group (142 ± 44 mmHg). After the onset of mechanical ventilation, PaO₂ was 90 ± 28 mmHg in the CON group, 118 ± 48 mmHg in the NPPV group (p = 0.035 vs. CON group), and 211 ± 59 mmHg in the NPPV + RM group (p < 0.0001 vs. NPPV group). After ETI, EELV was higher in the NPPV group compared with the CON group (p < 0.001). Compared with NPPV alone, RM further improved gas exchange and EELV (all p < 0.05). A significant correlation was found between PaO₂ obtained 5 min after mechanical ventilation and EELV (R = 0.41, p < 0.001).

**Conclusion** NPPV improves oxygenation and EELV in children with higher lever intra-abdominal pressure compared with conventional preoxygenation. NPPV combined with early RM is more effective than NPPV alone at improving respiratory function after ETI.

**PO-0322** THE EFFECTIVE DOSE OF SODIUM BICARBONATE IN SEVERE ACUTE DEHYDRATION AND METABOLIC ACIDOSIS DUE TO ACUTE DIARRHEA IN CHILDREN

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**Background** Still exist controversies about sodium bicarbonate (SB) effectiveness in metabolic acidosis (MA). The SB dose finally remain at discretion of physician.

**Aims** Proving SB efficiency in severe acute dehydration (SAD) with MA secondary to acute diarrhoea (AD) in children.

**Methods** Retrospective study conducted between May–September 2013, in 0–5 years old patients hospitalised for AD with SAD and MA. We chose the propitious age group and season for acute gastrointestinal pathology. We considered SAD loss >10% of body weight and severe MA pH <7.2 and bicarbonate <15 mmol/L. Not included patients with associated pathology. We studied 43 medical records; blood gases (BG) assessed at admission, 1 h (1H) and 4 h (4H). 31 patients received SB (7–2meq/kg dose – A Group, 24–1 meq/kg – B Group) and 12 not (C Group).

**Results** In A Group, at admission, 57,14% presented pH <7,2, 100% bicarbonate <15; at 1 H, all presented normal pH and bicarbonate >15; at 4 H, all presented alkalosis. In B Group, at admission, 50% presented severe MA at 1 H, 25% presented alkalemia, 50% bicarbonate <15; at 4 h, 25% presented alkalosis. In C Group, at admission, 50% presented bicarbonate <15; starting with 1 H, 91,66% presented normal BG.

86,04% presented respiratory compensation (RC), pCO₂ around 20 mmHg. Percentage of patients which developed alkalosis was significantly greater in A than B Group (p 0,004); no significance between C and B Group (p 0,57).

**Conclusions** In choosing the bicarbonate dose in metabolic acidosis, the physician should consider also the RC, especially at 2 meq/kg dose.

**PO-0323** AUDIT ON CARE OF THE FEBRILE CHILD

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**Background and objectives** Feverish illness in children is a common reason for hospitalisation. Guidance has been issued by NICE as fever can be a diagnostic challenge. The aim of this audit was to determine if the NICE guideline was being adhered to within the Emergency Department and, if not, where improvement was needed.

**Methods** This was a retrospective audit reviewing the charts for all children under five years of age attending the Emergency Department within a one month period. These charts were selected using the audit function of the ‘Symphony’ system. A total of 50 charts were included in the audit. Pyrexia was defined as temperature greater than 37.8

**Results** 70% were assessed out of hours.

62% had a fever for <72 h.

62% failed to complete a traffic light category for the child.

Only 30% mentioned hydration status.

Only 6% assessed for lymphadenopathy.

Only 6% documented joint examination.

Of those children only reviewed by junior medical staff 44% sought advice from senior colleagues.

66% of children were admitted to the hospital.

70% of those discharged from the Emergency department were given a safety net in terms of when to return to hospital.

98% of children discharged from the Emergency department did not return within the following week.

**Conclusion** Increased awareness of the NICE guidelines will help improve documentation and ensure that disease specific clinical signs are considered and diagnostic uncertainty is minimised. All cases should be discussed with senior colleagues.