



Research summary October 2018

# Rethinking acute medical care in smaller hospitals

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## About the report

Across England, millions of people rely on smaller hospitals as their first recourse in an emergency, their first source of expertise when conditions worsen, and their first choice for planned operations. But these hospitals are facing increasing challenges in delivering effective acute medical services in the context of growing patient numbers, an increasingly complex mix of cases arriving for care, workforce shortages, changing societal expectations and severe restrictions in funding growth.

The Nuffield Trust was asked by NHS England to develop a better understanding of the problems associated with acute medicine in smaller hospitals and to find possible solutions. This summary accompanies a full report which brings together what we have learnt from a review of the literature, discussions with experts from a number of health systems in other countries and interviews with senior clinicians and managers in England, Scotland and Wales, many of whom have already developed partial solutions to the problems associated with smaller and rural hospitals. We also draw on insights from other ongoing research at the Nuffield Trust.

The report is intended to be a stimulus for local innovation and to dissuade the thought that the reconfiguration of services is the only solution to staffing and other challenges posed by running smaller hospitals in an increasingly complex health care landscape.

The full report can be accessed at: [www.nuffieldtrust.org.uk/research/rethinking-acute-medical-care-in-smaller-hospitals](http://www.nuffieldtrust.org.uk/research/rethinking-acute-medical-care-in-smaller-hospitals)

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### Department of Health and Social Care disclaimer

The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health and Social Care.

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# Executive summary

There is an urgent need to create sustainable models for acute medicine in smaller hospitals. Too often, the knee-jerk reaction has been to try to close or downgrade these services rather than to develop solutions that better suit the needs of the local community. As a result, attempts to close these services have tended to fail, while the problems they were trying to address remain.

The Nuffield Trust was asked by NHS England to work with a group of clinical leaders, Royal College representatives and other experts to develop a better understanding of the problems associated with acute medicine in smaller hospitals and to find possible solutions. We reviewed the literature, looked at local and international examples and drew on our own extensive research in this area.

We mainly focus on hospitals serving 140,000 to 300,000 people – in particular those that are geographically isolated. These hospitals typically have an average of 30 to 40 emergency admissions of adult medical cases a day. By international standards, this type of hospital would not be regarded as small. Some of the issues the hospitals face are specific to this type of service, while others reflect more general problems in the way that emergency and acute medicine is organised in the United Kingdom.

## The current position

There is no single, agreed model for acute medicine. Furthermore, there is very little good evaluation of the different approaches to medical assessment and structuring used in these systems. Our site visits and interviews revealed such a wide variety of approaches and types of staffing models that imposing a single model – even if there was evidence of superior performance – would be near impossible.

Many hospitals are using highly complex and fragmented models, often with unhelpful divisions between acute medical and other, related services – particularly the emergency department (ED) and critical care. Having several different services that ‘carve out’ sub-groups of patients into increasingly

specialist care may work for large hospitals, but for smaller units it fragments scarce staff, spreading them more thinly.

Recruitment to smaller organisations has always been difficult, but most smaller hospitals are now completely dependent on high levels of locum staffing. Of the 48 sites studied, we found nine with more than half the acute physician posts occupied by locums. Some 80% of the sites found it difficult to ensure junior doctor cover for emergency work. The level of support being received from larger hospitals is very variable and smaller hospitals appear to be at the bottom of the pecking order for the allocation of trainees.

The tendency for some specialists to opt out of the general medical rota has increased staffing problems and has increased the pressures on the remaining staff. There is limited evidence that the benefits outweigh the problems that this can create, and more imaginative networked solutions have been adopted in some places.

These problems with staffing are further exacerbated by the imposition of minimum staffing levels, specific rota designs and other standards by external regulators. In many cases these rules are based on guidance developed for larger (often urban) centres, and there is limited evidence that these standards translate into improved outcomes. Smaller and remote hospitals need to be free to design the acute medical service in a less rigid way.

The fragmented and complex systems that have emerged for EDs, acute medical units (AMUs), frailty units and a variety of other internal systems are often hard for hospitals to coordinate. Moving patients between units, and the handovers of responsibility that accompany this, become inefficient. Work is duplicated, reducing the overall resilience of the system and creating potential for delays and even harm.

# Improving existing acute medical services: practical solutions

As many services have grown up over time, the staffing model, the way that care is organised and the working patterns of staff have not kept pace with changes in demand.

The development of a suitable model for acute medicine should start with an analysis of the actual pattern of need in the local area and should recognise the unique starting point in each case. However, some general components of an improved model of acute medical care can still be identified from our research.

**Establish a slick process at the ‘front door’ of the hospital** – Patients should rapidly be assessed by a senior decision-maker in the ED, with clinical investigations and a plan for onward care carried out and agreed as soon as possible. To make the best use of limited staffing resources and to reduce the number of times a patient is moved, where possible patients should remain in the initial assessment area until a diagnosis has been established or the patient is clinically stable enough for transfer. Patients with a clear need for specialist care would benefit from going directly to the appropriate specialist ward.

Patients whose need for specialist care remains undecided after an initial period of assessment and patients who require a concentration of resources (such as rapid access to diagnostics, higher levels of monitoring or greater intensity of multidisciplinary input) would benefit from being grouped together. Many of these patients are likely to stay in hospital for less than two days. For patients staying longer, disruptions to continuity of care should be minimised. Decisions to change the unit the patient is cared for in should be based on patient need rather than time constraints.

**Create a single ‘front door’ team** – In smaller hospitals that are struggling with limited numbers of consultant staff, the solution may be to pool clinician capacity and adopt a more inter-disciplinary approach to the process at the front of the hospital. For example, this could mean merging ‘front door’ assessment in acute medicine, ED and/or geriatrics to provide medical assessment cover during extended hours, or it could mean a merger of the ED, intensive care unit or trauma (with or without acute medicine) rosters to cover emergencies out of hours.

**Remove ‘carve out’** – Smaller organisations do not have enough staff to provide identical patient assessments in several units in the hospital (the ED, the AMU, the frailty unit and ambulatory emergency care), but they can still provide ambulatory care processes from within the ED and/or the AMU. For similar reasons it may be better not to create a separate frailty unit: many remote hospitals have such a high proportion of admissions of frail patients that it does not make sense to separate these patients out.

**Create clear plans for dealing with high-risk patients** – Smaller hospitals should continue to provide 24/7 interventional services wherever possible. Where they cannot, mixed models, a combination of ‘traditional’ on-call services during extended hours and ‘treat and transfer’ overnight (~midnight to 8am) could be considered. Where general surgery cannot be sustained at all or during out-of-hours periods, patients could be initially managed and investigated by a senior clinician, supported by ready access to CT and remote specialist advice and transferred as quickly as possible if necessary. Networked rotas for sending patients with gastrointestinal bleeds already operate in some parts of the country.

**Specialist advice through new on-call arrangements** – If more of a distinction is made between types of on-call arrangements – so that clinicians can be on call frequently, but sustainably (because the volume of calls and visits to hospital may be very low), this would create more flexibility. Mechanisms are needed to support consultants, especially subspecialists and those required for urgent interventions, to participate in more than one on-call or on-take rota.

**Create continuity of care** – Continuity of care, particularly at consultant level, is integral to the delivery of high quality care and maintaining patient flow. However, there is no research evidence on what the ideal model for this should be and we propose two different approaches to this depending on the type of staff the hospital currently has. One suggests general wards with specialist input; the other directs appropriate patients to specialist wards as soon as possible, regardless of their expected length of stay.

**Develop an innovative approach to staffing** – Improve the way hospitals work at night by agreeing the optimal time for changeover to night shifts. Provide robust cover at night with greater concentration of senior staff. Further develop the physician’s associate and advanced practitioner roles to provide cover and allocate more senior trainees to smaller organisations.

**Invest in diagnostics and other support services** – In addition to 24/7 provision of standard sets of emergency pathology tests, there also needs to be 24/7 access to CT and 7-day in-hours availability of MRI. All acute medical and surgical services require intensive care and support from intensivists for everyday emergency decision-making, but also strategic oversight to ensure that the appropriate systems are in place – particularly to recognise and respond to deteriorating patients, develop transfer systems, etc. International standards allow other appropriately accredited specialists (anaesthetists, physicians, etc) to support out-of-hours cover. An ‘electronic’ intensive care unit, where nursing and medical staff are supported by electronic monitoring, with real-time input delivered remotely by an intensivist, may also be a useful adjunct to this.

**Create effective networks** – Acute medical services need to be part of wider networks that function well, have strong governance and that can enforce decisions. A control-centre model, where the responsibility for finding beds and specialist advice is managed centrally – allowing a ‘send and call’ model to operate – would solve some of the current problems.

**Community and primary care** – Small hospitals benefit from closer working between community and primary care services. There are limits to how far ambulance services can preselect their patients, but there is more to do to reduce the number of people being taken to small hospitals. Local control room systems that link the hospital, community, ambulance, social care and voluntary services and that can rapidly mobilise support and provide a link to senior clinical advice could help to support this.

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## Core principles for redesigning acute medicine in smaller hospitals

1. **There needs to be a shift from the ‘all or nothing’ understanding of acute service provision to one that is more ‘modular’,** with hospitals differentiated by their capacity to undertake the various elements of a care pathway, from stabilisation to rehabilitation. This may include differences between in-hours and out-of-hours models of care.
  2. **Small hospitals need to be part of a wider system, with strong links to local services and support from other hospitals –** in particular specialist centres. This needs to be formalised and much more reliable than is often the case at present.
  3. **Smaller hospitals will need to be able to deal with all types of emergency medical cases.** Systems and processes should be designed for the ‘usual’, but plan and allow for the unusual. All acute hospitals need to have the capability to deal safely, quickly and expertly with all patients for at least the first 2 to 3 hours of their care. Advice from main centres needs to be provided rapidly and effectively to support this.
  4. **Working arrangements should be inter-disciplinary, team-based and calibrated at ‘whole-hospital level’ to meet the needs of the local population.** Care within smaller hospitals needs to shift from the current models, which are arranged around professional boundaries, to models built around skills, expertise and experience.
  5. **The benefits of specialist services and staff should be set against the increased costs, fragmentation and threats to viability that can result** and that can reduce hospitals’ ability to effectively deal with multi-morbid patients whose severity and urgency of need has not yet been determined. Policy and training models need to recognise the importance of generalist skills. Proposals that allow further opting out of acute medical on-call care in small hospitals require very careful thought.
  6. **Systems and processes in hospitals should be organised, as far as possible, with the intention of delivering the appropriate care to the patient as quickly as possible:** ‘doing today’s work today’.
  7. **Each step in a patient’s care pathway should add value.** Movement along the pathway should be determined by need, rather than artificial time constraints. Many current models duplicate work (for example, by clerking a patient in more than one unit) and have unnecessary delays in obtaining a diagnosis. Small hospitals need a model that removes all duplication and, where possible, ensures that critical tests are done rapidly to allow patients to be put on the most suitable pathway.
  8. **Improved continuity of care should be a key objective.** This will improve the flow of patients through the hospital and reduce length of stay, as well as reducing staff workload and improving job satisfaction.
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## Recommendations for national action

- NHS England and NHS Improvement's regional bodies should create the types of cross-system networks we found in systems in Australia, where a 'send and call' model operates and where a regional control function locates the capacity to deal with urgent transfers.
- Health Education England and other regulators need to improve how they recognise and respond to the needs of smaller hospitals, including by
  - i. taking forward their report on *Training in Smaller Places*
  - ii. developing new policies on how trainees are allocated to smaller hospitals
  - iii. implementing broad-based training and specialist training for rural settings that equip emergency medicine, acute medicine and other physicians with a wider range of skills for the particular demands of rural medicine.

Health Education England and local systems also need to urgently increase support for the development of physician's associates and other types of advanced practitioners.

- Several approaches have been successfully introduced in other countries that appear to support the development and maintenance of a medical workforce with a broad skill set. These include a more rigorous professional peer review process, and 'credentialing', through which clinicians gain approval and training support to expand their scope of practice and ensure skills are maintained. The General Medical Council (GMC) has explored the introduction of credentialing, but this has stalled in the face of concerns raised by the profession. The GMC's original proposals should be reviewed to ensure that they align to the needs of smaller organisations. Smaller organisations may be suitable 'test beds' for the introduction of credentialing.
- New contractual models for the on-call rota are required that reflect the intensity and frequency of shifts more appropriately than current methods. NHS Employers and professional bodies should allow more flexibility regarding non-standard arrangements to support very small or remote hospitals and the networks in which they sit.

- All of the international examples we have examined recognise that providing care in rural and remote locations incurs extra costs for ambulance services and hospitals. These costs arise from both sub-optimal economic scaling of services and the basic cost of travel. NHS England and NHS Improvement should examine whether there should be a financial premium for small-scale or remote sites.
- Regulators and clinical senates should take a more critical and innovative approach to the application of standards. At present many standards have a relatively low level of evidence underpinning them. Furthermore, these standards have generally been developed for large hospitals and carry an assumption that hospitals are close to each other, which compounds the problem for the cases discussed here.
- NHS Improvement and other national bodies need to invest in change management to create new models, build functional networks and allow space and permission to experiment.

Read the full report:

[www.nuffieldtrust.org.uk/research/rethinking-acute-medical-care-in-smaller-hospitals](http://www.nuffieldtrust.org.uk/research/rethinking-acute-medical-care-in-smaller-hospitals)

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