

Implementation of recommendations for the care of children in UK emergency departments: national postal questionnaire survey

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In June 1999 an intercollegiate working party of Royal College of Paediatrics and Child Health, British Association of Accident and Emergency Medicine (BAEM), British Association of Paediatric Surgeons, Faculty of Accident and Emergency Medicine, Royal College of Nursing (RCN), and Royal College of General Practitioners was established. Terms of reference were to review emergency services for children and to make recommendations for future provision of these services. The subsequent report—*Accident and Emergency Services for Children* (AESC)—made 32 recommendations (representing minimum levels of care), to be implemented by 2004.¹

Participants, methods, and results

We sent questionnaires to lead emergency doctors (listed in the BAEM's directory of 2001-2) between Oct 2003 and Jan 2004 about the recommendations. Non-responders were re-sent the questionnaire.

Facilities, function, and staffing of 139 UK paediatric emergency departments

	No (%) of responses from the targeted UK emergency departments
Facilities	
Trusts where children may be seen first for emergency conditions outside the emergency department	95 (61)
With triage and resuscitation facilities	63 (40)
Function	
Separate paediatric triage	56 (35)
Triage by trained nurse	36 (22.9)
Pain score used at triage	143 (90)
National triage scale used	129 (82)
All paediatric surgical cases can be managed on site	113 (70)
Provision for children in major incident plan*	14 (10.1)
Ability to maintain level 2 care†	24 (15)
Adequate audiovisual separation	104 (64)
Play area or separate waiting area	147 (94)
Paediatric resuscitation area screened from adult patients	123 (78)
Patient information	131 (82)
Leaflets available in languages other than English	28 (17.8)
Staffing: nursing	
Not having at least one children's trained nurse on duty at all times	107 (68)
Senior nurse coordinating	113 (72)
Nurses attended paediatric advanced life support course	84 (53)
Staffing: medical	
No of consultants with recognised training	102 (64)
In departments >18 000 children a year	14 (30)
Designated liaison paediatrician	119 (78)
Interaction with other agencies	
Induction programme including child protection	127 (91.7)
Informing primary care about attendances	129 (92.9)
Bereavement policy	120 (87)

*Nine (7%) did not know if children were included in the major incident plan.

†Level 2 care is continuous nursing supervision where the patient may be ventilated and needs support of two or more organ systems.

Of 219 departments with inpatient paediatric facilities,² 139 (63%) replied (table). In all, 47 (34%) of replying hospitals saw more than 18 000 children annually; 41 (87%) were district general hospitals. Only 64 (29%) departments with separate paediatric emergency facilities responded; the 71% that did not respond accounted for 47% of non-responders, many seeing more than 18 000 children annually.

Although currently 41 departments have separate paediatric emergency departments, 92% of children attend general departments; these show the largest differences from recommendations of the AESC report. In 1997, 10% of hospitals did not have inpatient services onsite³ now only 1.9% do not (minor injury units excluded).

Wards are safe for only the initial reception of emergency admissions if appropriately equipped and staffed for reception, triage, and resuscitation¹; these criteria are often not met.

Assessing the severity of illness is essential, but a quarter of departments seeing more than 18 000 children a year do not have separate triage facilities, and 23% do not triage children with an appropriately trained nurse. Although the pain assessment tool and the national triage score are used widely, their effectiveness must be questioned where non-trained staff are triaging. Level 2 care, while awaiting a paediatric retrieval team (children's mobile intensive care unit), is delivered in 85% of departments, often at cost to emergency, paediatric, and intensive care services. The current trend of centralisation means that emergency staff must deliver this care, so there must be the appropriate mix of skills on duty.

In 1996, 30% of hospitals did not cater for children within major incident plans (required by the National Service Framework for children and young people)^{4 5}; fewer now have children in their plans.

The National Service Framework expects emergency professionals to do courses in paediatric life support and to regularly update; currently, 47% of nurses do not attend such courses.

Comment

One in four patients presenting at emergency departments is a child. Child centred good quality care which is accessible at the right time is required, however there is considerable room for improvement in the care of children in emergency departments. This government

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BMJ 2005;330:73-4

This article was posted on bmj.com on 3 December 2004: <http://bmj.com/cgi/doi/10.1136/bmj.38313.580324.F7>



The questionnaire is on bmj.com

What is already known on this topic

Paediatric emergency services were under resourced in the United Kingdom, a report in 1999 found; the report made recommendations for improvement

What this study adds

Current emergency services for children in the United Kingdom still fall short of these essential recommendations

has recognised unacceptable variations nationwide in the quality of care for children and wants to eliminate these differences (the National Service Framework).^{4 5} The framework allows adult nurses to care for children only within the limits of their knowledge and should be under direct supervision of a children's trained nurse. Recruitment and retention of nursing staff is a problem in emergency departments. The Royal College of Nursing recommends rotational posts with community nursing and paediatric wards. The number of applicants for training in children's nursing exceeds the number available, so structured investment in nurse training may provide the necessary skilled nurses.

The AESC recommends that hospitals seeing more than 18 000 children should have a consultant in paediatric emergency medicine by 2004 and in all emergency departments by 2010. This, along with many of the other AESC recommendations made five years ago, has not been met and without future investment in staffing and facilities a child centred service will be hard to achieve.

Contributors: RS was the primary investigator. IKM was supervisor. IKM is guarantor.

Funding: St Mary's Hospital NHS Trust, department of Paediatric Accident and Emergency.

Competing interests: None declared.

Ethical approval: Not needed.

- 1 Royal College of Paediatrics and Child Health. *Accident and emergency services for children: a report of a multidisciplinary working party*. London: RCPCH, 1999.
- 2 Royal College of Paediatrics and Child Health. *Providing a service for children: workforce census 2001*. London: RCPCH, 2003.
- 3 Action for Sick Children. *Emergency health services for children and young people: a guide for commissioners and providers*. London: ASC, 1997.
- 4 Carly SD, Jones M. Are we ready for the next major incident? A review of hospital major incident plans. *BMJ* 1996;313:1242-3.
- 5 Department of Health. *Getting the right start: the national service framework for children, young people and maternity services: standard for hospital services*. London: DoH, 2003.

(Accepted 15 November 2004)

doi 10.1136/bmj.38313.580324.F7

DRUG POINTS

Synovitis induced by alendronic acid can present as acute carpal tunnel syndrome

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BMJ 2005;330:74

Alendronic acid (Fosamax, Merck) is a potent oral bisphosphonate licensed for prevention (5 mg daily) and treatment of postmenopausal osteoporosis (70 mg weekly or 10 mg daily).¹

A 69 year old woman had been treated for osteoporosis with disodium etidronate (Didronel, Procter & Gamble) for four years. She had a history of asthma but was not taking prednisolone. She started taking 70 mg alendronic acid a week but within 24 hours of her first dose developed synovitis in her right wrist and within 72 hours developed acute carpal tunnel syndrome. Fluid was found in the carpal tunnel when it was decompressed. No organisms or crystals were seen. Laboratory tests have included a consistently normal C reactive protein and erythrocyte sedimentation rate, calcium 2.41 mmol/l, ferritin 39 µg/l, uric acid 0.3 mmol/l, antinuclear antibodies 1/80, and negative extractable nuclear antigens, double stranded DNA, and rheumatoid factor. Nerve conduction studies showed a marked axonal lesion in the sensory median nerve. Alendronic acid was restarted at 10 mg daily five months later, but she developed pain in multiple joints after three days. The symptoms recurred on rechallenge at 10 mg on alternate days. She recovered fully when alendronic acid was discontinued.

Discussion

Synovitis is a well recognised cause of carpal tunnel syndrome. This patient had no previous history of carpal tunnel syndrome or evidence of inflammatory arthritis. Rechallenge led to symptoms in multiple joints.

Alendronic acid can cause musculoskeletal pain.² The New Zealand Pharmacovigilance Centre (<http://carm.otago.ac.nz>) holds three other reports of synovitis occurring in patients taking alendronic acid, one of whom developed a wrist effusion. Synovitis recurred when alendronic acid was re-administered after the normal dose interval of seven days in two patients and at a reduced dose after 11 days in the third. Alendronic acid should be considered a cause of synovitis or polyarthritis in the absence of any other pathology.

Contributors: DGJ identified and managed the case surgically, and JH investigated and managed the patient medically. DGJ and RS searched the literature, and RS collated and summarised other adverse reactions. DGJ is guarantor.

Funding: None.

Competing interests: None declared.

- 1 Bisphosphonates for osteoporosis. *Drug Ther Bull* 2001;39:68-72.
- 2 Sharpe M, Noble S, Spencer CM. Alendronate: an update on its use in osteoporosis. *Drugs* 2001;61:999-1039.