DO YOU KNOW WHEN YOUR INHALER IS EMPTY?
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10.1136/archdischild-2022-rcpch.386

Aims The presence of propellant in the metered dose inhalers (MDI) makes it challenging to identify when the inhaler is empty. Studies have shown that up to 86 actuations can be done just with the inhaler propellant after all the medication has been used up. Salbutamol, the commonly used inhaler in the UK do not have the dose counter. The National Institute for Health and Care Excellence (NICE) recommends medication review at clinic appointments. The Covid-19 pandemic has resulted in significant increase in remote consultations and monitoring bringing out its own challenges in maintaining essential asthma care. We aimed to evaluate if patients identify when the inhaler is empty, clinical implications and the method of inhaler disposal.

Methods A semi-structured interview was performed by two authors of all 20 neonatal units in the North West of England (Merseyside and Manchester deaneries) during 2021. The questions were designed by the authors comprising four main themes; discharge from hospital, oxygen at home, follow up team, and BPD-associated pulmonary hypertension.

Data was recorded and analysed in Microsoft Excel.

Results 7 (35%) hospitals in North West England had a dedicated BPD team and service. Home oxygen eligibility criteria existed in 13 (65%) of hospitals and this decision was made by the designated or current consultant in all units. There were no consistent criteria for home oxygen but common themes included corrected gestational age >36 weeks, gaining weight and no safeguarding concerns. 17 (85%) neonatal units had a multidisciplinary team (MDT) discharge planning meeting before discharge with home oxygen. All MDTs included a consultant and neonatal nurse but other members varied including BPD team, community outreach, health visitor, dietician and social worker. 4 (20%) of hospitals included parents in their discharge MDT and 9 (45%) hospitals performed pre-discharge home visits.

Only 2 units (10%) performed pre discharge echocardiograms to assess for BPD associated pulmonary hypertension.

Community care for babies requiring oxygen at home was provided by community neonatal nurses in 8 (40%) hospitals, general community team in 4 (20%) and respiratory paediatric nurses in 5 (25%) of hospitals. 12 (60%) hospitals had home oxygen weaning guidelines but there was no consensus regarding the frequency of community visits or overnight saturation studies (ONSS). Half of units stopped community visits after home oxygen discontinuation and half continued a further 1-2 visits.

Babies with BPD were largely followed up by their named consultant with only 3 (15%) of units providing specific BPD follow up clinics. The periodicity of follow up was heterogeneous with 8 (40%) units providing 2 monthly follow up, 8 (40%) had no set criteria and 2 (10%) had 6 monthly appointments. 13 (65%) hospitals followed up patients until 2 years but 5 (25%) of units had no set criteria and 2 (10%) provided follow up until 4-5 years of age.

Conclusion This review of BPD services in the entire North West England shows diverse heterogeneity of BPD teams, discharge criteria, community care and outpatient follow up. There is no consensus regarding home oxygen eligibility or weaning despite evidence based reviews from European Respiratory Society and BMJ. We suggest the creation of a centralised North West BPD service would standardise evidence based practice for patients in this area.

REFERENCES
2. NICE asthma quality standards:2018.