the excess of absenteeism and work disability. We have hypothesised that there may be a variety of other bio-psycho-social and cultural factors that impact on ability to work in severe asthma.

Methods Patients with severe asthma were recruited from the Birmingham Regional NHS Severe Asthma Service for qualitative, semi-structured interviews conducted by an independent student researcher. We included patients from different socio-demographic backgrounds but excluded those who had never been employed. Interviews were performed either face-to-face, online or via telephone, transcribed using software and edited by hand. Thematic analysis was performed to identify patterns of meaning within the data.

Results 12 patients participated in the study (9 females and 3 males). Analysis resulted in 5 major themes describing the experience of working with severe asthma: impact of patients’ asthma control on work, psychological impact of living with severe asthma, costs and benefits of working, adaptations to remain in employment and perceived importance of work identity (see Table 1).

Conclusions Our data highlights the potential for physical, occupational, psychological, and social support to enhance work ability for the wide-ranging work challenges patients face. There is also a need for greater public awareness and education about severe asthma to minimize patient distress in the work environment.

REFERENCES
2. Asthma, UK.

P127 INITIAL RESPONSES TO TEZEPELUMB IN A COMPLEX SEVERE ASTHMA POPULATION


Introduction Biologic therapies have revolutionised the management of severe type 2 high (T2H) asthma and the armamentarium of injectable asthma therapies continues to grow with the recent NICE approval of a sixth monoclonal biologic, Tezepelumb. Tezepelumb binds to an airway epithelial cell-derived cytokine, thymic stromal lymphopoietin (TSLP). TSLP is released in response to airway epithelium insult and leads to activation of downstream airways inflammation pathways. Large international RCTs have demonstrated a significant reduction in asthma exacerbations and an improvement in asthma control in the recruited population, however, the efficacy of Tezepelumb in an unselected severe asthma population remains to be defined. We aim to elucidate initial clinical and serologic responses to Tezepelumb in a complex severe asthma population.

Methods We retrospectively reviewed records of all adult severe asthma patients 8 weeks after initiation of Tezepelumb 210 mg s/c every 4 weeks. All patients were approved to commence Tezepelumb following multidisciplinary team (MDT) approval. These patients were either ineligible for any other NICE approved biologic therapies at that time or had failed to gain oral corticosteroid (OCS) independence whilst other NICE approved biologic therapies.

Results A total of 46 patients received 2 doses of Tezepelumb with baseline demographics in Table 1. The majority of patients were on OCS (91%) and therefore baseline T2H biomarkers were suppressed. 27 (59%) were obese with a BMI ≥ 30 kg/m² and the mean baseline ACQ-6 score was high 3.3. 35 (76%) patients had previously been on at least 1 asthma biologic. 22 (48%) patients were able to start weaning OCS and there was an overall trend suggestive of improved asthma control (Table 1).

Conclusions In a complex, real world, severe asthma population, 8 weeks of Tezepelumb affords patients clinically significant improvements in ACQ-6 scores, a mean FEV₁ improvement of 150 ml and, continued suppression of type 2 inflammation biomarkers. Whether this impact is sustained and leads to a reduction in OCS and annualised rate of asthma exacerbations requires further longitudinal studies.

REFERENCE

Abstract P127 Table 1 Baseline Demographics, Co-morbidities and Responses to Tezepelumb

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>50.9 (±12.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI (kg/m²)</td>
<td>31.6 (±8.5)</td>
</tr>
<tr>
<td>Female sex – no. (%)</td>
<td>29 (63%)</td>
</tr>
<tr>
<td>Smoking status</td>
<td>Never smoker 23 (57%)</td>
</tr>
<tr>
<td></td>
<td>Ex-smoker 19 (41%)</td>
</tr>
<tr>
<td></td>
<td>Current smoker 1 (2%)</td>
</tr>
<tr>
<td>Onset of Asthma</td>
<td>Early (&lt; 18yo) 30 (85%)</td>
</tr>
<tr>
<td></td>
<td>Adult 12 (26%)</td>
</tr>
<tr>
<td></td>
<td>Late (&gt; 40 yo) 4 (9%)</td>
</tr>
<tr>
<td>Nasal Polyposis – no. (%)</td>
<td>13 (28%)</td>
</tr>
<tr>
<td></td>
<td>Baseline (Week 0)</td>
</tr>
<tr>
<td></td>
<td>After 2 doses (Week 8)</td>
</tr>
<tr>
<td></td>
<td>FEV₁ (L) 2.00 (±0.62) 2.15 (±0.63)</td>
</tr>
<tr>
<td></td>
<td>FEV₁ (% predicted) 66.9 (±20.3) 74.0 (±19.9)</td>
</tr>
<tr>
<td></td>
<td>FeNO (ppb) * 21 (14 – 44) 15.5 (10.5 – 25.5)</td>
</tr>
<tr>
<td></td>
<td>Blood eosinophil count (x10³) * 0.1 (0.0 – 0.2) 0.08 (0.0 – 0.2)</td>
</tr>
<tr>
<td></td>
<td>Total IgE (kU/L) * 44 (30.5 – 225.5)</td>
</tr>
<tr>
<td></td>
<td>Maintenance Prednisolone dose (mg) * 10 (10 – 20) 10 (5 – 15)</td>
</tr>
</tbody>
</table>

P128 HEALTHCARE PROFESSIONAL-LED DE-ESCALATION OF BACKGROUND THERAPIES FOR SEVERE ASTHMA AMONG MONOCLONAL SUPER-RESPONDERS

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Introduction There is evidence to support healthcare professional (HCP) led de-escalation of background therapies without loss of asthma control in severe asthma (SA) patients with ‘Super-Response’ (SR) – cessation of maintenance oral corticosteroids (OCS) and an annualised exacerbation rate (AER) of 0 to monoclonal antibody (mAb) therapy (R Louis et al.

REFERENCE
1F Yles, R Burton, A Nuttall, J H Joplin, H Burhan. Liverpool University Hospitals NHS Foundation Trust, Liverpool, UK; 1Liverpool School of Tropical Medicine, Liverpool, UK; 2University of Liverpool, Liverpool, UK
Poster sessions

Severe Asthma Standard-of-Care Background Medication Reduction With Benralizumab: ANDHI in Practice Substudy.

JACI In Practice. 11(6);1759–1770.). However no drug-prescribing guidelines currently exist. We assessed drug-prescribing practices and outcomes at our severe asthma centre.

Methods Retrospective review of SA patients from January 2019 – May 2021 who achieved SR during their first 24 months of mAb therapy. We assessed HCP-led background therapy de-escalation choices, medication adherence, and clinical outcomes at baseline, 12, and 24 months.

Results 70 patients (mean age 53.7±15.3, M/F: 33/37) on mAb therapy demonstrated SR within the first 24 months (Omalizumab n=8, Mepolizumab n=14, Benralizumab n=48).

At 12 months, 21 (30%) discussed de-escalation with a HCP, and 6 had background medications stopped (long-acting muscarinic agonist [LAMA] n=3, leukotriene receptor antagonist [LTRA] n=2, macrolide antibiotics n=1); at 24 month review, 8 (11%) discussed de-escalation with a HCP, and 7 had background medication stopped (LAMA n=2, LTRA n=4, Theophylline n=1).

Patients whose medications were stopped by HCPs had a significantly better Asthma Control Questionnaire (ACQ-6) score compared to those who did not; other parameters were not statistically significant – table 1.

17 patients (24%) at 12 months and 20 (29%) at 24 months demonstrated poor adherence to their inhaled corticosteroid (ICS), indicated by medicines possession ratio <80%.

There was no statistically significant difference in clinical outcomes at 12 and 24 months between patients with and without poor ICS adherence.

Conclusion Among patients with SR, few had background treatment de-escalated, and there were high rates of poor adherence, suggesting these patients may feel their asthma is well-controlled enough to stop medications. Neither de-escalation nor poor adherence were associated with significant degradation of asthma control, but HCP-guided de-escalation is safer and preferable. Further research is needed to develop de-escalation guidelines for patients on mAb therapy.

Abstract P128 Table 1

<table>
<thead>
<tr>
<th></th>
<th>12 Months</th>
<th></th>
<th></th>
<th>24 Months</th>
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<tr>
<td></td>
<td>De-Escalation</td>
<td>p-value</td>
<td>De-Escalation</td>
<td>p-value</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
<td>Yes</td>
<td>No</td>
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</tr>
<tr>
<td>AER (µ±SD)</td>
<td>0.25 ±0.56</td>
<td>0.60 ±0.56</td>
<td>0.126 ±0.56</td>
<td>0.44 ±0.56</td>
<td>0.69 ±0.56</td>
<td>0.507 ±0.56</td>
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<tr>
<td>ACQ-6 (µ±SD)</td>
<td>1.0 ±1.2</td>
<td>2.3 ±1.2</td>
<td>0.007 ±1.2</td>
<td>1.28 ±1.2</td>
<td>0.024 ±0.24</td>
<td></td>
</tr>
<tr>
<td>Mini Asthma Quality of Life (µ±SD)</td>
<td>4.9 ±1.8</td>
<td>4.2 ±1.8</td>
<td>0.374 ±1.8</td>
<td>4.3 ±1.8</td>
<td>3.7 ±1.8</td>
<td>0.446 ±1.8</td>
</tr>
</tbody>
</table>

P129 UK SEVERE ASThma PATIENT OUTCOMES IN THE REAL-WORLD VERSUS ITALY AND THE USA: REALITI-A AT 2 YEARS

Introduction REALITI-A was a 2 year global, prospective observational study in severe asthma patients newly prescribed mepolizumab 100 mg subcutaneously. By-country analysis describes outcomes in the UK (n=200), Italy (n=244) and USA (n=100), the 3 largest cohorts with differing eligibility criteria.

Methods Outcomes included the rate of clinically significant exacerbations (CSEs), magnitude of exacerbation rate change and proportion of patients experiencing zero exacerbations post-mepolizumab initiation versus pre-treatment. Additional outcomes assessed changes in maintenance oral corticosteroid (mOCS) dose and asthma control (ACQ-5) at weeks 101–104 post-initiation.

Results 24 months post-initiation, CSEs were reduced 64% in the UK (CSE rate 6.55 pre-treatment versus 2.34); 85% in Italy (3.79 pre-treatment versus 0.58) and 68% in USA (2.40 pre-treatment versus 0.78). 61% (122/199), 81% (197/243) and 64% (64/100) of patients in the UK, Italy and USA experienced a 50–100% reduction in CSEs. 15% (30/200), 56% (137/243) and 50% (50/100) of patients from the UK, Italy and USA experienced no exacerbations at 24 months.

At weeks 101–104, median daily mOCS dose was reduced 78% from baseline (10.0 mg to 2.25 mg) in the UK; by 100% from baseline (7.32 mg to 0 mg) in Italy and by 100% from baseline (10.0 mg to 0 mg) in the USA.

Mean ACQ-5 scores reduced from 3.30 to 1.78 in the UK; from 2.80 to 0.84 in Italy and from 2.51 to 0.80 in the USA. At 2 years, blood eosinophil levels were reduced 82% from 2.80 to 0.84 in Italy and 68% in USA (2.40 pre-treatment versus 0.78). 61% (122/199), 81% (197/243) and 64% (64/100) of patients in the UK, Italy and USA experienced a 50–100% reduction in mOCS. 15% (30/200), 56% (137/243) and 50% (50/100) of patients from the UK, Italy and USA experienced no exacerbations at 24 months.

Across the global study cohort, treatment-related adverse events were observed in 90 (11%) patients; 7 (<1%) of which were serious and 1 fatal (hepatic cancer).

Conclusion REALITI-A data demonstrate effectiveness of mepolizumab in the real world in severe asthma patients in the UK, Italy and the USA. Eligibility criteria and baseline demographics may contribute to differing patient outcomes. From a UK perspective, this analysis highlights potential areas for changes to management of severe asthma patients including earlier intervention and appropriate OCS stewardship.

Please refer to page A290 for declarations of interest related to this abstract.