

Boris Revich
Center for Demography and Human Ecology
of Institute for Forecasting of Russian
Academy of Sciences. Moscow, Russia

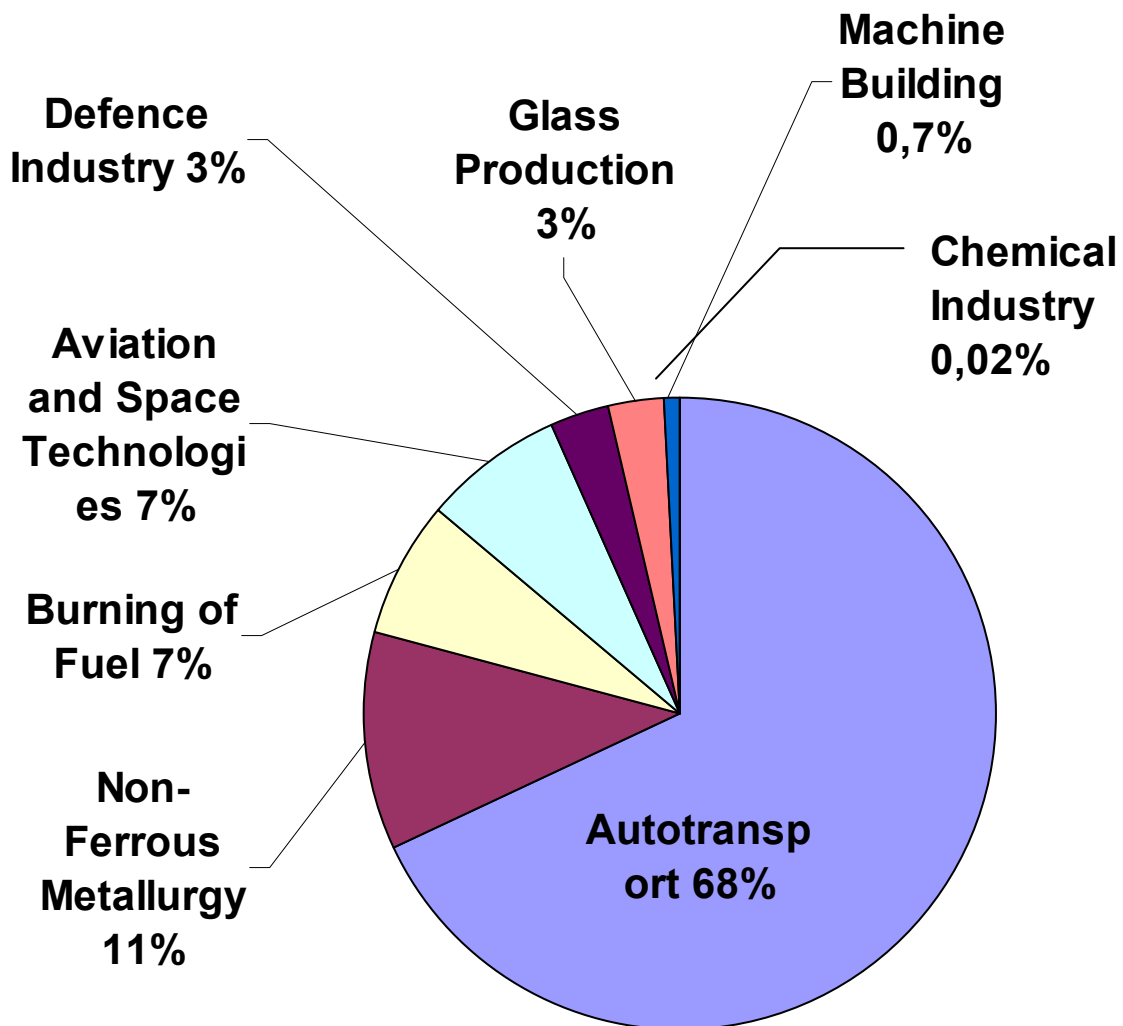
Lead and Environmental Health in
Russian Cities

Lead in the
Environment
and Public
Health in
Russia

Five Years of
American – Russian
Collaboration

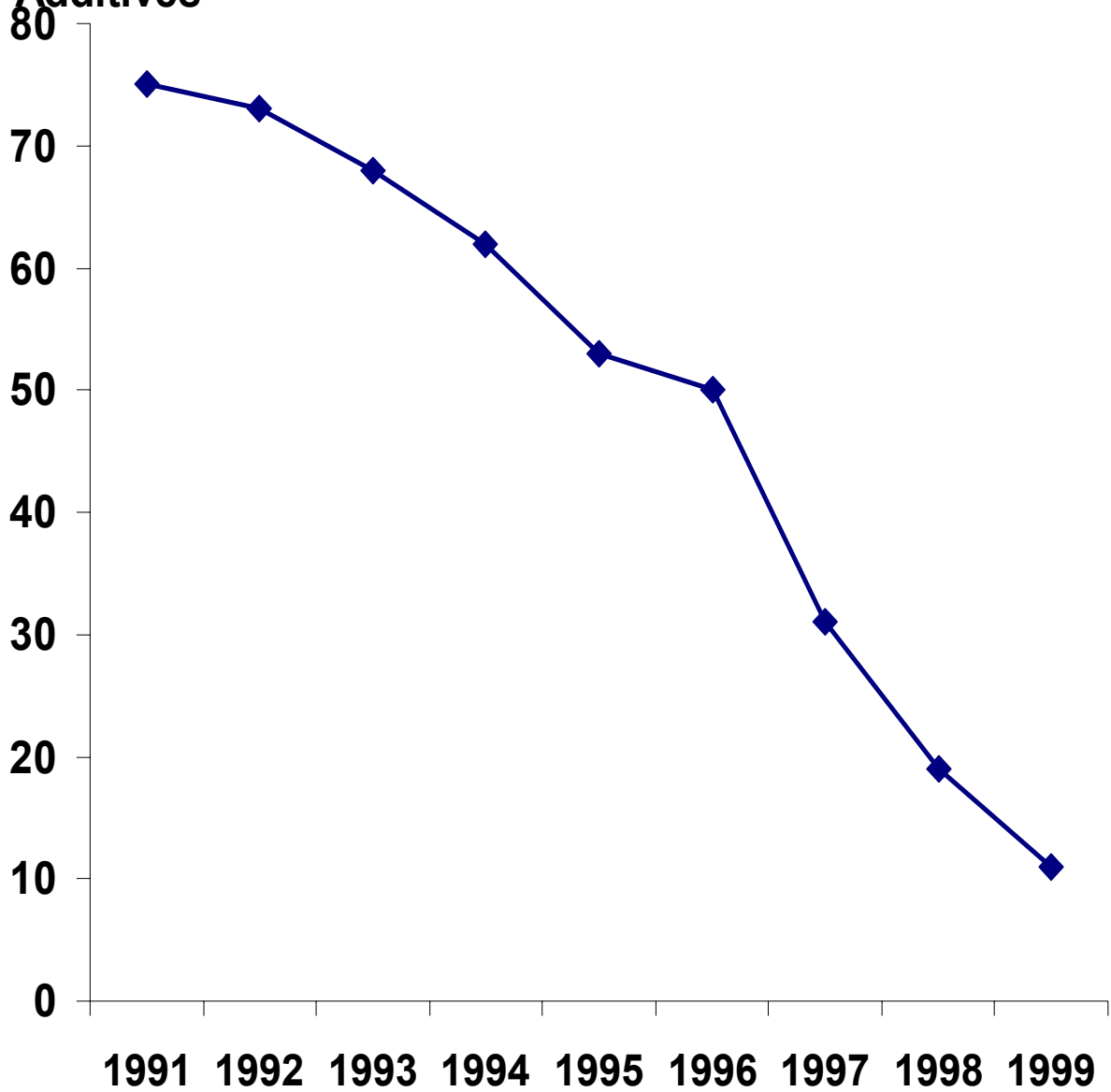
1995–1999

Sources of Atmospheric Lead Pollution



Annual Decrease in the Production of Leaded Gasoline, 1991-1999

% of
Gasoline
Produced
with Lead
Additives



Years

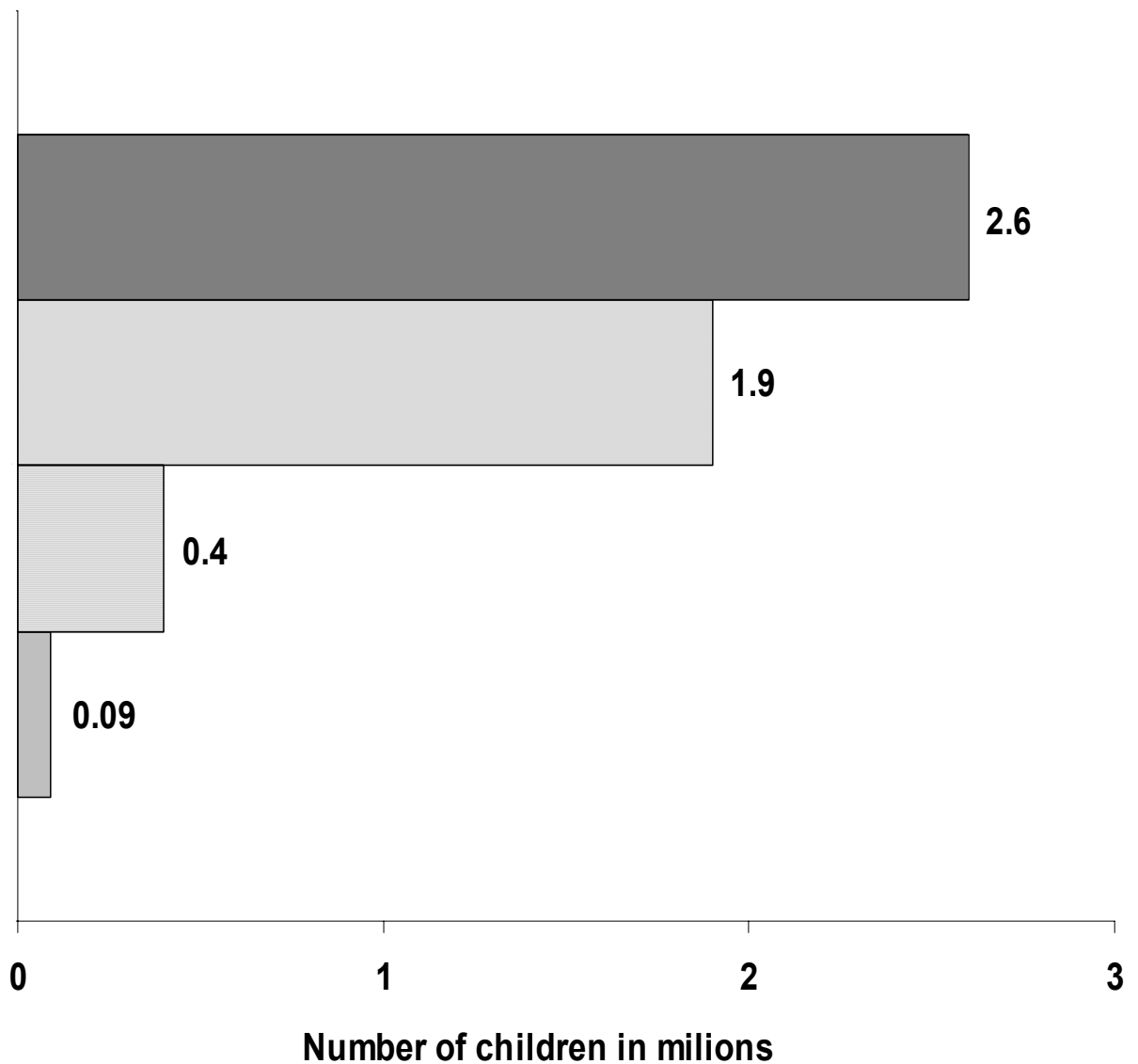
New Technologies and Indicators

Protecting children from exposure to lead has been a particular concern of the U.S. and Russian agencies collaborating in the joint program on lead. New data and analyses generated through their collaborative work suggest that an estimated 1.9 million children in 120 Russian cities may be experiencing behavioral and learning problems resulting from lead exposure. An additional 0,5 mln. children may have developed other serious health problems as a result of more severe lead poisoning.

Yet when the collaborative process began, Russia lacked a system for testing and monitoring lead concentrations in children's blood. Blood lead levels are the most informative indicators of exposure to lead. And data on elevated blood lead levels are essential to effectively plan and implement both primary and secondary prevention strategies.

Estimated number of children with elevated blood levels, urban Russia

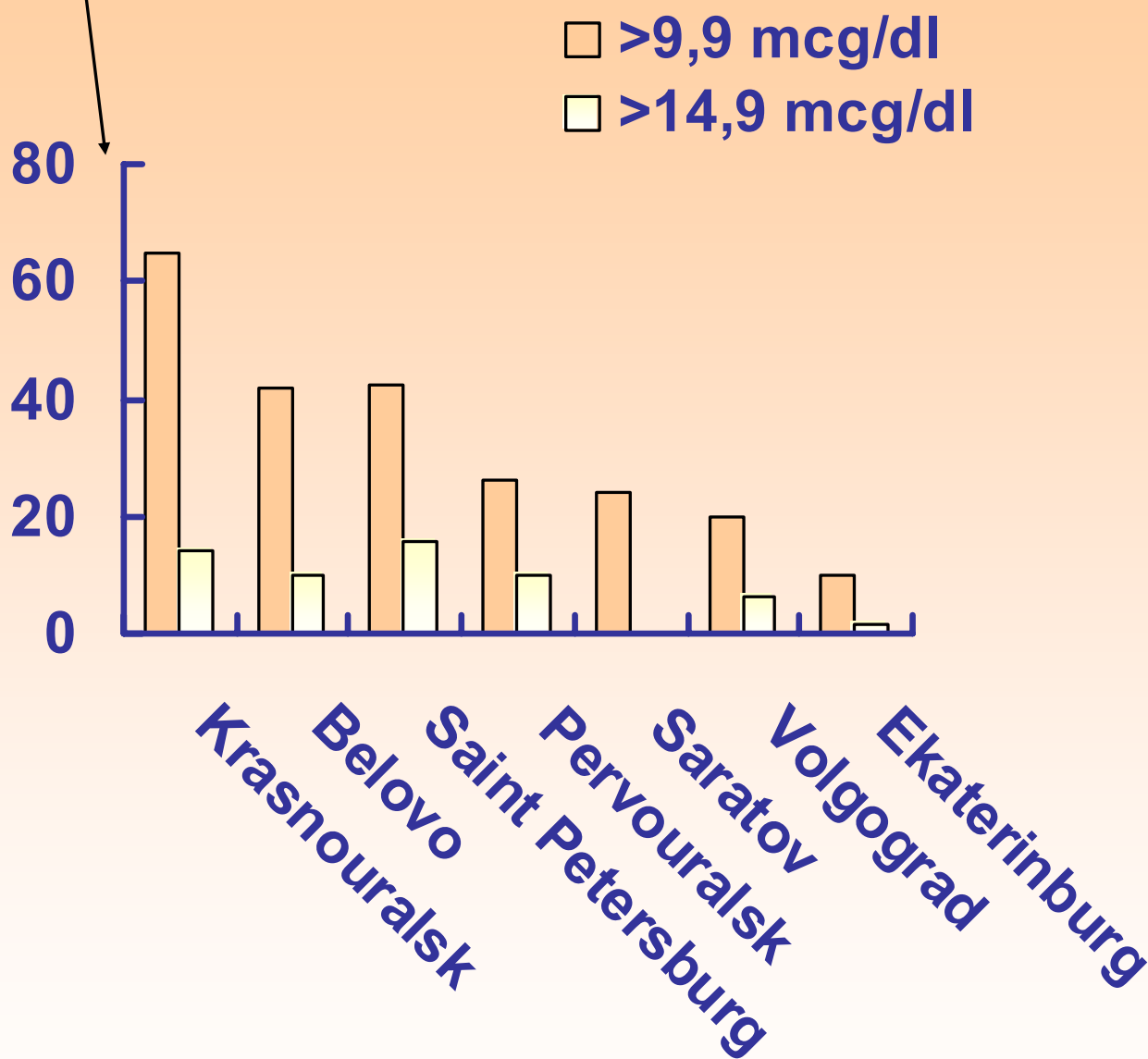
Lead contents in blood, mcg/dl



- Normal
- Behavior and learning problems may appear
- Medical check-up and a repeated test for lead in blood may be required
- Chelation therapy should be conducted within 48 hours



% children with elevated lead levels



Percentage of children with elevated blood lead levels in selected Russian cities



- ❖ The Russian Ministry of Health has adopted new guidelines on the diagnosis and treatment of lead poisoning;
- ❖ New methods for measuring lead in blood and assessing population exposure have also been adopted;
- ❖ Potential investors have been found to support projects that will decrease lead emissions in the copper smelting industry and in the production of batteries; and
- ❖ Progress is being made in improving both the safety and profitability of lead producing industries.