1407  ‘ENVIRONMENTAL SAFETY OF CHILDREN’ ANALYSIS OF ENVIRONMENTAL RISK FACTORS AT DIFFERENT SETTINGS FOR CHILDHOOD SAFETY AT AN ASIAN SETTING

1Ruwanthi Perera, 2Piyumaka Peiris. 1University of Sri Jayewardenepura; 2Lady Ridgeway Hospital for Children

Aims

Objectives Four different studies were carried out in home, preschool, school and play park settings.

- Assess the environmental safety at home setting
- Assess the environmental safety at primary school setting
- Assess the environmental safety at preschool setting
- Assess the environmental safety at play park setting

Methods

Methodology Descriptive cross-sectional study series. Home safety was assessed using a self-administered checklist developed by Ministry of Health for public health midwives by 200 bystanders of inward patients at a government teaching hospital setting, 20% of households were visited physically by investigators to check the accuracy. Data gathered via interviewer administered questionnaires from 10 primary schools, 10 government preschools and 10 government play parks in a selected populated urban municipal council area. Interviewer administered questionnaire developed using the manual for child friendly schools by UNICEF, pre-school safety checklist developed using health and safety checklist for early care and education programs: University of San Francisco and standards developed using health and safety checklist for early care and education programs: University of San Francisco and standards developed using health and safety checklist for early care and education programs: University of San Francisco and standards developed using health and safety checklist for early care and education programs: University of San Francisco and standards

Results

- Homes: Overall safety score mean was 76.1798 and SD was 18.7597. The data on presence of safety standards with regard to lightening (92%), burns (87%), poisoning (83%) and electrocution (78%) types were satisfactory. According to location, stairway was the unsafe (49%). There was no statistically significant correlation between socio demographic factors and home safety.

- Primary schools: According to our study, playground equipment showed extreme unsafe (95%) and record keeping got least unsafe (0%) in primary schools. Exploring further into sub domains of outdoor equipment safety, our study showed that the outdoor equipment was in a poor condition.

- Preschools: Faults of equipment unsafe (48%) was the most significant finding and record keeping had the least unsafe (0%). Further analysis of sub-domains in equipment safety revealed lack of resilient surface protection (67%) and failure of repair and replacement of play equipment when they have faults or defects (57%)..

- Play parks: The record keeping and maintenance supervision of play equipment which impairs the sustainability of public parks were the most unsafe (79%) and climbing structures were the safest (32%).

Conclusion

Conclusions Safety standards are lacking in different settings. These areas need to be addressed via different strategies to ensure childhood safety from accidental injuries.

The environment where children and young people grow up and develop, should safeguard them against risks and promote the development of positive knowledge, skills and attitudes.

1414  IMPROVING ADHERENCE TO NICE AND TRUST GUIDANCE ON THE MANAGEMENT OF BRONCHIOLITIS AT A TERTIARY PAEDIATRICS CENTRE

1Ross Leslie, 1Neave Kissane, 1Ronny Cheung, 1Katherine Orme, 1Lauren Byrne. 1Guys and St Thomas’ NHS Foundation Trust, London; 1Evelina London Children’s Hospital

Aims

We aimed to improve the management of bronchiolitis in a tertiary Paediatrics centre according to NICE and Trust guidance, to reduce unnecessary investigation [NK1] and inappropriate use of oxygen and antibiotic therapies.

[NK1] Could cut out CXR part to save words and would put oxygen in as that was a key element

Methods Data was collected over two ‘Plan, Do, Study, Act’ cycles from cases admitted under the General Paediatrics team at the Evelina London Children’s Hospital with a diagnosis of bronchiolitis. For cycle one, cases were admitted between October and November 2019, and for cycle two between September and October 2021. Electronic care records were consulted to compare the management against Trust guidance on bronchiolitis, as well as NICE guideline NG9 in the domains of investigation, oxygen therapy and respiratory support, and medications.

The findings of cycle one were presented to the General Paediatrics team and a series of improvement bundles were produced based on identified areas for improvement. Cycle two began at the start of the first true bronchiolitis season following the disruption of viral transmission by public health measures during the COVID-19 pandemic. Considering the findings of cycle two, the bundles were amended and re-presented to the team. The Trust guideline was also amended to reflect the recommendations.

Results At baseline (n=28), 29% of patients had a capillary blood gas performed, of which only 37% were indicated, and 61% had a chest x-ray, of which 50% were indicated. Where oxygen therapy was indicated, it was given in 100% of cases, but oxygen was unnecessarily given in 50% of cases according to NICE guidance and 57% according to Trust policy. Hypertonic saline and nebulised adrenaline were correctly not given in any cases. However, 53% were given antibiotics, 18% salbutamol, 21% ipratropium bromide and 7% systemic or inhaled corticosteroids, all of which are not indicated in either NICE or Trust guidance.

In cycle two (n=11), the proportion of patients who had blood gas analysis had increased to 55%, with only 17% being indicated, however the rate of chest x-rays improved to 27%, with 33% being indicated. Again 100% of children received oxygen when indicated by oxygen saturations being persistently less than 90%, and a reduction of 12% in the inappropriate use of oxygen was seen (from 57% to 45%). As in cycle one, neither hypertonic saline nor nebulised adrenaline were used. There were improvements in the use of inappropriate antibiotics from 53% to 18%, and ipratropium bromide from 21% to 9%. However, Salbutamol use increased from 18% to 27% and corticosteroids from 7% to 9%.
In both cycles, where high-flow nasal oxygen was used this was clinically indicated in 100% of cases. In cycle one, 61% required high-flow nasal oxygen compared with 36% in cycle two.  

**Conclusion** By implementing improvement bundles and drawing clinician’s attention to areas where unnecessary actions have been taken, inappropriate radiation exposure was reduced and antimicrobial stewardship improved. While oxygen therapy is routinely given when indicated, further work will aim to reduce its use where it is not needed. 

---

**UNDERSTANDING AND OBSERVING THE WARD ROUND AND DISCHARGE PROCESS TIME CYCLE TO EXPEDITE THE DISCHARGE PROCESS**

Karina Harding, North Middlesex University Hospital

10.1136/archdischild-2022-rcpch.206

**Aims** To investigate impediments in the discharge process and ward round efficiency within a general paediatric ward for future flow and discharge improvement. 

**Methods** During a 6-month seconded post as the paediatric patient discharge and flow lead nurse shared between two hospital sites, cycle time observation was used to establish a quantifiable timeline of tasks within the ward round process. A total of three ward rounds were observed across both sites with either a paediatric consultant or registrar.

Secondly, cycle time observation was utilised during the discharge process to establish a quantifiable timeline from ‘decision to discharge’ to when the patient left the ward area. A data collection tool was established to guide senior ward nurses in collecting data required during the discharge process. The data were collated into similar discharge patient groups: required a discharge letter only; required a discharge letter and TTAs (medication to take home); and required to meet a medical prerequisite prior to discharge and no TTAs, (e.g. patient required nap with good oxygen saturations).

**Results** During the ward round observations, the main process for each patient review included: review of patient chart; discussion with family and patient assessment; and patient plan. Within hospital A, the average review of the patient was 22.2 minutes (12-27 minute range), and an average wait time between patients was 9.3 minutes. Within hospital B, the average review of the patient was 10 minutes (6-14 minute range), and an average wait time between patients was 5.3 minutes. Majority of wait times were due to interruptions from other multi-disciplinary team members, access to patient files (including technology issues) and bedside teaching.

Within the discharge process observation, discharges took 4 to 5.5 hours in total on average, dependent on the requirements of patient needs. Discharges with medical prerequisite experienced the longest discharge process. On average the medical team took 2.5 to 3.5 hours to complete the discharge letter or TTA order. The average time between letter completion and TTAs on the ward was 1.25 hours. Families average took 0.7 to 2 hours to leave the ward. Typically, the decision to discharge was late on the day shift, ranging from 11:00 to 12:40 on average.

**Conclusion** Significant improvements could be implemented to streamline the efficiency of the ward round. In view of the observational results recommendations included: organisation of patient notes prior to ward round; uninterrupted ward round; and as the longest wait for patients was discharge paperwork, early commencement of discharge summaries the afternoon prior to expected discharge was suggested. Furthermore, initiating the ward round earlier would further impact the time when patients are discharged.

Further cycle time observation is required to identify whether interventions surrounding ward round have caused improvement for more timely patient discharge, providing a more streamlined service and patient experience.

---

**FEASIBILITY OF INFANT HEARING SCREENING IN A RURAL TERTIARY HOSPITAL IN INDIA**

1Vinayak Mishra, 2Pradeeksha Mukunthraj, 1Grant Government Medical College; 2Government Medical College Akola

10.1136/archdischild-2022-rcpch.207

**Aims** In India, out of every 1000 children born, six have some degree of hearing loss.1 There is a stark absence of a national programme for universal screening of infants for hearing loss. We aimed to determine the feasibility and need of hearing screening in a rural region of western India. We used transient evoked otoacoustic emission (TEOAE) and automated auditory brainstem response (AABR) for screening.

**Methods** We conducted this descriptive feasibility study in the neonatal unit of a tertiary care hospital from June 2021 to October 2021. We enrolled 150 infants after obtaining written informed consent from their parents. We divided the infants into ‘at-risk’ and ‘no risk’ groups based on the risk factors stated in the High-Risk Registry (HRR) of JCIH 2007 (Joint Committee on Infant Hearing, 2007). We used a two-stage protocol of TEOAE and AABR to improve the sensitivity of the screening programme (figure 1).

---

**Flowchart for screening protocol**

Abstract 684 Figure 1 Flowchart for screening protocol