulation

7. Performing central venous access
8. Performing Cardiac Pulmonary Resuscitation (CPR)
9. Performing Extracorporeal Membrane Oxygenation (ECMO)
10. Performing arterial puncture and cannulation
11. Treating shock including fluid resuscitation and vasoactive drugs
12. Monitoring of hemodynamics including Pulse Index Continuous Cardiac Output (PICCO)
13. Interpreting Electrocardiography (ECG)

Renal, electrolytes, glucose

14. Evaluating and treating kidney injuries including the use of diuretics and Renal Replacement Therapy (RRT)
15. Performing hemopurification therapy
16. Managing fluid balance and electrolytes
17. Inserting a urinary catheter

Blood samples

18. Interpreting arterial blood gases (ABG)
19. Interpreting blood tests including inflammatory markers

Gastro-intestinal

20. Prescribing nutrition for the patients
21. Inserting nasogastric tube

Medication

22. Treating patients with antibiotics
23. Treating patients with antiviral drugs
24. Treating patients with corticosteroids
25. Administering analgesia and sedation
26. Administering immunopotentiator

Diagnostics

27. Performing bedside ultrasound
28. Interpreting chest X-ray
29. Interpreting chest computed tomography (CT) scan
30. Performing flexible bronchoscopy
31. Performing throat swab
32. Analyzing and interpreting airway samples (e.g. sputum)

Theoretical COVID-19 knowledge

33. Knowing the theory about COVID-19 (pathophysiology, modes of transmission, incubation period, classification, epidemiology etc.)
34. Diagnosing COVID-19
35. Treating COVID-19 specific issues
36. Knowing about COVID-19 in pregnant women, children, and newborn

Theoretical knowledge about critically ill patients and organ support

37. Identifying critically ill patients including multiorgan failure
38. Understanding underlying diseases including diabetes, hypertension, etc.
39. Caring for the elderly and vulnerable population

Non-technical skills

40. Dealing with psychological issues of COVID-19 including care and support
41. Communicating with patients and relatives
42. Working in teams including performing handovers

Organizational issues

43. Knowing local hospital departments, rules, policies, and procedures
44. Knowing when to admit and discharge patients
45. Knowing about laws and regulations of infectious diseases
46. Knowing how to use (electronic) medical records

Other

47. Practicing traditional Chinese medicine

QUESTION 2:

The items below are your answers regarding **prevention of spread of COVID-19, and protection of staff**.

Please rate each item from 1- 4 according to how important it is to include the item in a COVID-19 course to how to prevent spread and protect themselves from COVID-19.

Remember: Please rate the importance of including them in a course, rather than the importance of knowing or doing it (example: if all doctors already know how to do it, then it is not as important to include it in a course).

Not at all important Less important Important Extremely important

Personal protection

1. Knowing when to use gloves, masks etc. including knowledge of the different levels of necessary protection
2. Donning and doffing of personal protective equipment (PPE) including gloves
3. Performing hand hygiene
4. Putting on and taking off of facial protection (mask, goggles, respirators)
5. Putting on and taking off of shoe covers
6. Knowing how to decontaminate clothes and personal items and when to shower
7. Managing exposure (=what to do if exposed)

Isolation

8. Knowing how to keep COVID-19 patients isolated
9. Preventing spread within the hospital

Organizational issues

10. Knowing how to dispose of medical waste
11. Knowing how to handle deceased patients without contamination
12. Knowing the different zones (clean, semi-contaminated, contaminated)
13. Knowing when and how to report the epidemic situation

Aseptic technique and disinfection

14. Performing aseptic technique
15. Knowing how to disinfect items and environment

Outside hospital measures to stay safe

16. Avoiding close contact (e.g. during meals, transportation etc.)
17. Securing safe personal residence including ventilation, disinfection and different zones
18. Maintaining physical wellness including proper sleep, exercise, food etc.
19. Maintaining psychological wellness including avoiding stress, staying positive and motivated
20. Knowing when to seek hospital care for yourself

Other comments and suggestions: