93.5% of all enrolled PID patients. On average, patients became competent in self-administration after 2.3 nurse visits (range 1–8 visits).

**Conclusion:** Patients of variable ages with PID are suitable for home-based therapy with Hizentra®. These patients can be effectively transitioned from hospital-based immunoglobulin treatment to weekly home-based therapy with Hizentra® using CARES. Further analyses of CARES are planned to determine how to best continue to support patients with their ongoing home-based treatment.

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**P101: MOLECULAR PROFILING UNCOVERS RESTRICTED ANTIBODY REPOTEROIR FOLLWING COV-19 VACCINATION IN PREDOMINANT ANTIBODY DEFICIENCIES**

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**Introduction:** Generation of antibody diversity is the consequence of both stochastic and heritable processes, defects of which may result in predominately antibody immunodeficiencies (PAD). Interrogation of specific antibody generation pathways through vaccination remains crucial to PAD diagnosis. However, routine assays do not reveal the molecular features of the antibody repertoire. Modern mass spectrometry proteomics (MS-proteomics) techniques can now unravel these characteristics. In our study we apply antibody repertoire profiling by MS-Proteomics for the first time to the assessment of antibody responses in patients with PAD following vaccination.

**Method:** Following SARS-CoV-2 vaccination, serological responses in PAD and demographically matched healthy controls were longitudinally assessed by ELISA and neutralisation assays. S1 subunit-coupled magnetic bead-purified IgGs were sequenced by MS for immunoglobulin heavy chain variable region (IGHV) subfamilies analysis.

**Results:** Twelve vaccine responsive PAD patients were recruited with 11 matched healthy controls. Neutralisation and end point anti S1 titres were variably reduced in PAD. By Proteomic profiling, all 12 PAD subjects demonstrated restricted anti-S1 antibody repertoires, with fewer than 5 IGHV subfamilies (median 3, range 2–4), compared to 5 or greater for 11 healthy control subjects (6–510). IGHV1-69, 3-53, 3-23 and 3-5 IGHV subfamilies (median 3, range 2–4) were the most commonly subfamilies used across both groups. There was less utilisation of IGHV1-69 in low neutralisers and IGHV3-7 was substantially less common in the PAD cohort. Somatic hypermutation number per subfamily did not differ amongst the groups.

**Conclusions:** This is the first comparative antibody repertoire study in immunodeficiency and vaccination identifying qualitative differences in the antibody composition, not distinguished by standard serological techniques. These results suggest that antibody repertoire restriction but not somatic hypermutation is characteristic of PAD. This study introduces antibody repertoire profiling by MS proteomics as a novel molecular resolution technique for comparative assessments of antibody generation in disease states.

**P102: DRIVE-THRU SUBCUTANEOUS IMMUNOGLOBULIN AS AN ALTERNATIVE APPROACH TO PATIENTS NEEDING IMMUNOGLOBULIN THERAPY DURING THE COVID-19 PANDEMIC**

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**Introduction:** Subcutaneous immunoglobulin (SC Ig) offers a home-based treatment option to patients requiring immunoglobulin therapy. Patients enrolled at The Royal Melbourne Hospital SC Ig Program are reviewed by the SC Ig Program nurse consultant and collect supplies on an 8-weekly basis. During COVID-19 pandemic in 2020, patients had increased anxiety and concerns over exposure to coronavirus, immunoglobulin treatment, and care support. To address these concerns a small multidisciplinary team established an out-of-hospital system to maintain patient safety and the continuity of care.

**Method:** “Drive-Thru SC Ig” is established after advisory consultations with nurses, doctors, patient advocacy group, transfusion laboratory, and pharmacy. Eligible patients were screened and offered with SC Ig therapy. Education and guidance on management plan were provided to patients. Health care needs were addressed via telehealth along with regular blood tests being monitored via external pathology. Closer-to-home collection was facilitated by regional pharmacies for relevant patients.

**Results:** 156 immunology patients were screened; the number of SC Ig patients: Before March 2020 = 44, Between March 2020 and December 2020 = 75. In May 2021 = 67. 210 encounters of Drive-Thru SC Ig collections were conducted between March 2020 and December 2020. No variances reported and cold chain requirements maintained. Positive feedback received from patients included feeling confident, safe, stress-free, and being supported.

**Conclusion:** The “Drive-Thru SC Ig” provides the flexibility to meet the evolving COVID-19 pandemic situation and maintains patient safety, the continuity of care, and the safety requirement of SC Ig products. The initiative commenced on 23 March 2020 and continued until August 2020. It was further extended to December 2020 due to multiple lockdowns in Victoria during 2021. The initiative has moved to the sustain phase in mid-2021, alternating in-person clinic and drive-thru/telehealth for review and supply collection.

**P103: EFFICACY AND SAFETY OF DUPILUMB IN CHILDREN AGED 6 MONTHS TO 5 YEARS WITH MODERATE-TO-SEVERE ATOPIC DERMATITIS**

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Background: There is a high unmet medical need in pediatric patients aged 6 months to 5 years with moderate-to-severe atopic dermatitis (AD).

**Method:** In LIBERTY AD PRESCHOOL (NCT03346434 part B), a double-blind, placebo-controlled trial, children aged 6 months to 5 years with moderate-to-severe AD inadequately controlled with topical therapies were randomized 1:1 to subcutaneous dupilumab every 4 weeks (q4w) (baseline weight ≥<15 kg: 200 mg; ≥15–<30 kg: 300 mg) or placebo for 16 weeks. From Day – 14, all patients initiated standardized treatment with low-potency topical corticosteroids (TCS).

**Results:** 162 patients were randomized (dupilumab/placebo groups, n = 83/79); 157 (96.9%; dupilumab/placebo n = 82/75) completed 16 weeks of treatment. At Week 16, 27.7%/3.9% (P < 0.0001) of patients receiving dupilumab/placebo achieved an IGA score of 0–1 (clear/almost clear), and 53.0%/10.7% (P = 0.0001) achieved ≥75% improvement in Eczema Area and Severity Index (EASI). Least squares (LS) standard error (SE) mean percent change from baseline at Week 16 in EASI and weekly averaged worst scratch/itch score in dupilumab/placebo was –70.6% (4.9)–19.6% (5.1) (P < 0.0001) and –49.4% (5.0)–2.2% (5.2) (P < 0.0001), respectively.

**Interpretation:** It was further extended to December 2020 due to multiple lockdowns in Victoria during 2021. The initiative has moved to the sustain phase in mid-2021, alternating in-person clinic and drive-thru/telehealth for review and supply collection.