

# POLIO ERADICATION IN THE WESTERN PACIFIC REGION



World Health Organization  
Manila



WHO Library Cataloguing in Publication Data

Polio eradication in the Western Pacific Region

1. Poliomyelitis - prevention and control.
2. Immunization.
3. Poliovirus vaccine, Oral.
4. Western Pacific.

ISBN 92 9061 000 X

The World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full. Applications and enquiries should be addressed to the Office of Publications, World Health Organization, Geneva, Switzerland or to the Regional Office for the Western Pacific, Manila, Philippines, which will be glad to provide the latest information on any changes made to the text, plans for new editions, and reprints and translations already available.

© World Health Organization 2002

Publications of the World Health Organization enjoy copyright protection in accordance with the provisions of Protocol 2 of the Universal Copyright Convention. All rights reserved.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

# TABLE OF CONTENTS

---

<b>Preface</b>	1
<b>Chapter 1: Introduction</b>	3
Chanthy's story	4
The World Health Organization and the Western Pacific Region	6
Polio: the virus and the disease	7
Western Pacific declared polio-free	8
How the poliovirus circulates – and is stopped	9
How the poliovirus was stopped in the Western Pacific	11
Expanding from the individual to the population	12
<b>Chapter 2: The background to polio eradication activities in the Western Pacific</b>	15
Polio in history	16
From endemic to epidemic	16
Oral polio vaccine	19
Inactivated polio vaccine (IVP)	20
The vaccines against polio	20
“Herd immunity”	22
“Eradication” of infectious diseases	24
Early beginnings of polio eradication efforts	25
<b>Chapter 3: Practical aspects and getting the people together</b>	27
Getting started in the Western Pacific	28
Establishment of the Polio Eradication Task Force	29
Drafting a plan of action	31
Establishment of a Technical Advisory Group	32
Strategies for eradicating polio	33

“Easier said than done”	34
Extra vaccine requirements	35
The cost of extra vaccine	36
Establishment of an Interagency Coordinating Committee	36
Rising costs of international vaccine	37
Locally-produced vaccine	38
Emergency situation	38
The first large donations for vaccine	40
Continuing financial support	41
Non-monetary support	42
Momentum builds	42
<b>Chapter 4 - Supplementary immunization</b>	<b>43</b>
A mother’s memories	44
Extra doses of vaccine	45
Reaching everyone together	46
Supplementary immunization activities	46
Getting started: early supplementary immunization in China	47
National immunization days	48
Planning for national immunization days	48
The first national immunization days: the Philippines	50
“The largest public health event ever” – China’s first national immunization days	52
National immunization days spread throughout the Region	54
<b>Chapter 5 - Surveillance – technical aspects</b>	<b>55</b>
Protect - detect - protect	56
Disease surveillance: “information for action”	56
Surveillance for polio -difficulties	57
The solution: surveillance for acute flaccid paralysis	58
Sorting the polio cases out from among AFP cases	58
The role of the laboratory: tracking the wild poliovirus	59
Options for detection of poliovirus	59
Isolating poliovirus from stool specimens	60
Identifying and typing poliovirus	61
Intratypic differentiation: distinguishing wild and vaccine-type poliovirus	61
Genomic sequencing: the gold standard	64
Relationships between polioviruses	64

<b>Chapter 6: Developing the surveillance system in the Western Pacific</b>	67
Situation at the beginning	68
Introducing surveillance for AFP	68
Population as compared to individual	70
Monitoring surveillance: the non-polio AFP rate	70
Passive surveillance	71
Active searches for AFP cases; development of active surveillance	72
Establishment of active surveillance in polio-endemic countries	73
Active surveillance in polio-free countries: the “lesson of Malaysia”	74
Monitoring of follow-up of AFP cases; link to the laboratory	74
Establishment of the laboratory network in the Western Pacific	75
Situation at the beginning	75
Early meetings and training	76
Coordination of AFP surveillance and laboratory activities	76
Coordination of the laboratory network	77
Laboratory accreditation and monitoring	78
<b>Chapter 7: Routine immunization/health services</b>	79
The Expanded Programme on Immunization	80
Universal childhood immunization	80
Measuring immunization coverage	81
Routine coverage with OPV during the polio eradication initiative	82
At the beginning	82
Effect of the polio eradication activities on routine coverage	83
The role of routine immunization in keeping countries polio-free	85
Another lesson from Malaysia	86
<b>Chapter 8: Refining the strategies</b>	87
The pieces fit together	88
Surveillance and response	90
AFP surveillance	90
Laboratory surveillance	90
Targeting the response: high risk response immunization	92
The Qinghai importation	93

<b>Chapter 9: Certifying the Region as polio-free</b>	95
Kyoto, 29 October 2000	96
The global process of polio-free certification	97
Appointment of the Regional Certification Commission for the Western Pacific	97
Planning the action	99
National certification committees	99
Criteria for certification	100
The impetus and timing of certification	100
Work begins in the countries	102
Developing openness and trust	102
Imported vs indigenous wild poliovirus	103
Can an imported virus become indigenous?	104
Laboratory containment	105
Developing a culture of analysis	105
Final efforts	106
<b>Chapter 10: What next?</b>	109
After certification	110
The Certification Commission continues...	111
Further containment work	111
Immunization continues	112
Surveillance continues	112
Vaccine-derived poliovirus detected	113
<b>Chapter 11: The legacies of the Western Pacific's polio eradication initiative</b>	115
Benefits for the Western Pacific of the polio eradication initiative	116
Lessons learnt in the Western Pacific about polio eradication	117
Broader lessons of the polio eradication initiative	119
<b>Annexes</b>	<b>Please see enclosed CD</b>
Annex 1: Regional progress in polio eradication	
Annex 2: Regional direction of polio eradication	
Annex 3: International partnership in polio eradication	
Annex 4: Surveillance for wild poliovirus	
Annex 5: National progress in polio eradication: Recently polio-endemic countries	
Annex 6: Maintaining and documenting polio-free status: Non-endemic countries	
Annex 7: Certification of the Western Pacific as polio-free	

# ACKNOWLEDGEMENTS

---

The World Health Organization, Regional Office for the Western Pacific wish to acknowledge following participants in the events of the polio eradication initiative in the Western Pacific who have given interviews and/or written contributions for this book. They are listed as representing the organizations/units in the Region in which they were most involved for this initiative, rather than current positions. Where individuals played important roles in the initiative within more than one institution, they are listed separately under each.

Dr Isao Arita and Dr Robert Hall, *Technical Advisory Group on the Expanded Programme on Immunization and Poliomyelitis Eradication in the Western Pacific Region*; Mr Brian Knowles, *Regional Interagency Coordinating Committee*; Professor Anthony Adams, Dr Carlyle Guerra de Macedo and Dr Olen Kew, *Regional Commission for the Certification of Poliomyelitis Eradication in the Western Pacific*; Ms Ly Nareth and Dr Mean Chhi Vin, *Ministry of Health Cambodia*; Dr Yu Jingjin and Dr Lei Jie, *Ministry of Health China*; Dr Somthana Douangmala and Dr Phengta Vongprachanh, *Ministry of Health Lao People's Democratic Republic*; Dr R. Devan, *Ministry of Health Malaysia*; Dr D. Narangerel and Dr Z. Mendsaikhan, *Ministry of Health Mongolia*; Mr Stephen Toikilik, *Department of Health Papua New Guinea*; Dr Paulyn Ubial, *Department of Health Philippines*; Professor Dang Duc Trach, Dr Nguyen Thu Yen and Professor Do Si Hien, *Ministry of Health Viet Nam*; Ms Judith Ugava and Ms Christine Hansen, *Australian Agency for International Development*; Dr Olen Kew, *Centers for Disease Control and Prevention*; Mr Akio Arai, Ms Satoko Koga and Mr Takeshi Watanabe, *Japan International Cooperation Agency*; Dr K. Shimizu, *Japan Ministry of Foreign Affairs*; Mr B. Knowles, *Rotary International*; Dr T. Yamazaki and Dr A. Ida, *Rotary Japan District 2650*; Dr Shigeru Omi, Dr Julian Bilous, Mr Chris Maher, Dr Rudi Tangermann, Dr Ray Sanders, Dr Sigrun Roesel, Dr Yoshikuni Sato, Ms Winniefred C. de Guzman and Ms Corazon Echiverri, *EPI/WHO/WPRO*; Dr Richard Nesbit, Dr Yang Baoping, Mr David Bassett, Mr Alan Schnur, Dr Marcus Hodge, Mr John Pott and Mr Keith Feldon, *WHO/EPI Country offices*

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_28021](https://www.yunbaogao.cn/report/index/report?reportId=5_28021)

