Objectives To apply NICE bronchiolitis recommendations to children with clinical bronchiolitis admitted to hospital to describe the (1) frequency and method of assessment of hydration status on admission, (2) volume of feed at admission and discharge from hospital, and (3) impact of NICE guideline risk factors on these assessments.

Methods 317 children aged <12 months admitted with bronchiolitis to an acute paediatric medical ward between 01.10.2019 and 31.01.2020 (269 had diagnosis at time of ED review). From a retrospective review of medical records we noted documentation of clinical hydration, last wet nappy, fluid intake and percentage fluid intake (documented or calculable) at admission and discharge. Where available we calculated agreement between medical paediatric (MP) and emergency department (ED) assessments.

Results Included infants were <3 months of age in 46% (146/317), preterm 17% (53/317) and had other high risk co-morbidities 13% (40/317).

At admission 264/269 infants (98%) MP and 172/269 (64%) ED reviews were documented. Last wet nappy, fluid intake and calculated percentage of fluid intake was observed in MP review for 190/264 (72%), 168/264 (64%) and 27/264 (10%) of infants and ED review for 107/172 (62%), 97/172 (56%) and 28/172 (16%). Fluid intake was documented or calculable in 155/264 (59%) MP and 94/172 (55%) ED, and for 179/269 (88%) bottle fed, 22/71 (31%) breast fed and 5/28 (18%) mixed fed babies. On admission NICE fluid threshold <50%, was identified in 69% (114/165), 50–<75% in 19% (31/165) and ≥75% in 12% (20/165). Age <3 months, but not other risk factors, appeared to impact clinical decision making for fluid intake and admission.

108 of 139 infants (78%) had reason for admission documented as feeding support and/or suction and/or observation with 36% (39/107) needing hydration support and 40% (43/108) an admission <24 hours.

Discharge fluid intake was median of 79% daily requirement for all infants (calculable in 230/317), and higher in any risk factor (82% vs 71%). The majority, 56% (129/230), were ≥75%, with 10% (23/230) discharged at <50% intake, predominantly term infants without risk factors. Re-admission rate in this group was 9% (2/23), in line with the whole group, 9% (29/317).

Conclusions In acute bronchiolitis documentation of fluid intake is frequently absent, particularly in breast fed infants. Many infants are admitted with fluid intake <50% of requirement, often for <24 hours. Acute care requires improvements to fluid volume calculation, particularly for breast fed infants. Some low risk infants breaching NICE thresholds may be able to be supported in the community.

Quality Improvement and Patient Safety

1180 THE GREAT ESCAPE: A QUALITY IMPROVEMENT PROJECT TO STREAMLINE THE PAEDIATRIC DISCHARGE

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Background Pressure on safe and timely discharges of paediatric inpatients is greater than ever before. With rising numbers of hospital admissions for children in the UK (up by 3% between 2014/2015 and 2019/20)1,2 and the COVID associated risks of a hospital stay.

There is minimal pre-existing data outlining the discharge experience for paediatric inpatients. The discharge process is an essential component of patient safety with respect to communication with primary care, medication information and effective follow up. Efficient processes improve patient flow and experience as well reducing patient complaints.

To evaluate current practice data was collated from The Royal Alexandra Children’s Hospital in order to implement strategies to improve discharge processes. The discharge process ordinarily comprises of initial discharge decision making by the clinical team, writing of a discharge summary to include follow-up arrangements and preparation and provision of TTO’s (To Take Out’s – referring to medications provided on discharge).

Objectives The aim of this quality improvement project was to collect data from different sources to identify how best to improve discharge processes for paediatric inpatients. Data gathered was used to highlight areas for improvement and propose strategies for change.

Methods Firstly quantitative data was gathered by means of a survey to nursing staff, this survey addressed time breakdowns for discharge processes and assessed specific reasons for delays along a single patients journey.

Questionnaires were also given to families to assess patient experience. An opportunity was given to provide feedback surrounding communication, and to suggest improvements. Finally a gap analysis was performed to design interventions in order to address identified gaps.

Results There were 45 respondents to the survey. We established that 62% of patients identified as appropriate for discharge left within 3 hours of the decision being made.

Prompt discharges were found to be as a result of:

- Early Pharmacy screening of TTO’s
- Timely preparation of discharge summaries and TTO requests reducing wait times for arrival of TTO’s to the ward or nursing staff collecting TTO’s from Pharmacy themselves

Delays included:

- Medication related issues
- Delayed decision making
- Inefficient communication
- Technical issues (including ward staff being unable to print Discharge summaries or printer errors)
- Need for repeat observations prior to discharge
- Delay in transport arrival

Reassuringly, 92% of parents felt they were clearly informed with regards to their child’s discharge time.

In order to improve communication between nursing, medical staff and patients:

- TTO sticker for patient notes to raise awareness of planned discharge and alert clinician to prepare discharge paperwork, communicate to patient and nursing staff likely discharge times.
- ‘TTO completed column’ on the patient whiteboard for doctors highlight when TTO completeTo address technical issues:
  - Designated TTO tray where printed TTO can be stored for
  - Poster and training in effective TTO completion to aide speed of medication ordering and screening
Conclusions Varying factors are involved in timely discharge of paediatric patients. Easily implemented and widely applicable quality improvement changes are likely to play a positive role in the timely and safe discharge of paediatric inpatients.

REFERENCES

Paediatric Critical Care Society

NON-ACCIDENTAL INJURY: THINK MAJOR TRAUMA

Helen Stewart, Sarah Stibbards, Victoria Curie. Sheffield Children’s Hospital NHS Foundation Trust; Alder Hey Children’s Hospital; University Hospital North Midlands

Background The 2015 North West Children’s Trauma Network Children’s Major Trauma Pathway defined the referral pathway for children who have suffered traumatic injuries in the North West. Despite this, there were concerns about several deviations from the pathway including disjointed communication and transport delays. This audit was designed to understand why this was happening and how we can improve the care of these patients.

Objectives To understand how closely the major trauma referral pathway is being followed by trauma units and local emergency hospitals in cases of traumatic injury in children.

Methods A retrospective analysis of all NWTS (North West and North Wales Transport Service) referrals from 01/06/2018 to 31/05/2019 resulted in 93 cases which met the criteria. These notes were reviewed against the defined standards with results as below.

Results

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<tr>
<th>Standard</th>
<th>Compliance</th>
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<tr>
<td>1. The trauma team leader (TTL) at the major trauma centre is involved in any call to NWTS (Children’s Major Trauma Pathway) where the presenting complaint is either initially identified or subsequently identified as being due to a traumatic injury, including non-accidental injury.</td>
<td>34% (10/29)</td>
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<td>2. Once the referral is accepted by the TTL any time critical transfer is arranged by the local team unless agreed otherwise with the major trauma centre (Children’s Major Trauma Pathway).</td>
<td>62% (18/29)</td>
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<td>3. Safeguarding concerns are properly highlighted and documented in all cases of major trauma (Children’s Major Trauma Pathway).</td>
<td>90% (9/10)</td>
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<td>4. There were no delays to transfer caused by looking for a bed/unnecessary procedures/performing investigations unless advised by the major trauma centre (Children’s Major Trauma Pathway).</td>
<td>69% (20/29)</td>
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<td>5. The Children’s Major Trauma referral pathway was followed in all areas.</td>
<td>17% (5/29)</td>
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<td>6. All cases where a non-accidental injury is identified are reclassified as a major trauma (Children’s Major Trauma Pathway).</td>
<td>30% (3/10)</td>
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<td>7. All referrals where safeguarding concerns have been identified have the proper documentation completed and sent to the MTC (NWTS Guideline: How to deal with safeguarding)).</td>
<td>86% (59/68)</td>
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Conclusions Action plan:
- Dissemination of the audit results throughout the transport team and children’s trauma network
- Major trauma update in outreach teaching and inhouse training
- Development of a trauma quick reference guide
- Alterations to the referral form to prompt adherence to the pathway

We were most concerned about the failure to reclassify non-accidental injuries as major trauma and conversations with colleagues elsewhere revealed similar experiences. Children who present floppy and unwell via the GP and ED, where a CT is performed and a non-accidental injury identified, are often, by this point, under the care of the general paediatricians. Outside of APLS, general paediatricians and those from other sup-specialities have very little experience in the management of traumatically injured children. They now find themselves managing a major trauma, often unaware of regional trauma pathways with additional management strategies frequently overlooked and unnecessary delays in transfer to definitive care. This has led us to develop an additional action plan to encourage education and training on the management of trauma in safeguarding updates for paediatricians.

British Paediatric Allergy Immunity and Infection Group

PAEDIATRIC QUALITY OF LIFE IN CONGENITAL CMV: CURRENT KNOWLEDGE AND FUTURE DIRECTIONS

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Background Congenital cytomegalovirus (cCMV) is the most common congenital infection. Around 25% of infants with cCMV develop permanent sequelae. However, there is a paucity of research evaluating the quality of life of children with cCMV.

Objectives This study evaluates current evidence regarding long-term effects of cCMV on affected children, and considers methodology used in quality of life studies that could be applied to cCMV and possible impacts on updated health economic evaluations of cCMV.

Methods We reviewed studies that reported long-term effects of cCMV on affected children, studies that measured quality of life in children with cCMV and similar paediatric populations, and studies that reported psychometric properties of quality of life measures.

Results The high prevalence of long-term sequelae amongst children with cCMV is likely to significantly impact quality of life of affected children and their families. Only one existing study assessed quality of life in children with cCMV and their parents, which was subject to bias and only incorporated one quality of life measure. We identified multiple quality of life measures that could be suitable for use in future studies of quality of life in cCMV, with varying psychometric properties and assessing different constructs.