**Introduction.** Prevalence of allergic diseases increases with every decade, which is determined by climatic changes, global warming, lengthening of season of pallination, anthropogenic loading on atmospheric air. The combination of a few allergies is present in one patient, frequency of polyallergy increases. Prevalence of allergy is higher in the industrially developed cities, than in rural places. Partly such "epidemic" of allergy is related to the "western" lifestyle. Reduction of contact with bacterial antigens (in connection with reduce of the family size, vaccinations, prevalence of antibiotics, improvement of hygienic regime) prevents switching formed in antenatal and neonatal periods Th$_2$ - polarized immune answer to Th$_1$ - cellular immune answer that assists forming and realization of allergy.

**Objective.** To study hypersensitivity to the main allergens in children with allergic diseases on results of skin allergy testing, and also to analyze the nosological structure of diseases.

**Materials and Methods.** 228 children were admitted to allergological department with bronchial asthma, allergic rhinitis, atopic dermatitis. Middle age was 10,4±2,6. They were underwent skin prick testing, the estimation of results was conducted 25-40 minutes after performing the test. Associations between skin prick-test results were studied using cross-correlation analysis and descriptive statistics in the package of applied statistics (Statistics 6.0 for Windows).

**Results.** We compare the structure of hypersensitivity for 2 last years with the data which department of faculty pediatrics received in 2007-2008. There is insignificant reduction in sensitization pattern to the basic groups of allergens in 2015 that may be explained by method of skin tests: in 2007-2008 scratch tests were used, which resulted in greater percent of false-positive reactions. To the pollen allergens 85,5% of children were sensitized (compare to 95% in 2007-2008), to the domestic – 54% (compare to 60% in 2007-2008), food allergens – 21% (compare to 35% in 2007-2008), fungal – 35% (40% in 2007-2008).

Hypersensitivity to pollen allergens corresponds with epidemiological situation in Zaporizhzhya region, where during last 10 years the prevalence of
pollen-induced bronchial asthma and allergic rhinitis increased rapidly. It is determined by the considerable increase of weeds amount (increase of jungles of ambrosia, Chenopodiaceae) and cultural plants (sunflower). Therefore naturally 47.8% of patients were sensitive to ambrosia, 49.5% - to sunflower. Among domestic allergens predominates house dust mite sensitization (to Dermatophagoides pteronyssinus and Dermatophagoides farinae about 24%), among fungal - Alternaria (23%), prick tests to epidermal cat dander is positive in 19.7% of patients.

More frequently hyperergic reaction of the skin (papula/hyperemia) was observed to cyclachaena (44%), sunflower (46%), ambrosia (50%), cat hair (42%), D.farinae (39%).

Bronchial asthma was diagnosed in 122 children (53.5%), in 95% of them we observed persistent course of the disease. According to GINA 2014 33 (27%) of patients had controlled asthma, 52.5% - partially controlled, 20.5% - uncontrolled course. Almost ½ of patients do have seasonal and year-round symptoms of allergic rhinitis, in 85% cases according ARIA classification allergic rhinitis has persistent course. Intermittent allergic rhinitis was detected in 14.4% and was associated with sensitization to epidermal and house dust mite sensibilization (r=+0.51, p<0.05). 9.7% of patients had symptoms of atopic dermatitis, 17.9% observed skin rash after some food products intake, 12.3% had drug allergy.

Mainly middle strength of significant association (p＜0.05) was revealed between positive prick-tests in pairs ambrosia - cyclachaena (r=+0.43), ambrosia - sunflower (r=+0.43), acarus D. pteronyssinus - D.farinae (r=+0.66), mixture "birch, alder, oak, hazel" - Lolium perenne L. (r=+0.53), beef meat - egg yolk (r=+0.42), pork meat – chicken meat (r=+0.35) and milk (r=+0.36); wool of sheep - pork (r=+0, 36).

**Conclusions.** Predominance of sensitization to pollen allergens represents the epidemiological situation in the South region of Ukraine. Ranging the prevalence of sensitization we received pollen (85.5%) – domestic (54%) – fungal
(35%) – food (21%). The presence of cross-correlation connections between the different types of allergens could be due to the cross reactions between them. In case of plural positive results of skin allergen tests molecular allergy diagnostic method is recommended with the purpose of establishment of genuine and/or cross allergy. 72% of children with bronchial asthma have insufficient disease control that needs deep inspection, optimization of supervision after these children, improvement of educational program.