Continuous Quality Improvement to Meet the Gold Standard of Growth Monitoring in Acute Admissions

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Background

The Royal College of Paediatrics and Child Health (RCPCH) guidance recommends growth monitoring if there is concern regarding a child’s general health¹. Missed growth assessments are highlighted in serious case reviews². Acute admissions present an opportunity to review growth and assess for faltering. Electronic growth charts are accessible by the multi-disciplinary team within NHS Lothian.

Aims

- To establish if current practice for monitoring growth is in line with the ‘gold standard’ from the RCPCH.
- To establish a continuous quality improvement initiative to achieve a higher standard.

Method

- Monthly spot audits of medical inpatients (total = 114) performed between September 2017 and January 2018. Interventions were undertaken between each spot audit.
- Included: acute receiving unit (ARU) patients who had been clerked and reviewed on a consultant ward round at time of data collection.
- Excluded: critical care or subspecialty admissions.
- Measurements collected: height/length and weight, plus occipitofrontal circumference (OFC) in children under two years old.
- Target set to plot 90% of admissions.

Figure 1- Interventions undertaken

Results

- Plotting of weight improved from 32% in September to 60% in October following 1st intervention. Subsequent drop to 50% in November, with recovery to peak of 71% in December. Compliance remained relatively stable at 65% in January.
- OFC followed a similar trend, improving from 33% in September to 58% in January, with a peak of 62% in December.
- Height/length was poorly documented in <20% patients, all months.

Table 1- Results

	Sept 17	Oct 17	Nov 17	Dec 17	Jan 18
Age range	13 d – 8 yr	7 d – 12 yr	6 wk – 14 yr	8 d – 13 yr	7 d – 11 yr
Total no. of pts	19	20	20	35	20
No. of pts with weight plotted	6 (32%)	12 (60%)	10 (50%)	25 (71%)	13 (65%)
No. of pts with height plotted	0 (0%)	2 (10%)	0 (0%)	4 (11%)	4 (20%)
No. of pts < 2 years	12	14	14	29	12
No. of pts < 2 years with OFC plotted	4 (33%)	8 (57%)	5 (36%)	18 (62%)	7 (58%)

Discussion

- Continuous quality improvement allows for rapid identification of falling targets, facilitating timely intervention.
- Our results demonstrate an overall responsiveness towards educational intervention.
- Limitations: daily variability not identified through monthly audit, measurements taken but not electronically plotted were not counted.
- Larger sample size in December as hospital busier.

Figure 2 – Percentage of admissions with weight and OFC plotted with timeline of interventions annotated.

Conclusions

- Overall improving trend in documentation of weight and OFC on admission to ARU; height remained poorly documented.
- The second intervention was the most effective.
- Results demonstrate the need for continuous team education to maintain any improved standard. This is ongoing in our department.
- **This project is relevant to all paediatric departments.**

(1) RCPCH Growth Factsheets 2017
(2) NSPCC Library. Serious case review: Child SAM [full overview report], Somerset Safeguarding Children Board (2017)