CHANGES IN ADMISSION RATES, LENGTH OF HOSPITAL STAY AND FREQUENCY OF COMPLICATIONS IN CHILDREN HOSPITALIZED TO CHIDREN'S UNIVERSITY HOSPITAL BETWEEN 2003 AND 2004, AFTER INTRODUCTION OF CHICKENPOX VACCINATION INTO THE LATVIAN NATIONAL IMMUNIZATION CALENDAR

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Introduction. Chickenpox is an extremely contagious infectious disease with worldwide spread. Each year 5459.6 chickenpox cases are registered in Latvia with the mean annual incidence rate of 239.032 per 100,000 persons. In 2008 chickenpox vaccination was introduced into the Latvian National immunization calendar. Clinical studies from different world countries have proven this vaccine's efficacy, which, based on the literature data, reaches 95%. Vaccination reduces number of chickenpox cases, indirectly protects groups of population in which vaccination is contraindicated, as well as reduces possibility of *herpes zoster* development later in life. It also reduces need for hospitalization, frequency of complications and mortality.

Aim of the study. To study the effect of chickenpox vaccination introduction into the National Immunization Programme on incidence, number of complications and length of hospital stay in children of different age groups at Children's Clinical University Hospital (CCUH) between 2003 and 2014.

Materials and methods. 565 case notes of children hospitalized to CCUH with diagnosis of chickenpox were analysed in this retrospective study. Data was processed using SPSS Statistics and MS Excel 2013 software.

Results. After the introduction of chickenpox vaccination into the National Immunization programme in 2008, a reduction in the number of disease cases from 6953 in 2003 to 2396 in 2014 (p=0.28) was noted, along with an increase in chickenpox immunity levels from 48.1% in 2008 to 84.5% in 2014.

There was no statistically significant reduction in CCUH chickenpox patient admission rates (p=0.684). However, mean annual number of cases in 1 – 3 y.o. age group has decreased from 12.4 (2003 – 2007) to 8.7 (2008 – 2014). Mean annual number of chickenpox cases in 12 – 18 y.o. group was 5.8 in 2003 – 2007, and it has decreased to 4.7 in 2008 – 2014. Mean hospital length of stay has also decreased from 5.24 days in 2003 to 3.21 days in 2014 (p = 0.42). Frequency of chickenpox complications among hospitalized children has not changed (p = 0.52).

Conclusions. Introduction of chickenpox vaccination into the National Immunization programme positively influenced chickenpox situation in Latvia in terms of reduction in number of cases and incidence. Overall number of patients admitted to CCUH with chickenpox has not changed; however, reduction of number of cases in specific age groups was noted. Frequency of chickenpox complications has not changed, although the mean length of hospital stay reduced.