

Abstract G83 Table 2 Sensitivity and specificity rates

Sensitivity	98.4%
Specificity	98.9%
Positive PV	97.2%
Negative PV	99.4%

Conclusion Neonatal echocardiography by neonatologists have high concordance rates and have a high sensitivity and specificity in detecting congenital heart diseases. With appropriate Paediatric Cardiology support Neonatal Echocardiography by neonatologists can be a safe and reliable tool.

G84 A PARENTS VIEW OF CARDIAC SCREENING FOR DOWN SYNDROME

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Background Cardiac disorders are common in children with Down syndrome and the Down Syndrome Medical Interest Group (DSMIG) guidelines were updated in 2007. This project aims to review if parents thought these standards were being met.

Methods A survey reflecting the guidelines was posted by the Down Syndrome Heart Group on their webpage and on facebook. Parent responders shared the page in order to more replies. The questionnaire was intended to identify when the diagnosis of Down Syndrome was made, and the time it took for a cardiologist referral and echocardiogram.

Results 98 responses were collected and analysed. 85 responders lived in England (86.7%). 23.65% were diagnosed with Down syndrome prenatally, 70.25% were diagnosed within one week of birth and 6.1% more than one week after birth. 94.45% underwent foetal echocardiography of which 54.1% had the diagnosis confirmed after birth and 94.5% were seen by a paediatric cardiologist within 2 weeks after birth. Of those who did not undergo foetal echocardiography, 71.4% were seen within 6 weeks of birth, in whom 42.9% were found to have congenital heart disease. 73.4% of those diagnosed with Down syndrome within one week of age had an ECG at this time. Only 84% of those with abnormal ECG were referred and seen by a paediatric cardiologist before 2 weeks of age. 14.2% were not seen by a cardiologist or underwent ECG within 6 weeks.

Conclusions The results of this parent led questionnaire show the majority of babies with Down syndrome are diagnosed within one week of birth. Most of the 2007 guidelines set by the DSMIG are being broadly met, however more emphasis should be made on meeting the deadlines for paediatric cardiology review and echocardiogram. This applies to whether diagnosis is made prenatally, within one week of birth or more than one week after birth. In addition only 73% of those that are diagnosed within a week undergo an immediate ECG. More importance needs to be based on adhering to the guidelines and reducing parental uncertainty about congenital heart disease in Down syndrome.

British Paediatric Allergy, Immunology and Infection Group**G85 ADRENALINE USE IN ANAPHYLAXIS IN PAEDIATRIC WARDS IN UK**

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Background Resuscitation Council Guidelines (RC-UK, 2008) for treating anaphylaxis advocate intramuscular adrenaline in doses of 150, 300 or 500 micrograms, according to age bands [1]. However, ALS guidelines recommend weight-based calculations of 10 micrograms/kg IM, leading to administration of a range of volumes [2].

Aims A survey was conducted to evaluate the availability of fixed dose Epipens versus adrenaline vials in paediatric wards and radiology departments in England.

Methods The questionnaire was sent to 105 paediatric pharmacists at the various paediatric units in UK.

Results 60% responding hospitals had adrenaline available, half of them in vials and 85% with prefilled variable-dose syringes. In 53% units, wards stocked adrenaline 1:10,000 and 64% also had 1:1000. 19% hospitals stocked Epipens on crash trolleys and it was available in 48% wards. Adrenaline was given according to a weight-based dose in 57% wards. For contrast studies, adrenaline was available in 68% departments, 9.5% of which stocked Epipen.

Conclusion Most units still use weight-based doses of adrenaline from vials or pre-filled syringes, with Epipens being available in less than half of units. Adrenaline must always be available on wards and in radiology departments, as most arrests from anaphylaxis occur within 10 minutes. To ensure compliance with RC-UK guidelines, either all wards should stock Epipens or the guidelines should reflect practise and recommend weight-based calculated doses.

REFERENCES

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G86 ANAPEN, EPIPEN AND JEXT AUTO-INJECTORS; ASSESSMENT OF SUCCESSFUL USE AFTER CURRENT TRAINING PACKAGE

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Background Anaphylaxis is a severe life threatening allergic reaction. Prompt administration of epinephrine(adrenaline) is the first line treatment. There are currently three epinephrine auto-injector devices available in the UK; original Anapen, new EpiPen and Jext, each of which differ in their advised method of use. International standards recommend training for all patients prescribed epinephrine auto-injectors, we meet these. If families can more successfully use a particular trainer device, this may have important clinical effects.

Aims To assess the effectiveness of the training by evaluating “epinephrine naive” families’ ability to successfully use an auto-injector trainer device.

Methods Adults and children over 12, with no experience of auto-injector use were invited to participate in this service evaluation. They were randomly allocated to be trained in the use of one of the available auto-injectors. Their performance was assessed using a ten point marking sheet based on the correct method of administration of epinephrine for the individual device. Six marks were for procedures identical to all three devices (e.g. massage the site of injection) and four were device specific to reflect the differences in administration technique. Success rates were analysed by Chi-square with $p < 0.05$ being deemed significant (<http://graphpad.com/quickcalcs/contingency2>).

Results There were 120 participants.

Abstract G86 Table 1

	Ana- pen	EpiPen	Jext	Chi	Chi	All parti- cipants (n = 120)
Scoring 6/6 for identical procedures	16 (40%)	13 (33%)	16 (40%)	ns	ns	45 (38%)
Scoring 4/4 for device specific procedures	36 (90%)	18 (45%)	22 (55%)	ns	0.0001	76 (63%)
Performing all procedures correctly 10/10	16 (40%)	8 (20%)	10 (25%)	ns	ns	34 (28%)
Successfully firing auto-injector trainer pens	39 (98%)	28 (70%)	39 (98%)	0.0024	0.0024	106 (88%)

Conclusions Only 28% of participants were able to perform the individual device's 10 steps correctly. Overall the trainer devices fired in 88%, with a failure rate of 2 to 30%; a clinically and statistically significant result. The EpiPen's swing and hit delivery method may affect its successful delivery compared to the Jext and Anapen's methods.

G87 HOW MUCH DO JUNIOR DOCTORS KNOW ABOUT ANAPHYLAXIS?

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Anaphylaxis is a severe, life-threatening hypersensitivity reaction. NICE issued guidance in December 2011 regarding management of suspected anaphylaxis, the authors of which attribute suboptimal management to inadequate understanding by health care professionals.

Aim We aim to evaluate how suspected anaphylaxis was managed in a large NHS trust and to assess knowledge of trainees and final year medical students.

Method A retrospective case note analysis of patients under 17 years old coded with anaphylaxis between January 2007 and September 2012 comparing management to NICE guidance, was performed. This was supplemented by a survey (based on Advanced

Paediatric Life Support guidelines) of junior doctors and medical students. Participants assigned twenty clinical features to 'allergy', 'suspected anaphylaxis' or 'neither' and selected suitable management options.

Results Table 1 illustrates initial management of anaphylaxis in 71 analysed cases.

NICE provides guidance regarding discharge, compliance with which is highlighted in table 2. 66% of children had a known allergy; 72% of which were admitted with a reaction to their known allergen. 55% of children known to carry an adrenaline autoinjector used it correctly on this occasion.

The results of the survey are shown in table 3. Anaphylaxis recognition was poorer amongst Emergency Medicine trainees compared with General Practice and Paediatric trainees. Regarding management, lower scores were seen in the more senior paediatric trainees and general practise trainees.

Conclusions Our results identify aspects of good practise but also areas for improvement, especially regarding discharge information. The proportion of children being admitted with anaphylaxis to a

Abstract G87 Table 1

Initial Management	Percentage of children who received intervention (%)
Adrenaline IM (pre-hospital + in hospital)	66 (33, 33)
Antihistamines	89
Steroids	87
Oxygen	37
Fluids	17
Nebulised salbutamol	76

Abstract G87 Table 2

On discharge	Percentage of children (%)
Allergy clinic follow up planned	92
Issued with adrenaline autoinjector	69
Documented training in autoinjector use if given	73
Patients receiving discharge information about anaphylaxis	73
Patients receiving discharge information fulfilling the criteria stated by NICE	0

Abstract G87 Table 3

	Trainees	Final Year Medical Students
Number of respondents	94	184
Mean clinical features score (maximum 20)	11.9	11.2
Mean anaphylaxis features score (maximum 8)	7.0	6.5
Mean management score (maximum 6)	5.1	4.4
Percentage identifying need for admission under paediatrics	85%	86%
Percentage identifying need for allergy clinic follow up	88%	n/a
Percentage who felt competent to teach autoinjector technique	63%	n/a
Percentage who felt confident at recognising anaphylaxis independently	n/a	56%