

COVID-19 How we do it @ Royal Surrey

The ED leadership
team

March 2020

"To save the life of an intensive care patient now is the effort of the whole hospital"

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ITU and Anaesthetic
Consultant .
MILANO.Italy*



Case-Fatality Rate and Characteristics of Patients Dying in Relation to COVID-19 in Italy

JAMA. Published online March 23, 2020.
doi:10.1001/jama.2020.468

Table. Case-Fatality Rate by Age Group in Italy and China^a

	Italy as of March 17, 2020		China as of February 11, 2020	
	No. of deaths (% of total)	Case-fatality rate, % ^b	No. of deaths (% of total)	Case-fatality rate, % ^b
All	1625 (100)	7.2	1023 (100)	2.3
Age groups, y				
0-9	0	0	0	0
10-19	0	0	1 (0.1)	0.2
20-29	0	0	7 (0.7)	0.2
30-39	4 (0.3)	0.3	18 (1.8)	0.2
40-49	10 (0.6)	0.4	38 (3.7)	0.4
50-59	43 (2.7)	1.0	130 (12.7)	1.3
60-69	139 (8.6)	3.5	309 (30.2)	3.6
70-79	578 (35.6)	12.8	312 (30.5)	8.0
≥80	850 (52.3)	20.2	208 (20.3)	14.8

^a Data from China are from Chinese Center for Disease Control and Prevention.⁴ Age was not available for 1 patient.

^b Case-fatality rate calculated as number of deaths/number of cases.

Protection of patients and staff

Safety is the first priority

When caring for patients with **suspected or confirmed infectious respiratory virus**, all healthcare workers need to – prior to any patient interaction – assess the infectious risk posed to themselves and wear the appropriate personal protective equipment (PPE) to minimise that risk.

When to use a surgical face mask



In cohorted area (but no patient contact)

For example:
Cleaning the room, equipment cleaning, discharge patient room cleaning, etc

Close patient contact (within one metre)

For example:
Providing patient care, direct home care visit, diagnostic imaging, phlebotomy services, physiotherapy, etc

PPE to be worn

- Surgical face mask (along with other designated PPE for cleaning)

PPE to be worn

- Surgical face mask
- Apron
- Gloves
- Eye protection (if risk of contamination of eyes by splashes or droplets)

When to use an FFP3 respirator



- Carrying out potentially infectious aerosol generating procedures

For example:
bronchoscopy, endotracheal intubation, tracheostomy procedures, cardiopulmonary resuscitation, diagnostic sputum induction:

- Where a patient is known/suspected to have an infection spread via the aerosol route
- When caring for patients known/suspected to be infected with a newly identified infectious respiratory virus

PPE to be worn

- FFP3 respirator
- Gown
- Gloves
- Eye protection

- Fit testing should be carried out by a properly trained competent fit tester.
- Other guidance is available on bacterial infections and pulmonary tuberculosis

These images are for illustrative purposes only. Always follow the manufacturer's instructions.

Remember

- PPE should be put on and removed in an order that minimises the potential for cross-contamination.
- The order for PPE removal is gloves, apron or gown, eye protection, surgical face mask or FFP3 respirator.
- Hand hygiene must always be performed following removal of PPE.
- Healthcare workers who have had influenza vaccination, or confirmed influenza infection, are still advised to use the above infection control precautions.

Protection of patients and staff

Cardiac
Arrest

consider all patients as at risk of Covid so follow Resus UK guidelines

or

Peri-
arrest

full PPE: FFP3, eye protection, hat, gloves, disposable apron/gown

minimise the number of staff in contact with patient

PROTECTION OF STAFF

In all ?COVID cases: minimal composition of the team to manage patients. Use the Rapid diagnosis strategy for Community acquired Pneumonia (do not auscultate the chest unless this will change the plan for the patient).

Every patient in cardiac arrest or peri arrest should be treated as a ?COVID- →wear full PPE as AGP are highly probable. Follow Resus UK guidelines.

DO NOT enter other areas with the scrub used in the RED areas.

If you suffer from a chronic condition or are pregnant please contact your line manager

Front Door

Triage:

**PPE:
surgical
mask,
eye
protection-
gown-
gloves**

- There will be two points of entry into the ED main entrance and Ambulance doors.
- At both entrances there will be a forward triage nurse who will take a brief history take a temperature and then stream patients into the non COVID pathway or the COVID pathway.
- All patients streamed into the COVID pathway will be asked to wear a surgical mask and use hand sanitiser at point of entry.
- Key principle is to protect our workforce and vulnerable patients by assessing at point of entry.

**Limited number
of visitors-social
distancing**

Pre triage

ACTION GUIDE (NAVIGATION NURSE front door)

ASK patient

Do you have ANY one of the following?

Fever over 37.8

Persistent cough (acute onset of cough can make confusion, we had a case today)

Hoarseness

Short of Breath

Sore throat

Wheezing

Sneezing

Nasal congestion

NB

All asymptomatic patients that are either self-isolating/have a symptomatic household member that present can be treated through the non Covid pathway wearing a surgical mask.

If they answer YES to ONE of the criteria

HCA to

GIVE PATIENT A SURGICAL MASK

If the patient is displaying symptoms but is clinically well and has no injury to be advised to return home, self-isolate and contact NHS 111 if symptoms worsen. Please provide leaflet re self-isolation.

- **Record details on a front sheet and complete casualty card with documentation of advice given**
- **Record a baseline set of observations including RR**
- **Track off system**

If the patient presents with ONE symptom and are clinically well, but need to remain to be seen in Minors/Majors

- **Record a temperature – if 37.8 or the patient has taken antipyretics then presume greater than 37.8**
- **Give a SURGICAL MASK, advise to wear at ALL times and sit in the 'clean' waiting room**

Pre triage

If the patient presents with **TWO OR MORE** symptoms and is ambulating with normal SpO2 please send to ED 2 with a surgical mask on.

Patients with abnormal observations and or SpO2 with **TWO OR MORE** symptoms are to be streamed into majors isolation. With a surgical mask on.

Paediatric patients with **TWO OR MORE** symptoms are to be streamed into Paediatric ED. With a surgical mask on.

Record their details on the front sheet

- **Radio Majors isolation (A) or Paediatrics to inform them of a patient.**
- **HCA to escort patient directly to ED Majors or Paeds ED of the appropriate area, giving booking in details to reception on the way**
- **Patients for ED 2 will be directed towards the AEC entrance where they will book in at the ED2 (AEC) reception.**

If patient answers **NO**

- **Patient to proceed to Reception as normal and is to be streamed as normal**

MATERNITY PATIENTS

If maternity is expecting a potential Covid positive expectant Mum, they will radio/call down.

- **Give the patient a SURGICAL MASK**
- **HCA to walk them to the 'Pregnancy POD' (old EPAU) you MUST go the same route as you would to Paediatric isolation and use the door on the left**

Midwives will come down and see the expectant Mum

ED Covid19 Clinical Admission Tool (updated on 20th March 2020)

1. Fever
2. Cough
3. Dyspnoea
4. Travelling from risk areas
5. Contact with confirmed Covid19 patient

Vital parameters for all patients, if 1 criteria?



If Obs ok, patient to self-isolated home according PHE

2 or more criteria?



COVID area

NB: All asymptomatic patients that are either self isolating/have a symptomatic household member that present can be treated through the none COVID pathways wearing a surgical mask.

Clinical Phenotype	1	2	3	4	5
Clinical presentation	Patient with temperature and respiratory symptoms but not hypoxia and CXR negative	Patient with temperature + consolidation on Xray or hypoxic.	Frank hypoxia, fever, multiple consolidation (patches) on Xray with high concentration oxygen compensation (SpO2 above 90% with high concentration oxygen).	pre-ARDS	ARDS (high risk for male between 35-70 of age)
Management	Swab the patient if required accordingly to PHE criteria.	Admit and isolate. Can deteriorate quick.	Critical care area	Critical care area	Critical care area
Treatment	Symptomatic treatment, reassure and discharge home.	Symptomatic treatment. If GCS <15 then ABG.	Involve ITU. Oxygen 92-96% (88-92% if COPD or severe restrictive lung disease). If target not achieved then move to Phenotype 4.	ITU management	ITU management

Clinical admission tool

Clinical admission tool

Aim

The aim of the following supplemental 'clinical admission tool' is to identify suspected Covid-19 patients who do not require hospital admission (Clinical Phenotype 1) and discharge home safely.

Background

In recent publication of Clinical Characteristics of Covid19 in China (published on February 28, 2020, and last updated on March 6, 2020, at NEJM.org), the median age of positive patients was 47 years while 41.9% were female. The most common symptoms were fever (43.8% on admission and 88.7% during hospitalization) and cough (67.8%). Diarrhoea was uncommon (3.8%). The median incubation period was 4 days.

On admission, ground-glass opacity was the most common radiologic finding on chest CT (56.4%). No radiographic or CT abnormality was found in 157 of 877 patients (17.9%) with non-severe disease and in 5 of 173 patients (2.9%) with severe disease. Lymphocytopenia was present in 83.2% of the patients on admission.

Myocardial damage and heart failure is quite frequently a cause of death (alone or in combination with respiratory failure). Many patients show an elevation of Troponin levels; the heart is involved in 40% of patients dying from Covid19 infection.

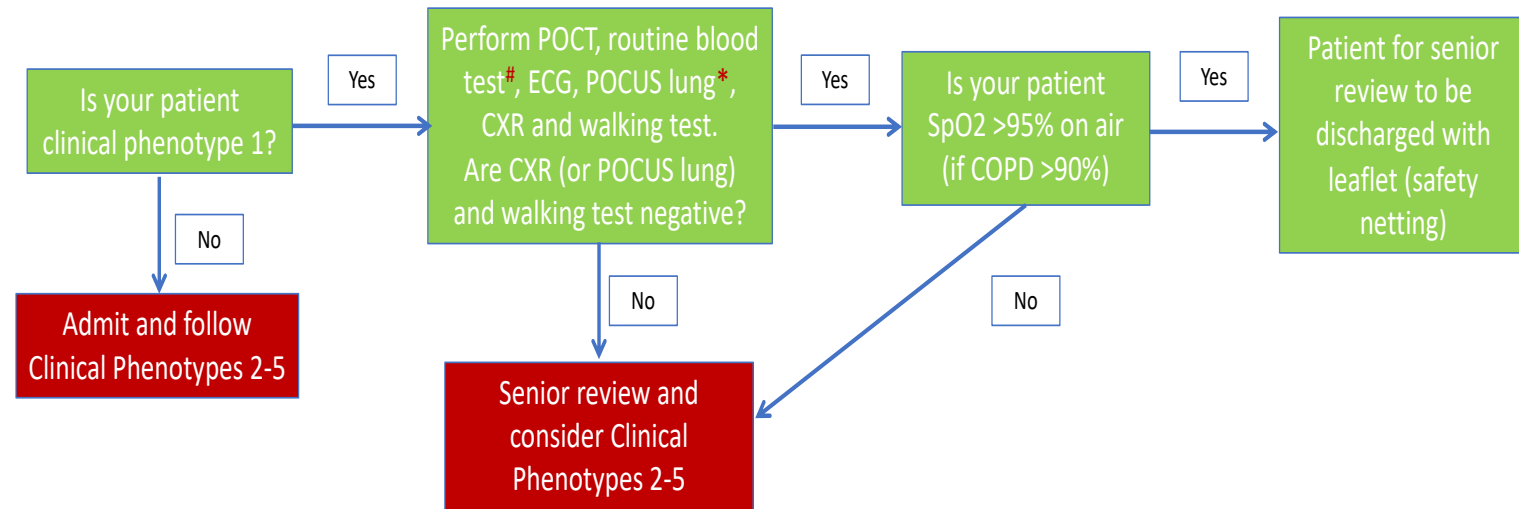
In clinical management, considering chest CT scan has various logistic obstacles (eg: infection control), lung point of care ultrasound (POCUS) has found to be in Covid patients approach incredibly helpful in detecting interstitial syndrome, alveolar consolidation, pleural line abnormalities, and pleural effusion. Lung POCUS represents an effective tool for diagnosing pneumonia in the Emergency Department. It can accurately provide early-stage detection of patients with (H1N1)v pneumonia having an initial normal CRx. Its routine integration into their clinical management is proposed. (Testa et al.

- Early recognition of the 2009 pandemic influenza A pneumonia by chest ultrasound - Critical Care 2012).

Finally, from Italian EDs experience, invaluable is the support of the walking test (6 minutes) either rapid walking test (patient should walk at the highest possible speed for 20-30 meters on a linear path) measuring basal SpO₂ on air before and after the test. The test is positive if the patient loses at least 5% saturation. This comes from expert consensus instead from evidence based.

Clinical admission tool

Royal Surrey Emergency Department Covid19 Clinical Admission Tool - Clinical Phenotype 1



Routine blood test are not required if a patient does not need admission
* POCUS Lung requires a minimum of training which is currently under arrangement

Lung POCUS



Lung Ultrasound for COVID-19



WHY learn lung ultrasound for COVID-19?

Because experience from the medical community in China and Italy has demonstrated that it helps in 3 key areas:

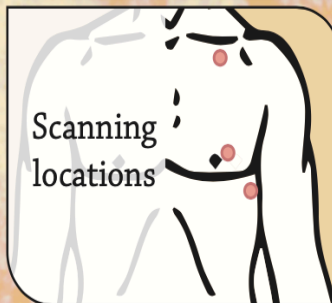
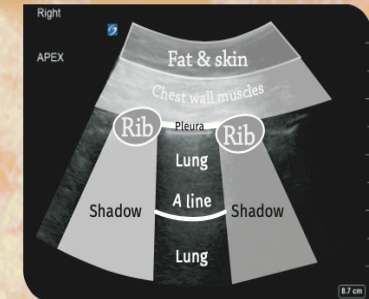
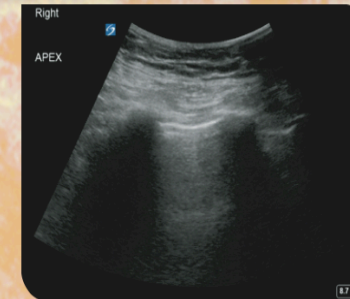
1. COVID-19 disease demonstrates a particular pattern of findings on lung ultrasound that can help differentiate it from other causes of acute dyspnoea.
2. Proning of patients is a mainstay of managing ventilated patients with refractory hypoxaemia. The changes responsive to proning can be seen easily on ultrasound.
3. Lung ultrasound can be done at the bedside easily and may well be as sensitive as CT for these things, without the significant logistical issues of obtaining a CT within the context of a pandemic.

So what does normal lung look like on ultrasound?

It is simple and homogeneous and grey. It sits between ribs when the probe is aligned cephalad-caudad. The ribs cast black shadows. A thin, bright white pleural line with small speckles on it sits atop the lung between the ribs and moves back and forth with each breath.

In much of the lung there is a normal, parallel, white line, an A-line, below the pleura (it will return with disease resolution).

At the base you won't see diaphragm, just lung, then straight to organs.



Where do I scan the lungs?

An ultrasound probe is placed to scan at the apex of the lung, baso-anteriorly and postero-laterally (posterior axillary line). This will pick up most pathology, even though some may not make it to the pleura due to aeration.

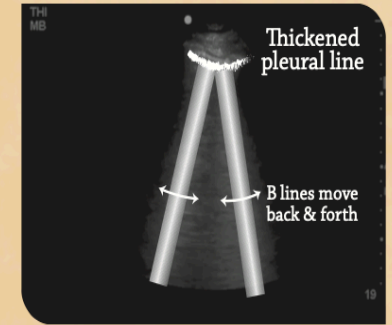
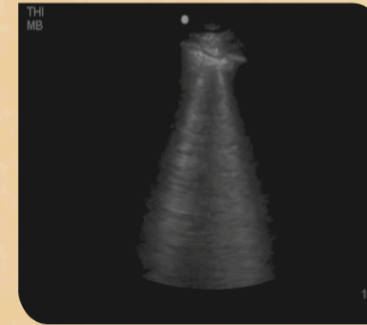
What probe do I use?

A low-frequency, curvilinear probe will allow you to see between multiple ribs. Better for obese or oedematous patients. A high-frequency linear probe will show between just one pair of ribs, but with better, shallower, resolution.

Lung POCUS

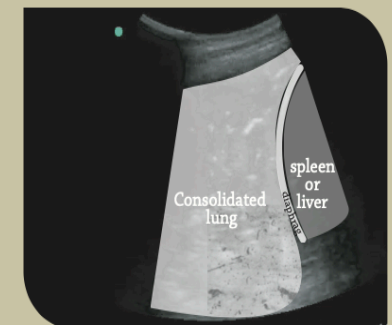
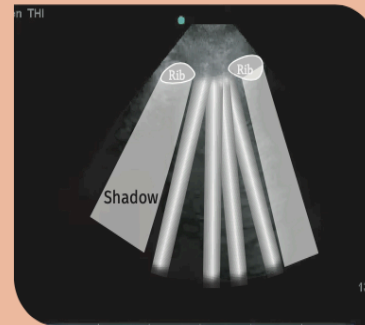
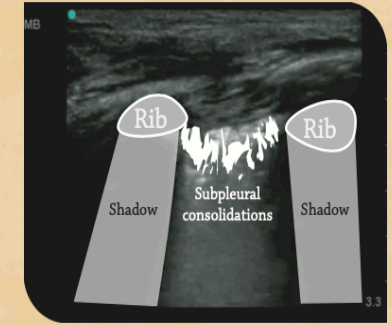
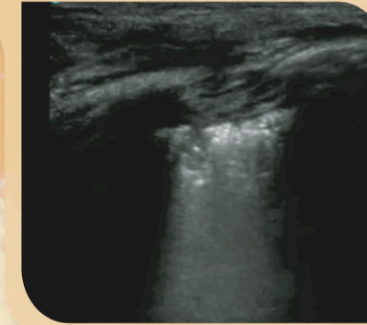
Early / Mild COVID-19 disease

COVID-19 has a particular pattern in early and mild disease. This involves development of lung ultrasound B lines. These are white lines that arise from the pleura and descend into the lung. They move with breathing. They spread out a little and don't fade as they descend. You may normally have one or two at the lung base. The thin pleural line thickens and develops a lumpy texture to it. Areas with lots of B lines are next to areas with none, causing 'skip lesions'. The pleural line will also thicken causing discrete 'subpleural consolidations'. These features initially appear anteriorly in COVID-19.



Progressing / Moderate COVID-19 disease

As the disease develops, the B line numbers increase in areas affected, from mainly basal to other areas of the lungs. The B lines also increase in number to become coalescent. In COVID-19 disease this is referred to as **Pattern 1**. With increasing B lines and progressive hypoxaemia fluid balance becomes very important. B lines increase in number as the extravascular lung fluid increases, such as in hypervolaemic states. Fluid removal may be required or increasing the PEEP may improve this. Response would be seen with reducing B line numbers.



Lung POCUS

Committee of the Intensive Care Society



@PARADICMSHIFT



Severe COVID-19 disease

This patient group will likely be already ventilated. The lung will be progressively de-aerated. Alveoli will be full of fluid, secretions or there may be a secondary infection. This lung consolidation can now be easily seen on ultrasound. Changes are mainly postero-basal. It can cause the lung to look like the liver, hepaticisation". (Scan over the liver to see what this might look like). In COVID-19 these changes are referred to as **Pattern 2**. These findings suggest proning may be of value. Response to proning would reduce these ultrasound changes toward normality with return of A lines. If fluid balance is too positive pleural effusions may also develop. They form black areas of varying size between the ribs and the lung.

Where to from here? Now disinfect your ultrasound machine!

Governance is importance. Do not over-call interpretations. If in doubt seek expert advice if available or use other imaging modalities. All imaging must be taken in its clinical context.

Ultrasound can be used to diagnose pneumothorax, surgical emphysema, etc., but has been omitted here as it is less relevant to COVID-19.

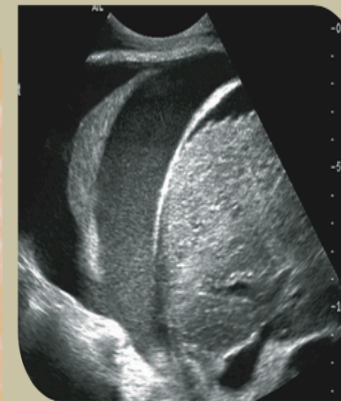
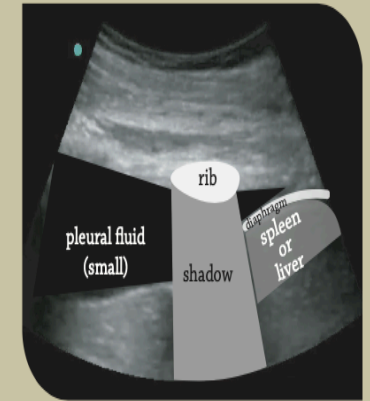
There is a lot more lung ultrasound you can learn. See www.ics.ac.uk for details of the FUSIC lung ultrasound training programme and other modalities.

References

Peng, Q., Wang, X. & Zhang, L. Findings of lung ultrasonography of novel corona virus pneumonia during the 2019-2020 epidemic. *Intensive Care Med* (2020). <https://doi.org/10.1007/s00134-020-05996-6>

Huang, Yi and Wang, Sihan and Liu, Yue and Zhang, Yaohui and Zheng, Chuyun and Zheng, Yu and Zhang, Chaoyang and Min, Weli and Zhou, Huihui and Yu, Ming and Hu, Mingjun A Preliminary Study on the Ultrasonic Manifestations of Peripulmonary Lesions of Non-Critical Novel Coronavirus Pneumonia (COVID-19) (February 26, 2020) <http://dx.doi.org/10.2139/ssrn.3544750>

COVID-19 Critical ultrasound webinar. Chinese Critical Ultrasound Group. Ultrasound Imaging Features & Criteria For Clinical Severity of COVID-19/NCP Cases https://online.bizconfstreaming.com/webcast/mrgj202003_m.html Accessed 13/3/2020



Paediatrics

PAU SHO helping ED during days

All paediatric patients will enter via the two entry points and be assessed by the forward triage nurse.

All non COVID children will go to Paediatric ED.

Phase One All COVID children will be directed to PAEDS ED cubicles.

Phase Two All COVID children will go to Paediatric ED which will be a COVID area. All Paediatric minors patients will be seen in minors with adults. All NON COVID Paediatric majors patients will be transferred to PAU for assessment.

Paediatric PAU will not accept any potential COVID patients they will be directed to ED. Paediatric medical team will support Paediatric ED.



Maternity:

All pregnant women will be screen by the midwife. Mums with COVID symptoms will be diverted to the ED entrance by the midwife accepting the telephone call and will be streamed into the EPAU which will become the maternity forward triage point known as the "Pregnancy Assessment POD" (P Pod).

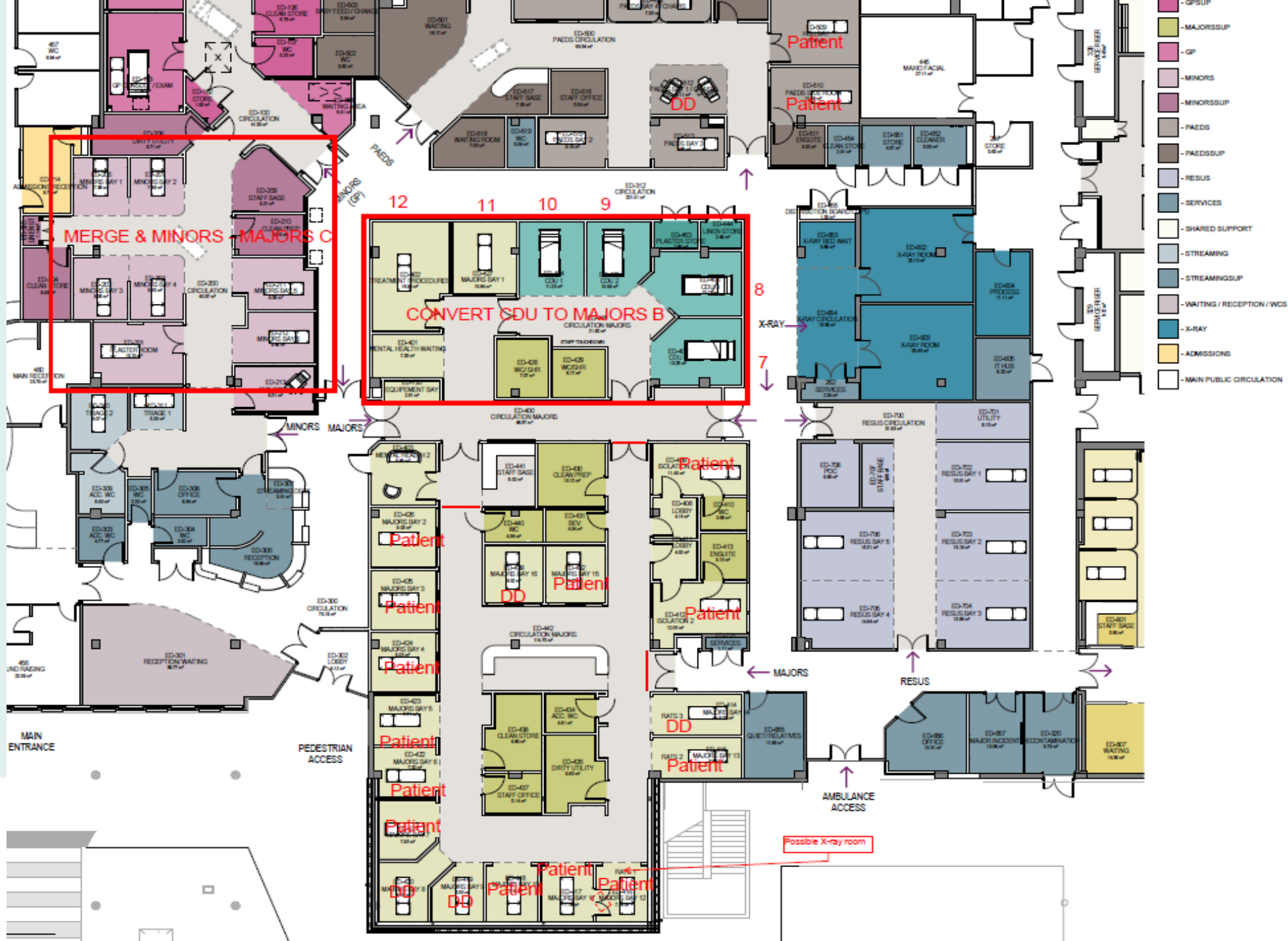
Maternity will contact forward triage nurse in the ED by radio and make them aware on the incoming patient.

The ED triage nurse will then inform the midwife by radio that the patient has arrived place a mask on the patients and transfer them to the P POD.

Midwife will come to P POD and assess the patient and determine if they are for admission. If they have not already been swabbed and require admission the patient will be swabbed.

The Midwife will then arrange for an isolation room in maternity and transfer the patient to the maternity ward.





PHASE 2

KEY

— Screen

Patient - Isolation room
x 13 Adult, 2x PAED

DD - Donning/Doffing

Merge Minors & Majors
initially. Consider Relocation
Minors to Fracture Clinic


Loss of CDU & F2S to
support Majors

Temporary Majors capacity -
X12

REFURB NO.	DESCRIPTION	STATUS	PROPOSED FINISH
AC 7	2017T Upgrade to Isolation Room including replacing existing RCP equipment and to fit existing wall infill for existing screens	BS 0	ADP
AC 8	2017T Upgrade to Isolation Room including replacing existing wall infill along the existing corridor to fit RCP	BS 0	ADP
AC 9	2017T Upgrade to Isolation Room including replacing existing wall infill to fit RCP	BS 0	ADP
AC 10	2017T Upgrade to Isolation Room including replacing existing wall infill to fit RCP	BS 0	ADP

CHECK ALL DIMENSIONS AND VERIFY ON SITE. REPORT BY EMAIL OR CALL US.

CONSTRUCTION



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JOB TITLE
ABE REFURBISHMENT
ROYAL SURREY COUNTY HOSPITAL
NHS FOUNDATION TRUST, GUILDFORD

DRAWING TITLE
GA - ABE - PROPOSED 1 OF 2

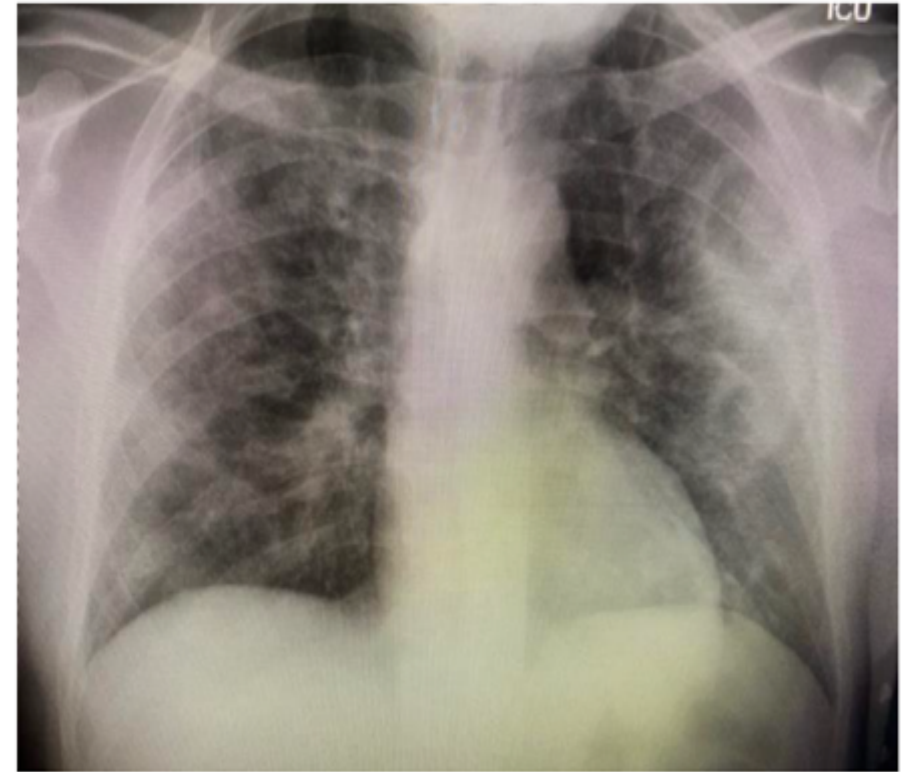
SCALE	DRAWING SHEET NO.	
As Indicated	A1	
JOB CODE	DRAWING NUMBER	REVISION
RSC-84	ADP-XX-00-DR- A-1001	AC 10

clinical characteristics

Test	Result	Comments
WCC	Normal	N:L ration > 3 poor prognosis
Lymphocytes	Low	Low in 80% of cases
Neutrophils	Normal	
Platelets	Mildly low	< 100 poor prognosis
D-dimer	High	> 1 poor prognosis. DIC may develop later
CRP	High	> 125 poor prognosis. If normal consider alternate diagnosis eg heart failure
PCT	Normal	Elevated = think bacterial infection
Lactate	Mildly High	Caution: not shock
Troponin	High	Poor prognosis. Not AMI - ECG
Urea / Creat	Mildly High	AKI usually mild
CK	High	Rhabdomyolysis may contribute to renal failure
AST/ALT	High	5 times normal, transient, no fulminant hepatitis; rise day 14
Albumen	Low	

Imaging: CXR

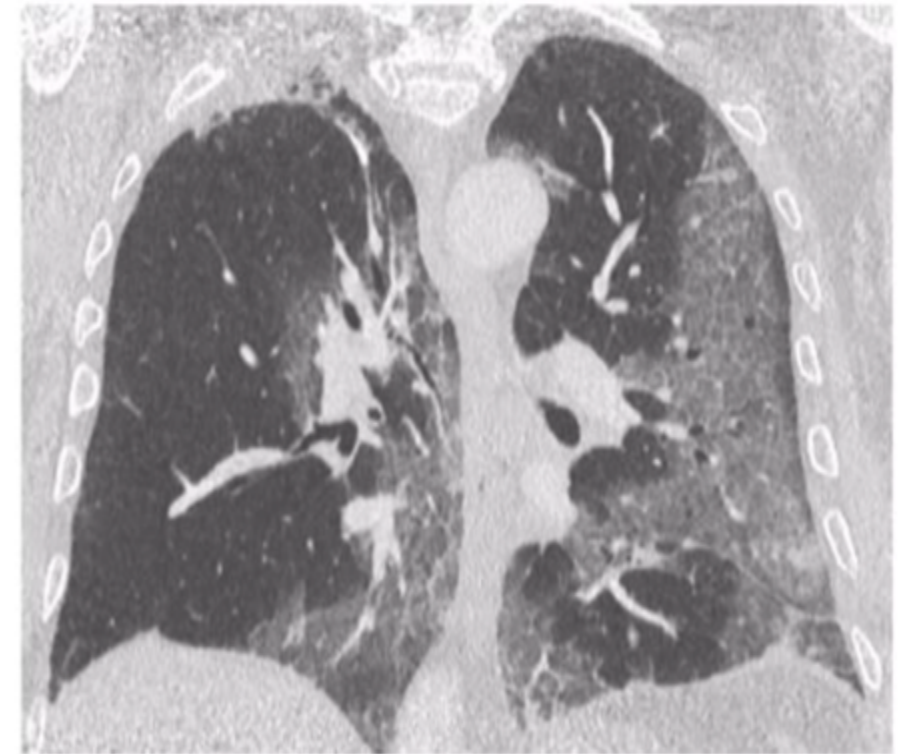
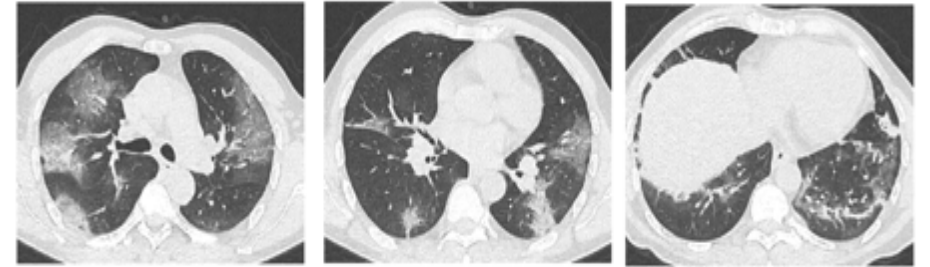
- **Request information** – ensure ?COVID-19 + respiratory history + smoking history
- Typically patchy ground glass opacities; may be unilateral (25%)
- Peripheral and basal
- Number of lung segments increases with more severe disease
- Over time, patches coalesce into more dense consolidation
- May be subtle / appear normal (40%)
- Do not tend to see: effusions (5%), cavitation, mass, lymphadenopathy



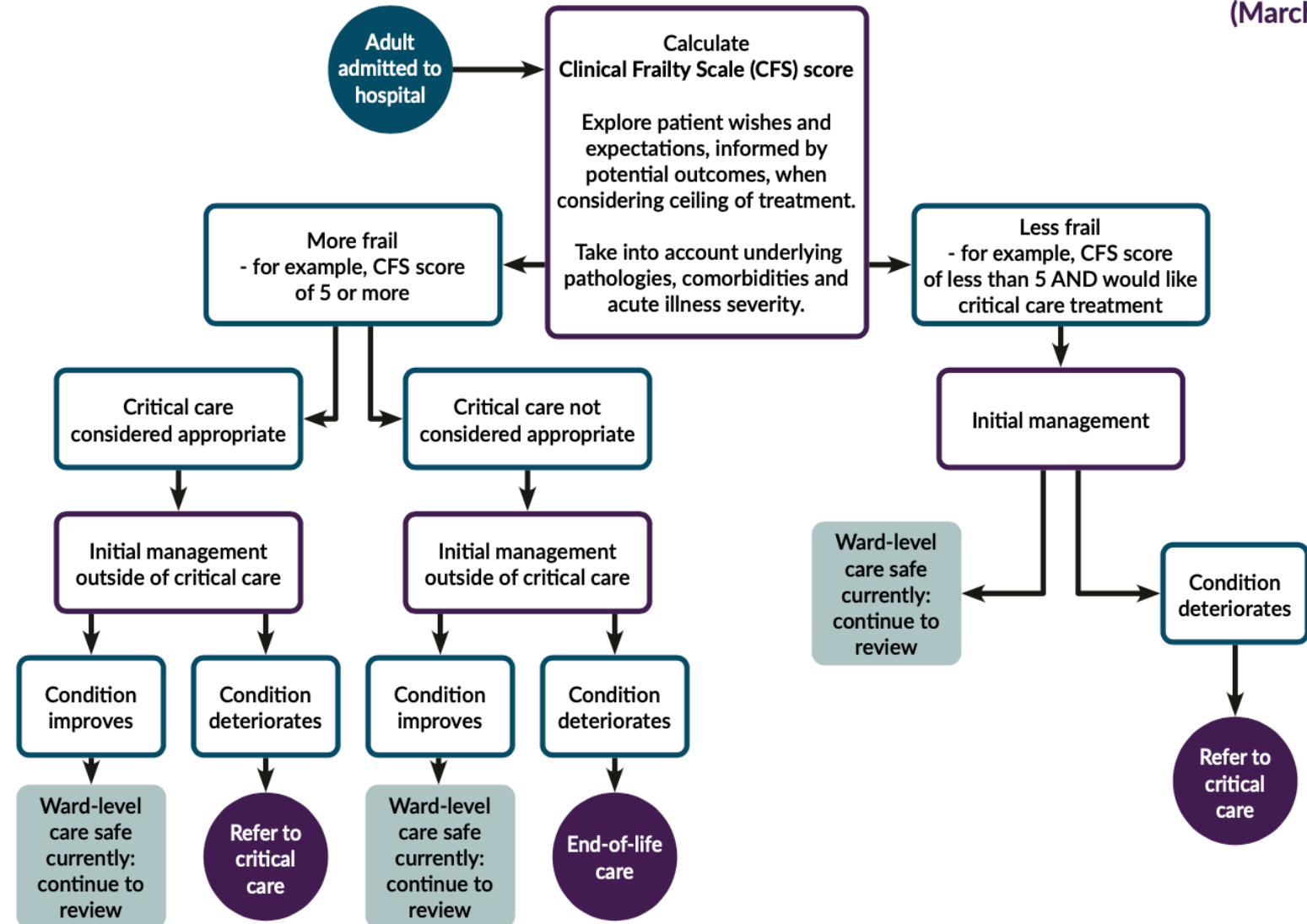
Imaging: CT

Sensitivity around 80% - may be normal in early stages

- Peripheral ground-glass opacities
- 'Crazy paving' may be present
- Diffuse alveolar damage
- Organising pneumonia
- Less likely: non-peripheral, effusions, lymph nodes
- Not: lobar pneumonia, cavitating, Tree-in bud changes



Management
(remember
single clerking
proforma)



Treatment

(see article on the Lancet)

Therapy	Implementation
High-flow nasal oxygen	Might prevent or delay the need for intubation
Tidal volume	Use 6 mL/kg per predicted bodyweight (can reduce to 4 mL/kg per predicted bodyweight)
Plateau airway pressure	Maintain at <30 cm H ₂ O if possible
Positive end-expiratory pressure	Consider moderate to high levels if needed
Recruitment manoeuvres	Little value
Neuromuscular blockade	For ventilator dyssynchrony, increased airway pressure, hypoxaemia
Prone positioning	For worsening hypoxaemia, PaO ₂ :FiO ₂ <100–150 mm Hg
Inhaled NO	Use 5–20 ppm
Fluid management	Aim for negative fluid balance of 0.5–1.0 L per day
Renal replacement therapy	For oliguric renal failure, acid-base management, negative fluid balance
Antibiotics	For secondary bacterial infections
Glucocorticoids	Not recommended
Extracorporeal membrane oxygenation	Use EOLIA trial criteria ³

Figure: Therapeutic options for severe acute respiratory distress syndrome related to coronavirus disease 2019
ppm=parts per million.

Dialysis

- Renal failure in 70%
- Acute tubular necrosis as part of multi-organ failure
- Rhabdomyolysis may contribute
- Strong predictor of mortality – 92%

Prognosis

(from Retrospective cohort
multicenter study in Wuhan.

The Lancet

March 9, 2020

[https://doi.org/10.1016/S0140-6736\(20\)30566-3](https://doi.org/10.1016/S0140-6736(20)30566-3)

hospitalised with COVID-19. In particular, older age, d-dimer levels greater than 1 µg/mL, and higher SOFA score on admission were associated with higher odds of in-hospital death. Additionally, elevated levels of blood IL-6, high-sensitivity cardiac troponin I, and lactate dehydrogenase and lymphopenia were more commonly seen in severe COVID-19 illness. Sustained viral detection in throat samples was observed in both survivors and non-survivors.

Previously, older age has been reported as an important independent predictor of mortality in SARS and MERS.^{14,15} The current study confirmed that increased age was associated with death in patients with COVID-19.

Cardiac arrest



Resuscitation Council UK

Resuscitation of COVID-19 patients in hospital

- 1** Recognise cardiac arrest. Look for the absence of signs of life and normal breathing. Feel for a carotid pulse if trained to do so. Do not listen or feel for breathing by placing your ear and cheek close to the patient's mouth. If there are any doubts about the diagnosis of cardiac arrest, the default position is to start chest compressions until help arrives. When calling 2222, state the risk of COVID 19.
- 2** The current advice as of 18 March 2020 is that as a minimum, staff require a gown, eye protection, gloves and FFP3 mask before starting chest compressions . Start compression-only CPR and monitor the patient's cardiac arrest rhythm as soon as possible. Avoid mouth-to-mouth ventilation and the use of a pocket mask. If the patient is already receiving supplemental oxygen therapy using a face mask, leave the mask on the patient's face during chest compressions as this may limit aerosol spread. If not in situ, but one is readily available, put a mask on the patient's face. Restrict the number of staff in the room (if a single room). Allocate a gatekeeper to do this.
- 3** Defibrillate shockable rhythms rapidly - the early restoration of circulation may prevent the need for airway and ventilatory support. Local guidance must be followed about equipment entering the area.
- 4** Full Aerosol Generating Procedure (AGP) Personal Protective Equipment (PPE) must be worn by all members of the resuscitation/emergency team before entering the room. Sets of AGP PPE must be available on the resuscitation trolley (or where resuscitation equipment is being stored) to be readily available. No chest compressions or airway procedures such as those detailed below should be undertaken without full AGP PPE.

Cardiac arrest

- 5 Airway interventions (e.g. supraglottic airway (SGA) insertion or tracheal intubation) must be carried out by experienced individuals. Individuals should use only the airway skills (e.g. bag-mask ventilation) for which they have received training. For many HCWs this will mean two-person bag-mask techniques with the use of an oropharyngeal airway. Tracheal intubation or SGA insertion must only be attempted by individuals who are experienced and competent in this procedure.
- 6 Identify and treat any reversible causes (e.g. severe hypoxaemia) before considering stopping CPR. Discussion should be maintained throughout the resuscitation event and early planning of the post resuscitation phase undertaken. Contact senior help and gain advice from critical care partners as part of the planning.
- 7 Dispose of, or clean, all equipment used during CPR following the manufacturer's recommendations and local guidelines. Any work surfaces used for airway/resuscitation equipment will also need to be cleaned according to local guidelines. Specifically, ensure equipment used in airway interventions (e.g. laryngoscopes, face masks) is not left lying on the patient's pillow, but is instead placed in a tray. Do not leave the Yankauer sucker placed under the patient's pillow; instead, put the contaminated end of the Yankauer inside a disposable glove.
- 8 Remove PPE safely to avoid self-contamination and dispose of clinical waste bags as per local guidelines. Hand hygiene has an important role in decreasing transmission. Thoroughly wash hands with soap and water; alternatively, alcohol hand rub is also effective.
- 9 Post resuscitation debrief is important and should be planned.

Cliff Mann's document

The management of the non-respiratory cohort should:

- aim to manage without admission
- use capacity from other specialties for whom elective work will be stepped down; especially T&O, O&G, ENT and ophthalmology as these can be rapidly streamed at the front door
- make appropriate use of staff most at risk to their own health from coronavirus.

For the respiratory cohort, the priorities must be:

- an environment and equipment that best safeguard the health of the staff dealing with these patients

Patients for SDEC and discharge

2. Clinical presentations not requiring admission:

(taken from same day emergency care (SDEC) guidelines, documents and expert advice from national clinical directors)

Expect **not** to admit overnight the following:

Clinical speciality	Emergencies that do not require admission
Respiratory	Pneumonia/COPD without oxygen /NIV requirement. May need initial antibiotics and assessment of response (yet may not require an overnight stay). Asthmatic with PEFR > 75% best or predicted PE without physiological compromise
CNS	Stroke with residual deficit not affecting ADLs TIA Cognitively impaired patient with minor head injury (GCS15) taking oral anticoagulation Seizure patient who has recovered
Gastro	Haemodynamically stable GI bleed Gastroenteritis taking oral fluids with normal/minimally changed U&Es
Cardiovascular	New non-ventricular dysrhythmia adequately rate controlled ? ACS without high sensitivity troponin elevation at 6hrs Syncope without ECG conduction defect, rhythm disturbance or hypotension
MSK	Patients requiring physio/analgesia alone Upper limb fracture Fracture of the lower limb except femur, tibia, calcaneum Dislocation following reduction Minor stable vertebral fractures
General surgery	Renal biliary colic in whom pain is controlled Abdominal pain with normal CT and pain controlled Abscess not showing signs of sepsis Haematuria without clot retention, hypotension or anaemia

Patients for SDEC and discharge

Bacterial infection	News \leq 3 with clinical decision for oral antibiotic or SDEC i.v.
Toxicology	Overdose patients with non -toxic levels or asymptomatic 6-12 hrs after ingestion (guided by ToxBase)
Other	Patients on an end of life pathway or for whom ceiling of care does not require hospitalisation

All patients in the above groups who are not admitted must receive appropriate follow up, wherever possible by telephone/video call etc.

Advice for patients with flu like symptoms who are not being admitted

PHE has published clear guidelines on the first 7 days of illness:

www.gov.uk/government/publications/covid-19-stay-at-home-guidance/stay-at-home-guidance-for-people-with-confirmed-or-possible-coronavirus-covid-19-infection

- If at any point after discharge a patient feels that;
 - They cannot cope with symptoms at home
 - Their condition is getting worse after 7 days
 - Or they feel that their symptoms (excluding cough) have not improved in 7 days.

They should seek help via the NHS 111 online coronavirus service or call 111 if they cannot access help online. If their situation is an emergency, they will need to contact 999.

Please be aware isolation guidelines may be updated as we move from Contain to Delay to Mitigate phases. www.nhs.uk/conditions/coronavirus-covid-19/self-isolation-advice/

Discharge leaflet



Royal Surrey
NHS Foundation Trust

Going home following suspected COVID-19 infection

This leaflet explains why you are being discharged from hospital and what you might expect after your discharge.

Why am I being discharged from hospital?

You are being discharged from hospital as your health team have agreed that you are now able to return home. Currently we are not testing patients for suspected COVID-19 if you do not require hospital admission.

What shall I do?

It is extremely important you follow the government advice for isolation:

Those with symptoms and living alone should remain at home for 7 days after the onset of their

symptoms. This will reduce the risk of you infecting others.

If you live with others and you or one of them have symptoms that may be caused by coronavirus, then household members must stay at home and not leave your house for 14 days.

What shall I do if I feel unwell?

After you have been discharged if you continue to feel unwell please contact **111** for advice. If the symptoms are severe or you feel very unwell come to the Emergency Department or call 999.

Symptoms to look out for:

- Increased shortness of breath
- Unable to walk or talk due to shortness of breath
- Persistent fever
- Drowsiness/Confusion
- Chest pain/chest tightness

To find out more about coronavirus (COVID-19) and find out how to avoid catching or spreading it, visit www.nhs.uk/coronavirus

It is a team effort

Look after yourself

Look after your team

- Take regular breaks
- Be kind to other and to yourself: it is OK not to be OK. Talk to your seniors.
- Meditation:
<https://www.youtube.com/watch?v=Fpiw2hH-dlc>
- Tapping technique: video from Aga Kehinde Royal surrey. <https://www.youtube.com/watch?v=ftA-l3xDZEo&feature=youtu.be>
- teamjoy@joyfuldoctor.com
- Pastoral care Adria Teare a.teare@nhs.net
freedom to speak up and champion lead chaplain.
- Wellness compendium
<https://books.apple.com/gb/book/rcem-wellness-comendium/id1484639161>

Encouraging each other to attend to basic needs will be important. Having easy access to food and drink on the unit, engaging in physical activity between shifts, ensuring rest and respite between shifts.

Posters created by the Intensive Care Society (ICS) relating to maintaining psychological health while working in critical care will be visible on units.

Individual appointments with the clinical psychologist will be available for any staff member experiencing particularly acute health anxiety, acute stress or other forms of psychological distress that interferes with functioning. The focus during the pandemic will be on developing a broader toolkit of coping strategies, rather than 'therapy'. Please do not hesitate to contact Matt via email or Whatsapp 07878378533. He will try to maximise his availability on the unit throughout.

Psychological support at Royal Surrey

Resources

[*https://www.gov.uk/coronavirus*](https://www.gov.uk/coronavirus)

[*https://emcrit.org*](https://emcrit.org)

[*http://www.stemlynspodcast.org*](http://www.stemlynspodcast.org)

[*https://www.ecdc.europa.eu/en*](https://www.ecdc.europa.eu/en)

[*https://www.who.int/emergencies/diseases/novel-coronavirus-2019*](https://www.who.int/emergencies/diseases/novel-coronavirus-2019)

[*http://thesgem.com*](http://thesgem.com)

"To save the life of an intensive care patient now is the effort of the whole hospital"

*Maurizio Cecconi .
ITU and Anaesthetic
Consultant*

