1. INTRODUCTION

An informal second meeting of the Subregional Committee for the Certification of Eradication of Poliomyelitis in Pacific Island Countries and Areas (PICs) took place in Suva Fiji on 12 December 1997.

1.1 Objectives

(1) To review progress in implementation of the plan of action for certification of poliomyelitis eradication in PICs.

(2) To review and make a final classification of all AFP cases reported during 1997.

(3) To provide guidelines for PICs on technical recommendations made by the Regional Certification Commission.

1.2 Organization

The meeting was attended by four of the five members of the Subregional Committee and a WHO secretariat (see Annex 1). Since the first meeting in 1996, one member (Dr Arvind Patel) has withdrawn from the Committee, and two new members have been appointed (Dr Elaine Chungue and Dr Isamu Abraham). Dr David Morens attended the committee as a Temporary Adviser to WHO.

1.3 Opening Session

The Chairman addressed to committee, requesting Dr David Morens to continue to serve as rapporteur. Representatives from UNICEF and JICA were present at the opening session.

2. PROCEEDINGS

2.1 Regional Overview of Poliomyelitis Eradication

A brief overview of polio eradication in the Western Pacific Region was provided, acknowledging the continuing support of UNICEF, the governments of Australia, Japan, the United States of America, and Rotary International.

The Western Pacific region is on the verge of completely interrupting transmission of wild poliovirus during 1997, creating the opportunity for certification of the Regional eradication of poliomyelitis in 2000, after three consecutive polio-free years. As at December 1997, only 9 of the over 4000 AFP cases with onset in 1997 have been confirmed as poliomyelitis by wild poliovirus association. Eight of these polio cases originated in Cambodia, which is where the last wild poliovirus was located, (date of onset 19 March 1997) in the same area as those cases reported in 1996. The ninth wild poliovirus-associated cases were reported from the central region of Viet Nam. In response to the nine wild poliovirus-associated cases with onset in 1997, additional rounds of High Risk Response Immunization were conducted in May, June and July in Cambodia, Laos and Viet Nam. In addition, seven recently-endemic countries will continue to conduct National or Sub-national Immunization Days during the low transmission season of 1997/1998.

The Regional commission for the Certification of Poliomyelitis Eradication in the Western Pacific met 20-21 November 1997 in Manila. The following summarizes the proceedings of that meeting:
The plans of action of non-endemic countries, including Pacific Islands, were endorsed
The Manual of Operations for documentation of certification was endorsed in principle
Prospective AFP surveillance was reaffirmed as the standard method of surveillance
Alternative information sources for non-endemic countries without AFP surveillance were proposed
Guidelines for response to importation of wild poliovirus were requested of the secretariat
Plans of action for containment of wild poliovirus stocks in laboratories were recommended

2.2 Overview of Implementation of the Plan of Action for Certification of Polio Eradication in Pacific Island Countries and Areas.

As endorsed by the Committee last year, a hospital-based surveillance network has been established in the Pacific to detect and report all cases of AFP. The secretariat described the progressive establishment of the network throughout the Pacific in 1997. The system was first implemented in each hospital during a briefing visit by WHO staff, consultants, or staff or partner agencies. By 12 December 1997, active surveillance for AFP (and suspected measles and neonatal tetanus) had been established at 49 (of an expected 55) hospitals in 16 of 20 Pacific island countries and areas, representing over 92% of the population of the Pacific. The four remaining countries (Tuvalu, Niue, Tokelau, and New Caledonia) are expected to establish hospital-based active surveillance by the first quarter of 1998.

This surveillance network depends on the active involvement of 20 national co-ordinators, 55 hospital co-ordinators, and about 200 key paediatric clinicians in the Pacific. The Committee agreed that this adequately represents the geography and demography of the Pacific sub-region, and that, collectively, the members of the network are likely to see and evaluate almost every case of childhood AFP occurring in the Pacific. The Committee also considers that the system, as designed and supported does not unduly burden the clinicians involved.

The Committee concurred that the extension of the network to more peripheral facilities would entail considerable extra effort with very little added benefit, and that such extension was not currently indicated. The Committee asked the secretariat to monitor the situation and the results from a few countries (particularly Vanuatu and the Solomon Islands) to determine whether the addition of one or two smaller hospitals might be necessary.

The Committee reviewed and endorsed the contents of the AFP/EPI Surveillance Folder provided to each participating hospital. The folder contains all forms and instructions necessary for reporting of AFP each month by all key clinicians, and for reporting and investigation of AFP cases encountered, including instructions for collecting, storing, packing, and shipping stool specimens to participating diagnostic laboratories. In addition, the folder contains instructions for reporting and investigation of suspected cases of measles.

The secretariat presented results of the monthly reporting to date. The reporting mechanism in most countries requires a copy of the completed monthly form to be sent from the hospital co-ordinator to the national co-ordinator. Although reporting to WHO had not been mandated in most instances, the WHO office has to date received copies of nearly 50% of expected forms for 1997.

One performance standard relates to AFP surveillance activities:

**Standard: At least 80% of expected reports will be received on time.**

This standard has not yet been met in reporting to WHO, but may have been met at country level overall. The Committee endorsed the secretariat proposal to request all national co-ordinators to routinely send copies of hospital monthly reports (or at least summaries) every three months to WHO.
The Committee also agreed that the "on time" aspect of this standard should be understood as quarterly reporting to WHO, together with evidence that reports are forwarded within the country every month, rather than as a requirement for rapid reporting of surveillance forms. This is because, in the system established in the Pacific, the monthly reporting from surveillance sites and the immediate reporting of AFP cases are not dependent on one another. AFP reports must be made immediately, without waiting for monthly reports. Their timeliness will be assessed in other ways. Monthly reports, in combination with AFP investigations, will constitute the documentary evidence over time of the absence of poliomyelitis in the Pacific, but are not themselves particularly time-sensitive.

The Committee concurred that the secretariat should produce and widely distribute a newsletter, to keep all surveillance network participants and other interested parties informed of the progress of AFP surveillance and reporting, and to encourage full participation in the surveillance network.

2.3 Review of all AFP cases Reported in 1997

The Committee reviewed in detail 8 definite or suspected AFP cases reported during 1997, another 4 uncovered during retrospective record reviews, and 2 others reported during the week of the meeting. The virological algorithm was used for case classification. The algorithm and classification categories adopted by the Committee are displayed below:

**Virological Classification of AFP Cases**

<table>
<thead>
<tr>
<th>Classification categories (1 – 5, a, b)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. confirm</td>
<td>confirm</td>
</tr>
<tr>
<td>2. compatible</td>
<td>compatible</td>
</tr>
<tr>
<td>Pending:</td>
<td></td>
</tr>
<tr>
<td>a) 60 day follow-up</td>
<td></td>
</tr>
<tr>
<td>b) expert review</td>
<td></td>
</tr>
<tr>
<td>3. discard</td>
<td>discard</td>
</tr>
<tr>
<td>4. discard</td>
<td>discard</td>
</tr>
<tr>
<td>5. discard</td>
<td>discard</td>
</tr>
</tbody>
</table>

Of the 14 cases reviewed, the Committee felt that three did not meet the definition of AFP under age 15 years, and thus were not further classified. Two were discarded as poliomyelitis cases based on negative results, for each, of two adequate stool specimens (category 5). Two others lacked residual paralysis at 60 days, and were thus discarded (category 4). Three cases were discarded by the Committee based on expert review of the available clinical and laboratory data (category 3). However, two of these may not be AFP cases, which will only be determined on re-confirmation of their presenting clinical status. The Committee asked the secretariat to re-confirm the clinical presentation of these two at a planned site visit to the hospital concerned (in Kiribati) the week following this meeting. Should this review confirm that these two cases were not AFP, the secretariat will provide details to the Committee members in writing, and will drop them from further AFP classification; otherwise they will remain in category 3.

For three cases, 60 day follow-up information was not yet available. These were retained as “pending” (category a), and will receive final classification at the next meeting of the Committee.
The Committee considered the final case number 97-08 to be the most problematic. This was a 12 year old child with definite AFP, who died after a 3 week illness without stool specimens having been taken. The case had been fully investigated as AFP after notification had been made, but this had unfortunately occurred only after burial. The epidemiological and clinical situation suggested a diagnosis other than poliomyelitis. The child lived in an area of high Immunization coverage, she had herself had one documented dose of OPV at school entry and was reported to have had a full course in infancy (although the clinical record could not be located), she had not travelled or been in recent direct contact with anyone from an endemic area, and her clinical and laboratory findings were compatible with Guillain-Barre' syndrome. The Committee was unable to confidently discard this case without further information, and decided to retain the case as pending (category b). The Committee asked the secretariat to provide further information (such as written confirmation of the child's immunization status, and further community case-finding and risk information), and will reconsider this case at its next meeting. Details of cases reviewed by the expert committee will be maintained by the secretariat and available for review by the Regional Committee.

A summary of the Committee's expert review is provided in the table below:

<table>
<thead>
<tr>
<th>Case number</th>
<th>Country</th>
<th>Classification category</th>
</tr>
</thead>
<tbody>
<tr>
<td>97-01</td>
<td>Kiribati</td>
<td>a</td>
</tr>
<tr>
<td>97-02</td>
<td>Fiji</td>
<td>4</td>
</tr>
<tr>
<td>97-03</td>
<td>Fiji</td>
<td>5</td>
</tr>
<tr>
<td>97-04</td>
<td>Fiji</td>
<td>5</td>
</tr>
<tr>
<td>97-05</td>
<td>Kiribati</td>
<td>3*</td>
</tr>
<tr>
<td>97-06</td>
<td>Kiribati</td>
<td>3*</td>
</tr>
<tr>
<td>97-07</td>
<td>Fiji</td>
<td>4</td>
</tr>
<tr>
<td>97-08</td>
<td>Fiji</td>
<td>b</td>
</tr>
<tr>
<td>97-09</td>
<td>Fiji</td>
<td>a</td>
</tr>
<tr>
<td>97-10</td>
<td>FSM**</td>
<td>a</td>
</tr>
<tr>
<td>97-11</td>
<td>FSM**</td>
<td>3</td>
</tr>
</tbody>
</table>

* May not be AFP

** Federated States of Micronesia, identified on retrospective review

The performance standards related to AFP case finding and investigation were variably met in 1997, as follows:

** Standard: At least one case of AFP per 100,000 children under age 15 per year.**

This standard was essentially met. The standard requires about 10 reported AFP cases in the Pacific each year. For 1997 (as at 12 December), between 9 and 11 cases have been identified, depending on the outcome of the AFP case review in Kiribati in the week following this meeting.

** Standard: All AFP cases must be investigated.**

This standard was met. Full case investigations were obtained on all 10 reported AFP cases (7 to 9 confirmed), and retrospectively on the 4 reported AFP cases (2 confirmed) identified in retrospective case reviews. In future it is expected that very few cases will be identified retrospectively. This was, however, acceptable in 1997, as prospective surveillance was introduced progressively throughout the year in the hospitals of the Pacific, and many hospitals were not included in the network until the second half of the year.
Standard: At least 80% of AFP cases should have two adequate stool specimens.

This standard was not met. Neither of the two confirmed retrospective cases had stool specimens obtained. Only two of the other cases had two adequate stool specimens, although two more had a single specimen obtained within the maximum period of 14 days after onset, and all but one of the others (case 97-08) had two specimens obtained within 30 days. In 1997, only 18 – 22% of AFP cases in the Pacific (depending on the outcome of the AFP case review in Kiribati) were in full compliance with this standard. The Committee suggested measures to improve performance, including continued reinforcement to clinicians and to their supervisors of the importance of the certification effort, and increased involvement of the laboratories in ensuring that specimens are collected and sent.

Standard: All stool specimens should be examined in an accredited laboratory.

This standard was met. All specimens were successfully transported to the Victorian Infectious Diseases Reference Laboratory in Melbourne, Australia.

Standard: At least 80% of AFP cases should be examined in an accredited laboratory.

This standard was essentially met. Although follow-up is still pending in four cases, it is expected that this will be accomplished. The Committee suggested that the secretariat routinely request 60 day clinical follow-up in all cases, to ensure that completed reports are received in a timely manner.

2.4 Laboratory issues

The committee reviewed the status of collection and transport of stool specimens to reference laboratories under reverse cold chain conditions. At the 1996 and 1997 EPI managers meetings, countries were provided with details of the reference laboratories and the means and routes of dispatch. The committee was provided with a document on packaging and shipping requirements for laboratory specimens, which is attached as an annex to this report (Annex 2). As most countries will use the Victorian Infectious Diseases Reference Laboratory, in Fairfield, Australia, details on the requirements for dispatch to this laboratory are included in the annex.

2.5 Last Case of Poliomyelitis in the Pacific

For the purpose of documentation of poliomyelitis eradication, it is necessary to determine the last case of poliomyelitis in the Pacific Islands. An attempt was made to document this in 1990, but the data received were incomplete. It is proposed that letters should be written to the health authorities of all Pacific Island countries and areas, requesting information on the last case reported as poliomyelitis, together with virological or clinical information that was used to confirm the diagnosis.

2.6 Retrospective Reviews

The secretariat presented its experience with 5 year retrospective reviews, and suggested that the effort involved in these reviews achieved little useful result. Most of the 49 hospitals visited so far have had at least partial reviews conducted. As expected, many cases of possible AFP, and an appropriate number of AFP other than poliomyelitis are identified in such reviews. Although no suspected cases of poliomyelitis can be found, given the often limited clinical, laboratory, and follow-up data available in a retrospective review of old records in the Pacific, some questions are raised which cannot, even with extensive investigation, be conclusively answered. The Committee agreed that the outcome of such 5 year reviews, pre-1997, did not justify the effort involved. While acknowledging the work done so far, the Committee suggested that such reviews no longer take place.
In contrast, the Committee felt that ensuring complete information on AFP from January 1997 forward is a high priority, and that retrospective case searches are an important validation check on the quality of the monthly hospital-based key clinician system. At its last meeting, national annual case searches had been proposed as such a quality assurance check, to uncover AFP cases which might have been missed by the routine active surveillance mechanism.

The Committee endorsed a modified protocol for conducting such case searches, with four components:

- Monthly retrospective case searches of relevant hospital registers by all hospital co-ordinators (this has already been incorporated in the routine system instituted at all hospitals so far, and is documented on the monthly reporting form itself).

- Annual retrospective record reviews (manual or computer-based) at 10 key hospitals in 8 countries. The hospitals selected are those serving as tertiary facilities for populations of at least 100,000 people, and are, collectively, the main referral sites for about 2.1 million of the Pacific's 2.5 million population. These are the main national hospitals in the Solomon Islands, Vanuatu, New Caledonia, French Polynesia, Guam, Samoa, Tonga, and the three divisional hospitals in Fiji.

- Annual retrospective record reviews at low-performing sites (to be monitored by the secretariat).

- A final retrospective review, to January 1997, at all participating hospitals to be conducted near the end of the certification process.

This protocol for retrospective case searches will be reviewed by the Committee at its next meeting, and modified as necessary.

2.7 Manual of Operations for Documentation of Poliomyelitis Eradication

The Manual of Operations has been prepared to provide standards and guidelines for the preparation of documentation for the certification process. The purpose of the manual is to provide the Commission with essential information presented in a standard format, and to provide countries with a methodology for the collection and presentation of the information. It will be at the discretion of the Regional Commission to request further information or allow less detailed information, as appropriate. The manual is designed to collect the following information:

1. history of poliomyelitis cases;
2. performance of surveillance for poliomyelitis eradication; and
3. performance of poliomyelitis eradication laboratory activities.

In addition to the above sections, the first two Annexes should include:

1. country background information (with details on the structure, responsibilities and policies for the poliomyelitis eradication initiative); and
2. immunization activities relevant to poliomyelitis eradication.

The manual should be considered as a guide to the certification process: It will be at the discretion of the Regional Commission to request further information or to allow less detailed information, as appropriate.
Standardized documentation on the inventory and containment of polioviruses is also needed; therefore Pacific Island Countries and Areas will need to begin the process of identifying laboratories that are potential sources of specimens that may contain polioviruses.

2.8 Investigation and response to importation of wild polioviruses

The committee discussed the various possibilities that may result from the importation of wild poliovirus. Incidental importation:

- Imported wild poliovirus not associated with an AFP case, e.g. detected from viral screening
- Imported polio case: wild poliovirus isolated from a single AFP case with history of recent travel outside the country
- Secondary imported polio case: wild poliovirus isolated from a single AFP case associated with an imported case
- Indigenous spread of imported wild poliovirus: more than one polio case associated with an imported case

The committee was concerned that detection of any imported wild poliovirus in any Pacific Island country should be considered as a national emergency, triggering immediate response in the form of urgent, full investigation and immunization over a wide area, usually the whole country.

To better ensure that importations are detected and responded to appropriately, the Regional Commission has requested the WHO secretariat to provide member states with guidelines for the investigation and response to wild poliovirus importations.

2.9 Future Activities of the Subregional Committee

The Committee decided to meet for the third time in December 1998. In order to ensure the independent nature of the Subregional Committee it was decided that all correspondence from the Committee should bear a letterhead with the title of the committee and the names of its members. Correspondence with the committee should be addressed to the chairman, using the WHO Suva postal address.

3. CONCLUSIONS

The Committee notes that 47 hospitals in 16 (of 20) countries, providing services to over 92% of the population of the Pacific subregion, have already been visited by WHO staff or consultants during the past year. The Committee affirms that this surveillance network represents the core of the Pacific islands active surveillance system for AFP.

With the proposed addition of about 5-8 hospitals, the Committee believes that the surveillance network, encompassing about 200 key paediatric clinicians in the Pacific, is representative of the geography and demography of the Pacific, and is adequate to achieve the necessary AFP surveillance documentation. The Committee further believes that expansion to more peripheral health facilities would greatly increase the effort required, with very little increase in AFP reporting.

The Committee notes that the AFP reporting benchmark of 1 case per year per 100,000 children under age 15 may yet be reached in 1997, based on the establishment of a partial network, and that this standard is likely to be exceeded in 1998.
The Committee is concerned that only 2 of 8 AFP cases had two or more adequate stool specimens. Five others had stools specimens collected, but these were not collected in time to meet the AFP investigation standard. One AFP case had no stool specimen collected.

The Committee was able to provide final classification for 5 AFP cases in 1997, and to place 6 others in "pending" categories awaiting further information. Two of these may prove to be non-AFP cases.

The Committee endorses aggressive field investigation of problem cases, preferably by the clinicians on-site, with outside support when indicated. This may include full investigation of contacts of cases.

The Committee recognizes that the 5 year retrospective case reviews have yielded little useful information. The considerable effort required has uncovered actual or suspected AFP cases due to conditions other than polio, as expected, and also raises questions of final diagnosis which in some cases cannot be answered, given the limited clinical and laboratory information available.

The Committee reviewed a draft of the Manual of Operations. Although this is still under the development, the Committee concurs in principle with the country requirements for documentation of eradication as outlined in the Manual.

The Committee understands that guidelines for management of imported cases of poliomyelitis are under development in the Western Pacific Region. The committee recognizes the need for a wide, probably national, surveillance and immunization response in any Pacific island country should an imported case of laboratory-confirmed poliomyelitis be identified.

The Committee wishes to thank the Victorian Infectious Diseases Reference Laboratory for their Cupertino and guidance in virological surveillance for Pacific island countries. In 1997, specimens for 7 AFP cases were successfully transported to Melbourne for analysis. The fact that many of these specimens were sent under a reverse cold chain from remote locations and arrived at VIDRL in good condition demonstrates the viability of the system. Problems that have been encountered include:

- incorrect and incomplete shipping and customs documents;
- late notification of flight details to WHO; and
- inappropriate containers.

The Committee is satisfied with the plans to deal with these problems.

4. ACTION POINTS

1. AFP SURVEILLANCE SYSTEM

The Committee is satisfied that the system of hospital-based active surveillance for AFP is an adequate mechanism for documentation of certification of polio eradication in Pacific Island countries and areas. The following action should be taken in 1998 to improve the performance of the system:

1) To facilitate monitoring of the performance of AFP surveillance, National co-ordinators should send copies of reports to WHO South Pacific, Suva, every quarter.
2) The secretariat should identify low-performing areas and take steps to strengthen surveillance, including follow-up visits.
3) The secretariat should provide regular feed-back reports to all countries and areas.
4) The committee requests the secretariat to provide additional evidence to allow final classification of pending cases, particularly case number 97-08.
2. RETROSPECTIVE REVIEWS

Five-year retrospective reviews no longer need to be conducted at reporting sites. Monthly active surveillance reports from all reporting sites, if complete, will provide sufficient documentation. Annual retrospective reviews should be used to supplement monthly reports in ten major hospitals and in low-performing areas. A final review should be conducted in all hospitals at the end of the certification period.

3. DOCUMENTATION OF LAST POLIOMYELITIS CASE

For the purpose of documentation of the last poliomyelitis case in each Pacific Island country and area, the last case should be the last case reported nationally as poliomyelitis, accompanied by whatever clinical or laboratory evidence is available to support the diagnosis.

4. LABORATORY SURVEILLANCE

The committee advises all countries to follow the guidelines attached as an annex to this report when collecting and transporting specimens to the Victorian Infectious Diseases Reference Laboratory (VIDRL), at Fairfield, Australia, for analysis. To co-ordinate the laboratory surveillance activities, WHO should be notified whenever a country intends to send stool samples to VIDRL.

5. RESPONSE TO IMPORTATION

The committee considers any isolation of wild poliovirus as a national emergency requiring urgent surveillance and immunization response. It is understood that guidelines on these responses will be provided by WHO in the near future as recommended by the Regional commission.

6. CONTAINMENT OF WILD POLIOVIRUS STOCKS

The committee recognizes that some laboratories in PICs may still store samples containing wild polioviruses in the form of material from studies conducted many years previously. Taking into account the global recommendations for containment of wild poliovirus stocks to prevent accidental infection and environment contamination, the following recommendations are made to health authorities in all countries and areas:

Immediate action:
Ensure that all wild polioviruses, and all wild poliovirus-infectious or potentially infectious materials are handled under biosafety level 2 (BSL-2) conditions.

Action in the next twelve months:
(1) Establish a comprehensive listing of all institutions, hospitals and laboratories that currently process of store materials which may contain wild poliovirus.
(2) Establish a national inventory of all stored wild poliovirus infectious materials and participate in the systematic selection of stored materials for retention or destruction.

The WHO secretariat should ensure that health authorities in all countries and areas are aware of these recommendations. Additionally, the secretariat should develop a Regional plan for restricting all processing and storage of wild poliovirus.

7. FUTURE ACTIVITIES OF THE SUB-REGIONAL COMMITTEE

The next meeting of the Sub-Regional Certification Committee should be held in December 1998.
Annex 1

MEMBERS OF THE SUBREGIONAL COMMITTEE FOR THE CERTIFICATION OF POLIOMYELITIS ERADICATION IN PACIFIC ISLAND COUNTRIES AND AREAS

Dr Lisi Tikoduadua (Chair)

Dr Siaosi 'Aho

Dr John Adams

Dr Isamu Abraham

Dr Elaine Chungue

SECRETARIAT

Dr M. O'Leary
Dr D. Morens
Mr F. Rousar
Dr J. Bilous