months = 111, 60–144 months =180. Severity classification: Mild intermittent=33, Mild persistent=61, Moderate persistent=181, Severe persistent=25. Children with persistent asthma received inhaled corticosteroid with (26%) or without (74%) long-acting-bronchodilator or Leukotriene-receptor-antagonist. Those with intermittent asthma received short course of bronchodilator. After 6mo, disease control could be assessed in150 children who had at least 90% adherence to the prescribed treatment. Table1 shows the distribution of demographic features, symptom profile, personal and family atopy, and exacerbating/triggering factors, in children with uncontrolled versus controlled disease.

Conclusion With the exception of night time symptoms at presentation, there are no specific features that can predict poor response to therapy in children with bronchialasthma.

PO-1023 OVER-PRESCRIPTION OF ADRENALINE AUTO-INJECTORS IN SCHOOL AGE CHILDREN?

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Anaphylaxis is an acute, potentially life-threatening condition. Referral to specialist allergy services is vital to allow identification of triggers involved. One of the key purposes of these clinics is prescription of rescue medication, which can include adrenaline auto-injectors.

Aim We reviewed all patients who attended the Paediatric Allergy Clinic and were supplied with an adrenaline auto-injector over the period of January 2008–December 2013. We aimed to compare this number with the number of children with anaphylaxis care-plans in schools within the Northern Health and Social care trust.

Method We reviewed all submissions to the Adrenaline Auto-injector log-book. This is held at the Paediatric Allergy Clinic and completed each time a patient is seen who has been prescribed an adrenaline auto-injector. Information was obtained from the Public Health nursing team to ascertain the number of children with an anaphylaxis care-plan for school.

Results In 2013 there were 49,286 children aged between 5–16 years within the NHSCT; 580 children were identified with an anaphylaxis care-plan held in school. Prevalence of school aged children at risk of anaphylaxis was 1.2%. Only 160 children (from birth to 18 years), with adrenaline auto-injector devices were reviewed at the allergy clinic in 2013, with 157 reviewed in 2012.

Between January 2008 and December 2013 there was six fold increase in patients seen at the Paediatric Allergy Clinic. We reviewed a total of 476 submissions to the Adrenaline Auto-injector logbook; 339 new patients and 137 review patients. There were no specific trends identified with regard to gender but there was a majority of patients under 5 yrs. There was a predominance of nut allergy in the new and review patients. Of the 68 new patients identified with an egg allergy 18% had a sole egg allergy, all of who had been prescribed an adrenaline auto-injector.

Conclusion There is a major shortfall with regard to the total number of children within the Northern HSCT who have been prescribed an adrenaline auto-injector and those who are seen at the Paediatric Allergy Clinic. This study has focused future efforts to review each of these patients in a formal paediatric allergy setting.

PO-1024 THE IMPORTANCE OF PROINFLAMATORY CYTOKINE'S IN IMMUNE RESPONSE IN MYCOPLASMA PNEUMONIAE INFECTION IN CHILDREN WITH BRONHOPULMONARY AFFECTION

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Aims Our study was to evaluate proinflammatory cytokine's (IL-2) interaction with humoral immunity in children with *Mycoplasma pneumoniae* lower respiratory tract infection.

Methods The study group included 20 children, aged 5 months – 7 years, with pneumonia and wheezing induced by *Mycoplasma pneumoniae* infection. The diagnosis of *M.pneumoniae* was based on clinical, radiological and on the immunological determinations of specific antibodies in diagnosis titers. Levels of IgA, IgM, IgG, IL-2 were determined in serum samples obtained from all children and were tested by *ELISA*.

Results IL-2 levels in children with *Mycoplasma*-positive bronchopulmonary disease was 36,51 ± 2,26 pg/ml (variation 20,0–100,85 pg/ml) and it is higher, than in healthy children (variation 2,44–7,2 pg/ml) pg/ml. In study group average level of IgA was 0,96 ± 0,13 g/l did not differ from levels of IgA in healthy children (IgA 0,9 ± 0,04 g/l). But level of serum IgM was higher ($p < 0,05$) in *Mp*-positive group (1,8 ± 0,16 g/l) in comparison with levels of IgM in healthy children (1,2 ± 0,1 g/l). In study group level of IgG was higher (9,47 ± 0,67 g/l; $p < 0,05$) in comparison with age norms (7,5 ± 0,1 g/l).

Conclusion Inflammatory processes in children with *Mycoplasma pneumoniae* infection are characterised by hyper production of IL-2, and they are associated with high serum levels of IgM, IgG.

PO-1025 PERSISTENT WHEEZING CASES AND TREATMENT WITH INTRAVENOUS IMMUNOGLOBULIN DURING INFANCY

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Background When a physician comes across patients with recurrent wheezing are resistant to β2-agonist and anti-cholinergic therapy, known as atypical wheezing cases; he should investigate for hypogammaglobulinemia in these patients.

Aim Here, 3 cases are reported to make paediatricians aware of hypogammaglobulinemia, which is one of the reasons causing recurrent and persistent wheezing attacks during infancy and beyond.

Case presentations Case 1: 24 month-old girl presented to us with complaining of coughing and persistent wheezing. Her symptoms persisted even though she was using religiously nebulized salbutamol+budesonid therapy. Before this episode, she had 9 other wheezing attacks in her past medical history beginning from 2 months of age. Low IgG level (358 mg/dl) was detected at two different times. At the fourth day of admission, she was given IVIG 500mg/kg/dose. Case 2: 8-month-old girl came to our outpatient clinic with complaints of coughing and wheezing. Despite routine therapy, wheezing persisted for 2 months and wheezing severity increased and it did not respond to β2-agonist therapy. Low IgG level (304 mg/dl) was detected at two different times. At the 15th day of admission, she was

given IVIG 500mg/kg/dose. Case 3: 20 month-old boy presented with complaints of having frequent lower respiratory tract infections. He was experiencing recurrent wheezing attacks almost every other week for the last 6 months. Low IgG level for his age (300 mg/dl) was detected twice. He was given IVIG 400 mg/kg/dose.

Conclusion In patients with persistent wheezing symptoms during infancy, especially resistant to therapy, hypogammaglobulinemi should be excluded.

PO-1026 ACQUIRED FOOD ALLERGY IN PATIENTS WITH SOLID ORGAN TRANSPLANTATION

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Background The acquisition of new food allergy after transplantation (TAFA) is usually reported in adults and rarely in children.

Aim Here, a patient although who had normal total IgE and specific IgE test results, he developed reaction to skin prick test for cow's milk after transplantation is presented and his clinical presentation will be discussed.

Case presentation 15 month-old- boy came to our allergy clinic with complaints of vomiting after drinking cow's milk and skin rush on the area where contacted with chocolate. In his past medical histroy, left lateral segment of liver (donor was his mother) was transplanted to him when he was at 5 months. Methylprednisolone and tacrolimus immunosuppression were used after the transplantation, and tacrolimus therapy was continued for prophylaxis of chronic rejection. When he was at 7 months, family fed the patient with cow's milk but 3 h later he began to vomit. He was thought to be having food protein induced enterocolitis. His vomiting complaints repeated after intake of formula and baby food which includes grain. Laboratory findings: Total IgE : <5 and ImmunoCAP specific IgE against milk, grain and other classic foods was <0.35. Skin prick test.

Results saline: 0 × 0 mm, histamine 4 × 4 mm, fresh cow's milk: 2 × 2 mm, other food allergens (peanut, egg, fish, soybean, wheat): 0 × 0 mm.

Conclusion Our patient seemed to have cow's milk allergy related to liver transplantation. Laboratory investigations and clinical presentation of the patient did not look like typical IgE–mediated food allergy, which is expected in TAFA.

PO-1027 THE IMPACT OF NEONATAL ANTIBIOTIC EXPOSURE ON ATOPIC SENSITISATION BY THE AGE OF 12 MONTHS

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Background and aims Empirical antibiotic therapy is common in the neonatal period but often discontinued due to the lack of evidence of bacterial infection. Early antibiotic exposure may disturb microbial colonisation and immune maturation and thus increase the risk of immune-mediated diseases in later life. We investigated the long-term immune effects of early antibiotic exposure in neonates with or without evidence of infection.

Methods Altogether 622 neonates from ongoing allergy prevention studies underwent skin prick testing at the age of 12 months. Exposure to antibiotics commenced during the first 72 h of life was categorised as follows: no exposure, brief empirical exposure (less than 5 days) or therapy for documented infection (≥5 days). Outcomes were analysed by logistic regression.

Results Brief neonatal antibiotic exposure was associated with lower risk of prick test positivity (Table 1). The effect remained statistically significant after adjusting for potential confounding factors (Table 2).

Conclusions Brief antibiotic exposure during the first days of life without concomitant infectious disease appears to impact immune development.

Abstract PO-1027 Table 1 Prevalence of positive skin prick test by antibiotic exposure

No exposure	25% (136/547)
Brief exposure	8% (4/51)
Therapy for infection	29% (7/24)

Abstract PO-1027 Table 2 Logistic regression model for skin prick test positivity

	RR	95% CI	p-value
Brief antibiotic exposure	0.31	(0.093–0.75)	
Antibiotic therapy for infection	1.33	(0.61–2.28)	0.014
Maternal allergy	1.57	(1.02–2.56)	0.038
Breastfeeding ≥6 mo.	1.39	(1.03–1.92)	0.033
Smoking during pregnancy	0.52	(0.19–1.12)	0.10
Prematurity	1.24	(0.63–2.12)	0.50
Probiotic intervention	1.02	(0.88–1.17)	0.80
Elective section	1.03	(0.54–1.68)	
Non-elective section	0.90	(0.49–1.46)	0.92

PO-1028 ALLERGIC RHINITIS AND EXPOSURE TO AEROALLERGENS

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Background and aims Allergic Rhinitis is a fairly common allergic disease among children that significantly affects quality of life as well as school performance. Frequently coexists with asthma.

The aim of our study was to assess the sensitisation to inhalant allergens among children with allergic rhinitis.

Methods We included in our study 205 children, 118 boys and 87 girls, followed at the outpatient clinic of our hospital and aged (MEAN ± SD) 6.03 ± 4.18 years. A questionnaire regarding asthma, allergic rhinitis and atopy was used, along with standard clinical and laboratory assessment. Radioallergosorbent assay test (RAST) was used to identify allergen – specific IgE for common aeroallergens (a concentration of specific IgE > 3.5 KU/L was considered positive). For the statistical analysis we applied SPSS 20.0 (IBM Corp.), chi-square and Fisher's exact test.

Results Children with allergic rhinitis had more often positive RAST for Olive ($p < 0.001$), Altenaria ($p < 0.001$), and Dust Mites ($p < 0.001$). Additionally, children with allergic rhinitis also had more often asthma ($p < 0.003$).

Conclusions Often exposure to allergens such as olive, dust mites, Altenaria, that are common in the environment, is