



Pneumococcal infection in Latvia.

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**1st Euro-Asian Summit of Experts on Pneumococcal Infection in St.Petersburg,
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Population – 1,93 million

- Urban - 69%

- Rural - 31%

1320 GPs

1 Children's Clinical University Hospital

19 local and regional hospitals with children departments



Data from the Department of Epidemiological Supervision and Immunization of Infections

say that year by year in Latvia about 750 cases of infection diseases are for children till the age of five years, whereof-

- about 700 children have pneumonia
- about 4 children have meningitis
- but about 30 children have septic conditions.
- And about 3-4 cases are lethal.
- Mortality of pneumonia in hostpitals of Latvia on average is 3 %.

CAUSES OF INFANT MORTALITY IN 2008 – 2014, per 1,000 live birth

2008	2009	2010	2011	2012	2013	2014	Cause of death
6,7	7,7	5,7	6,7	6,4	4,5	3,9	Deaths - total
0,2	0,3	0,2	0,1	0,3	0,1	0,0	Infectious and parasitic diseases
0,1	0,1	0,1	0,1	0,1	0,0	0	Diseases of the respiratory system
3,3	3,6	3,0	3,7	3,5	2,5	2,0	Certain conditions originating in the perinatal period
0,8	0,6	0,8	0,7	0,5	0,1	0,3	<i>Intrauterine hypoxia and birth asphyxia</i>
0,3	0,1	0,2	0,3	0,6	0	0,0	<i>Respiratory distress of newborn</i>
0,3	0,2	0,4	0,3	0,4	0,2	0,1	<i>Bacterial sepsis of newborns</i>
0,4	0,6	0,3	0,5	0,4	0,7	0,3	<i>Intracranial non-traumatic haemorrhage of foetus and newborn</i>
1,8	2,3	1,3	1,6	1,4	1,1	0,9	Congenital malformations, deformations and chromosomal abnormalities
0,2	0,1	0,1	0,2	0,1	0,1	0,0	<i>Other congenital malformations of nervous system</i>
0,5	0,9	0,4	0,5	0,4	0,3	0,2	<i>Congenital malformations of the heart</i>
0,3	0,2	0,3	0,2	0,4	0,1	0,1	<i>Down's syndrome and other chromosomal abnormalities</i>
0,7	1,1	0,7	0,7	0,7	0,3	0,4	Sudden infant death syndrome
0,3	0,2	0,2	0,2	0,2	0,1	0,1	External causes of mortality
0,3	0,2	0,3	0,3	0,2	0,3	0,4	Other diseases

Register of Causes of Death.

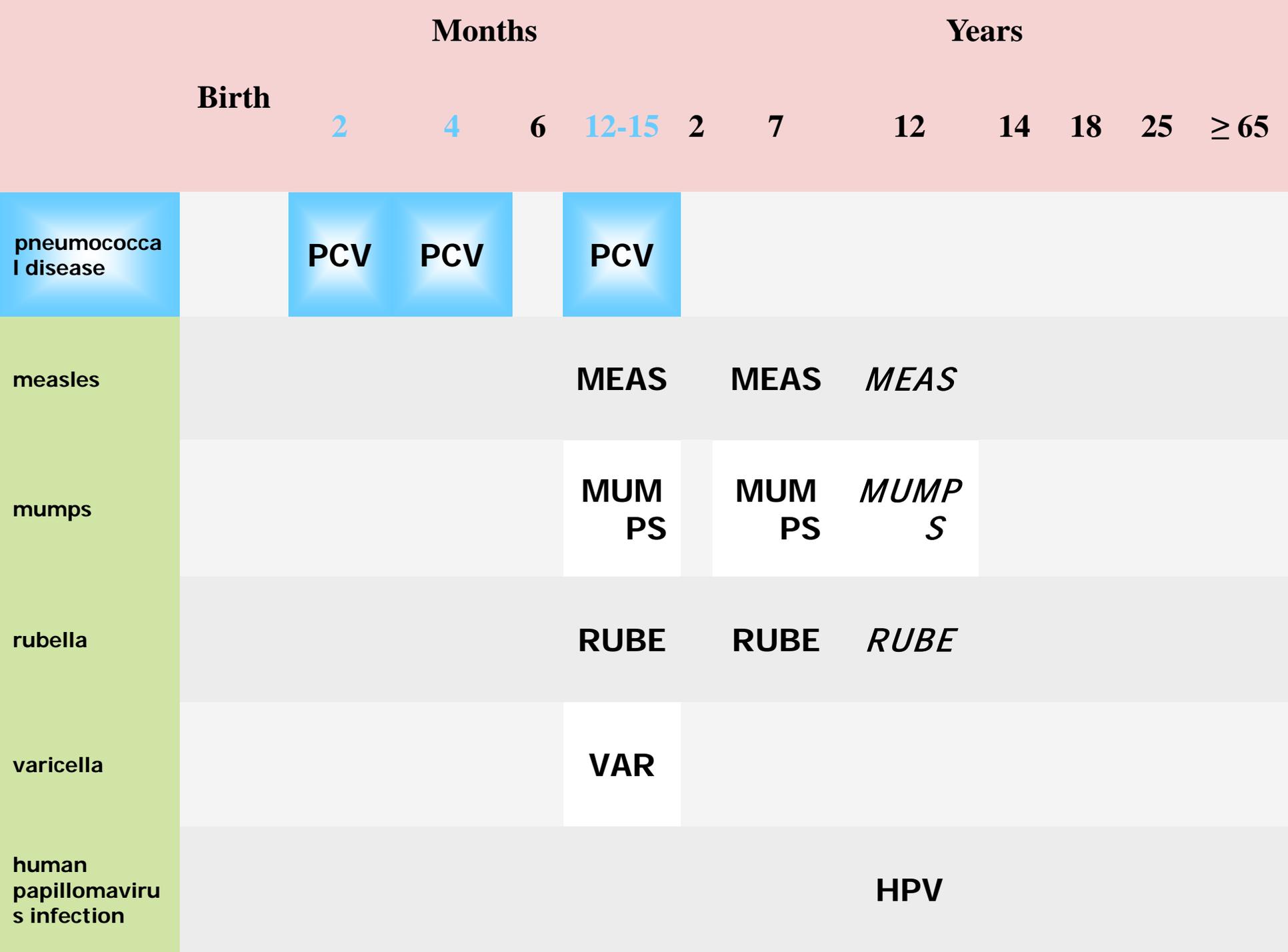
- In 2014 in Latvia 18 bacterial meningitis were diagnosed, whereof five had been pneumococcal meningitis [three patients were men and two- were female.
 - One of them was in the age group of 1-6 years olds,
 - one patient was in the age group of 50-59 years old, and
 - three were more than 60 years old].

- More significant mortality is in the age group of elderly people, for example, in 2011, in the age group of 18-44 mortality rate was 1.9%, though in the group of age of 60 and more years mortality rate was 7.5%

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- *In 2010, following the WHO recommendations, children vaccination against pneumococcal infection was included into the Program of Immunization of Latvia, and immunization level of first dose in 2011 was 87,2%.*
 - *Initiating the program, the 7-valent vaccine was used for immunization of children.*
 - *The course of vaccination consists of three doses, which are injected in the age of two months, four months and 12-15 months.*
 - *Thereby immunity of children is provided in the first years of life, when the rate of mortality and morbidity and risk of complications is the highest.*

Latvian vaccination schedule

	Birth	Months					Years					
		2	4	6	12-15	2	7	12	14	18	25	≥ 65
tuberculosis	BCG											
rotavirus infection		ROTA	ROTA	ROTA								
diphtheria		D	D	D	D		D		d		d	
tetanus		TT	TT	TT	TT		TT		TT		TT	
pertussis		acP	acP	acP	acP		acP					
poliomyelitis		IPV	IPV	IPV	IPV		IPV		IPV			
Haemophilus influenzae type b infection		Hib	Hib	Hib	Hib							
hepatitis B	<i>HepB</i>	HepB	HepB	HepB	HepB				<i>HepB</i>			



- *Vaccination against pneumococcal infection are paid by the government till the age of five years,*
- *later- it is possible to buy the vaccines for money.*
- *Statistical data show that, comparing 2013 with 2010, in 2013 the rate of vaccination against pneumococcal infection for children in the age of two years grew from 62.4% till 87.5% in Latvia.*
- *In 2015 immunization level against this infection was 90.8%,*
- *and in the first half of 2016- 93.8%.*

The analysis of immunization level and timeliness of the 2010

The analysis of immunization level and timeliness of the 2013

The analysis of immunization level and timeliness of the 2015

The analysis of immunization level and timeliness of the 2016 January-June

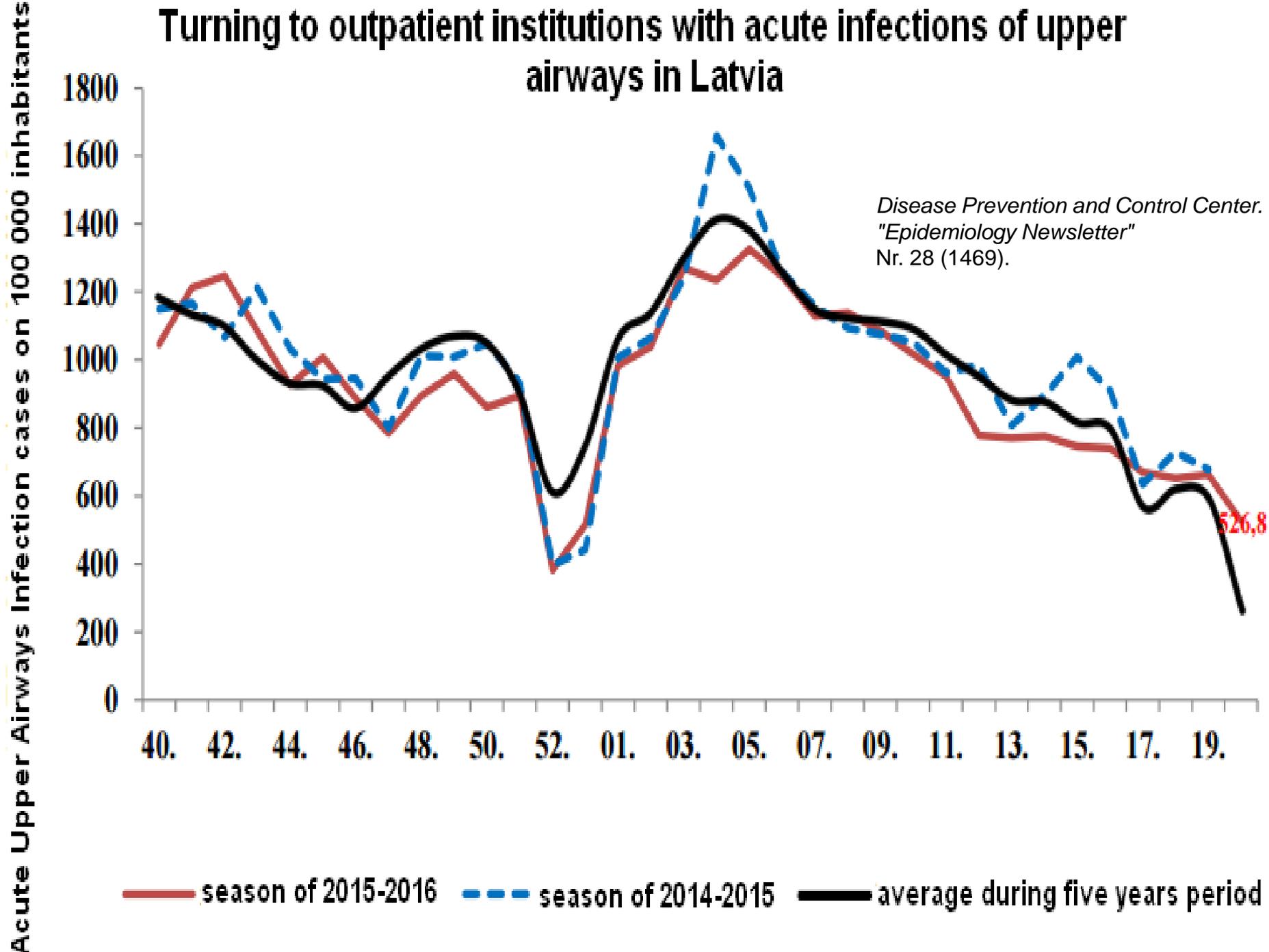
Disease Prevention and Control Center. "Epidemiology Newsletter"

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- *Good rates of immunization in Latvia are shown in the group of age of seven years, when children get ready for the school and get all the necessary vaccination- in this group the rate of immunization on all positions is 95% and more.*

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- In this vaccine 10 pneumococcal serotypes are the most important disease causing serotypes in Europe, and cause about 56-90% invasive pneumococcal disease cases for children till the age of 5 years. Depending on the state and the studied period of time 1., 5. and 7F serotypes cause 3,3 – 24,1 % cases of invasive pneumococcal diseases.

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- In Latvia the first dose is injected is the age of two month, and the second dose goes after two months after the first dose- in the age of four months.
 - Revaccination [third dose] is recommended at least 6 months after the first dose- usually in the age of 1 year.

Turning to outpatient institutions with acute infections of upper airways in Latvia



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- In 2014 in Latvia there were 51 laboratory confirmed infections of *Streptococcus pneumoniae* where of two infections were with reduced sensitivity to penicillin.

Number of Refusals to vaccinate tend to grow

- Decrease of vaccine-regulative diseases make arise the number of people who refuse to vaccinate, saying that it is because of ecological and “green” reasons, where chemical based medicines and industry of pharmacy are out of trust.
- Statistical data in Latvia show that, the number of refusals to vaccinate tend to grow year by year to every group of vaccines. Stable high rate of refusals are to the vaccines of Human Papilloma virus and Varicella infections- 12.4% and 5.9% in 2013. **Rate of refusals to vaccinate against pneumococcal infections has grown for 3%.**

More and more often doctors must answer to the questions like-

- **Does a child really need to vaccinate to all of these infections regulated by the state?**
- **What is inside of them?**
- **What are complications like?**

All this parents have the rights to know.

Let us keep vaccinate! Thank you!

