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Arch. Dis. Child. 2008;93:194-195; originally published online 11 Sep 2007;
doi:10.1136/adc.2007.122283

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Children in UK emergency departments

Ffion Davies

Healthcare provision for acutely unwell or injured children in the UK is changing fast. Paediatric emergency medicine (PEM) is now a recognised subspeciality for certification of completion of training for consultants in either paediatrics or emergency medicine. Facilities for children in emergency departments (EDs) have improved since 2000 (following central government funding). At the same time the case mix of children attending EDs is changing, with less serious illness or injury and more children with minor, self-limiting conditions being brought by parents and carers who find the lottery of primary care arrangements confusing, inaccessible or inadequate (particularly out of hours).

Add to this the political changes which include the 4 h emergency target, Modernising Medical Careers, the European Working Time Directive effects on doctors' rotas, continuing reconfiguration of services towards centralisation of specialist services (which affects EDs and paediatric units), and Payment by Results tariffs which can result in some perverse incentives around acute admissions to hospital, and we see a changing landscape.

As a subspeciality with an ED-based infrastructure, PEM does not exist in Europe. The USA is 10 or so years ahead of the UK in developing PEM medical and nursing training, while Canada and Australia are roughly on a par with the UK. There are interesting differences in medical training, but also a large degree of overlap in both training and practice in these four countries.¹

In 1999 a set of standards was published by an intercollegiate working party under the auspices of the Royal College of Paediatrics and Child Health (RCPCH). The document *Accident and emergency services for children*,² often known as "the red book", contained recommendations which were practical and feasible. However, a survey in 2005 showed that many EDs were still falling far short of the recommended standards.³ In 2007 the Healthcare Commission Improvement

Review into Services for Children in Hospital⁴ revealed an alarming lack both of provision of staff with adequate life-support skills out of hours, and of rapid availability of consultants for emergencies out of hours.

In April 2007 a second edition of professional recommendations was published, renamed *Services for children in emergency departments*⁵ (in line with the change of name of the speciality accident and emergency to emergency medicine). It now includes additional recommendations for sudden unexpected death in infancy, major incidents, information technology, and research and audit.

So what is currently good or bad about the care of children in UK EDs? We can consider the following: facilities, nursing and medical skills, and the effects of changes in government policy in terms of targets and organisation in healthcare delivery. Government policy issues relate mainly to England; a set of recommendations specific to Scotland has also been published in the last year.⁶ The two documents have much in common.

Facilities for children in EDs have undoubtedly improved, with children often protected from the sights and sounds of the main ED, with its confused, elderly patients or disturbed patients with mental health problems. Segregation may range from a small area with a couple of toys offset from the main waiting room, to a self-contained children's ED (within or separate from adult ED areas). Child-orientated waiting and treatment areas are often easily funded by local charities and businesses. Sadly in some cases these are pleasant but empty "white elephants" because staffing such areas can be difficult. Evenings and weekends are the busiest period for children, while nights and early mornings are quiet. Co-location with the main ED helps manage the peaks and troughs of activity, and ensures that the resuscitation bays for children are adequately sized, equipped and staffed at all times.

All staff who may have to treat acutely ill or injured children should be able to deal with children to the same standard as adult patients. This means having equally

good clinical management of common conditions, yet possessing the additional skills and knowledge needed for this age group. There is a recent drive towards a similar philosophy for elderly patients in the ED. Paediatric training has been part of core training for registrars in EM for many years, which should now enable any ED to practise a basic level of competence.

In the majority of EDs, injury comprises 70–80% of the paediatric workload, although in some EDs (usually in deprived, inner city areas) the ratio is inverted with illness causing 70% of child attendances. Paediatricians usually have little training in injury management. An increasing proportion of children with illness have self-limiting conditions and if ED and paediatric staff have not been trained to be confident in differentiating these children from those with serious illness, or managing simple conditions such as those managed by GPs, we will fail to stem the tide of increasing hospital admission rates for children.

The Department of Health (England) has supported education in recognition of the sick child.⁷ More senior doctors (in EM and paediatrics) need to be available at the "front door" of the hospital to prevent risk-averse junior doctors over-admitting children. There should also be more sophisticated risk stratification (eg, venous gas analysis, urinalysis, near-patient blood testing of white cell count, etc) and easy access to short-stay facilities if the 4 h permitted in ED are close to expiring. This short observation period is clinically necessary but is categorised, and often managed, as a full in-patient admission.

The College of Emergency Medicine and RCPCH have collaboratively developed competencies for PEM training for registrars.⁸ Demand for such consultants still outstrips supply, and each parent college needs to support training. Manpower planning (Department of Health) needs to make accurate projections, and commissioners need to fund such posts. Without this joined-up planning, the 2007 recommendations will be unachievable. All EDs seeing more than 16 000 children per year should have EM consultants with PEM training, and in hospitals with paediatrics on site, there should also be a paediatric consultant with PEM training and substantial commitments to the ED. However, although departments of this size account for over 50% of UK EDs, we are a long way off achieving this level of consultant cover.

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The situation for nursing staffing is fragile as well. Nurses also need both emergency and paediatric skills. However, the career structure makes formal qualification in both difficult. Nevertheless, many of these skills can be achieved very simply, with staff rotation, senior supervision, modular training and focussing on essential skills. The Faculty of Emergency Nursing has produced some excellent competencies at various levels.⁹

There are three major political threats to children's emergency services. The rapid implementation of walk-in centres, primary care centres and minor injury units, etc, often led by nurse practitioners rather than general practitioners, risks fragmentation of services, downgrading of staff skills (for recognition of the seriously ill child or non-accidental injury), and lack of facilities and equipment for receiving children. These changes may be acceptable in urban areas but rural areas require different solutions. The 2007 recommendations are therefore intended to apply core standards to all settings where acutely ill and injured children are received. There are also recommendations for ambulance services and emergency care practitioners – a new breed of ambulance responders who work independently and are encouraged to see and manage the acute episode on scene (usually at home in the case of children) in order to avoid hospital attendance.

The second threat is of closure of EDs or paediatric units, so that specialist services are centralised and staffing levels can achieve a critical mass. The 2007 guidance recommends that adequate services for the child population are considered within a regional network of care. Regionalised networks are promoted for neonatal care, paediatric intensive care, paediatric oncology, paediatric surgery, burns and (more recently) major trauma, so why not paediatric emergency care (including urgent care outside hospital)?

A pre-requisite of this approach is the breaking down of traditional professional barriers between ED and paediatric clinicians. There are many excellent examples of joint working around the UK. Such working arrangements greatly enhance flexibility and the provision of round the clock high-quality care. Where paediatric support is a distance away, attendance of a paediatrician need not be necessary if the ED and the hospital's anaesthetists are "upskilled" in paediatric stabilisation and transfer. This may mean an urgent imperative to employ PEM specialists (as the guidelines advise) who will train the staff to stabilise children sufficiently for safe transfer out. Short-stay units can successfully limit numbers of transfers in such cases, and provide solutions to the closure of traditional wards.

The third major political threat is the tariff-based system, under Payment By Results, whereby the same child with the same condition and medical treatment can be seen within the primary care system or "cost" anything from £54 (approx US\$107) for an ED attendance to around £1900 (US\$3800) if the general practitioner refers the child for a short period of observation on a paediatric ward. Therein lie perverse incentives for commissioners of services within primary care to deflect children away from attending EDs, and for them to believe that a "zero length of stay" (ie, a hospital admission of less than 24 h) is an inappropriate admission. As all clinicians treating acutely unwell children know, this is untrue. Clinicians must fight to prevent clinically inappropriate pathways being developed purely for financial reasons.

There is no doubt that the care of children in EDs is improving. With collaborative working between EDs, paediatric units and healthcare commissioners, there is hope for regionalised networks of care which allow for local variations in demographics and healthcare provision, while coping with the challenges of high out-of-hours demand, government targets and

funding arrangements. On behalf of the Intercollegiate Advisory Group, I hope that the new recommendations provide practical and useful guidance for the next few years.

Funding: None.

Competing interests: None.

Accepted 4 September 2007

Published Online First 11 September 2007

Arch Dis Child 2008;**93**:194–195.

doi:10.1136/adc.2007.122283

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