AN AUDIT ON PAEDIATRIC WEIGHT ESTIMATION IN THE EMERGENCY DEPARTMENT OF A PRIMARY HEALTHCARE CENTRE IN MUMBAI

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Aims In paediatric emergencies, the dosing of life-saving interventions, including drugs and fluids, depends on the child’s weight or surface area. However, children presenting in the emergency department are not weighed before prescribing or administering drugs in many cases. The paediatricians often ‘guess’ the weight based on their experience and a cursory visual inspection. This study aimed to assess whether children are weighed before drugs are administered or prescribed in the accident and emergency (A&E) department of a primary healthcare centre in Mumbai, India. It also evaluated the accuracy of ‘visual’ weight estimation by the paediatricians.

Methods The medical records of 250 children who visited the A&E department between 1 April 2021 and 31 May 2021 were reviewed. The child’s age and whether the child’s weight was documented were noted. From 15 June 2021 to 10 July 2021, two paediatric residents and two paediatric consultants were asked to estimate the weight of 150 children aged 12 years and below who visited the paediatric outpatient department. The child’s age was conveyed to the doctor before estimating the weight. In addition, the children’s actual weight was documented separately and not given to the doctors. A paired t-test was used to check if the mean difference between the estimated and actual weights was significantly different from zero.

Results The medical records audit revealed that only 32 (12.8%) children had their weights documented before receiving a prescription of drugs and fluids in the A&E department. The paediatric residents slightly underestimated the children’s weights (p<0.05). Whereas, in the case of paediatric consultants, the mean difference was not significantly different from zero (p=0.15). However, in both cases, the error margin increased as the weight and age of the child decreased. There were no significant differences based on the sex of the child.

Conclusion The audit highlighted that most children were prescribed drugs and fluids in the A&E department without measurement and documentation of their weight. This practice of ‘guessing’ the child’s weight risks over- or under-dosing of critical life-saving drugs, such as antiepileptics, sedatives, and intravenous fluids. The audit also showed that the weight estimation by paediatric residents was unreliable, especially in the case of children below the age of five years. The consultants were able to estimate the weight more accurately, thereby underlining the value of their experience.

Measuring and documenting children’s weights would constitute a small but significant change in the current practice in the A&E department. This intervention would involve a minor expenditure in obtaining weighing scales and a slight increase in time spent assessing each child. However, it could significantly improve the practice and prevent critical incidents with paediatric drugs and fluids over- or under-dosing.

A QI CASCADE PROJECT ADDRESSING PSYCHOLOGICAL SAFETY IN A CHILDREN’S HOSPITAL

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Aims Doctors in training rotate and integrate into new teams frequently. It is well documented that workplaces where people feel psychologically safe are more successful, have a better safety culture and in the case of healthcare have improved patient safety outcomes.1 We wanted to assess levels of psychological safety (PS) across junior doctors in our hospital and instigate a Quality Improvement (QI) project to improve it, where required.

Methods We developed a survey to assess perceptions and experiences across the 4 stages of Psychological Safety, as defined by Tim Clarke2 and emailed it to all the junior doctors. It was completed on a confidential and non-attributable basis.

All respondents were invited to join a QI methodology refresher training program, delivered over 5 sessions. They were set tasks at the end of each session to guide them through the progress of introducing a QI intervention within their local department.

Results Results from the initial survey highlighted areas of excellent PS, alongside areas for improvement.

Overall, junior doctors recorded ‘good’ levels of PS and many (76%) felt ‘very safe’ or ‘safe’ admitting their errors.

However, the research revealed key issues;

• across the hospital respondents felt unable to suggest change or to challenge decisions.

• In some departments respondents felt excluded because of their differences.

Respondents had the option to identify their department; where identified, results can be shared with departmental leads.

19 people joined the QI training scheme. Attendance rates varied due to clinical commitments and pressures during the Omicron surge; individual catch-up sessions were offered (and accepted) to those who missed sessions.

A broad range of departments was represented within the group and people described various problems and areas of psychological safety they wanted to address within their local team.

Table 1 shows some examples of the projects undertaken.

The variety of issues addressed, and projects undertaken highlights the importance of local, site specific, interventions; there is not a ‘one size fits all’ solution to such a complex subject.

Members of the group reported that they enjoyed the sessions, valued the discussion opportunities with other teams and felt supported by me throughout the process. Some individual projects have reported back and demonstrate an increase in Inclusion Safety and Learner Safety.

Results from the repeat survey of psychological safety across the whole organisation are currently awaited.