MARGARET CHAN
NEW WHO DIRECTOR-GENERAL –
PLEDGES TO ERADICATE POLIO

D r Margaret Chan was appointed the new World Health Organization (WHO) Director-General in Geneva on 9 November 2006. Dr Chan’s appointment follows the sudden and tragic death of Dr Lee Jong-wook, in May. Addressing the World Health Assembly immediately after her appointment, Dr Chan underlined the importance of finishing polio once and for all. “We will complete polio eradication,” she vowed.

GLOBAL POLIO ERADICATION
NOW HINGES ON FOUR COUNTRIES

I mmunization for all travelers from polio-infected areas may be necessary with the availability of the best technical tools ever, the world’s success in eradicating polio now depends on four countries – Nigeria, India, Afghanistan and Pakistan – according to the Advisory Committee on Polio Eradication (ACPE), the independent, technical oversight body of the Global Polio Eradication Initiative. Monovalent oral polio vaccines (mOPVs) which protect children twice as fast, and new laboratory processes that halve the time needed to detect poliovirus, provide these four countries with the most effective tools ever.

“The global eradication of wild poliovirus is technically and operationally feasible,” said Dr Steve Cochi, Chair of the ACPE and Senior Adviser to the Director of the Global Immunization Division, US Centers for Disease Control and Prevention (CDC). “This is clearly evidenced in the eradication of endemic poliovirus from all but four countries worldwide. Moreover, all the other countries eradicated poliovirus using trivalent OPV alone, while monovalent OPV types 1 and 3 are now available, providing potent, additional tools.”

Highlighting the need for Head of State supervision over polio eradication activities in the four endemic countries, the ACPE welcomed the example set in Afghanistan, where the office of President Hamid Karzai has already taken direct oversight of polio activities. In parts of the four countries, the ability to reach all children with vaccine has improved only slowly, and full political oversight would accelerate improvements.

The ACPE also noted strong progress in stopping outbreaks in previously polio-free countries over the past two years. However, given that poliovirus has shown its ability to travel great distances, causing distant importations by either sea- or air-travel, the group concluded countries should do more to protect themselves from re-infection. With more than US$450 million spent in recent years in emergency outbreak response activities, full immunization requirements of all travelers from any polio-infected area may be necessary in the near future. Appropriate recommendations, potentially under the International Health Regulations 2005, are currently being explored; Saudi Arabia already enforces such policies for all travelers from Nigeria, and has indicated plans to enforce similar policies for all travelers from India, Afghanistan and Pakistan.

STOP POLIO
FOREVER!

NOW, MORE
THAN EVER

RUSSIA RESPONDS
to G8 PLEDGE

Russian President Vladimir Putin at a news conference at the G8 Summit. Russia made a new commitment to polio eradication immediately after the Summit.

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A Newsletter for the Global Polio Eradication Initiative
World Health Organization in association with Rotary International, United Nations Children’s Fund and the Centers for Disease Control and Prevention
The Global Polio laboratory Network has significantly reduced the time to confirm the presence of wild poliovirus in stool samples from acute flaccid paralysis (AFP) cases. Field trials of new methods conducted in reference polio laboratories in India, Pakistan and the United States (at the US Centers for Disease Control and Prevention) have reduced the time taken to complete laboratory procedures by approximately 50%. Currently, the target time to complete laboratory procedures is 42 days. Under the newly-developed system, procedures could be concluded in as rapidly as 21 days.

To achieve this impressive reduction in case confirmation time, experts of the Global Polio laboratory Network analysed each process-step, from initial receipt of a stool sample from an AFP case, to final genetic sequencing, to determine where time-savings could be achieved. In particular, the group identified shortened cell-culture steps, as well as increasing the capacity of more laboratories to conduct a wider range of analyses on site (e.g. sero-typing to determine type 1, 2 or 3 poliovirus and intratypic differentiation between wild-type or Sabin poliovirus), as areas that could significantly shorten reporting times.

Rolling out the lessons learnt from the field trials will now require investment in equipment and staff training. It is anticipated that the new and faster case confirmation process could be operational in at least 75% of the network’s laboratories in polio-endemic regions, by December 2007.

Confirming polio infection in a paralysed child: a timeline

Three key factors to confirm wild poliovirus:
1. Field activities, e.g., finding acute flaccid paralysis (AFP) case and collection of faecal specimens
2. Shipment of faecal specimens and isolates
3. Laboratory activities at national and regional reference laboratories

The 12th Informal Consultation of the WHO Global Polio Laboratory Network, convening on 27-29 June 2006 in Geneva, Switzerland, recommended key new laboratory processes that will slash the time to confirm polio cases.
Faster polio confirmation time: significant public health impact

In 2005, growing epidemiological evidence and mathematical modelling indicated that a fast immunization response to detection of wild poliovirus in polio-free areas leads to fewer cases and shorter outbreaks. In 2006, in response to the international threat of poliovirus spread, the World Health Assembly issued new outbreak response guidelines (Resolution WHA59.1). The rapid implementation of these guidelines has already markedly reduced the number of polio cases associated with outbreaks, particularly in comparison to the 2003-2005 epidemics.

“Because we now have a much more rapid process for confirming polio in the laboratory, we can respond much faster,” said Christopher Maher, Coordinator of Global Field Operations for Polio Eradication at the World Health Organization (WHO). “More children will be spared life-long polio paralysis.”

A faster response will be particularly important in the post-eradication era, as populations become increasingly susceptible to poliovirus. Adults who may never have been vaccinated or exposed to wild poliovirus will be increasingly at risk, as was highlighted during the 2006 outbreak in Namibia, which primarily affected adults. The new and faster laboratory case confirmation times will greatly minimise the consequences of a potential virus re-introduction in polio-free areas.

### Polio outbreak response times

Mean times from onset of paralysis, to laboratory confirmation, to immunization response

<table>
<thead>
<tr>
<th>Days</th>
<th>Outbreaks in 2003-2005</th>
<th>Future outbreaks (with new laboratory procedures and WHA guidelines)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10 days</td>
<td>10 days</td>
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<td>10</td>
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<tr>
<td>90</td>
<td>100 days</td>
<td>100 days</td>
</tr>
<tr>
<td>Total</td>
<td>106 days</td>
<td>68 days</td>
</tr>
</tbody>
</table>

Field activities and laboratory confirmation: 59 days

Immunization response: 47 days

Field activities and laboratory confirmation: 38 days

Immunization response: 30 days

Global Polio Laboratory Network: the unsung hero of polio eradication

For most people, polio eradication conjures up images of mass immunization activities: millions of vaccinators travelling village-to-village, city-to-city, to visit every single house-hold to immunize millions of children in the course of just a few days. These impressive activities are actually underpinned by the Global Polio Laboratory Network and ongoing, ceaseless active surveillance for acute flaccid paralysis (AFP) cases.

Globally, 145 laboratories work overtime to investigate well over 120,000 faecal samples from more than 60,000 AFP cases each year, with genetic sequencing of each wild and vaccine-derived poliovirus to determine its origin. These efforts ensure that every polio case is geographically pinpointed, determine transmission and drives strategic decisions such as where and when to conduct immunization activities. “This system allows us to find the change of poliovirus transmission,” said Dr Esther de Gourville, Head of the Global Polio Laboratory Network at the World Health Organization (WHO). “The virus is effectively showing us how, when and where to hit it.”

The future of the polio lab network:

The Global Polio Laboratory Network plays a key strategic role in efforts to eradicate polio; these skills will also be needed in the post-eradication era, to ensure ongoing capacity to rapidly detect any re-introduction of a poliovirus. At the same time, the global network is increasingly addressing a wide range of other public health problems.

Already today, 83% of the laboratories assist in rapid diagnosis of a wide range of other vaccine-preventable diseases. Indeed, the network today serves as a model for developing broader vaccine-preventable disease (VPD) laboratory capacity, to detect measles, rubella, yellow fever and Japanese encephalitis.

These efforts significantly contribute to estimating the burden of vaccine-preventable and other epidemic-prone diseases, assessing the impact of vaccination programmes, and assisting in investigation of new and emerging diseases of international public health importance, most notably avian influenza.

Because of its unique role and strategic importance to polio eradication efforts, and capability to help address other public health challenges, maintaining and mainstreaming the vast capacity of trained staff, facilities and technologies in the laboratory network is a crucial objective of the Global Polio Eradication Initiative.

A map of the global vaccine-preventable disease laboratory network to detect outbreak-prone diseases, and based on the polio lab network, is available at [www.polioeradication.org](http://www.polioeradication.org)
Surveillance and Immunization

Wild Poliovirus infected districts*, 2006

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory or area, or concerning the delimitation of its frontiers or boundaries. Changes of the political status of any country, territory or area or of its administrative division may not be represented on this map.

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Data in WHO HQ as of 24 Oct 2006

Polio endemic and re-infected countries:
YTD comparison of reported polio cases, 2005 and 2006 (as at 24 October)

Endemic countries: Nigeria, India, Afghanistan, Pakistan

/AIDS and polio reporting, year-to-date comparison: 2005 and 2006

Source: Data at WHO as of 24 October 2006

An up-to-date calendar of upcoming supplementary immunization activities in selected countries (previously featured in PolioNews) is now available in electronic format at: www.polioeradication.org/nid.asp
Interview with polio advocate Alan Court, Director, Programme Division, UNICEF New York

Long-time polio eradication advocate Alan Court heads up UNICEF’s Programme Division in New York, with responsibilities for the polio eradication unit and other public health programmes. Previously, he was integral in the global polio eradication effort as Director of UNICEF’s Vaccine Supply Division in Copenhagen, Denmark, and UNICEF’s India Country Representative.

PolioNews: Mr Court, what do you see as UNICEF’s key roles in the global polio eradication effort?

Alan Court: UNICEF’s expertise is in two particular areas. The first is social mobilization and programme communication in-country. UNICEF helps develop and support networks of community organizers on the local and district level that advocate and create demand for the polio programme. At the grassroots level, this involves educating community members on the dangers of polio, and on the importance of protecting every child. Reaching every child is particularly challenging in countries such as Afghanistan, where access to populations is hampered by conflict, or in India, where complex cultural and socio-economic issues may provide specific obstacles to overcome. So a critical part of programme communication is identifying coverage gaps in specific communities, and then developing strategies with governments to fill those gaps.

UNICEF’s second area of expertise is vaccine-supply. This means working with countries, partners and vaccine-manufacturers to continuously assess vaccine supply needs in terms of real demands, forecasting supply needs, not only for vaccines but also for other supplies such as syringes and needles and cold chain. UNICEF’s Supply Division has 95% accuracy for forecasting on polio at a global level.

PN: In your opinion, what would the achievement of a polio-free world represent?

AC: It will mean that no child will ever again be paralyzed by this terrible disease. It will be a tremendous relief to millions of affected families and the many communities who have had to cope with the consequences of polio. Polio eradication will exemplify what a strong global public health partnership can accomplish.

India: Muslim leaders join forces with Government of India and Rotary to finish polio

With a polio outbreak in western Uttar Pradesh, India, re-infecting other parts of India and neighbouring countries, and which continues to disproportionately affect Muslim children, Rotary International sprang into action, as part of urgent efforts to counter this trend.

Rotary India’s National Polio Plus Committee arranged a gathering of Muslim religious leaders and scholars on 10 August 2006 in Delhi, to discuss the importance of engaging all Muslim communities in polio eradication activities. Attended by 86 Muslim leaders from Uttar Pradesh and surrounding states, the conclave focused on new strategies to more strongly foster community participation and activities to overcome hurdles facing polio eradication. Muslim leaders lauded Rotary’s efforts and expressed that such community outreach initiatives by Rotary International were essential to strengthen preventive health services such as polio eradication, throughout India. Concluding the conclave, all delegates affirmed their support, by signing a pledge of commitment for polio eradication activities in their regions and throughout India.

Polio champion Dr Hussein A Gezairy re-elected as WHO Regional Director for the Eastern Mediterranean

Member States at the 53rd Session of the Regional Committee for the Eastern Mediterranean, convening in September 2006 in Isfahan, the Islamic Republic of Iran, expressed renewed confidence in long-time polio eradication champion Dr Hussein A Gezairy, by re-electing him as WHO Regional Director for the Eastern Mediterranean.

Dr Gezairy has been serving as Regional Director for the Eastern Mediterranean since first joining the World Health Organization (WHO) in 1982. Since then, under his leadership, 20 of 22 countries in the Region have interrupted indigenous polio transmission, and the estimated cases have fallen by greater than 99%. Under his direct involvement, Egypt – a particularly entrenched polio reservoir – finally eradicated polio using the new monovalent oral polio vaccine type 1 (mOPV1) and was officially removed from the endemic country list in January 2006; the 2005 polio epidemic in Yemen – the largest, single-country epidemic in recent years – was successfully stopped; and the outbreak currently affecting Somalia is being curbed. “The remaining challenge is now to eradicate polio from both Afghanistan and Pakistan, the only two countries in the Region where the virus is still endemic,” commented Dr Gezairy. He stressed he would continue to work with countries to assure the highest political commitment, also in filling the US$50 million funding gap for 2006, and US$390 million funding gap for 2007-2008. “The success of eradicating polio now also depends on greater commitments by this Region’s fortunate polio-free countries, in ensuring the necessary financial resources are rapidly made available,” Gezairy concluded.
Resource mobilization

Russian Federation acts quickly to fulfil its G8 Pledge

At the G8 Summit held in St Petersburg in July 2006, G8 leaders committed to “continuing our support for the Global Polio Eradication Initiative so that the planet can be declared polio-free within the next few years,” and called for the urgent mobilization of financial resources to close the funding gap for polio eradication activities in 2006-2008.

The Russian Federation took immediate action, contributing US$ 10 million for global polio eradication activities between 2006 to 2008. The Global Polio Eradication Initiative partners urge other G8 countries to follow Russia’s lead and rapidly fulfil their polio funding commitments, to enable the implementation of urgently needed mass polio immunization campaigns.

Ireland and Luxembourg provide critical multi-year funding

Ireland and Luxembourg continued their generous support for global polio eradication efforts as they recently announced multi-year contributions for 2006-2008. Multi-year global contributions are critical and greatly appreciated since they provide the necessary consistency to implement the long-term strategy, and also the flexibility to respond to emergency polio outbreaks.


Ireland has pledged US$ 10.4 million in global funding for 2006-2008 - a doubling of its funding compared with 2003-2005 - bringing its total contribution to US$ 16.5 million. In recognition of Ireland’s outstanding financial contribution to polio eradication, Rotary International presented An Taoiseach Mr Bertie Ahern with the Polio Eradication Champion Award on 3 October 2006.

Russia’s President Vladimir Putin addresses a news conference at the G8 Summit in St Petersburg. Following the G8’s pledge of continued support for polio eradication made in St Petersburg, the Russian Federation took immediate action, and made a new commitment for 2006-2008, that now brings their total contribution to US$18 million.

New External contributions*

<table>
<thead>
<tr>
<th>Country</th>
<th>Amount</th>
<th>Purpose</th>
</tr>
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<tbody>
<tr>
<td>Australia</td>
<td>US$ 430,000</td>
<td>in global funds and for OPV in Nepal</td>
</tr>
<tr>
<td>Canada</td>
<td>US$ 4.4 million</td>
<td>for Afghanistan</td>
</tr>
<tr>
<td>Denmark</td>
<td>US$ 510,000</td>
<td>for Afghanistan</td>
</tr>
<tr>
<td>Germany</td>
<td>US$ 1.28 million</td>
<td>in global funds for 2007-2008</td>
</tr>
<tr>
<td>Iceland</td>
<td>US$ 50,000</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>US$ 10.4 million</td>
<td>in global funds for 2006-2008</td>
</tr>
<tr>
<td>Japan</td>
<td>US$ 8.9 million</td>
<td>for OPV in priority countries</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>US$ 2.76 million</td>
<td>in global funds for 2006-2008</td>
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<tr>
<td>Monaco</td>
<td>US$ 30,000</td>
<td></td>
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<tr>
<td>Rotary International</td>
<td>US$ 4.6 million</td>
<td>for priority countries</td>
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<tr>
<td>Russian Federation</td>
<td>US$ 10 million</td>
<td>for global funds for 2006-2008</td>
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<tr>
<td>United Nations Foundation</td>
<td>US$ 3.4 million</td>
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<tr>
<td>UNICEF National Committees</td>
<td>US$ 780,000</td>
<td>for priority countries</td>
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<tr>
<td>UNICEF Regular Resources Set-aside</td>
<td>US$ 12.13 million</td>
<td>for priority countries</td>
</tr>
<tr>
<td>USAID/OFDA</td>
<td>US$ 300,000</td>
<td>for north Sudan</td>
</tr>
</tbody>
</table>

*Contributions received since Polio News 27.

The Global Polio Eradication Initiative expresses its gratitude to all donors.

Materials available

Also on www.polioeradication.org


Final report, outcomes & recommendations of the Third Annual Meeting of the Advisory Committee on Polio Eradication (ACPE), held in Geneva, Switzerland on 11-12 October 2006

Forthcoming events

9 Nov. World Health Assembly (WHA) Special 2006 Session, Geneva, Switzerland
1-2 Nov. Regional Certification Commission, 2006 WHO Regional Office for the Eastern Mediterranean (EMRO), Cairo, Egypt
22-30 Jan. WHO Executive Board (EB) 120th 2007 Session, Geneva, Switzerland

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