Spread of Lice and Lice-borne Typhus in Ukraine

Iryna Kurhanova, Oleksandra Tarasyuk

Lviv Research Institute of Epidemiology & Hygiene
Health Ministry of Ukraine

Lviv, Zelena Str. 12, Ukraine 79005
Phone (8-032) 260-12-00
Fax (8-032) 276-30-67
e-mail:epidem@mail.lviv.ua
www.Lndieg.org.ua

The outbreaks of the louse-borne typhus were one of the greatest danger for the people's health during many centuries. Under Professor Mosing's supervision the intensive clinical-epidemiological research into typhus was conducted and it resulted in scientifically augmented substantiation of the theory of the sporadic typhus with the recrudescent genesis and made the conclusion about the possibility of the disapearance of louse-borne typhus and Brill-Zinsser disease (BZD) at the begining of the XXI centure in Ukraine. In 1990-2005 there was a reduction of BZD in Ukraine; and in 2001, 2003, 2005 no cases of BZD were registered. Different spread of BZD in different regions of Ukraine was observed. Typical and atypical clinical cases of BZD caused difficulties for preliminary clinical diagnostics. With increasing age the proportion of the immune response against Rickettsia prowazekii increased. The greatest immune response was observed in persons over 60, but during 1990 - 2005 gradual reduction of immune response was observed in persons over 60. Decrease of lice infestation among population occurred 1990-2005 in all regions of Ukraine. Lice infestation among children decreased but among adults. Body lice infestation, as well in the same time body and head lice infestation among children was much less than among adults. Increasing

of the head lice registration was in September. Head pediculosis had the same spread in cold and warm seasons, but 3/4 cases of body pediculosis occur in cold period of the year.

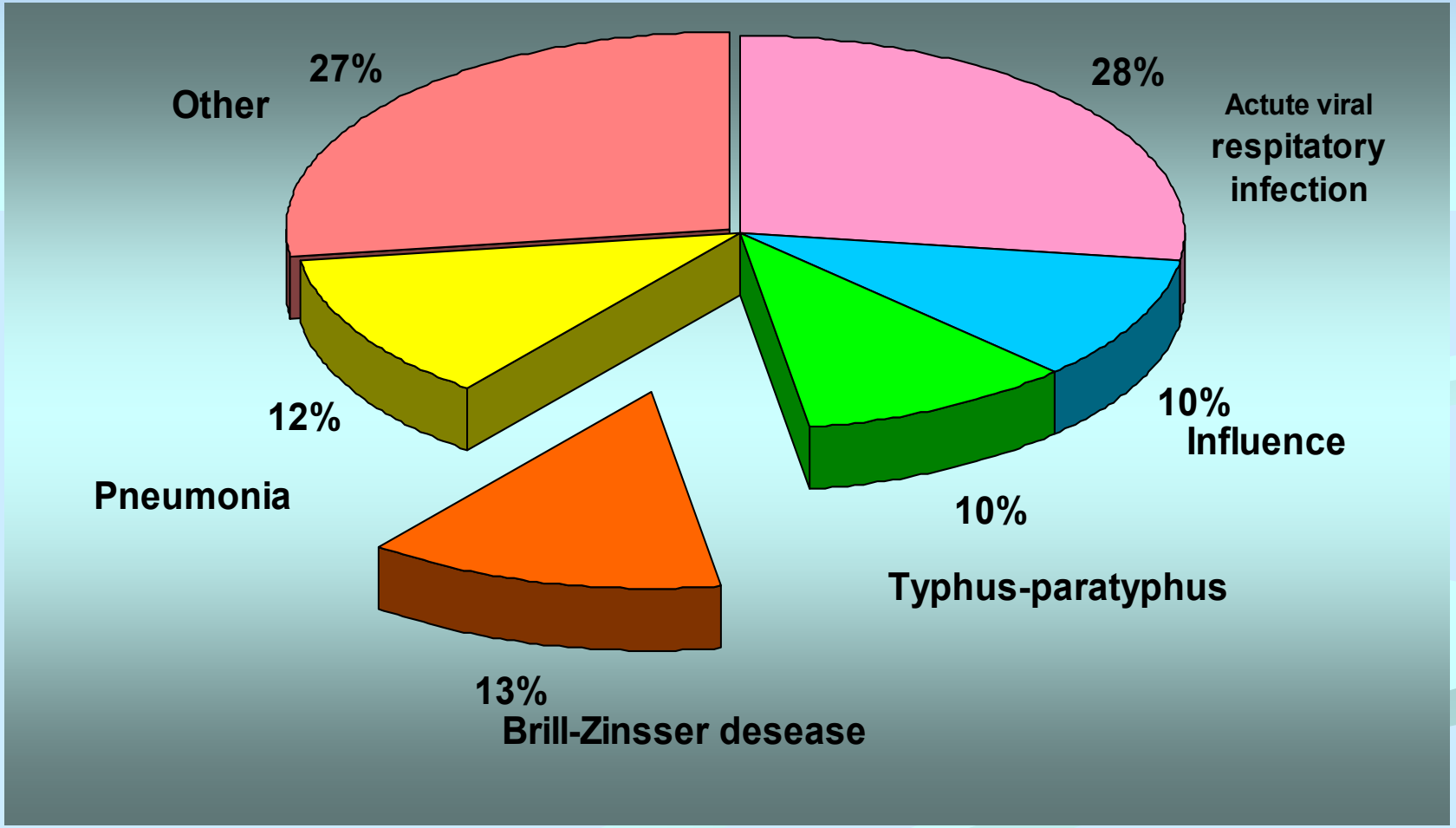
Clinical peculiarities of Brill-Zinsser disease (BZD) in Ukraine

- The prevalence of the typical and the atypical clinical cases of BZD occurred
- The duration of the acute fever period was less than 8 days
- 50 % of persons with BZD did not have a skin rash
- The presence of the roseolous rash on the skin was observed

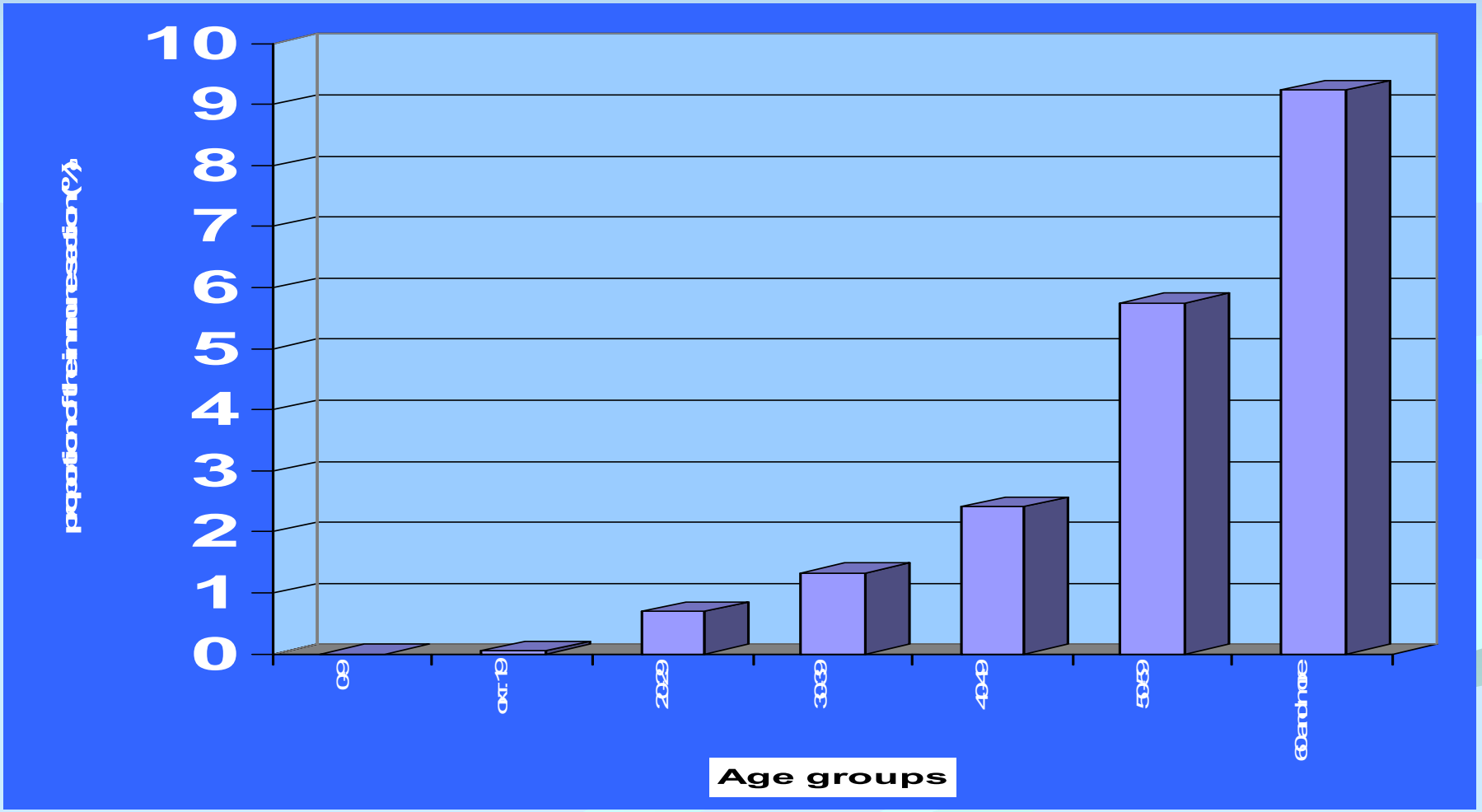
Epidemiological peculiarities of Brill-Zinsser disease in Ukraine

- The absence of lice infestation among people with BZD and contact people in the focuses of BZD
- The absence of the seasonal – winter-spring spread of the BZD morbidity
- The presence of the a preceding diagnosis before the appearance of BZD
- All cases of BZD were among people older than 50

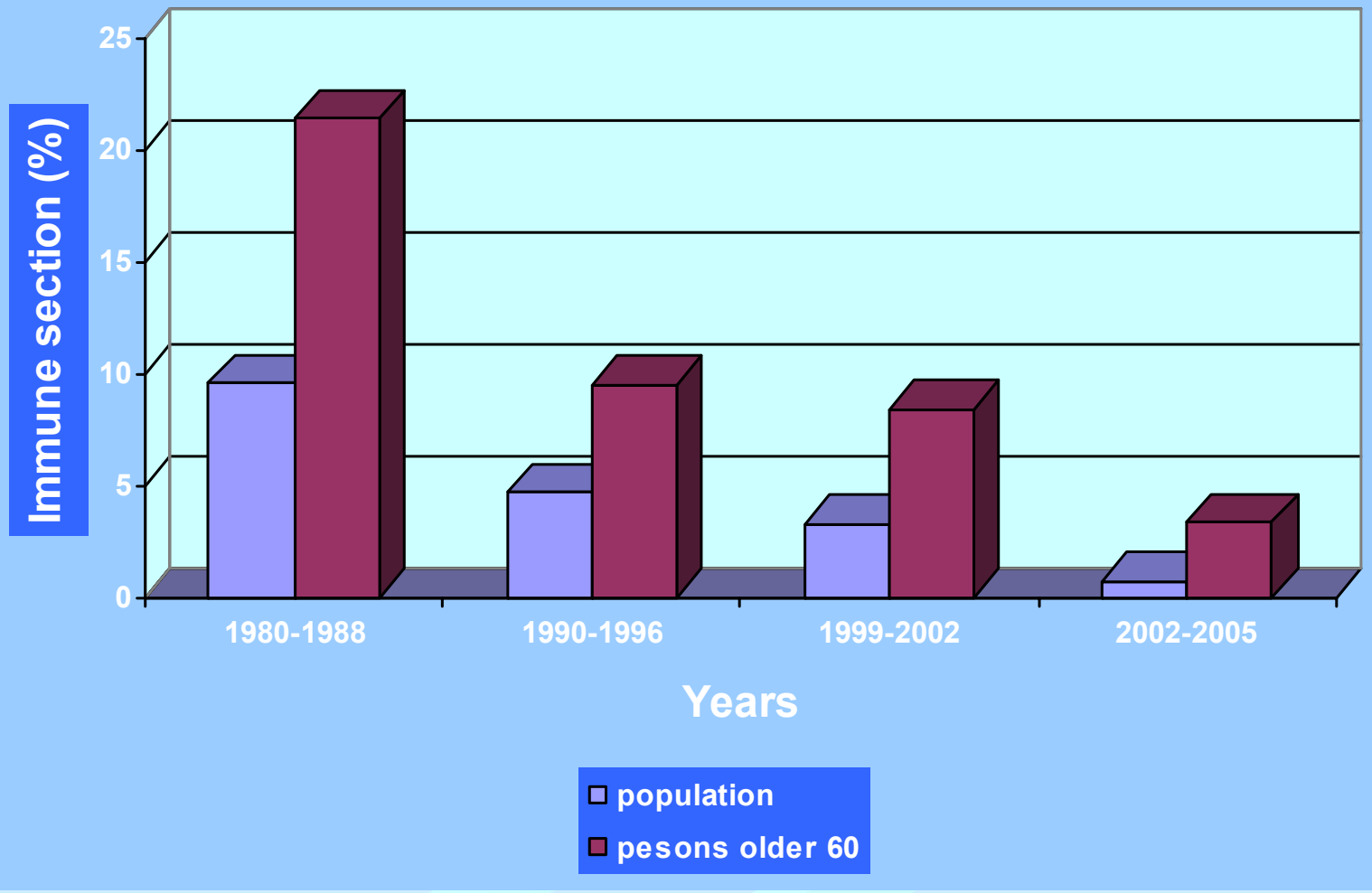
Preceding diagnoses of Brill-Zinsser disease in Ukraine



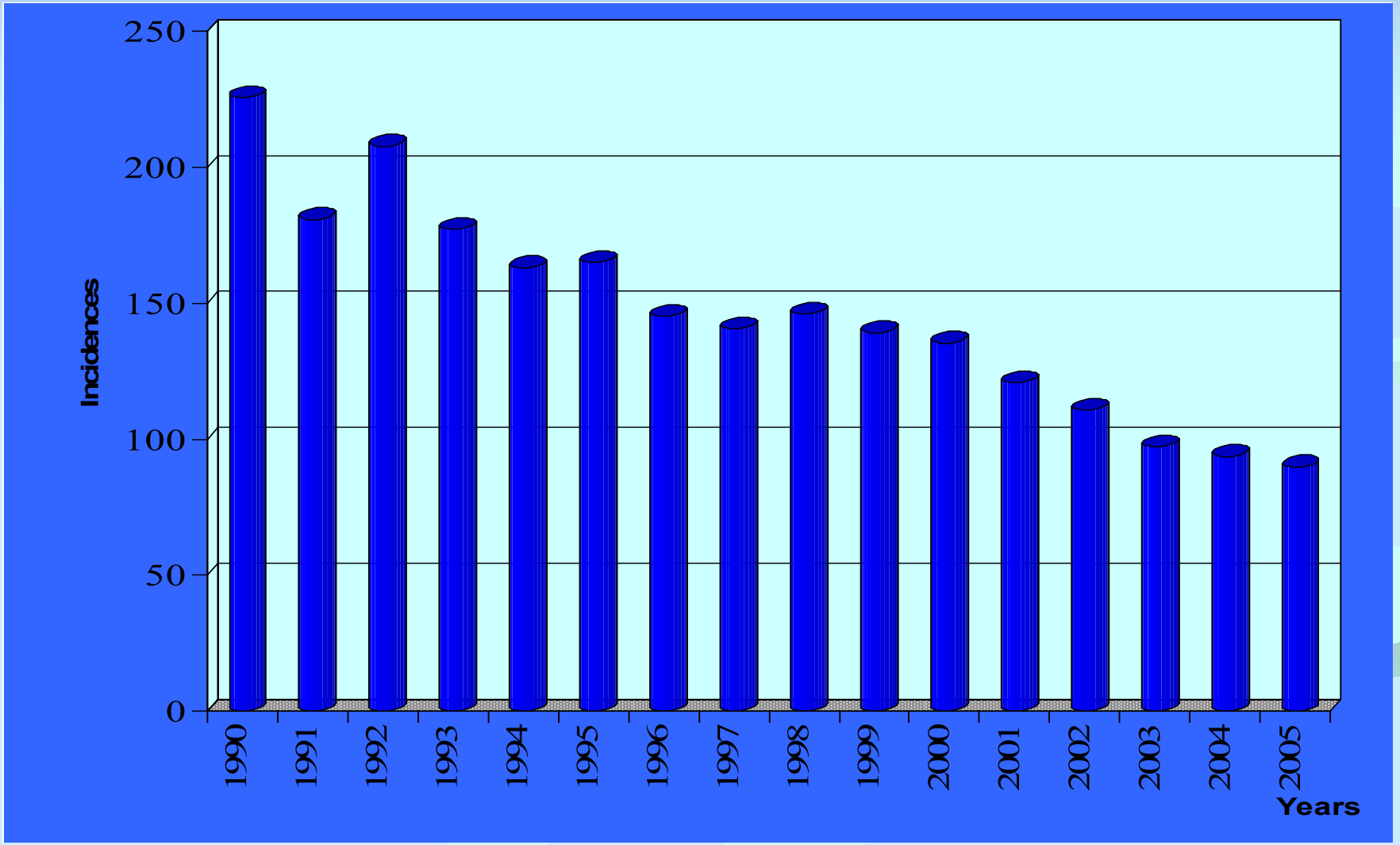
The prevalence of the immune response in different age groups population in Ukraine in 1990-2005



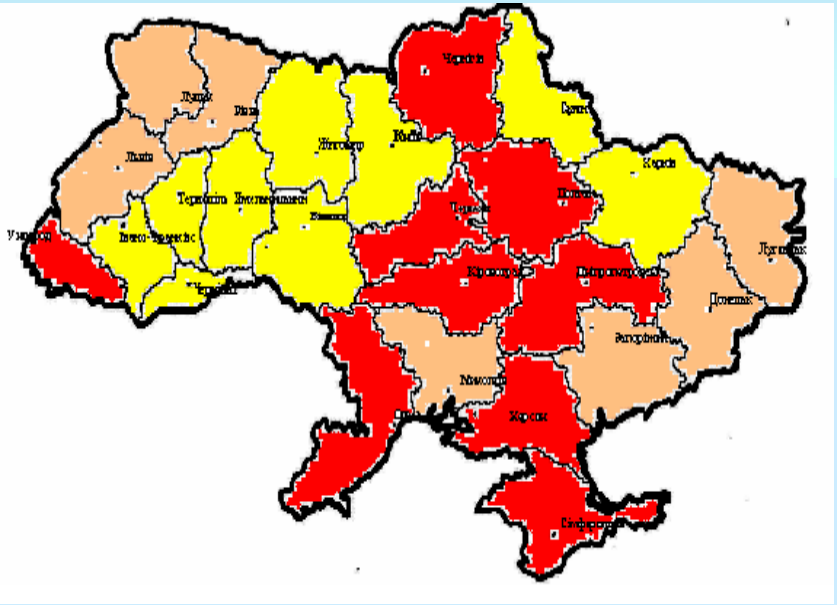
The results of the monitoring of the the immune section against Rickettsia prowazekii among the population in Ukraine

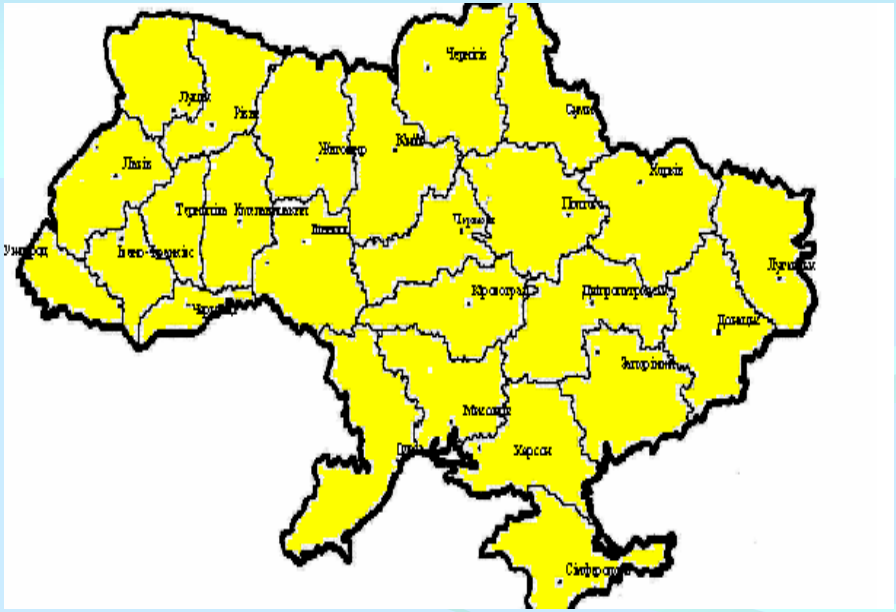


Spread of louse infestation among population in Ukraine (incidence 100 000, population) in 1990-2005



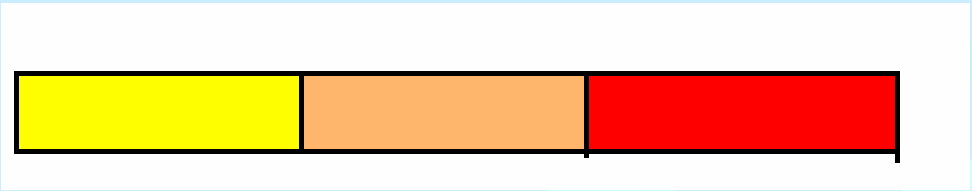
Spread of louse infestation in different regions of Ukraine (incidence 100 000, population) in 1990 and 2005



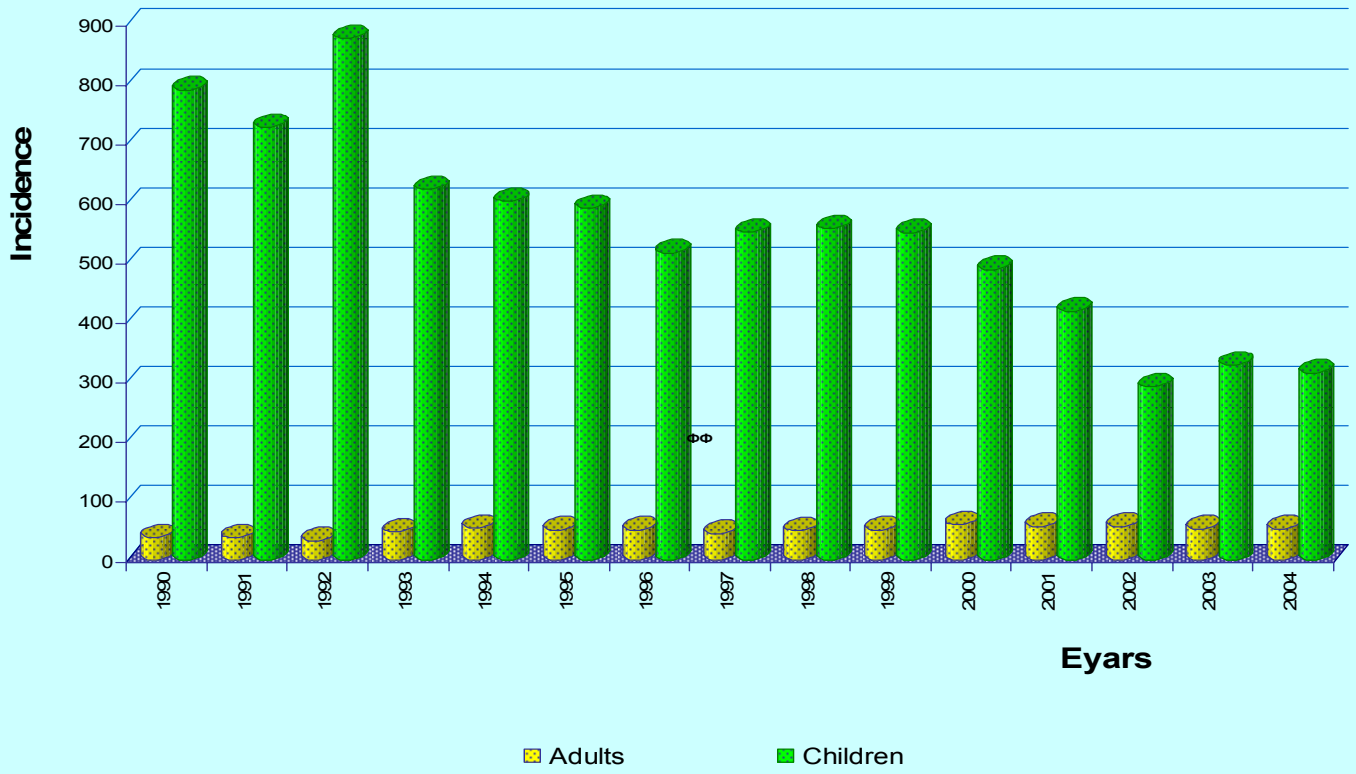


1990 2005

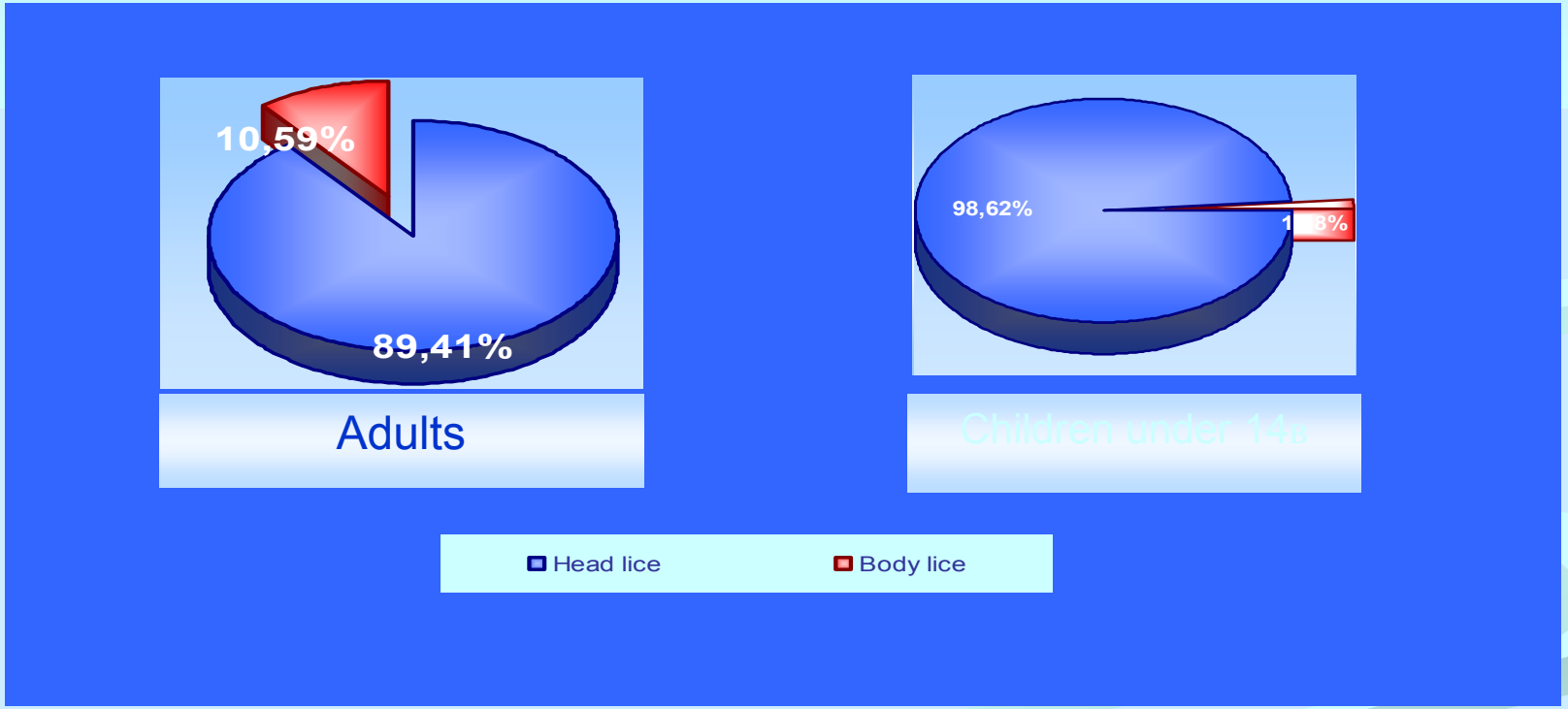
30-150 151-200 200 and >



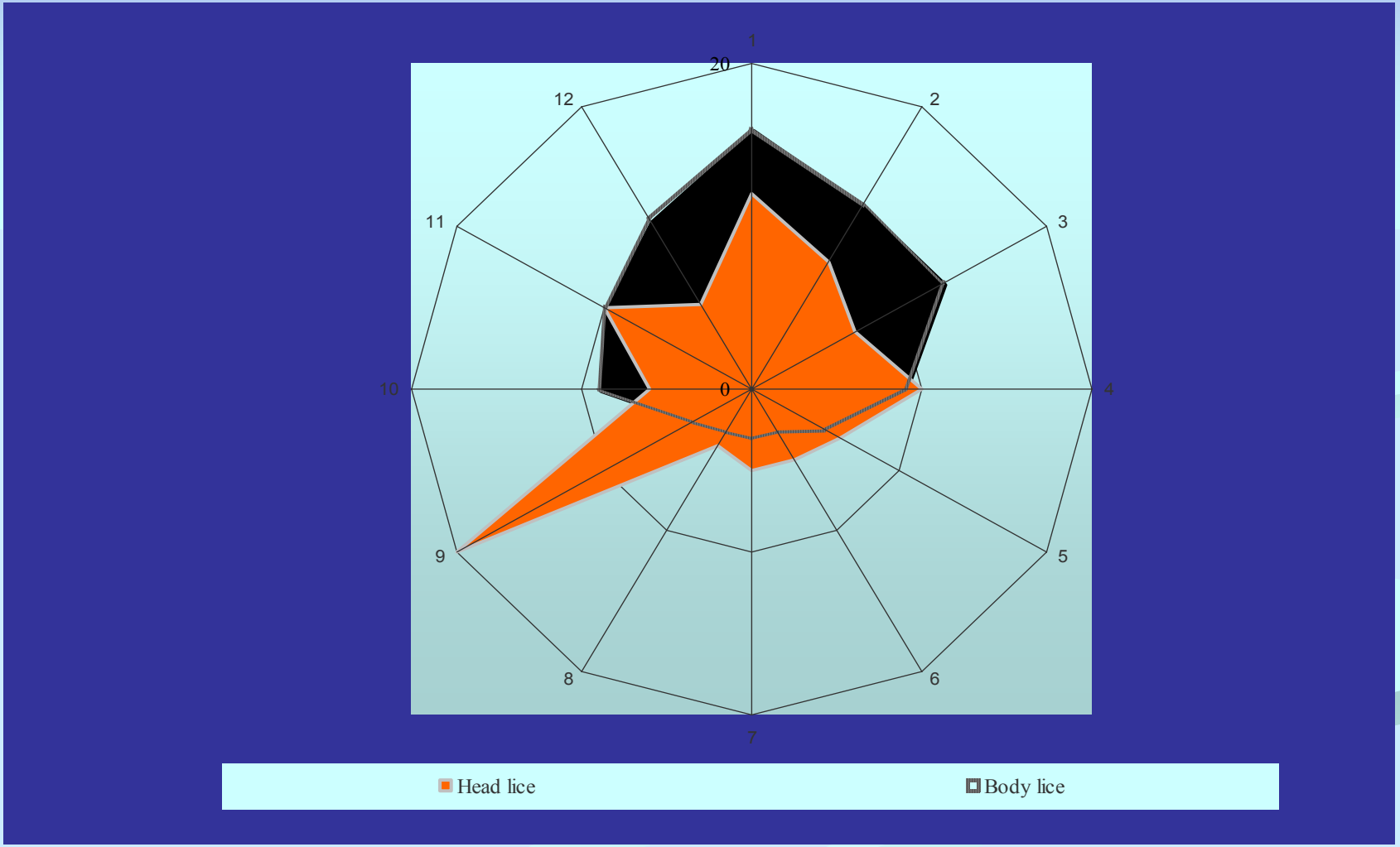
Spread of louse infestation in different age groups (children under 14 and adults) in Ukraine (incidence 100 000, population) in 1990-2005



Comparative analyses of head and body lice infestation spread among children under 14 and adults in Ukraine in



Comparative analyses of head and body lice infestation spread during months of the years in Ukraine



CONCLUTIONS

- The natural process of the elimination of Rickettsia prowazekii infection from the population in Ukraine was observed
- A decrease of the reservoir Rickettsia prowazekii among the population, persons sick with louse-borne typhus, and morbidity of Brill-Zinsser disease was observed
- The presence of the vector of Rickettsia prowazekii – Pediculus humanus preserves
- Current level and peculiarities of lice infestation do not support the circulation of Rickettsia prowazekii

REFERENCE

- Lice and lice-borne ricketsioses in Ukraine / Kurhanova I., Klymchuk M., Lubinsky S., Kitsara M., Kos Z., Basarab N. // EUWOG-ASR Joint meeting Marseille - France, 14-16 June,1999. - P.56.
- Results of scientific researches on problem of rickettsial diseases / Bezkopylny I., Tarasjuck O., Klymchuck M. , Kurhanova I. // Microorganisms in pathogenesis and their drug resistance.- September, 11-14, 2003, Lviv. - P.39.
- Курганова І.І. (Ecological peculiarities of presence of typhus infection in current situation (in ukr.) // Журн. АМН України.- 2005.-Т.11, №2. - С.392-401.
- Kurhanova I. Lice Infestation and Lice Control Remedies in Ukraine // Ann. N.Y.Acad.Sci. - 2006. - Vol.1078. - P. 357-360.
- Kurhanova I.Perspectives of Louse-borne typhus Eradication in Ukraine // 21st National Meeting on September 8-11, 2007. Colorado Springs, Colorado – P. 58
- Kurhanova I. Evolution of Louse-borne Typhus Epidemiological Process in Ukraine // The 2nd International Weigl Conference "MICROBIOLOGY IN THE XXI CENTURY". - Warszawa, Poland: 24-26 September 2007 – P. 241-242