

Delivering Community Emergency Medicine during the COVID-19 pandemic: the Physician Response Unit

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ABSTRACT

The COVID-19 pandemic has presented significant challenges to services providing emergency care, in both the community and hospital setting. The Physician Response Unit (PRU) is a Community Emergency Medicine model, working closely with community, hospital and pre-hospital services. In response to the pandemic, the PRU has been able to rapidly introduce novel pathways designed to support local emergency departments (EDs) and local emergency patients. The pathways are (1) supporting discharge from acute medical and older people's services wards into the community; (2) supporting acute oncology services; (3) supporting EDs; (4) supporting palliative care services. Establishing these pathways have facilitated a number of vulnerable patients to access patient-focussed and holistic definitive emergency care. The pathways have also allowed EDs to safely discharge patients to the community, and also mitigate some of the problems associated with trying to maintain isolation for vulnerable patients within the ED. Community Emergency Medicine models are able to reduce ED attendances and hospital admissions, and hence risk of crowding, as well as reducing nosocomial risks for patients who can have high-quality emergency care brought to them. This model may also provide various alternative solutions in the delivery of safe emergency care in the postpandemic healthcare landscape.

BACKGROUND

The Physician Response Unit (PRU) is a model of emergency care that provides an enhanced medical response to 999 calls. Established in 2001, the service is a collaboration between Barts Health National Health Service (NHS) Trust, London's Air Ambulance charity and London Ambulance Service (LAS). It operates in North East London, and works alongside

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emergency, community and primary care providers. A more detailed description of the service has been reported previously.¹ The COVID-19 pandemic has presented significant challenges for the emergency care sector.²⁻⁴ The PRU has responded to these and developed several specific patient-focused pathways to support local emergency patients. We use the term 'pathway' in the sense of a care pathway. This brief report will outline four pathways that have been rapidly implemented in response to COVID-19. The pathways described were developed to support groups of patients that were identified at being significantly affected by the pandemic; namely the elderly/frail, oncology patients and those receiving palliative care.

PATHWAYS TO SUPPORT EMERGENCY CARE

Pathway 1: supporting discharge from acute medical and older people's services wards into the community

As the COVID-19 pandemic developed, clinicians have been required to familiarise themselves with new clinical syndromes associated with SARS-CoV-2 infection. There have been challenges identifying patients that can be safely discharged versus those requiring inpatient care. The PRU facilitated a safety net for patients discharged from hospital through the provision of a clinical review follow-up service. This service was implemented for a broad range of patients, not only for those with symptoms of COVID-19 deemed safe for a clinically supported discharge. Patients were managed through this pathway by prior consultant discussion and review within a prespecified timeframe.

Pathway 2: supporting acute oncology services

Acute oncology patients represent a high-risk clinical group advised to 'shield' during the pandemic. Normally, patients access acute oncology services through an emergency hotline, and may be advised

to attend the emergency department (ED). Attending the ED is undesirable for immunocompromised patients due to the increased potential of exposure to coronavirus. The PRU established a pathway in which an emergency physician can attend the patient's home, wearing appropriate personal protective equipment, to assess and treat the patient. Point of care analysis, using the Abbott i-STAT, allows the team to obtain a blood gas and biochemistry profile. If a full blood count is required they are able to take blood samples, including cultures, and send them to the laboratory at a Barts Health hospital, with subsequent follow-up as required. The team are able to discuss patients with acute oncology clinicians, and deliver community-based care where appropriate.

Pathway 3: supporting EDs

This pathway was developed to support clinical decision-making around admission and safe discharge from the ED. An on-call PRU consultant rota was established, allowing consultant guidance to support senior ED clinicians wishing to safely discharge patients from the ED into the community. Three tiers of community discharge were created. Tier 1; community home monitoring with a community pack provided to patients containing SpO₂ and temperature monitoring, plus daily primary-care lead clinician telemedicine appointments. Tier 2; a community nursing team to provide face-to-face assessment and observations. Tier 3; a PRU visit to provide a senior medical review with repeat diagnostic tests as required.

Both Pathways 1 and 3 were made possible with the introduction of a secure mobile phone application, Pando. Pando is a communication tool that allows confidential patient information to be shared securely across a clinical team. Pando is available to NHS staff at no cost and can be found in the NHS Apps Library.

Pathway 4: supporting palliative care services

Under normal circumstances, palliative care patients can access a hotline to support their emergent end-of-life (EoL) needs. When their needs cannot be met by remote or face-to-face palliative care services, they may require ambulance conveyance to hospital for ED review. The COVID-19 pandemic response has identified a cohort of patients, in particular, the elderly and comorbid, for whom appropriate advanced care planning

discussions were required but had not been performed.

The pathway enabled assessment by the PRU for patients that were acutely unwell, those likely to be dying, and those already known to palliative care services but requiring face-to-face emergency review. The normal care for these patients invariably is provided in the inpatient setting as access to EoL decision-making and care structures is unavailable in the acute emergency setting. Although hospital admission is appropriate for some, for many patients a comfortable death at home is preferable, particularly during the pandemic when visitation and relative contact was strictly reduced. The success of these endeavours to provide community EoL care is frequently dependent on the availability of EoL medications, and access to the services to subsequently administer them. The PRU established an ability to both prescribe these medications in the community and also to provide access to community nursing teams to deliver subcutaneous or intravenous medications where required.

DISCUSSION

These pathways are novel for several reasons. The speed in which they were introduced allowed patient-focused care to be delivered very early on in the pandemic response. These pathways have broken down a number of the traditional barriers to delivery of community-based emergency care, and have demonstrated agile collaboration between various emergency care disciplines. This has allowed EDs to safely discharge patients to the community and also mitigate some of the problems associated with trying to maintain isolation for vulnerable patients

within the ED. In supporting the LAS, the PRU has also been able to manage some of the 'usual' workload that has otherwise been reduced in EDs during the pandemic. The governance structure of the PRU has allowed detailed data capture and weekly death and disability meetings to review cases and ensure safe clinical practice.

Ultimately a number of vulnerable patients have been able to access patient-focused and holistic definitive emergency care. This has been delivered in spite of significant challenges facing EDs and ambulance services, and we believe this model can be replicated elsewhere. There are demonstrable benefits for a broad range of specific patient groups, and this model could provide various alternative solutions in the delivery of safe emergency care in the postpandemic healthcare landscape. Community Emergency Medicine models are able to contribute to reducing ED attendances and hence risk of crowding, as well as reducing nosocomial risks of hospital visits for patients who can have high-quality emergency care brought to them.

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