such practices, with an aim to create a centralised North West BPD service.

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.

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 Design Prospective, multicentre quality improvement project in hospitals who are part of the West Midlands Paediatric Severe Asthma Network (WMPSAN). Data collected from children with asthma and other respiratory conditions at hospital visits.

Outcome measures Children/carers attending hospital were asked how they identify an empty salbutamol inhaler, dose counters in the preventer inhalers and disposal practices were reviewed.

Results Data was collected from 157 children between October 2020 to September 2021. One hundred and seven (68.1%) were boys, the median age was 9.5 years (Interquartile Range IQR 2,15). One hundred and eighteen children (75.2%) had asthma, 19 (12.1%) preschool wheeze, 5 (3.2%) cystic fibrosis and 15 (9.3%) bronchiectasis. In children with asthma or PSW (n=137), median asthma attacks requiring emergency department visits within the last 12 months were 2 (IQR, 0-10) and High Dependency Unit (HDU) admissions were 0.5 (IQR 0,4).

Eighty six (54.8%) said they were able to identify an empty inhaler correctly and seventy one (45.2%) were unsure/not aware. One hundred and five (69.9%) sought to identify medication left in the inhaler by shaking it and twenty seven (29.9%) looked for visible aerosol during actuation. Only three patients said that they will look at the dose counter and two actually kept count of actuations delivered.

Inhaler technique was checked in 152/157 patients (96.8%) and was found to be satisfactory in 127/152 (83.5%). 138/157 brought a spacer device to the clinic and 127/138 (92%) were using an appropriate spacer for age.

Neither the Salamol® or Ventolin® information leaflets contained any information on how to identify when 200 actuations had been performed. Symbicort® and Clenil® brands with dose counters had information on when to change the inhaler by looking at the number on the dose counter. Seretide® and Clenil® (without the dose counter) did not have any information regarding when to change the inhaler.

Conclusion Patients cannot reliably identify when their inhaler is empty. Along with focus on inhaler technique and use of spacer device, guidance should be provided on how to identify an empty inhaler as part of essential asthma care.

There is urgent need for health regulators to work with the pharmaceutical industry to ensure that all inhalers are manufactured with dose counters and support recycling.

REFERENCES
2. NICE asthma quality standards:2018.