Specialty guides for patient management during the coronavirus pandemic

Reference guide for emergency medicine

November 2020

These charts, checklists, tools and care record are collated from NHS England and NHS Improvement publications, for ease of reference in assisting and informing how each trust can respond to the current challenges relating to COVID-19.

They were not created to be comprehensive and local adaptation to reflect local circumstances and increasing understanding of the disease is assumed. They do however provide clear guidance on a cohesive revised approach to:

1. Which patients should/should not be conveyed to hospital?
2. Emergency department approach to streaming during the COVID-19 pandemic
3. Emergency department/AMU patient admission criteria for COVID-19 and non-COVID-19 patients
4. Emergency department documentation for suspected COVID-19 patients
5. Radiology guidelines for COVID-19 patients
6. Same-day emergency care ‘must do/priorities’
7. Discharge of inpatients – reasons to reside in an acute hospital bed
Possible flowchart for ED attendances

Front door

Binary triage

Severity assessment

Ix/ Rx

Result

Action

Place

Attend ED

Respiratory illness

Not seriously ill (Sats > 94%/90% & NEWS<3)

Red flags

No red flags

Seriously ill i.e. Sats < 94% (<90% if COPD) And/or NEWS>=3

O₂ Rx to keep sats > 94% (90% if COPD) + restrict IV fluids

CXR +/- CT (See BSTI guideline)

Clinical assessment + CXR if clinically indicated

ED assessment

Streamed non ED services

CXR - Bilateral changes

CXR inconclusive Proceed to CT

CoVID disease

Non-CoVID disease

Treat as CoVID probable

Treat as Non CoVID disease

Advised to return if dyspnoea worsens

Manage accordingly

Cohorted ward

General Ward/ HDU

Home and self isolate

Usual place of residence

Reference guide for emergency medicine
Same-day emergency care should always be considered – admission may be required but is seldom the default option.
**ED/AMU coronavirus assessment tool**

**Clinical Assessment**
- History and vital signs.
- Particular note of Persistent new cough
- Fever > 37.8°C,
- Dyspnea
- Flu like illness

**Chest examination**
- Often normal.
- ‘Silent hypoxia’ is common

**Important co-morbidities**
- Hypertension
- Diabetes
- Respiratory disease
- Cardiovascular disease

**Green**
- NEWS2 < 3
- Sats ≥ 95%
- 40 steps desaturation test*
- No desaturation - home with advice

**Amber**
- NEWS = 3 or 4
- Sats 93% or 94% or desaturates on 40 step test*
- Senior review
- Admit or discharge with safety netting on basis of full assessment

**Red**
- Marked dyspnoea
- NEWS ≥ 5 or
- Signs of sepsis
- Sats ≤ 92%
- Admit for close monitoring
- Rx with O₂
- Rx intercurrent bacterial infection
- May need CPAP/IPPV

For **ALL admitted** patients Ix should include
- CXR
- FBC (n.b. leukocytopenia)
- CRP
- Troponin
Emergency department COVID-19 care record

Emergency Department COVID-19 Care Record

Patient name: [AFFIX LABEL] Date: Time of arrival: 
Name: Time: 
Vital signs: T: °C HR: /min BP: / mmHg RR: /min SpO2 % (O2) BMI mmol NEWS2 

Nursing assessment: Investigations: (Tick when done) 
- Blood panel
- Blood cultures
- CXR
- ABG/VBG
- ECG
- Viral swabs
- Pregnancy test
- CT/FOCUS

Medications: Medicine/Substance Reaction 

Examination: Heart sounds: 

Focused history: 
- Respiratory: Cough, dyspnea, rhonchi, wheeze
- Cardiovascular: Heart rate, rhythm, murmurs, edema
- Gastrointestinal: Abdominal pain, nausea, vomiting
- Renal: Hematuria, proteinuria, dysuria
- Neurologic: Headache, altered mental status, focal neurologic deficits
- Other:

History (Free text) Onset of symptoms: 

Immunosuppression/compromise Y/N Details: 

Primary Diagnosis: COVID-19 Likely □ Possible □ Unlikely □ 
Other (please specify): Secondary diagnoses/problems 1. 2. 3. 4. 5.
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Drug</th>
<th>Dosage</th>
<th>Route</th>
<th>Prescriber (sign/name)</th>
<th>Given by</th>
<th>Time</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Paracetamol</td>
<td>1 g</td>
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**Oxygen prescription**

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- **Oxygen saturation**: 80-92%
- **Other**:...%

- **Starting flow rate**:...L/min
- **Maximum flow rate**:...L/min
- **Signs (Name)**:...%

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**Results**

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<tr>
<th>Cases</th>
<th>Time</th>
<th>Artifical or natural</th>
<th>pH</th>
<th>pCO2 (kPa)</th>
<th>Leucocytes</th>
<th>ST</th>
<th>NO CO2 or Limits</th>
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- **Respiratory rate**:...rpm
- **SpO2**:...%
- **FiO2**:...%
- **PEEP or PEEP**:...

**A Sheet**

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**Senior Review**

- **Signed (Name)**:... Grade:...
- **Situation**: Likely diagnosis...

**Background**:...

**Assessment**:...

**Recommendation**: Time

- **Palliative treatment**:...°°°°
- **Oxygen and supportive treatment**:...°°°°
- **Ventilatory support (not suitable for escalation)**:...°°°°
- **Ventilatory support (consider intubation)**:...°°°°
- **Intubation and ventilation**:...°°°°

**Care escalation plan**: (check all appropriate boxes)

- **DNACPR**: Highest level of care appropriate...°°°°
- **Ward**:...°°°°
- **HDU**:...°°°°
- **ICU**:...°°°°

**Decision made by**:... (Name):... (Grade):... (Signed):... (Date and time)...°°°°

- **DNACPR**: Highest level of care appropriate...°°°°
- **Ward**:...°°°°
- **HDU**:...°°°°
- **ICU**:...°°°°

**Decision made by**:... (Name):... (Grade):... (Signed):... (Date and time)...°°°°

- resp/Equivalent form completed...°°°°
- Patient/relatives aware...Yes/No...

**Comorbidities**

<table>
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<tr>
<th>Comorbidities</th>
<th>Coded as Comorbidity score</th>
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<tr>
<td>1 each for...</td>
<td>2 each for...</td>
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- **Acute cardiac failure**:...% Heart failure%
- **Renal disease**:...% Diabetes with complication%
- **Dementia**:...% End-stage renal disease%
- **Chronic obstructive disease**:...% Diabetic nephropathy%
- **Hypertension**:...% Chronic liver disease%
- **Pneumonia**:...% Cirrhosis with liver disease%
- **Tuberculosis**:...% \[Enter specific comorbidity\]...% AIDS (excluding asymptomatic H1)%
- **Diabetes**:...% Metastatic solid tumour%
Radiology decision tool for patients with suspected COVID-19

- **Suspected COVID-19**
  - Clinical assessment and labs
    - < 50% have fever but > 80% have lymphopenia
    - Stable: Sats > 94%, NEWS < 3
      - If clinically required: CXR
    - If neither COVID-19 less likely

- **Seriously ill**
  - Sats < 94% or NEWS > 3
    - CXR

- **Non-COVID-19 disease**
  - Don’t isolate

- **Abnormal CXR**
  - Definite/Probable COVID-19 pattern**
    - Isolate
  - CT scan***
    - Pre-contrast + CTPA
    - Indeterminate
    - Clinico-radiological review
  - ? COVID-19
    - Self isolate with follow up

- **Normal CXR**
  - Home with advice
  - Self Isolate

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*94% unless known COPD in which case <90%*

**Unsuspected/unexpected cases may be incidentally discovered on CXR/CT at this stage; should be reviewed in the context of clinical suspicion as to likelihood of COVID-19.*

***Classic and indeterminate CTs should be scored either ‘mild’ or ‘moderate/severe’*

*Please upload all COVID-19 cases to BSTI database: https://www.bsti.org.uk/training-and-education/covid-19-bsti-imaging-database/*
### Same-day emergency care priorities

<table>
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<tr>
<th>Clinical specialty</th>
<th>Emergencies that do not require admission</th>
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| **Respiratory**          | Pneumonia/chronic obstructive pulmonary disease (COPD) without oxygen/NIV requirement  
                           | May need initial antibiotics and assessment of response (yet may not require an overnight stay)  
                           | Asthmatic with peak expiratory flow rate (PEFR) over 75% best or predicted  
                           | Pulmonary embolism without physiological compromise                                                                                                                |
| **Central nervous system** | Stroke with residual deficit not affecting activities of daily living  
                              | Transient ischemic attack  
                              | Cognitively impaired patient with minor head injury (GCS15) taking oral anticoagulation  
                              | Seizure patient who has recovered                                                                                                                                     |
| **Gastrointestinal**     | Haemodynamically stable gastrointestinal bleed  
                              | Gastroenteritis taking oral fluids with normal/minimally changed urea and electrolytes                                                                                     |
| **Cardiovascular**       | New non-ventricular dysrhythmia adequately rate controlled  
                              | Acute coronary syndrome without high sensitivity troponin elevation at 6 hours  
                              | Syncope without electrocardiogram (ECG) conduction defect, rhythm disturbance or hypotension                                                                           |
| **Musculoskeletal**      | 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                                                                                                                                 |
| **Bacterial infection**  | National Early Warning Score (NEWS) 3 or less with clinical decision for oral antibiotic or same-day emergency care intravenous                                                                                                         |
| **Toxicology**           | Overdose patients with non-toxic levels or asymptomatic 6 to 12 hours after ingestion (guided by ToxBase)                                                                                                                                 |
| **Other**                | Patient on end-of-life pathway or for whom ceiling of care does not require hospitalisation                                                                                                                                                 |
Reason to reside – a checklist for acute hospital beds

**Physiology**

- **NEWS2 ≥ 3**

**Therapy**

- Oxygen therapy / NIV
- Intravenous fluids
- IV medication > b.d.

**Recovery**

- Lower limb surgery within 48hrs
- Thorax-abdominal/pelvic surgery with 72 hrs
- An invasive procedure within 24hrs

**Function**

- Diminished level of consciousness
  - Where recovery realistic
- Acute impairment
  - In excess of home/community care provision
- Last hours of life
  - All admitted patients should have a TEP

Every patient on every general ward should be reviewed on a twice daily board round using the checklist above. If the answer to each question is ‘No’, active consideration for discharge to a less acute setting must be made.

**Update information**

November 2020: hyperlinks in this document were updated when the suite of guidance was moved from NHS England to NICE.

22 April 2020: minor updates, version 5 published.