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COSTS OF ERADICATING POLIOMYELITIS NOW ARE MUCH LOWER THAN TRYING TO CONTROL IT LATER

The costs of eradicating poliomyelitis from the remaining infected countries, while high in the short term, are much lower than the long term costs of trying to control infections without eradication. And a recently developed monovalent vaccine is almost three times more effective against type 1 poliomyelitis than an existing trivalent vaccine. These are the findings of two **Articles** published **Online** and in an upcoming issue of *The Lancet*.

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Issued by Tony Kirby,
Press Officer, *The Lancet*

Both **Articles** look at the success of the Global Polio Eradication Initiative (GPEI), started in 1988 by the World Health Organisation, which has reduced the global incidence of poliomyelitis by 99%.

In the first, Professor Kimberly Thompson and Dr Radboud Duintjer Tebbens of Harvard School of Public Health, Boston, USA used a dynamic modelling technique based on current wild poliovirus endemic areas of India. The results show the importance of maintaining and increasing the immunisation intensity to complete eradication.

They find that even small decreases in this intensity could lead to large outbreaks—and state that more short term funds are needed than are currently being spent.

The authors conclude: “Worldwide eradication of polioviruses is likely to yield substantial health and financial benefits, provided we finish the job.”

In the second paper, Dr Nicholas Grassly and of the Department of Infectious Disease Epidemiology, Imperial College, London, UK and Dr Bruce Aylward, of the World Health Organisation, Switzerland and colleagues did a study of the efficacy of the monovalent oral type 1 poliovirus vaccine (moPV1).

This vaccine was developed in 2005 to tackle persistent poliovirus transmission in the last remaining infected countries—India, Pakistan, Afghanistan, Nigeria, Niger, and Egypt.

A case-control study of more than 2000 people in India estimated the efficacy of mOPV1 to be 30% per dose against type 1 paralytic poliomyelitis in the Uttar Pradesh region, compared with 11% for the standard trivalent oral vaccine.

Between 76–82% of children aged 0–23 months in Uttar Pradesh were estimated to be protected by vaccination against type 1 poliovirus at the end of 2006 (after repeated rounds of vaccination with mOPV1)—compared with 59% at the end of 2004, prior to the introduction of mOPV1.

The authors conclude: “Achieving high coverage with the new vaccine in areas of persistent poliovirus transmission should substantially improve the probability of rapidly eliminating transmission of the disease.”

In an accompanying [Comment](#), Professor Paul Fine and Dr Ulla Griffiths, of the London School of Hygiene and Tropical Medicine, said: “The demonstration of superior effectiveness of mOPV1 vaccine adds to the evidence that termination of wild poliovirus transmission is technically feasible, given enough time, continued funding, political stability, and continued political support in the affected areas of the world.”

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