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## Learning from the first phase of the Coronavirus Pandemic

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### Introduction and scope

The first phase of the Coronavirus pandemic required the emergency care system to undergo rapid and massive changes. Coronavirus will continue to circulate for the foreseeable future, and it is worth considering which changes in emergency department organisation and care have been effective and which have not. This narrative document is based on the experience of senior emergency physicians working from a variety of settings, with varying exposure to Coronavirus cases. This document makes recommendations in advance of future outbreaks to assist future planning.

Immediately prior to the pandemic, UK emergency departments were regularly overcrowded with delays to ambulance patient handovers and the worst recorded performance against the four-hour access standard. Whilst most departments had some contingency for low numbers of infectious cases, and all had plans for seasonal influenza, few were equipped to deal with a pandemic in terms of layout or capacity.

The Coronavirus is mainly spread by droplet transmission, there is evidence that people can spread the disease asymptotically, either before they become unwell or if they fail to demonstrate any symptoms. Staff to patient, and patient to staff, transmission appears to be rare. Patient to patient, and staff to staff transmission is more common. This is highly relevant in the context of the crowded ED.

This document is designed to summarise the lessons learned so far. The evidence supporting this is largely consensus and experience based. This document explicitly does not examine why decisions were made or who was or is accountable for decisions.

### Structure

The pandemic quickly illustrated that most departments were too small and had insufficient layout or sideroom capacity to isolate patients with suspected COVID-19, even fewer departments had negative pressure ventilation rooms. There were a number of quick and imaginative building or reconfiguration solutions to improve isolation capacity, often involving an increase in the emergency department's footprint. Most departments were reconfigured into COVID-19 "possible" and COVID-19 "unlikely" areas, but this also reduced flexibility. As community prevalence

dropped, a number of departments again altered their configurations back to nearer pre-pandemic levels.

Anecdotally many departments also moved minor injury and illness services off site or to other areas of the hospital, where this was not already in place.

Some outbreaks in hospitals have occurred related to the use of shared offices and to communal staff rooms. Communal and shared areas are often too small for the numbers of staff using them and have limited access to up to date changing and showering facilities.

The pandemic has helped bring into a sharper focus the need for ED estate to match the demand and presentations we experience.

### **Recommendations**

Emergency departments need to be able to quickly segregate, or have a phased, appropriate, increase in, their estate if there is a surge of suspected cases. In the longer term the design of new facilities should take into account lessons from the pandemic around infection control, in particular the need for side rooms, negative pressure room capacity, resuscitation capacity, and the need for adequate staff facilities. Appropriate toilet facilities for patients being looked after in side rooms with possible infection should also be considered.

Consider moving some services to alternative locations away from the ED. This however has the potential to drive a change in the nature of EM away from minor injury and illness, which may not be consistent with the currently accepted brand or the ability to staff and govern such locations.

All hospitals need to minimise staff to staff transmission by providing safe offices and communal break areas adhering to optimal infection prevention and control (IPC) measures. The ability of staff to work from home where possible should be maximised.

### **Process**

The early stages of the pandemic were associated with a drop in attendances. The majority of people who stayed away were low acuity cases and those referred by their GP, However, there were undoubtedly some patients with significant illnesses who avoided seeking medical attention. In primary care and hospital outpatient departments, there was a paradigm shift in the amount of clinical work that could be done online. There was less of a focus on this within EM with the primary focus being managing all those who attended in the acute phase of the pandemic. Segregated flows have in many departments required the adoption of new processes. There was enthusiastic adoption of enhanced support to the ED and of measures designed to improve flow through hospitals, such as streaming direct to acute surgical and medical assessment units. Many ED's lost the use of their CDUs with mixed satisfaction. Anecdotally many such changes have been deemed unsustainable and pre-COVID arrangements were reinstated. As the second phase of the epidemic gets underway it is clear that the original response was only possible because other healthcare work was stopped, freeing up resource.

### **Recommendations**

There should be a written policy with clear indicators of when hospital processes designed to support EM function, such as streaming direct to specialties, are

reinstated to ensure rapid hospital-wide action in response to a surge in patient attendances.

In the longer term many of the process changes designed to improve flow should be adopted as standard practice. These might include; access to specialist advice, streaming direct to specialities, access to non-admission based pathways and SDEC, access direct from the community into specialty clinic or ward, bypassing the ED completely so the patient gets to the "right place, first time". There also needs to be implementation of the raft of inpatient process changes designed to improve flow and facilitate discharge.

The potential for virtual consultation in Emergency Medicine has not been fully explored within the UK but should be considered.

There should be a trusted mechanism to communicate process changes within an emergency department internally and to the public.

### **Infection Prevention and Control (IPC)**

This has been possibly the most important element of the outbreak response. Crowding and patients spending longer in the ED, compounded by fatigue leading to complacency in some departments, is risking IPC measures slipping. The College has recently published a guide to infection prevention and control. These are simple and effective measures that will cut the risk of transmission among staff. It is vital that all healthcare workers should rigidly follow these measures. There is significant potential for a concurrent seasonal flu and coronavirus outbreak over the coming winter with a cumulative mortality effect.

### **Recommendations**

All departments should adhere to the RCEM IPC guideline.

Fatigue and complacency should be recognised and refresher training, spot checks and audits performed within a supportive environment and alongside wellbeing support (see wellbeing section below)

Clinical Quality Leads should act on the results of the RCEM Infection Control Quality Improvement Project

Infection prevention and control is everyone's responsibility, measures to improve IPC within the ED should also be advocated for and monitored at Trust level

Staff should be strongly encouraged to have the flu vaccine where it is offered, and a COVID vaccination if it becomes available and is shown to be both safe and effective

Clinical leads and Covid leads in the ED should ensure that they are up to date with PHE guidance on infection control and PPE measures

### **Personal Protective Equipment (PPE)**

The provision of PPE for all health and care staff has been a significant challenge. In particular FFP3 mask provision has been variable, requiring multiple fit testing approaches and episodes, as suppliers change. There have also been challenges ensuring that staff are properly trained in the use of PPE.

### **Recommendations**

Access to adequate PPE is a fundamental responsibility of organisations

Trusts should be provided with a consistent type of FFP3 mask or equivalent (eg hoods) to minimise fit testing

Staff should be regularly trained in correct PPE procedures

Staff compliance with PPE should be regularly audited.

### **Staffing and redeployment**

Some, but not all, understaffed emergency departments had staff temporarily redeployed to them. emergency departments are well versed at inducting new staff; however, deployed staff may commence at differing times, are of mixed experience and arrive during a pressured time.

The alarming projected levels of staff sickness never materialised, though advice around self-isolating continues to stress fragile rotas. Many rotas were adjusted to ensure equal balance between appropriate demand capacity matching 24 hours a day and enough time off for rest and recuperation, particularly as the work was, and remains, mentally and physically challenging.

Shielding clinicians made themselves invaluable by undertaking non-clinical tasks. Many departments rapidly and successfully implemented remote working, with staff successfully completing non-patient facing work from home. However, as the pandemic has persisted it is clear that there is a need to find work which is sustainable in the long term for those undertaking it.

### **Recommendations**

There should be an ED and hospital wide plan for redeployment of staff with clear trigger points for initiation

Clinical leads should ensure that there is capacity for a rapid induction programme for new staff of mixed experience.

Rotas should reflect demand and allow for adequate time off between blocks of shifts

Alternative deployment for vulnerable staff is possible, , with due consideration of both sustainability and tolerability.

### **Ethical and Moral Concerns**

Covid-19 is a threat to personal safety and fear of the disease experienced by health care workers should not be underestimated. This has forced a change in the 'hippocratic oath' mindset of immediately attending to a patient in need, to firstly considering personal risk and donning PPE. This may create uncomfortable moral and ethical emotions for clinicians and has impacts on mental health.

The initial concern in availability of intensive care beds, non-invasive ventilation machines, and oxygen supply has forced clinicians to consider difficult decisions on rationing of care.

Departments have had to limit the number of clinicians that attend to a patient, to reduce nosocomial spread. The balance between staff capability versus training need has been required to be considered.

It is now clear that certain groups are at higher risk (such as people from Black, Asian, and minority ethnic backgrounds, those who are pregnant, obese, older, and immunocompromised) and need to be shielded. Although non-patient facing tasks have been allocated to these individuals with great effect, the moral frustration experienced should not be ignored.

### **Recommendations**

It is key that PPE is donned to protect the health care worker, prior to attending to the patient, even if in cardiac arrest.

Open discussion about training needs and service provision should be undertaken  
Delegate roles at the start of a shift e.g. members of the cardiac arrest team

### **Staff Wellbeing**

The pandemic has been a stressful and uncertain time for many emergency medicine staff. Staff have had to make difficult personal and professional decisions (see ethics section).

Departments quickly realised the need to have wellbeing support for members of staff. Levels of stress were higher in people who were shielding. Additionally, the effects of redeployment and delayed training on morale may be significant.

### **Recommendations**

Departmental leads should create a supportive, open and inclusive environment for the whole team without fear of speaking up about health concerns.

Leaders should role model well-being strategies

Staff should be familiar with the rules for self-isolating

The needs and challenges of shielding staff should be explicitly considered and their value to the department should be recognized

Wellbeing activities within the department and across the Trust are essential

Educational and pastoral supervision support and meetings should be adhered to and strengthened

Clinical leads should make preparations for if a staff member dies from COVID<sup>[AB2]</sup>

### **Education and Training**

Education of staff is critically important in delivering new ways of working and communicating rapid process changes. Staff who are being educated feel more looked after and this is one way to build morale and minimise work related stress. Most classroom education can be moved on-line, though there are certain psychomotor skills that will require face to teaching.

The situation was and still is rapidly evolving. There was an urgent need for all staff, clinicians and nurses to be well informed and trained on the recurrently updated correct procedures and clinical care.

### **Recommendations**

Regular multidisciplinary departmental training on guidelines, PPE etc – ideally with some simulation based learning. A rapid but thorough induction programme should be in place (see staff redeployment section)

Junior doctor and clinician teaching programs and activities such as QIP, audit should be maintained and only cancelled due to service pressures as a last resort.

CPD time and personal professional development should be maintained and protected

Online and virtual platforms should be accessible to all

Educational supervision for trainees, junior doctors (whether shielding or otherwise) and medical students should be maintained. Reference to relevant designated bodies should be undertaken

### **Testing**

In the early phases of the pandemic, patients were sent to the emergency department by NHS call handling services for Coronavirus swabbing. This created additional and avoidable risk for patients and staff by attracting potentially infectious cases to hospitals. Long waits for test results were reported as a reason to delay admission into hospital. Subsequently, the risk to organisations of staffing shortages due to delays in testing both staff and their families has become apparent

### **Recommendations**

Systems to prioritise rapid testing for staff and their families are crucial in maintaining resilience

Asymptomatic healthcare worker testing may become a useful tool to enable staff to return to work more rapidly

Swabbing and testing facilities need to be available at sites remote from acute hospitals

Patients who need admission to hospital should not be delayed waiting for swab results.

Where validated POC testing is available it should be used to aid inpatient pathway decision making and for vulnerable populations, such as the homeless.

### **Technology**

Use of technology for communication and education has soared over the crisis. There has been a need to maintain social distancing and to communicate fast with a high capture rate either with the team or hospital operations.

Some departments have effectively used technology to aid triage and screening.

### **Recommendations**

Consider use of innovative online and information and knowledge sharing platforms

Ensure departmental and staff access to adequate IT equipment, Wi Fi and video conferencing capabilities

## **Research**

The ability of research networks to deliver rapid results about which treatments are effective and how to best triage patients has been a national success that should be celebrated. Future work will further quickly identify which point of care tests are reliable.

## **Recommendation**

Emergency departments should aim to make recruitment to multi-centre research studies part of routine clinical business. A Consultant should be nominated as the research lead with adequate time for the role who is expected to implement multi-centre research studies and evidence -based care.

## **Internal Relationships: Hospital wide response**

Crowding has been a challenge in our EDs for some time now. It is vital that we do not return to this in the coming winter. The flow that was achieved over the first wave was through the whole hospital system operating together and cohesively. Relationships and collaborations between specialties were built like never before. As usual business is resumed, these processes and links risk breaking down.

## **Recommendations**

Escalation and crowding policies and protocols should be developed in collaboration with your Trust managers and clinicians to ensure hospital-wide buy in and action when trigger points are met

The whole hospital or Trust should act as one with one goal which is able to be challenged but also supportive

## **External Relationships**

Nationally the frontline clinical services have worked together as part of joint pandemic systems at a number of levels. Primary care systems have been engaged through their CCG, devolved nation equivalents and also through national systems

The ambulance services have adopted specific clinical and operational changes as part of pandemic changes and have managed more patients at home usually because the patients were most appropriately managed out of hospital, but sometimes when the patient declined transfer to an ED. There has been improved communication with ambulance service leads regionally and nationally in order to support the management of more patients at home, diversion to other same day clinical pathways within acute trusts and also improved arrival and handover systems in EDs.

National innovations to reduce low acuity patients waiting in crowded waiting rooms and direct patients to the correct care first such as 'Think 111', and the clinical advisory service, are being piloted and rolled out in some areas. The effectiveness of

the scheme and effects on certain populations, particularly the vulnerable, are yet to be fully quantified..

Whilst the impact of the use of technology to reduce face to face consultations in primary care has been significant with many benefits for patients, there is also a need to monitor the impact on the ED. There is a potential for the reduced face to face contact to result in increased ED attendances for a number of reasons, for example, patient frustration, altered clinician risk threshold due to the changed nature of the consultation.

### **Recommendations**

ED nominated leads or lead clinicians should engage in regional RCEM groups which should include an invitation to regional NHS ambulance service medical directors and clinical leads, to improve clinical pathways to and bypassing EDs.

Departments should engage with national innovation and advocacy work.

Disclaimer

The recommendations are for staff working in emergency departments. The College recognises that departments vary widely and that a recommendation may not be appropriate in all settings.