

## WELCOME to this edition of the DeCon Multi-site Audit Newsletter.

In this edition, we will provide you information on the following:

1. Clinical Audit Questionnaire Data returns
  2. Clinicians' Survey Update
  3. Clinical Audit Data
    - Age
    - Gender
    - Grade of doctor reviewing the child at presentation to hospital
    - Actual working diagnosis within 4 hours of presentation
    - Outcome
    - Additional Information: Data Analysis for the Clinical Audit
    - Results of the Aggregated Audit Standards
- i. Note some percentage totals may not sum to 100% due to rounding where percentages are shown.
- ii. Data analyses contained in this newsletter may be subject to change once the full data returns are obtained.
- iii. The number of cases in the system is currently insufficient for comparative analyses of trusts and case mix analyses. Consequently, in this newsletter, analyses are provided on all cases irrespective of the presenting NHS trust. (Data refers to cases in the system up to the 31 March 2010).

## 1. Clinical Audit Questionnaire Data Returns

- 58 trusts are participating in the audit (1 new trust– Buckinghamshire Healthcare NHS Trust has joined us).
- 41 of the 58 participating trusts have returned clinical audit data and 3 trusts have not had any cases. The total number of submitted cases in the web portal to the 31 March 2011 was 366.
  - ◊ < 5 cases = 15 trusts
  - ◊ 5-10 cases = 12 trusts
  - ◊ 10-20 cases = 9 trusts
  - ◊ > 20 cases = 5 trusts

### IMPORTANT NEWS!

**Keep the 15th September 2011 free in your Diary!**

The DeCon Project team will be hosting a Stakeholders' meeting on this date to feedback the audit's results prior to publication of the final report.

**More information will be available at a later date.**

## 2. Clinicians' Survey Update

The response rate to the Clinician's Survey is 47% ( 139 out of 296). There were 8 opt-outs and 11 bounced emails.

If you have not completed a survey and would still like to do so, please note:

**The deadline for completion has been extended from 31 March to 30th April 2011.**

## Age

### Age

Audit sample = 366  
 Mean age = 6.9 years  
 Standard deviation = 6.1  
 Median age = 5 years  
 25th Percentile = 1 years  
 75th Percentile = 14 years

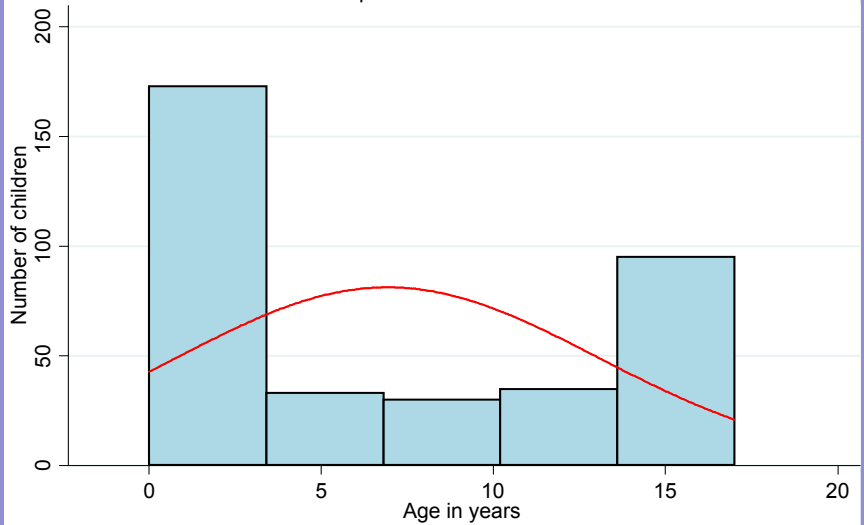
### Age categories (adapted from Goldstein et al. 2005)

0.0 to 0.1 year (1 month) = 31 (8.5%)  
 0.2 to 1.0 year = 78 (21.3%)  
 1.1 to 5.0 years = 82 (22.4%)  
 5.1 to 13.0 years = 80 (21.9%)  
 13.1 to 17.9 years = 95 (26.0%)

Brahm Goldstein; Brett Giroir; Adrienne Randolph; and the Members of the International Consensus Conference on Pediatric Sepsis (2005) International pediatric sepsis consensus conference: Definitions for sepsis and organ dysfunction in pediatrics *Pediatric Critical Care Medicine* 2005; 6(1):2-8

### Age distribution of children in the audit

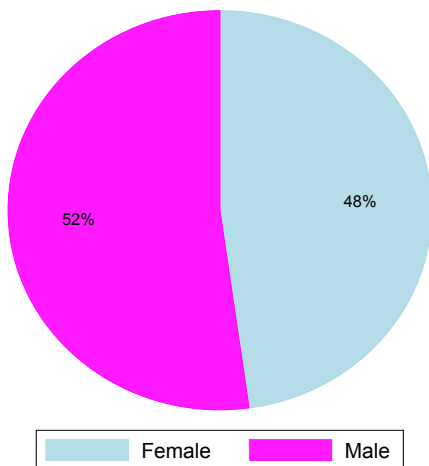
Total audit sample: all trusts combined= 366



## Gender

### Gender

Total audit sample: all trusts combined = 366  
 female = 175; male = 191



### Gender

Audit sample = 366  
 Female = 175 (47.8%)  
 Male = 191 (52.2%)

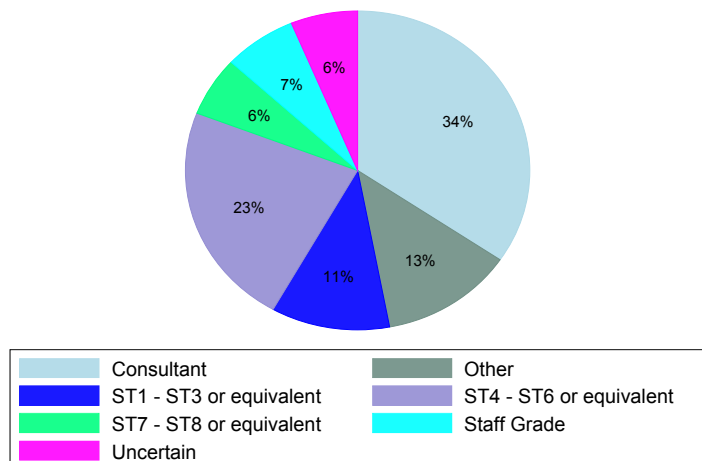
## Grade of doctor reviewing the child at presentation to hospital

### Grade of doctor reviewing the child on presentation to hospital

Consultant = 126 (34.4%)  
 ST1-ST3 or equivalent = 41 (11.2%)  
 ST4-ST6 or equivalent = 83 (22.7%)  
 ST7-ST8 or equivalent = 22 (6.0%)  
 Staff Grade = 25 (6.8%)  
 Uncertain of doctor's grade = 23 (6.3%)  
 Other (associate specialist, clinical fellow or other) = 46 (12.6%)

### Grade of doctor reviewing at presentation to hospital

Total audit sample: all trusts combined = 366



## Actual Working Diagnosis within 4 hours of presentation

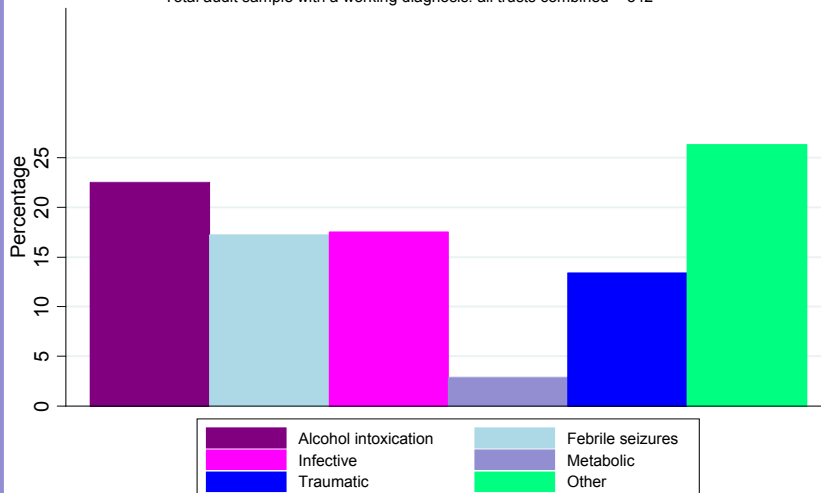
342 (93.4%) of the total audit sample (366) of children and young people with a decreased conscious level have a working diagnosis within 4 hours of presentation to hospital.

Of those 342 children and young people with a working diagnosis, the actual diagnoses are as follows:

- Alcohol intoxication = 77 (22.5%)
- Febrile seizures = 59 (17.3%)
- Infective causes = 60 (17.5%)
- Metabolic causes = 10 (2.9%)
- Traumatic causes = 46 (13.5%)
- Other causes = 90 (26.3%)

### Actual working diagnosis in categories

Total audit sample with a working diagnosis: all trusts combined = 342

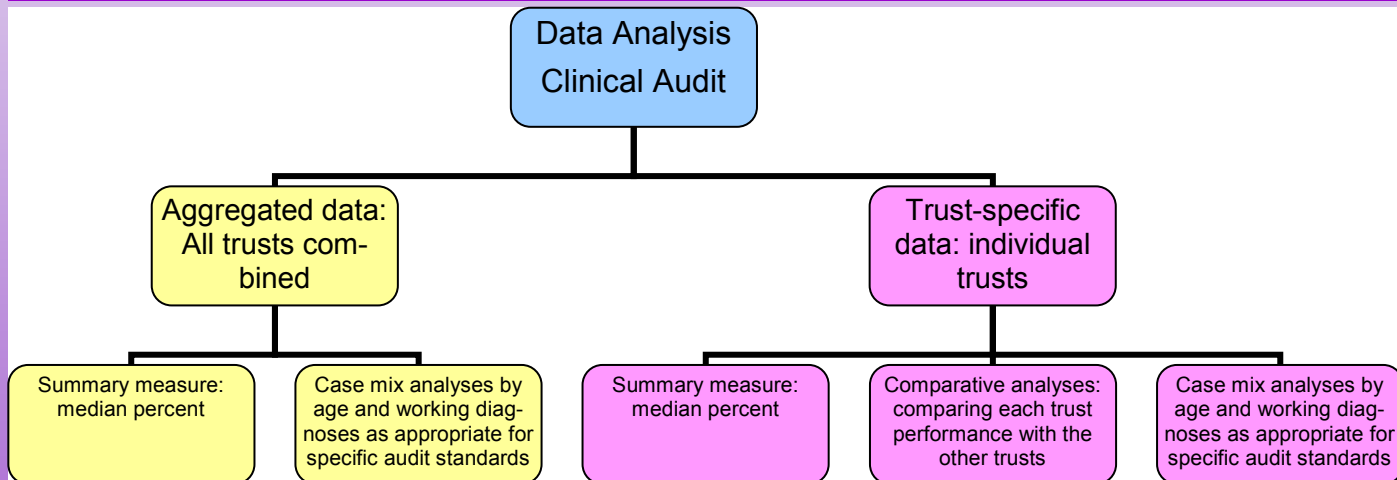


## Outcome

Of the total audit sample of 366 children and young people, the outcomes are as follows:

- Discharged from the area of hospital attendance = 147 (40.2%)
- Transferred to a ward area (general or specialist) = 200 (54.6%)
- Transferred to another hospital = 8 (2.2%)
- Died = 6 (1.6%)
- Other (self-discharge or discharged without medical consent) = 5 (1.4%)

## Additional Information: Data Analysis for the Clinical Audit



Data analyses for the clinical audit will be presented in two main formats:

*Aggregated data:* relates to the combined cases from all the trusts accompanied by case mix analyses as appropriate.

*Trust-specific data:* relates to the all the cases for an individual trust and involves comparative analyses to benchmark trusts' performance.

The main summary measure used for the audit will be the median percent and its related 95% confidence intervals.

**The median percent:** The middle value of the percentages of children and young people meeting the specific audit standard for all the trusts in other words the 50th percentile.

**95% confidence intervals for the median:** This is used to indicate the reliability of the median percent and can be interpreted as the 95% probability that the median percent lies within the bounds of this interval.

## Results of the Aggregated Audit Standards

The audit standards highlighted in this newsletter are those which relate to all children and young people rather than those which are pertinent to selected groups of children and young people only.

### Key Findings

The small numbers of cases for some of the trusts mean that percentages related to the audit standards may provide an unreliable measure of performance and be less meaningful in some instances. However tentatively they indicate certain patterns in the management of children presenting to hospital with a decreased conscious level.

Uniformly all trusts are performing well with regard to observations performed and documented on presentation to hospital (with the exception of blood pressure) and in the establishment of both a working diagnosis and a management plan within 4 hours of presentation to hospital.

However, there are several areas for improvement because of the relatively low percentages of children and young people with a documented evidence of the following in the clinical record (electronic and/or written):

1. The features of the clinical history generally with the exception of the length of symptoms (This area will be explored in greater detail using case mix analyses when more cases become available in a later newsletter)
2. The recommended frequency of GCS measurements undertaken in children and young people who had a GCS performed
3. Parental/guardian involvement with regard to staying with their children and information sharing with them on their child's diagnosis and prognosis.

| Audit standards (Total Audit sample all trusts combined = 366, except for Standard 4) | Target performance: Median % of all trusts | 95 % confidence intervals for the Median % |
|---|--|--|
| <b>1. Features of Clinical history absence or presence documented</b>                 |  |  |
| % vomiting on or before presentation  | 60%  | (48% , 75%)                                |
| % headache on or before presentation  | 16%  | (5% , 22%)                                 |
| % fever on or before presentation   | 50%  | (41% , 63%)                                |
| % convulsions on or before presentation   | 45%  | (37% , 50%)                                |
| % alternating periods of consciousness  | 60%  | (43% , 78%)                                |
| % trauma  | 29%  | (20% , 40%)                                |
| % ingestion of medication/recreational drugs  | 20%  | (0% , 26%)                                 |
| % length of symptoms  | 88%  | (79% , 100%)                               |
| <b>2. Observations documented</b>   |  |  |
| % heart rate at presentation  | 100%                                       | (100% , 100%)                              |
| % respiratory rate at presentation  | 100%                                       | (91% , 100%)                               |
| % oxygen saturation at presentation   | 100%                                       | (100% , 100%)                              |
| % blood pressure at presentation  | 75%  | (67% , 81%)                                |
| % temperature at presentation   | 100%                                       | (91% , 100%)                               |
| <b>3. Use of a physiological scoring system documented</b>                            |  |  |
| % modified GCS or AVPU documented   | 100%                                       | (100% , 100%)                              |
| <b>4. Recommended frequency of GCS if done (Audit sample = 342)</b>                   |  |  |
| % recommended frequency of GCS  | 50%  | (43% , 67%)                                |
| <b>5. Recommended Core Investigations</b>   |  |  |
| % capillary blood glucose taken with 15 mins of presentation                          | 85%  | (75% , 100%)                               |
| <b>6. Working diagnosis within 4 hours of presentation</b>                            |  |  |
| % working diagnosis within 4 hours  | 100%                                       | (95% , 100%)                               |
| <b>7. Management plan within 4 hours of presentation</b>                              |  |  |
| % management plan in place within 4 hours   | 100%                                       | (100% , 100%)                              |
| <b>8. Parental/Guardian involvement documented</b>                                    |  |  |
| % allowed to stay with their child  | 33%  | (20% , 63%)                                |
| % informed re their child's diagnosis   | 50%  | (40% , 75%)                                |
| % informed re their child's prognosis   | 33%  | (20% , 45%)                                |