

Infant mortality is falling in Russia, latest figures suggest

Government figures released this week at the annual Congress of Russian Pediatricians in Moscow suggest that infant mortality dropped to 13.3 deaths per 1000 in 2002, a 23% decline since 1996. But in a worrying development, the government says the number of child illnesses doubled during the same period.

Deputy minister of health Olga Sharapova said checkups on 31.6 million Russian children in 2002 found rapidly increasing levels of infectious diseases, respiratory ailments, physical trauma, poisoning, growth disorders, alcoholism, and drug abuse.

Sharapova highlighted young people's increasing difficulties with "older people's diseases, especially heart and kidney disorders". But Sharapova told *The Lancet* that the improved infant mortality figure validates policies intended to bring Russia in line with the Organisation for Economic

Cooperation and Development average of six deaths per 1000. Efforts to improve maternity care are "showing results, thanks to new technology in the maternity facilities, reorganisation of prenatal units, and intensification of resuscitation efforts for underdeveloped newborns", she said. The government is now planning reforms for the paediatric system, including increases to paediatric budgets, and paediatricians' salaries, she said.

A paediatric reform project in the Novgorod and Perm regions introducing WHO-recommended antenatal, perinatal, and infant-care practices indicates that healthy results will flow from clinical reforms even without more money. "By dropping traditional clinical rules separating mothers and children for a week after birth, we were able to promote breastfeeding on demand," project director

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Nationwide checkups found an increasing number of illnesses

Natalia Vartepetova said. "We introduced basic infection-control principles which demonstrated that infection control is not about forbidding family visits, which puts further stress on women; it's about washing your hands and limiting skin-to-skin contact." 2 years after basic reforms were introduced, perinatal mortality dropped

from 11 per 1000 to 5.6.

Elena Fokina, children's health director for UNICEF Russia, emphasises the need to tackle malnutrition and iodine deficiency disorders among the 20% of families below the poverty line.

At Moscow's Children's Hospital, chief haematologist Alexei Maschan agrees that improving children's health depends most on alleviating poverty and modernising clinical practices. But he adds that increasing funding for facilities such as the Children's Hospital is crucial. Maschan points to the hospital's bone-marrow transplant facility, built with money from private donors, as an example. "It's the only facility like it in Russia," Maschan explains. "But due to a lack of funding for staff and operating costs, we only operate at half capacity."

Maschan says that improving the reliability of paediatric data is another area that Russia must bring into line with Western standards. A recent study found that up to 68% of death and perinatal certificates are inaccurate, and that the cause of death was misreported in up to 20% of cases. "Until we establish reliable data collection", Maschan says, "the government can't even claim its reform plans are based on solid evidence".

Paul Webster

Drug reduces child heart surgery problems

Results from a double-blind placebo-controlled trial show that milrinone given immediately after surgery can reduce the incidence of clinically defined low cardiac output syndrome (LCOS) in children operated on for congenital heart disease. "Our study also shows that the drug is safe", says investigator Gil Wernovsky (Children's Hospital of Philadelphia, PA, USA), "with no increased incidence of any adverse effects in the high-dose or low-dose treatment arms compared with the placebo arm".

Heart defects occur in 1% of live births and a third of affected babies need corrective surgery during their first year. "About a quarter of children have a pretty rocky course after this type of surgery", explains Wernovsky, developing a reduced cardiac index and increased vascular resistance. 20 years ago, he says, "a large proportion of the babies who developed LCOS died. Improvements in surgery and intensive care have greatly reduced this mortality but there is still considerable morbidity associated with the condition."

The phosphodiesterase inhibitor milrinone is used to treat established LCOS in children undergoing cardiac surgery. To find out if it would work prophylactically, Wernovsky and

investigators at 31 north American centres enrolled 238 children into their trial, the composite primary endpoint of which was death or the development of LCOS requiring intervention. No patients died during drug administration and high-dose milrinone reduced the relative risk of developing LCOS by 55% compared with placebo (*Circulation*; published online Feb 24; DOI 10.1161/01.CIR.0000051365.81920.28).

"It is essential that paediatric drug trials like this are done rather than trying to extrapolate from adult trials", comments Jerrold Levy (Emory University School of Medicine, Atlanta, GA, USA). "However, although this is an interesting trial of inodilator therapy, I am slightly concerned by the use of a clinical primary endpoint without better outcome data." Wernovsky admits that if funding had allowed a larger trial, then objective endpoints such as length of stay on the ventilator would have been preferable. "Nevertheless, even this amount of information is so much more than we got before changes in the FDA rules in the late 1990s encouraged drug companies to fund paediatric trials", he concludes.

Jane Bradbury