were compared to the 62 with successful testing. Infants were divided into two groups based on gestation, 38 weeks and below and 39 weeks and above. Results were dichotomised into sufficient and insufficient (QNS) results. The Chi square test indicated that there is a statistically significant association between gestational age and sufficient or insufficient result. ($p=0.004$)

Discussion It would be helpful to compare our data to the same cohort in other centres and national rate to see if this is an acceptable QNS rate and obtain further data regarding gestational age. Collection techniques and laboratory analysis have already been optimised with current equipment and staff. Consideration could be given to delay offering sweat test by one to two weeks to those born at 37 and 38 weeks gestation in infants who only have 1 mutation. This may reduce need for time consuming and stressful repeat testing.

GP277 EVALUATION OF A NOVEL DISPOSABLE OSCILLATING POSITIVE EXPIRATORY PRESSURE (OPEP) DEVICE IN A COHORT OF CHILDREN WITH CYSTIC FIBROSIS

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Objectives To evaluate use of a novel disposable Oscillating Positive Expiratory Pressure (OPEP) device (SoloPep) by children with CF.

Methods A convenience sample of 36 participants, all current OPEP device users, was recruited from a paediatric CF service. For one month, participants replaced their current OPEP devices (typically used daily for up to 6 months) with the SoloPep device (daily disposable), and followed their existing OPEP regimen. Lung function was assessed on the day that use of the new device was adopted and following completion of the test period using the EasyOne Air Spirometer (NDD Medzintech AG, Switzerland). Lung Clearance Index (LCI) was assessed via multiple-breath nitrogen washout (Exhalyser D, Eco Medics, Switzerland). User experience of SoloPep was evaluated with a post-study questionnaire, rated on five-point Likert scales. All participants were trained at the first clinic visit to use the SoloPep device utilising a proprietary software program.

Results 31 participants completed the study: 13 females; median age 10 years, range 4–16 years. Lung function (mean $\pm$ SD; %FEV₁, baseline = 83.26 ± 19.63 , follow-up = 86.31 ± 20.95 ; %FVC, baseline = 92.65 ± 16.02 , follow-up = 94.32 ± 16.82 ; FEV₁: FVC, baseline = 0.79 ± 0.11 , follow-up = 0.80 ± 0.10) and LCI (mean $\pm$ SD; baseline = 10.05 ± 2.86 , follow-up = 9.66 ± 2.10) were unchanged post-intervention. Most participants felt that SoloPep was easy to use (72% Strongly Agree; 24% Agree; 4% Neutral), addressed issues they had with cleaning their current OPEP device (72% Strongly Agree; 16% Agree; 12% Neutral), and encouraged them to perform their OPEP therapy more regularly (52% Strongly Agree; 28% Agree; 16% Neutral, 4% Strongly Disagree). All participants agreed that they would like to use SoloPep as their usual OPEP device (76% Strongly Agree; 24% Agree). No adverse device-related events were reported during SoloPep use.

Conclusion SoloPep was developed as a daily disposable OPEP device to reduce the risk of infection due to poor device cleaning. It is a convenient, user-friendly alternative to currently available OPEP devices. Over the course of the study, lung function was maintained, no adverse events were reported, and positive user experiences of the device were reported. Therefore, SoloPep may be a useful adjunct to aid airway clearance in children with CF.

GP278 WARD LEVEL HIGH FLOW NASAL CANNULA OXYGEN FOR THE MANAGEMENT OF BRONCHIOLITIS: THE IMPACT ON HIGH DEPENDENCY UNIT BEDS (INTERIM RESULTS)

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Background Many units across the UK and Europe still use HFNC₂ only within the critical care department. Prior to the introduction of ward level high flow nasal cannula oxygen (HFNC₂) ten percent of patients admitted with a diagnosis of bronchiolitis required high dependency (HDU) care in our tertiary centre. A review of winter 2016 data suggested that the introduction of ward HFNC₂ had the potential to reduce over a third of HDU admissions. The median length of stay in HDU was 7.82 days for bronchiolitis patients.

Aim To introduce ward level HFNC₂ for the management of bronchiolitis and audit the impact on critical care floor beds (HDU).

Methods

1. Produced an evidence-based guideline for HFNC₂ use at ward level in the management of bronchiolitis.
2. Set up a working group and instituted staff training.
3. Sought management approval leading to the funding of 2 machines for ward level use.
4. Implemented the protocol in September 2018.
5. Interim audit of the use and outcomes December 2018.

Results Twenty patients received ward HFNC₂. Only one patient had a significant background comorbidity which was neuromuscular. Table 1 shows the demographics, management and outcomes. Three patients required HDU care for continuous positive airway pressure. No patients required intensive care.

Overall therefore were 60 days of ward HFNC₂ use.

Abstract GP278 Table 1

Demographics	N=20
Age range (decimal age)	0.03 – 1.4
Median decimal age (years)	0.78
Sex: Male	7
Female	13
Preterm	1
Management	
Oral feeds	1
NG continuous feeds	4
I.V fluids	15
HFNC₂	
Mean no. of days of HFNC ₂	3
Deterioration requiring HDU (n=)	3
Deterioration requiring PICU (n=)	0
Mean length hospital stay (days)	5.9
Median length hospital stay (days)	5