No. 24

WPRO（WHO西太平洋地域事務局）
フィジー、西サモア、クック諸島
感染症対策協力調査団報告書

昭和63年3月

国際協力事業団
医療協力部

医　管
JR
88—42

JICA LIBRARY
1071965[6]
18 676

WPRO（WHO西太平洋地域事務局）

フィジー、西サモア、クック諸島
感染症対策協力調査団報告書

昭和63年3月

国際協力事業団
医療協力部

国際協力事業団
18676

序　文

開発途上国に対する感染症対策協力の重要性にかんがみ，当事業団は専門家，外務省，厚生省，文部省及び事業団関係者による調査団を編成し，昭和63年1月より3月にかけて，太平洋地域5カ国に2調査団を，期間各2週間をもって派遣し，調査を実施したが，本報告書は1月21日から2月4日にわたりフィジー，西サモア及びクック諸島の感染症対策の実情調査のため派遣された第一次調査団のものである。

ここに本調査団員各位並びに同調査団派遣にご協力を賜った関係機関の各位に対し深甚なる謝意を表する次第である。

昭和 63 年 3 月

国際協力事業団

理事　末永昌介

目　次

序　文

Ⅰ．調査団派遣の経緯と目的 …… 1
Ⅱ．調査団の構成，日程，訪問機関・面会者 …… 2
　1．調査団の構成 …… 2
　2．日程，訪問機関・面会者 …… 2
Ⅲ．総　括 …… 6
　1．調査結果の概要 …… 6
　2．感染症対策協力推進のための提言 …… 7
Ⅳ　調査の結果 …… 8
　1．ＷＨＯ西太平洋地域事務局（ＷＰＲＯ） …… 8
Ⅴ．各国の実情 …… 16
　Ａ．フィジー …… 16
　　1．概　況 …… 16
　　2．調査の概要 …… 17
　　3．調査団への要望事項 …… 18
　　4．感染症対策調査書に対する回答 …… 18
　　5．参考資料 …… 18
　Ｂ．西サモア …… 35
　　1．概　況 …… 35
　　2．調査の概要 …… 35
　　3．調査団への要望事項 …… 37
　　4．参考資料 …… 37
　Ｃ．クック諸島 …… 38
　　1．概　況 …… 38
　　2．調査の概要 …… 38
　　3．調査団への要望 …… 39
Ⅵ．Questionnaire の回答 …… 41
　　フイジー …… 41
　　西サモア …… 73
　　クック諸島 …… 105

Ⅰ．調査団派遣の経緯と目的

当事業団の実施する海外保健医療協力のうち感染症対策協力の占める割合いは従来約４割であったが，昭和62年２月衆議院予算委員会において，議事録によれば上田哲議員から開発途上国の死因の８割は感染症であり，わが国の優れたワクチンを用いた協力を行えば稗益効果が高いので，この分野の国際協力に力を入れる必要がある旨の指摘があり，これに対し外務大臣及び関係大臣より積極的に取り組んで行く旨の答弁があった。

上記討議を踏まえて，60年７月に「感染症対策協力研究会」が設置され，合計７回の会合の後61年１月「感染症対策国際協力に関する報告書」を完成した。その後同年２月同じく衆議院予算委員会において上田議員は本件報告書を紹介するとともに同報告書への対応ぶりにつき政府の見解を質した。これに対し，外務大臣より報告書に盛られている内容，提言を今後の施策に充分生かし，具体化していくのが国の責務であるので，61年度に先進国並びに開発途上諸国に調査団を派遣し，感染症対策協力に関する実態調査を実施したい旨答弁を行った。

従って調査団派遣の目的は上述の通りであるが，具体的に言うと，開発途上国の主にワクチンで予防可能な感染症対策，予防接種，ワクチン生産等の実状につき調査すると同時に問題点，ニーズを確認し，今後わが国の本件分野への協力計画策定に資することである。

II. 調査団の構成、日程、訪問機関・面会者

1. 調査団の構成

団長	蟻田　功	国立熊本病院　院長
団員	秋葉正嗣	文部省，国際局学術課学術企画室
団員	中島正夫	厚生省，薬務局生物製剤課血液対策室　室長
団員	三好知明	厚生省，国立病院医療センター派遣協力課
団員	池田嘉弥	国際協力事業団，医療協力部管理課　課長

2. 日程，訪問機関・面会者

月　日	行程・調査内容	備　考
1月21日（木）	東京 — マニラ　JL 741	
	大使館，JICA 事務所と打合せ	
1月22日（金）	WHO 西太平洋地域事務局（WPRO）訪問	
	西太平洋地域における感染症対策実情聴取及び資料収集	
	面会者：	
	DR. S. HUILAN – REGIONAL ADVISOR IN HEALTH LABORATORY TECHNOLOGY	
	DR. H. SUZUKI – REGIONAL ADVISOR IN COMMUNICABLE DISEASES	
	DR. A. SHIMOUCHI – MEDICAL OFFICER IN ACUTE RESPIRATORY INFECTIONS	
	DR. G. MARTCHENKO – STC, EPI / CDD	
	DR. S. PIECHE – APO, CDD / EPI	
	DR. H. MEHTA – REGIONAL ADVISOR IN COMMUNICABLE DISEASES	
1月23日（土）	マニラ — シドニー　PR 213	
1月24日（日）	シドニー — スヴァ　QF 093・FJ 135	
1月25日（月）	大使館，JICA 事務所と打合わせ	
	保健省訪問	
	面会者：	
	DR. F. WAINIQOLO – PERMANENT SECRETARY.	
	DR. S. SAVOU – ASST. DIRECTOR OF PREVENTIVE & PRIMARY HEALTH SERVICES.	

月　日	行程・調査内容	備考
	DR. L. SERUVATU – CONSULTANT PATHOLOGIST DR. J. NAILATI – ACTG. ASST. DIRECTOR OF PREVENTIVE & PRIMARY HEALTH SERVICES DR. L. NAIVALSLEM – ACTG. ASST. DPPHS. MR. S. REDDY – ASST. SECRETARY DR. M. J. MATAIKA – OFFICER IN CHARGE OF WELCOME VIRUS LABORATORY MR. E. RAUEUVANUA – MEDICAL STATISTIC	
	CWM病院視察	
	面会者：　DR. L. SERUVATU – CONSULTANT PATHOLOGIST	
	ＳＴＤクリーニック視察	
	面会者：　DR. S. R. GOUIND	
1月26日（火）	TAMAVUA病院視察	
	面会者：　DR. J.C. MAHARAJ – MEDICAL SUPERINTENDENT	
	WELCOME VIRUS LABORATORY 視察	
	面会者：　DR. J. MATAIKA – OFFICER IN CHARGE OF LABORATORY.	
	TWOMEY HOSPITAL視察	
	面会者：　DR. E.C. DAULAKO – MEDICAL SUPERINTENDENT	
	大使表敬	
	スヴァ―アピア　EJ 252	
	JICA 事務所で打合せ	
	外務省訪問	
	面会者：　MR. P. KOMITI – HEAD, POLITICAL DIVISION.	
	保健省訪問	
	面会者：　DR. W. VERUNULEN – DIRECTOR GENERAL OF HEALTH. DR. I. ESERA – ACT. CHIEF PUBLIC HEALTH	
1月27日（水）	保健省訪問	
	面会者：　MR. TIPASA ME – SENIOR HEALTH PLANNER & EPI COORDINATOR	
	WHO西サモア事務所訪問	

月　日	行程・調査内容	備考
	面会者：MR. COLLIN – TECHNICAL OFFICER	
	国立病院視察	
	面会者：DR. F. ALODAINA	
	– MEDICAL SUPERINTENDENT.	
	TB/LEPROSY病棟視察	
	面会者：DR. VAIOUGA LEVI	
	– OFFICER IN CHARGE OF TB / LEPROSY.	
	国立医学研究所視察	
	面会者：DR. N. PAKSOY	
	– ACT. CHIEF OF LABORATORY.	
	稲葉伸之 — 臨床検査技師協力委員	
	山上清子 — 〃	
	保健医療教育部視察	
	面会者：MRS. P. TOELUPE – HEALTH EDUCATOR.	
1月28日（木）	UPOLU地区保健医療施設視察	
	面会者：MISS M. SILI – CHARGE NURSE, POUTASI DISTRICT HOSPITAL	
	MRS. S. TUATIMA – NURSE, SALESATELE SUELENTRE.	
	保健省訪問	
	面会者：DR. W. VERUNULEN – DG/H	
	DR. I. ESERA – ACT. CHIEF PUBLIC HEALTH.	
1月29日（金）	アピア — ラロトンガ　PH 654	
	国立ラロトンガ病院訪問	
	面会者：DR. T. TEARIKI	
	– ACTING DIRECTOR GENERAL OF HEALTH	
	DR. M. MAEVA	
	– DIRECTOR CLINICAL SERVICES	
	MR. T. FAIREKA	
	– DIRECTOR ADMINISTRATION	
	DR. T. TERE	
	– ACTING DIRECTOR PUBLIC HEALTH	

月　　日	行程・調査内容	備　考
	DR. T. TAIREA – DIRECTOR DENTAL SERVICE MS. M. MATAO – MATRON	
	法務・郵政大臣（Mr. N. DAVID — 保健大臣代行）主催夕食会　ホテル　ラロトンガ	
1月30日（土）	AITUTAKI島及びMANGALA 島の視察を予定していたが，雨天のため取止め	
	総理大臣（DR. P. ROSATI）主催　夕食会 保健大臣（DR. T. MAOATE）及び内務大臣（DR. T. MCTENGE）が参席　ホテル　ラロトンガ	
1月31日（日）	資料整理	
2月1日（月）	国立ラロトンガ病院訪問・視察 面会者：DR. T. TEARIKI – ADG/H MS. M. MATAO – MATRON 地区クリーニック及び地区集会所視察 PUBLIC HEALTH DIVISION 訪問 面会者：SISTER N. SHORT – CHIEF PUBLIC HEALTH NURSING 国立ラロトンガ病院訪問 面会者：29日と同じ	
2月2日（火） 2月3日（水）	ラロトンガ ┐ └ オークランド　TE 57	
2月4日（木）	オークランド — シドニー — 東京　QF 40・JL 772 備考：蟻田団長は事情により行程の途中シドニーより帰国した。	

III. 総　　括

1. 調査結果の概要

(1) 調査国の感染症及びその対策の現状

今回調査対象となった3カ国においては，感染症対策はともに国の保健医療対策の中でプライオリティー上位に位置づけられている。調査国の感染症及びその対策の現状は比較的類似しており，現在インフルエンザ，下痢症（乳幼児を含む）及び性病が主な感染症となっている。

EPIに関して，Cold chain system 等の体制は一応整備されており，またワクチン接種率もおおむねフィジー70%以上（BCG96%），西サモア90%以上，クック諸島90%（outer island のみでは70%）と，ともに高い。一方EPI対象疾患については，近年ジフテリア，百日咳，ポリオの発生はみられず，破傷風についても極わずかの発生がみられるのみで，麻疹，結核の発生はみられるが減少傾向が認められている。（感染症サーベイランスについて，3カ国とも医師又は医療機関から保健省等へ登録する届出制度がとられている。）

以上のとおり，EPIに関して3カ国とも一応の成果が認められているが，その理由として人口の比較的少ない島国であること，また西サモア，クック諸島については女性を中心とした地域団体のボランティア活動の積極的な協力が得られていること等も挙げられる。

なお3カ国ともワクチンの自国製造は実施していない（フィジー，西サモアについては自国民由来HBsAg陽性血液をWHOを有し日本（北里研究所）へ供出，現在ワクチン待ちの状況にある。）

(2) 感染症対策実施上の問題点

EPIに関し，Cold chain system は一応確立されてはいるが，器材の老朽化等が認められ，またより積極的に推進するには，車両，冷蔵庫等器材の不足が認められる（フィジー，西サモアについてはソーラーシステムの導入は気候的理由により困難）。

なお，フィジーについては，一時接種率が麻疹を除き80%以上であったが，1986年はおおむね70%と低下しており，政情が不安定であることの影響を受けている可能性もある。

また感染症対策を推進する上で基本的に人的，経済的不足が認められる。

なお，検査体制，特にウイルス学的検査については，西サモア，クック諸島は検査をニュージーランドへ依頼している（西サモアは結核菌の培養も委託）。フィジーについては，Welcome Virus Laboratory において血清学的検査を実施しており，またウイルス培養の技術も備えているが現在人的，経済的理由等によりこの部門は休止している。以上のとおり検査体制については十分とはいえない。

2. 感染症対策協力推進のための提言

(1) 協力のあり方

今次調査対象諸国におけるＥＰＩを中心とした感染症対策は，前述の通り，種々の問題を抱えながらも，かなりの成果を収めているといえる。従って，これら諸国に対するわが国感染症対策協力については，①これら各国が推進している諸対策を側面から補完し，〔先進国程度の罹患率及び死亡率を維持できるよう，またポリオについてはＷＨＯの世界ポリオ根絶対策の線に沿って，そのサーベイランスを強化できるような主な感染症の完全撲滅を目標とする〕協力をおこなうべきか，または，②これら諸国は，それぞれの自助努力により一応の成功をみせているという判断に立ち，より協力ニーズの高い他の後進諸国に対してわが国の協力を優先的に配分すべきという，グローバルな視点からの考え方があり，この二つの意見に分かれよう。調査団としては，この点に関し早急に感染症対策協力専門部会における活発な議論及び提案を期待したい。

(2) 具体的な協力について

以上より，同地域に対する現在可能と考えられる協力を具体的に述べれば以下の通りである。

まず，広大な南太平洋に点在する多くの小国が類似した感染症問題を有しており，これに対して，それぞれが独自に対策を構じたり研究を行うことは効率的でない。そこで，ポリオ根絶計画とも関連して南太平洋地域全体をカバーする地域研究センターの設立が感染症専門部会，ＷＨＯ，西太平洋事務局において検討されている。

これに関しては本調査団の調査により，実際的には，フィジー国・ウェルカムヴィールス研究所の発展拡充が考えられる。同施設は技術的には，可能とは言えるが，現在の人員，設備では全く不十分であり，長期にわたる専門家の派遣及び資材供与が必要不可欠である。また，この施設の運営・維持を同国（及び周辺諸国）に委託することはかなり困難と言わざるを得ない。ＷＨＯを中心とし日本，オーストラリア，ニュージーランドなどの強力なバックアップが必要である。また周辺諸国の協力を得るためにも同センターは，Training center としての機能を重視せざるを得ない。

一方，現在の比較的高い予防接種率をさらに高めるためには，二国間協力の立場から，輸送設備，コールドチェーンシステム（とくに冷蔵庫）などの供与が効果的であろう。

西サモア，クック諸島は非常な小国であり，地域レベルでのコミュニティーの協力もかなり良く得られているので，上記の機材の供与により確実に予防接種率をあげることができると考えられる。フィジーにおいて，近年やや予防接種率が低下しているが，これは１つには政治的不安定によるものであり。これらの機材が活用されれば，従来以上の高い接種率が期待されよう。

さらに重要なことは，これらの国々の深刻な人材不足に対しては日本は，専門家，ボランティアの派遣のみでなく，同諸国の研修員の受け入れを中心とした人材育成に力を注ぐべきである。こうしたＰ．Ｈ．Ｃ充実を通して総合的な感染症対策が構じられるべきである。

Ⅳ. 調 査 の 結 果

1. WHO西太平洋地域事務局（WPRO）

(1) 西太平洋地域における感染症の現状と対策

1）訪問国における感染症及びＥＰＩの現状

(ア) ３ケ国ともに近年ジフテリア，百日咳，ポリオの発生の報告はなく，破傷風はFiji で極く少数例報告されているのみである。麻疹の流行及び結核の発生は報告されているが減少傾向にある（別添1参照）。

(イ) ３カ国ともに主たる感染症はインフルエンザ，下痢症（乳幼児を含む），性病等である。

(ウ) 感染症サーベイランスについて，少なくともW. Samoaでは病院等からの情報を含め，もれなく行われている。

(エ) ＥＰＩについて，３カ国ともにCold chain systim は確立されており，また，高い接種率が報告されている（別添１参照）。

(オ) 南太平洋地域のＥＰＩを進めるにあたり，WPROはFiji（WHO/SUVA）をワクチン供給の核に位置づけている。

更に，ポリオ根絶計画に関連して，ＥＰＩの血清学的評価の実情を含めた南太平洋地域感染症対策研究開発センターをFiji の Welcome Virus Laboratory に設置する案が示された。

2）急性呼吸器感染症対策

西太平洋地域の諸国において，肺炎は乳幼児死因の上位にあり，急性呼吸器感染症対策が進められている。

主な内容は肺炎早期発見のための母親教育及び肺炎症状に対する早期抗生剤治療の実施である。

3）Ｂ型肝炎対策

西太平洋地域の諸国は保因者の率が高く（別添2），ワクチン接種を含めたＢ型肝炎対策を進める必要がある。

既に，Fiji, Western Samoa，Tonga については，日本へ原料となる各国由来の HBs Ag 陽性血液を供出しており，現在北里研究所においてワクチンが製造されつつある。人口の少ない国に対しては上記国からのワクチンの分与が予定されている。

COUNTRY: Fiji
REGION: Western Pacific
POPULATION: 723 000 YEAR: 1982 URBAN: 37.0 %
RURAL: 63.0 %

CBR: 29.8/1000 popn
NEWBORNS:
IMR: 22.5/1000 live birth
SURV.INF:
TFR: 3.4/1000 women (15 - 49 years)

No: of cases	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
DIPHTHERIA	0	0	0	0	0	0	0	0	0	0	0	0	0
MEASLES	1911	1026	212	2348	441	1621	913	1003	902	313	827	152	385
PERTUSSIS	41	7	28	15	23	10	13	8	15	5	5	0	0
POLIO	0	0	0	0	0	0	0	0	0	0	0	0	0
TETANUS	59	3	3	2	3	0	1	0	1	0	1	1	2
NNT	0	0	0	0	0	0	0	0	0	0	0	0	
TB	294	268	258	257	183	204	210	180	163	185	165	230	199

ESTIMATED COVERAGE BASED ON NUMBER OF CHILDREN UNDER ONE OF AGE AND PREGNANT WOMEN IMMUNIZED:

YEAR:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
PERCENTAGE:													
BCG							95	98	98	99		99	
DPT 3							68	70	64	80	77	69	
POLIO 3							64	66	65	81	77	69	
MEASLES							0.2	2	2	25	24	52	
TETANUS 2							0.2	0.1	0.1	0.1	0.3	52	

PROGRAMME REVIEWS:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986

COURSES: Senior level management
Mid-level management
Cold-chain repair
Training for quality control of vaccine
Combined CDD/EPI mid-level course
Cold-chain logistics course

VACCINE QUALITY:		SUPPLIED BY:	MANUFACTURER:
BCG	WHO rec	UNICEF	
DPT	WHO rec	UNICEF	
MEASLES	WHO rec	UNICEF	
POLIO	WHO rec	UNICEF	
TT	WHO rec	UNICEF	

TARGETS:	DISEASE REDUCTION: TARGETTED	/ACHIEVED	COVERAGE: TARGETTED	/ACHIEVED
	YR:	YR:	YR:	YR:
BCG				
DPT				
POLIO				
TETANUS				
MEASLES				

COUNTRY: Samoa
REGION: Western Pacific
POPULATION: 161 000 YEAR: 1984 URBAN: 29.1 %
RURAL: 70.9 %

CBR: 31.0/1000 popn
NEWBORNS:
IMR: 35/1000 live birth
SURV.INF:
TFR: 5.91/1000 women (15 - 49 years)

No: of cases	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
DIPHTHERIA	0	0	0	0	0	0	0	0	0	0	0	0	0
MEASLES	494	314	1348	240	1026	68	376	72	28	7	0	1095	1
PERTUSSIS	11	65	139	91	140	40	113	99	16	0	0	0	0
POLIO	0	0	0	0	0	0	0	0	0	0	0	0	0
TETANUS	4	18	8	5	1	0	0	0	1	0	0	0	0
NNT				0	0	0	0	0	0	0	0	0	0
TB	63	51	79	36	59	77	48	50	28	27	33	42	3

ESTIMATED COVERAGE BASED ON NUMBER OF CHILDREN UNDER ONE YEAR OF AGE AND PREGNANT WOMEN IMMUNIZED:

YEAR:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
PERCENTAGE:													
BCG							72	99	96	99	98	97	
DPT 3							29	99	80	84	88	88	
POLIO 3							29	99	80	84	88	87	
MEASLES									59	78	81	81	
TETANUS 2													

PROGRAMME REVIEWS:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986

COURSES: Senior level management
Mid-level management
Cold-chain repair
Training for quality control of vaccine
Combined CDD/EPI mid-level course
Cold-chain logistics course

VACCINE QUALITY:		SUPPLIED BY:	MANUFACTURER:
BCG	WHO rec	UNICEF	
DPT	WHO rec	UNICEF	
MEASLES	WHO rec	UNICEF	
POLIO	WHO rec	UNICEF	
TT	WHO rec	UNICEF	

TARGETS:	DISEASE REDUCTION: TARGETTED /ACHIEVED		COVERAGE: TARGETTED /ACHIEVED	
	YR:	YR:	YR:	YR:
BCG				
DPT				
POLIO				
TETANUS				
MEASLES				

IMMUNIZATION SCHEDULE:	AT AGE	RECOMMEND	NO: OF DOSES:	ARE IMMUNIZATIONS COMPULSORY BY LAW
BCG				
DPT				YES/NO
POLIO				
MEASLES				
TETANUS				

COV. SURVEY RESULTS:

YEAR:	1985
AREA:	
AGE(MONTHS):	18-30 months
NUMBER:	210
BCG	96.6 %
DPT I	94.7 %
DPT II	92.3 %
DPT III	89.5 %
POLIO I	94.7 %
POLIO II	91.9 %
POLIO III	89.0 %
MEASLES	
TETANUS I	
TETANUS II	
FULLY IMM.	

NEONATAL TETANUS SURVEY RESULTS:

YEAR:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
LOCATION:													
POPN TYPE:													
NO: LB SURVEYED:													
NEONATAL DEATHS:													
RATE/1000 LB:													
NNT DEATHS:													
RATE/1000 LB:													
% DUE NNT													

POLIO SURVEY RESULTS:

YEAR:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
LOCATION:													
POPN.TYPE:													
SURVEY METHOD:													
AGE GROUP:													
NO:CHD SURVEYED:													
PREV/1000 SURVEYED:													

COMBINED NNT/
POLIO SURVEYS:

COUNTRY: Cook Islands
REGION: Western Pacific
POPULATION: 18 000 YEAR: 1982 URBAN: 29.9 %
RURAL: 70.1 %

CBR: 22.5/1000 popn
NEWBORNS:
IMR: 16.4/1000 live birth
SURV.INF:
TFR: 4.2/1000 women (15 - 49 years)

No: of cases	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
DIPHTHERIA	0	0	0	0	0	0	0	0	0	0	0	0	
MEASLES	26	58	103	136	28	8	363	57	14	4	1	43	
PERTUSSIS	0	0	0	0	0	0	0	0	0	0	0	0	
POLIO	0	0	0	0	0	0	0	0	0	0	0	0	
TETANUS	0	0	0	1	0	0	1	0	0	0	0	0	
NNT													
TB	26	55	20	15	36	12	20	10	19	29	9	15	

ESTIMATED COVERAGE BASED ON NUMBER OF CHILDREN UNDER ONE YEAR OF AGE AND PREGNANT WOMEN IMMUNIZED:

YEAR:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
PERCENTAGE:													
BCG							29			60	99		
DPT 3							40			58	48	78	
POLIO 3							39			57	47	96	
MEASLES										68	65	80	
TETANUS 2												23	

PROGRAMME REVIEWS:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986

COURSES: Senior level management
Mid-level management
Cold-chain repair course
Training for quality control of vaccine
Combined CDD/EPI mid-level course
Cold-chain logistics course

VACCINE QUALITY:		SUPPLIED BY:	MANUFACTURER:
BCG	WHO rec.	UNICEF	
DPT	WHO rec	UNICEF	
MEASLES	WHO rec	UNICEF	
POLIO	WHO rec	UNICEF	
TT	WHO rec	UNICEF	

TARGETS:	DISEASE REDUCTION: TARGETTED YR:	DISEASE REDUCTION: ACHIEVED YR:	COVERAGE: TARGETTED YR:	COVERAGE: ACHIEVED YR:
BCG				
DPT				
POLIO				
TETANUS				
MEASLES				

IMMUNIZATION SCHEDULE:	AGE:	RECOMMEND	NO: OF DOSES:	ARE IMMUNIZATIONS COMPULSORY BY LAW YES/NO
BCG				
DPT				
POLIO				
MEASLES				
TETANUS				

COV. SURVEY RESULTS:

YEAR:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
AREA:													
AGE(MONTHS):													
NUMBER:													
BCG													
DPT I													
DPT II													
DPT III													
POLIO I													
POLIO II													
POLIO III													
MEASLES													
TETANUS I													
TETANUS II													
FULLY IMM.													

NEONATAL TETANUS SURVEY RESULTS:

YEAR:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
LOCATION:													
POPN TYPE:													
NO: LB SURVEYED:													
NEONATAL DEATHS:													
RATE/1000 LB:													
NNT DEATHS:													
RATE/1000 LB:													
% DUE NNT													

POLIO SURVEY RESULTS:

YEAR:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
LOCATION:													
POPN.TYPE:													
SURVEY METHOD:													
AGE GROUP:													
NO:CHD SURVEYED:													
PREV/1000 SURVEYED:													

COMBINED NNT/
POLIO SURVEYS:

HBsAg POSITIVE CARRIER RATE IN THE SOUTH PACIFIC COUNTRIES/AREAS

Country/area	HBsAg carrier rate
Cook Islands	-
Fiji	11.0%
French Polynesia	1.6-2.3%
New Caledonia	3.8%
Wallis and Futuna Islands	18%
Kiribati	31.0%
Nauru	8 -12%
Niue	11.9%
Tokelau	-
Papua New Guinea	20-25%
Samoa	5.5%
Solomon Islands	10-15%
Tonga	20
Tuvalu	9.8%
American Samoa	6.5%
Guam	2.6%
Palau	15.0%
Saipan	7.3%
Trust Territory of Pacific Islands	8.4%
Vanuatu	18.0%

-: Data not available.

(2) 入手資料一覧

1) Country Health Information Profile （3カ国分）

2) Digest of Health Statistics (Fiji, W. Samoa)

3) EPI 関連

(ア) WPR Countries By Population Size And EPI WHO/UNICEF Involvement

(イ) WPR – Reported Annual Incidence of Diphtheria, Measls, Pertusis, Poliomyelitis, Toxoid Tetanus, Neonatal Tetanus and Tuberculosis 1974 to 1986, October 1987.

(ウ) Weekly Epidemiological Record, 1988, 63, 9–16.
"Expanded Programme on Immunization"

(エ) Weekly Epidemiological Record, 1987, 37, 273–280 and 1987, 38, 281–282.
"Poliomyelitis in 1985"

4) ARI 関連

(ア) Plan of Implementation of ARI Control Programme in Countries by Population Size and Infant Mortality Rate in the Western Pacific Region.

(イ) WHO / RSD / 87. 35 "Areas of Research on Acute Respiratory Infections."

(ウ) WHO / RSD / 87. 36 "Planning a National ARI Programme."

(エ) WHO / RSD / 87. 37 "Programme of Acute Respiratory Infections."

(オ) ARI

(カ) WHO / RSD / 86. 32 "Acute Respiratory Infections."

(キ) Regional Workshop on Acute Respiratory Infections.

5) AIDS, ATL 関連資料

V．各国の実情

A．フィジー

1．概　況

約300島／18,272 km²

人口　723,000人

高中所得国

乳幼児死亡率　22.0／1,000

平均余命　70歳

主な疾患（対100,000）：呼吸器疾患（740），外傷及び中毒（580），循環器疾患（551），感染症及び寄生虫（516），泌尿生殖器疾患（484）　（1984年）

主な死因（対100,000）：循環器疾患（46），悪性新生物（17），感染症及び寄生虫（13），呼吸器疾患（11），外傷及び中毒（11）　（1984年）

フィジーは，英連邦諸国との緊密な関係の維持を基調とするとともに，大洋州地域島嶼諸国の中でパプア・ニューギニアと並び指導的地位を占める国として，これら諸国との協力関係を重視し，地域機関である南太平洋委員会（ＳＰＣ）および南太平洋フォーラム（ＳＰＦ）の活動に積極的に参加している。

フィジーに対する豪州（79年以降最大の援助供与国で，近年対フィジー二国間ＯＤＡの約4割を占めている），ニュー・ジーランドおよび世界銀行等国際機関からの援助は概ね，同規模で維持されている反面，旧宗主国たる英国の援助は相対的に低下している。

わが国はフィジーの指導的地位及び南太平洋の交通・通信の中心であるとの地理的重要性，さらには，近年のわが国関係緊密化等を考慮し，70年代末よりＯＤＡの拡充に努めており，今や主要援助国の1つとなっている。わが国の対フィジー協力は，同国の所得水準が比較的高く，一般無償の実施には制約が伴うことから従来，水産・文化無償並びに専門家・協力隊の派遣，研修員受入等の技術協力が中心となっていた。協力分野としては，フィジーにとって砂糖，観光に次ぐ重要な産業である水産業，農業，通信分野があげられるが，近年は，周辺諸国に裨益する条件（「看護学校建設計画」はその一例）に対する協力を重視している。また，フィジーは南太平洋の中心国であることも考慮し，83年度より電気通信分野において第三国研修を実施している。

フィジー人とインド人との関係は不安定である。

2. 調査の概要

Cumulative Number by Diseases													
DIPHTERIA		PERTUSSIS		TETANUS		NEONATAL TETANUS		POLIOMYELITIS		TUBERCULOSIS		MEASLES	
Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
0	0	0	0	2	0	0	0	0	0	199	0	385	0

Cumulative Number by Diseases												
LEPROSY	DENGUE/DHEW		ENCEPHALITIS		INFLUENZA		MENINGITIS		DIARRHOEA		
Cases	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	
20	269	0		0	62,085	0	103	12	9,886	0	

Cumulative Number by Disease						
GONORRHEA				SYPHILIS	TRACHOMA	YAWS
Cases	Type A Cases	Type B Cases	Unspecified Cases	Cases	Cases	Cases
1,513	...	...	211	612	157	2

(1986)

1）感染症の現状

(ア) ＥＰＩ対象疾患について

ジフテリア，百日咳，ポリオについては近年その発生をみていない。また破傷風についても極めて少数の発生をみるのみである。一方，麻疹の流行及び結核の発生はみられるが，減少傾向が認められる。

(イ) その他の感染症について

主な感染症はインフルエンザ及び下痢症（乳幼児を含む）であり，性病の発生増加傾向が認められる。また肝炎の発生も続いている。一方，デング熱の発生はみられるが，マラリアはなく，フィラリア及び癩は少数ながら発生が続いている。

2）感染症対策

(ア) 政策について

国家保健衛生政策（保健衛生改善計画及び保健医療事業計画）においては９つの重点目標が定められている。感染症対策（プライマリ・ヘルスケアと組み合わされている）については，人口家族計画，病院診療についで，プライオリティ第３位に位置づけられている。

(イ) 実施事業等について

現在，大部分の感染症について対策が講じられており，成果が認められている。ＥＰＩに関しては一時麻疹以外80％以上の接種率であったが，1986年は概ね70％以上（BCGは96％)の接種率となっている。Ｂ型肝炎保因者が10％程度認められ，対策として自国民由来HBsAg陽性血液を原料として既に日本へ供出しており，現在ワクチン待ちの状況にある。なお，ＡＩＤＳに関しては今までに患者・保因者とも発見されていないが，今後に備え予防対策が検討されている（輸血血液スクリーニングは実施）。

一方，感染症サーベイランスについては，医師からの届出制度が確立している。

3）感染症対策実施上の問題点

(ア) 感染症対策に必要な専門家，技術者が不足している（政情不安，海外流出等の背景もある）。

(イ) EPIに関し，Cold chain systemは確立しているが，老朽化がみられ，またより積極的に対策を進めるには必ずしも十分とはいえない。

(ウ) 臨床検査体制として細菌学的検査は3カ所の国立病院で実施され，ウイルス学的検査はWelcome Virus Laboratoryで実施される。ウイルス学的検査についてウイルス培養部門は現在人的，経済的理由で休止している（年次報告は別添3のとおり）。

(エ) 国家予算における保健医療費は8％で，主に人件費医療の現物給付に当てられており，加えて近年更に削減を強いられ，絶対的不足をきたしている。また外国援助はWHO，UNICEF等の国際機関及びオーストラリア，イギリス，アメリカ，日本等の第3国に限られる。

3. 調査団への要望事項

1）EPI関連としてCold chain system器材，特に車両，冷蔵庫等の供与。

2）Welcome Virus Labo.ではウイルス培養関連器材等の供与及び技術者の派遣等

4. 感染症対策調査書に対する回答

5. 参考資料

1）CMW Hospital Annual Report

2）Register of Notifiable Diseases

3）ワクチン接種報告（月報）

4）母子手帳

A N N U A L R E P O R T 1 9 8 6.

WELLCOME VIRUS LABORATORY
TAMAVUA HOSPITAL
SUVA
FIJI ISLANDS

A N D

FIJI FILARIASIS CONTROL PROGRAMME

C O N T E N T S:

1. STAFF 23

2. VISITORS 24

3. INTRODUCTION 25

4. LABORATORY DIAGNOSTIC WORK 26

5. SURVEILLANCE 30

6. PUBLICATION 31

7. NUMBER OF TESTS PERFORMED 32

8. FIJI FILARIASIS PROGRAMME 33

1. STAFF:

ESTABLISHED STAFF:

DR. J.U. NATAIKA	CHIEF MEDICAL OFFICER IN-CHARGE
DR. J. KOROIVUETA	SENIOR MEDICAL OFFICER
MR. R. PARMAR	RESEARCH ASSISTANT
MR. J.D. NASERUA	TECHNICAL OFFICER 1
MRS. SHANDIL SUSHIL	TECHNICAL OFFICER 2
MR. SABHARWAL A.	SENIOR CLERICAL OFFICER

NON-ESTABLISHED STAFF:

M. DOMINIKO	ANIMAL ATTENDANT
A. BULIVAKACEGU	STERILIZER
MEREWALESI NAIBOSA	STERILIZER ASSISTANT
ADI TUKANA BIUMAIWAI	MOSQUITO ATTENDANT

FIJI FILARIASIS PROGRAMME:

J.N. KAISUVA	SENIOR ASSISTANT HEALTH INSPECTOR
S/N BROWN M	STAFF NURSE
LUISA TAKOTAVUKI	CLERICAL ASSISTANT
NEMANI TALEKIBAU	CLERICAL ASSISTANT
VETAIA SOKIQELE	CLERICAL OFFICER
NEMANI TALEMAITOGA	MICROSCOPIST
SEINI KAISUVA	MICROSCOPIST
SENIMILI SAURARA	TYPIST

2. VISITORS:

JANUARY	DR. B.A. SOUTHGATE	WHO Consultant Fiji Filariasis Control Pilot Project. London School of Hygie & Tropical Medicine.
FEBRUARY	DR. HIGGINS	WHO Consultant, Manila
JUNE	WINCENER J. DAVID	Health Department, U.S. Trust Territories.
	MS. E. FOX	Wellcome Laboratories Ltd, Auckland.
	DR. AKIRA SHIMOUCHI	WPRO, Manila, Consultant Acute Respiratory Infectious.
	DR. B.C. DAZO	WHO, Manila
	DR. CLAUDE ALLEN	WHO, Suva.
	DR. J.M. JEWSBURY	School of Tropical Medicine Liverpool.
OCTOBER	DR. UMENAI	WHO Senior Advisor, Communicable Diseases, Manila.

WELLCOME VIRUS LABORATORY

ANNUAL REPORT

3. INTRODUCTION:

During the year work in the Wellcome Virus Laboratory went on satisfactorily. An outbreak of haemorrhagic conjunctivitis occured in the March/April period. There were outbreaks of upper respiratory infection in February/March period also in July and again in October.

The Chief Medical Officer In-Charge went on retirement leave in March and was re-employed for one year from June. Dr. Koroivueta J. left for Auckland University, New Zealand to start studies for a Fellowhip in Virology in December. In August Research Assistant Parmar R. attended a South Pacific Congress in Medical Sciences in Sydney.

The Fiji Filariasis Control Pilot Project was continued. The first annual dose of Diethylcarbamazine citrate (DEC-C) mass drug administration was carried out at Kadavu in February. A parallel mass drug administration with weekly and monthly doses of DEC-C was started in the islands of Batiki, Nairai and Koro in November.

Dr. B.A. Southgate of London School of Hygiene & Tropical Medicine WHO Consultant to the Fiji Filariasis Project was in Fiji for 2 weeks in February to advise on the work being carried out.

4. LABORATORY DIAGNOSTIC WORK:

4.1 ISOLATION:

4.1.1 Egg Inoculation:

There were about 1352 egg inoculations conducted during the year testing throat swabs collected from cases of infleunza-like illnesses for respiratory viruses. Investigations were carried out during outbreaks of upper-respiratory tract infection which occurred during the year. No virus isolation was made.

4.1.2 Mice Inoculations:

3625 one day old mice were tested with sera, stools sent from patients in wards and from Outpatients Department and also from our own investigations in cases during outbreaks of dengue-like illnesses. Inspections were made daily for changes in normal behaviours, growth, slowness and signs of paralysis whether flaccid or spastic.

11 strains of herpes simplex type 2 were isolated in mice with scrapings from genital sores.

4.1.3 Toxorhynchites:

We made inoculations to larvae and adults of toxorhynchites mosquitoes with diluted sera of suspected dengue cases. Head squashes were made then after necessary staining processes fluorescence microscopy sere conducted. None were found Positive.

4.2 SEROLOGY:

There were 17306 serology tests conducted during the year. These were tested against various virus antigens including respiratory, enteroviruses as well as rubella, mumps, herpesviruses, arboviruses usually based on physcians requests. Tests for hepatitis 'B' surface antigen were carried out.

Haemmagglutination Inhibition and Complement Fixation tests were the tests commonly used. Test kits were used for hepatitis 'B' antigen. We continued to receive sheep cells from the Veterinary Pathology Laboratory at Koronivia as well as one day old chicks for erythrocytes from Crest Hatchery Nausori.

Antigens and Antisera used for these tests were purchased from commercially prepared reagents from the Commonwealth Serum Laboratories, distributor agent at Melbourne, Australia.

We continued to buy dengue antigens from the Virus Research Institute, Bangkok, Thailand.

These reagents were found satisfactory.

4.2.1 INFLUENZA:

All sera from upper-respiratory cases that were sent to the Virus Laboratory from the Nuffield Clinic, Tamavua, from Colonial War Memorial Hospital or from Medical Stations througout Fiji. All were screened for Influenza A and Influenza B and in case of children against Para-influenza 1,2 or 3,. Respiratory Syncytial virus or adenovirus.

Serological tests carried out in sera from cases in outbreaks of influenza-like illness which occurred in February-March period especially in the Suva area showed evidences (four-fold rises) of Influenza A/Philippines/2/82 (H3N2). In July-August period there were evidences of Influenza A/Chile (H1N1) and Influenza B/Singapore/222/79. Most of the sera during July were collected from Monfort Boys Town where there were approximately 40% of the pupils ill.

4.2.2 HEPATITIS 'B':

1769 sera were tested in the Laboratory for hepatitis 'B' surface antigen using the Wellcome Hepatest Kit. 232 (13.00%) were found Positive. 764 of these cases were sent in by physicians from hospitals, and 15% were found Positive. The rest were from routine blood donors.

4.2.3 DENGUE:

Routinely tests were made against Dengue 1,2,3 or 4 antigens on paired sera of fever cases from Nuffield Clinic, from suspected dengue cases sent in from physicians from all over Fiji, and of cases of outbreaks of influenza-like illnesses in Suva and its surburbs.

218 paired sera were screened and none showed any rise against dengue infection. It appeared from this finding that there was no significant dengue virus activity in Fiji during the year.

VECTOR STUDIES:

During the year Aedes aegypti Breteaux Indices in Suva averaged 18% and was highest in March with 41%. The Lautoka average was 5% both urban and rural. Nausori figures showed 22% average with 60% the highest during a wet March.

These findings were collected from figures supplied by the Vector Control Unit in Walu Bay Suva. Mosquito larval collections were conducted monthly at all town areas by local health Inspectorate staff and they send these collections to the Vector Control Unit. Generaly speaking the Assistant Health Inspector who is in charge of the larval identification said that the overall aedes indices in 1986 was low as compared with previous years.

RAINFALL:

The climattological section at Nadi Meteorological Services supplied these figures on rainfall:

Stations	Average rainfall measured in mm.	
	1986	Average rainfall in the number of years indicated.
Nadi Airport	167.6	186 (44 years)
Rarawai Mill	175.75	180 (70 years)
Lautoka (FSC)	175.09	152 (70 years)
Nacocolevu	164.58	155 (54 years)
Nausori	279.08	253 (23 years)
Laucala Bay	259.66	257 (38 years)
Labasa Mill	163.16	203 (24 Years)

Comment:

It appeared from this rainfall table that the average rainfall in 1986 in these stations in Fiji were comparable to the averages of other years.

One would like to say that there may be an indication here that there were improvements of environmental sanitation work.

4.3 HAEMORRHAGIC CONJUNCTIVITIS OUTBREAK:

An outbreak of haemorrhagic conjunctivitis occurred in Fiji especially in Suva and surburban area in mid March and taper off towards the end of April.

Investigations were carried out with the Eye Department CWM Hospital. 61 Eye swabs and sera were collected and these were sent to Fairfield Hospital Melbourne for tests.

Adenovirus type 3 was isolated from one patient (1.5%) while Coxsackie A 24 was isolated from 43 patients (70.5%).

No serological test was conducted.

The last extensive epidemic of haemorrhagic conjunctivitis occurred in Fiji in December 1981 January-March 1982 and approximately 50,000 had contracted the infection. Enterovirus 70 2-4fold neutralising antibodies were found in paired sera which were tested by Dr. I. Gust at Fairfield Hospital, Melbourne.

5. SURVEILLANCE:

5.1 INFLUENZA:

The World Health Organisation (WHO) sponsored Influenza Survillance was continued during the year. The WHO Collaborating Centre for Influenza at Atlanta USA sent to us yearly and whenever we request for them, reagents for the serology tests.

Tests for Influenza A and Influenza B antibodies were carried out weekly on about 30 randomly selected sera sent to us from the Pathology Laboratory, CWM Hospital in Suva.

Influenza A showed raised levels of antibodies in January, in April June-July and again in October. Influenza B antibodies showed rises in the June-July period.

These rises corresponded with outbreaks of influenza-like illnesses which occurred at about these periods. Also, in general numbers of influenza notified from various Institutions in Fiji ran parallel with these rises in antibodies levels.

6. PUBLICATIONS:

1. Epidemiological survey of Angiostrongylus cantonensis in Fiji :-

   M. Sano, A.I Ishi, D.J. Clarkson & J.U. Mataika.

   S. Pacific Journal Natural Science, 1986 Vol 8:2-5.

7. NUMBER OF TESTS PERFORMED:

1. DIAGNOSTIC SEROLOGY

			NUMBER OF TESTS.
Respiratory viruses-	1.	Influenza A	4,278
	2.	Influenza B	3,725
	3.	Parainfluenza 1,2,3	460
	4.	Adenovirus	135
	5.	Respiratory syncytial	240
Enterviruses	6.	Coxsackie B	325
	7.	Echovirus	440
	8.	Polio 1,2,3	210
Arboviruses	9.	Dengue	4,645
	10.	Ross River Fever	180
Herpes	11.	Herpes homonis	760
	12.	Herpes simplex	95
	13.	Cytomegalovirus	770
Hepatitis	14.	Hepatidtis 'B'	3,835
Others	15.	Rubella	594
	16.	Mumps	315
	17.	Measles	145
	18.	Chicken pox	119

2. ISOLATION:

Animal Inoculation	19	Mice	3,625
	20.	Toxorhynchites adults	699
		Larvae	699
	21.	Eggs	1,352

3. SURVEILLANCE:

	22.	Influenza	6,890

4. FIJI FILARIASIS CONTROL PILOT PROJECT:

	23.	Blood slides	5,002
	24	Sera - WHO Bank	378

APPENDIX 1

8. FIJI FILARIASIS CONTROL PILOT PROJECT:

The project continued satisfactorily during the year and follows out the objectives which are:-

1. To study the effects of mass drug administration (MDA) using single dose treatment with diethylcarbamazine citrate (DEC-C) at 6mgm per kilogram body weight given annually for 5 consecutive years;

2. To study the Fijian schedule of treatment with DEC-C at 5mgms per kilogramme body weight given weekly for 6 weeks followed by another dose of 5mgm/kg body weight given monthly for 22 months and

3. To compare the above schedules of treatment with DEC-C using the following criteria:-

   3.1 effect on clinical filariasis

   3.2 effect to microfilarial rates and densities

   3.3 acceptibility by the population and

   3.4 cost effectiveness in terms of funds, labour and drugs utilised in each pilot demonstration area.

Herewith a copy of summary of report on the project for 1986 sent to the Secretary, Steering Committee of the Filariasis Scientific Working Group, World Health Organisation, Geneva. This sums up the work carried out by the Fiji Filariasis Programme team during 1986.

Of approximately 5411 people surveyed at our first study area (Kadavu Is.) 359 (6.6%) were found to harbour microfilaria bancrofti. Clinical findings showed 0.3% elephantiasis 4% hydroceles in males and about 37% with adenolymphangitis (inguinals and epitrochlears).

The first annual mass drug(DEC-C) administration using a single dose treatment with diethylcarbamazine (DEC-C) at 6mgm per kilogramme body weight was carried out on 16th February 1986. The response to the drug taking was found satisfactory and a week after D. Day approximately 86% of the population were registered as having taken the pills.

In July/August 1986 basic clinical and blood surveys were carried out at our 2nd study area of Koro Is., Nairai Is and Batiki Is. About 4600 people were tested for microfilaria and about 544 (11.76) were found Positive.

Mass drug (DEC-C) administration using the Fijian Schedules of treatment with 5mgm/kilo body weight given weekly for 6 weeks, then another dose at 5mgm/kilo body weight is then given monthly for 22 monhths, was started late November 1986. The response by the population to the MDA has been found satisfactory.

Responses to the MDA in the 1st and 2nd study areas are satisfactory and there is likelihood of the lsuccessful completion of both DEC-C courses of treatment.

B. 西サモア

1. 概　況

9主島/ 2,840 km²

人口　163,000人

低所得国

乳幼児死亡率　35/1,000

平均余命　男63歳，女65歳

主な疾患（対100,000）：インフルエンザ（4,827），肺炎（973），胃腸病・下痢（924），麻疹（684），気管支炎等（542）

主な死因（対100,000）：肺炎（26），うっ血性心不全（22），脳血管障害（19），自殺（12），不詳（11）

西サモアは，1962年に太平洋諸島で初の独立国となって以来，経済開発を進めてきたが，同国の開発プロジェクトは，日・豪・ニュー・ジーランドおよび国際機関からの援助に大きく依存している。

我が国は，同国が後発開発途上国（LLCD）であり，国家規模も小さいことから，これまでに水産・教育・運輸などの分野で無償資金協力を実施すると共に，協力隊派遣などを中心に技術協力を行っている。資金協力では域内諸国ではパプア・ニューギニアに次ぎ第2位（無償資金協力に関しては第1位）となっており，太洋州地域諸国における我が国主要援助対象国の1つとなっている。

2. 調査の概要

(1) 感染症の現状

Cumulative Number by Diseases													
DIPHTHERIA*		PERTUSSIS*		TETANUS*		NEONATAL* TETANUS		POLIOMYELITIS*		TUBERCULOSIS*		MEASLES*	
Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
0	0	0	0	0	0	0	0	0	0	62	0	0	0

Cumulative Number by Diseases										
LEPROSY	DENGUE/DHEW		ENCEPHALITIS		INFLUENZA		MENINGITIS		DIARRHOEA	
Cases	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
19	0	0		0	7,428	0	0	0	1,397	0

Cumulative Number by Disease						
GONORRHEA				SYPHILIS	TRACHOMA	YAWS
Cases	Type A Cases	Type B Cases	Unspecified Cases	Cases	Cases	Cases
14	...	...	5	0	...	0

1）EPI 対象疾患について

ジフテリア，百日咳，ポリオについては近年その発生をみていない。また破傷風については極まれに新生児破傷風の発生をみるのみである。一方麻疹の流行は時にみられ，結核の発生もみられるが，ともに減少傾向が認められる。

2）その他の感染症について

主な感染症はインフルエンザ，下痢症（乳幼児を含む）であり，また性病（淋病），らい及び肝炎の発生も続いている。一方マラリヤはなく，フィラリア，デング熱は極わずか発生が続いている。

(2) 感染症対策

1）政策について

国家開発計画の中に医療政策が含まれ，感染症対策は常にプライオリティ上位に位置づけられている。

感染症の予防，治療，撲滅のための適切な計画に，可能な政府及び援助の資源が配布される。

2）実施事業等について

小児感染症に対しEPI，結核・らいに対し結核・らいコントロール計画が設定されている。EPIに関しては90%以上の接種率となっている（高い接種率となっている理由の1つとしてwomen's committeeという地域女性団体の積極的協力が得られていることが挙げられる）。B型肝炎保因者が5.5%存在し，対策として自国民由来HBsAg陽性血液を原料として既に日本へ供出しており，現在ワクチン待ちの状況にある。なおAIDSについては今のところ患者・保因者ともに確認されておらず，輸血血液のスクリーニングも未実施である（検査キットが高価なため）。

一方，感染症サーベイランスについては，医療機関からの届出制度が確立している。

(3) 感染症対策実施上の問題点

1）EPIについて，Cold chain systemは確立しているが，車両，冷蔵庫等は，十分整備されているとはいえない。

2）結核対策も積極的に取組む意向があるが，細菌学の専門家，技術者がおらず，結核剤の培養をニュー・ジーランドへ依頼している。また，結核以外の一般的な細菌学的検査は一応実施されているが，ウイルス学的検査はHBsAg及び抗HIV抗体スクリーニング検査以外全く行われていない。

3）主な感染症は下痢症であるが，この原因として上水道の整備が不十分であること，衛生教育に対する理解不足等が挙げられる。

4）国家予算中保健医療費は11%で，主として人件費，医療の現物給付に当てられており，保健医療費は不足している。また外国援助はWHO，UNICEF等の国際機関及びニュー・ジーランドが主である。

3. 調査国への要望事項

(1) EPI関連としてCold chain system 器材，特に車両，冷蔵庫等の供与。

(2) 結核対策推進のため細菌学の専門家・技術者の派遣。

(3) 上水道整備への協力

(4) 研修員の受入れ等の技術協力

4. 参考資料

(1) National Disease Report Form

(2) Western Samoa National Hospital, Pathology Laboratory Manual

C. クック諸島

1. 概　況

15主島 / 240 km²

人口　18,000人

低中所得国

乳幼児死亡率　16.4 / 1,000

平均余命　男64歳，女70歳

主な疾患（対100,000）：外傷及び外因（1137），消化器疾患（619），呼吸器疾患（409），循環器疾患（456），泌尿生殖器疾患（439）

主な死因（対100,000）：悪性新生物（90），老衰（90），腎炎・ネフローゼ（73），肺炎（56），循環器疾患（51）

クック諸島はニュー・ジーランドの属領であったが，1965年よりニュー・ジーランドの自治領として，内政自治権，国際条約締結権等を有するに至っている。国民所得も比較的高くまた援助の9割以上はニュー・ジーランドによってなされている。我が国は，開発調査とそれに関した研修員受入を行っている。

2. 調査の概要

(1) 感染症の現状

Cumulative Number by Diseases													
DIPHTHERIA		PERTUSSIS		TETANUS		NEONATAL TETANUS		POLIOMYELITIS		TUBERCULOSIS		MEASLES	
Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
0	0	0	0	0	0	0	0	0	0	26	0	16	0

Cumulative Number by Diseases									
LEPROSY	DENGUE/DHEW		ENCEPHALITIS		INFLUENZA		MENINGITIS		DIARRHOEA
Cases	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
3	0	0		0	2,192	0	6	12		0

Cumulative Number by Disease						
GONORRHEA				SYPHILIS	TRACHOMA	YAWS
Cases	Type A Cases	Type B Cases	Unspecified Cases	Cases	Cases	Cases
62	...	...	6	0	322	0

1）EPI対象疾患について

ジフテリア，百日咳，破傷風及びポリオについては近年その発生をみていない。一方，麻疹及び結核の発生は少数ながら続いている。

2）その他の感染症について

主な感染症はインフルエンザ，性病であり，下痢症（乳幼児を含む）については上水道が整備され近年減少傾向にある。

一方，マラリヤ，デング熱の発生はなく，フィラリア，らいは極少数の発生がみられている。

(2) 感染症対策

1）政策について

保健医療事業計画においては，予防から診療に至る最良の包括的保健事業を提供することが目的とされており，非感染性疾患と同様，感染性疾患についても常に高いプライオリティーが与えられている。

2）実施事業等について

主な感染症に対して対策が講じられており，一応の成果が認められている。ＥＰＩに関しては概ね90％の接種率となっているが，outer island に限ると接種率は70％である（高い接種率になっている理由の１つとして地域におけるボランティア活動（child committeeが徹底していることが挙げられる ）。Ｂ型肝炎保因者の率は不詳であるが，抗原又は抗体陽性者が約70％存在し，対策としてＢ型肝炎ワクチン予防接種の導入が検討されている。なおＡＩＤＳについては今までに患者・保因者ともに確認されていないが，輸血血液のスクリーニングは実施されている。

一方感染症サーベイランスについては医療機関からの届出制度が確立している。

(3) 感染症対策実施上の問題点

1）クック諸島は15の島から成り，うち９島で島民が生活しているが，感染症対策を進めるに当たり医師等の医療スタッフが不足している。

2）ＥＰＩに関し，outer island，特に北方地区へのワクチン輸送にボートで４～５日必要で，この間及び各地域における冷蔵が十分保たれていない（冷蔵庫の老朽化等の理由による ）。

3）臨床検査体制についてはラロトンガ病院に集約しており，細菌学検査は培養を含め実施されているが，ウイルス学的検査で実施されているのはHBsAg 及びＨＩＶ抗体のスクリーニング検査のみである。実施不能の検査はニュー・ジーランドに依存している。

4）国家予算における保健医療費は約８％で主に人件費，医療の現物給付に当てられており，不足している。また外国援助はWHO/UNICEFのみである。

3. 調査国への要望

(1) ＥＰＩ関連として， outer islandにおけるソーラーシステム，冷蔵庫等の供与（試験用）。

(2) 医師等の派遣。

(3) 研修員の受入れ等の技術協力

(4) WHOを通じてのＢ型肝炎ワクチンの分与について検討中。

サウジアラビア	ソマリア	スーダン	テュニジア
アラブ首長国連邦	イエメン		

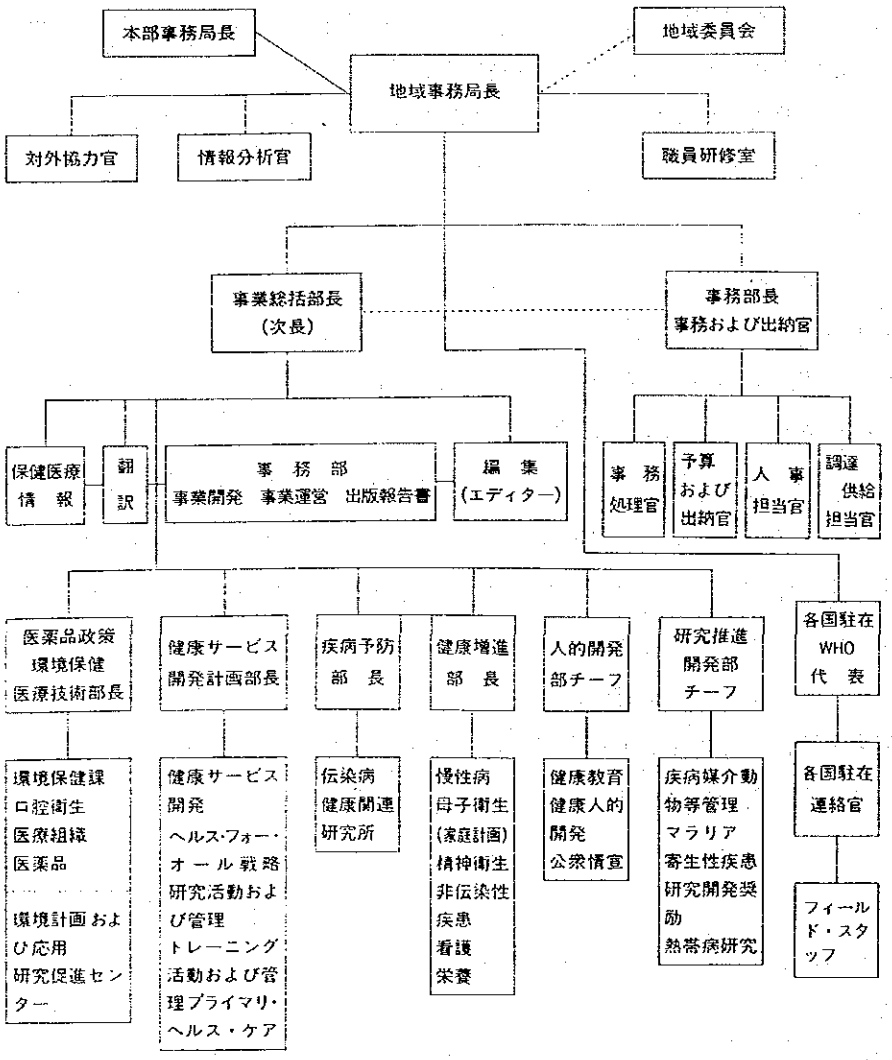
7．西太平洋地域（加盟国20か国，執行理事国3か国）

World Health Organization. Regional Office for the Western Pacific

P. O. Box 2932. 12115 Manila. Philippines

オーストラリア	ブルネイ	中華人民共和国	カンボディア
フィジー	日本	キリバス	ラオス
マレイシア	ニュージーランド	パプア・ニューギニア	フィリピン
大韓民国	西サモア	シンガポール	ソロモン
トンガ	ヴァヌアツ	ヴィエトナム	クック諸島

西太平洋地域事務局組織図



フィジー（回答）

QUESTIONNAIRE
ON
INFECTIOUS DISEASES CONTROL

JAPAN INTERNATIONAL COOPERATION AGENCY
INFECTIOUS DISEASES CONTROL SURVEY TEAM

1. Infectious Diseases Control Programme
(including immunization programme)

1.1 System and process of decision making on national health care policy.

Please outline them.

The Minister of Health formulates the National health care policy which is approved by the Cabinet of Ministers. The Permanent Secretary for Health who assists unformulating policies is responsible for the general administration and execution of the policy. The Directors and Medical Officers of Health with the Chief Health Inspector are responsible for the executive duties relating to the implementation of the National Health Care policies.

1.2 Priority of infectious diseases control in the national health care policy.

1) Please describe how much priority has been given to infectious diseases control.

Infections disease control is the third top priority of the National Health Care Policy.

2) Please describe the process and the reason of the above decision.

The Cabinet issued a mandate that in the DP9 period Family Planning is the top priority for the ministry of Health. Hospital services with Primary Medical Care comes next and Infectious diseases prevention and profection in conjuntion with Primary Health Care Approach become third priority.

1.3 Major infectious diseases and their control programme(s).

1) Please specify the diseases and their control programme(s)

name of major infectious diseases	control programme	contents	year
Tuberculosis	T.B. Control	Institutionalized Care Dornuceliary & Follow up	1948
Leprosy	Leprosy Control	Institutionalized Care Multidrug Therapy	reviewes in 1983
Filariases	Filariasis Control Pilot Project	Drug Taking, Blood Health Education	1983
Venereal Diseases	STD Control	Policy Review, Treatment Investigation & Follow up	1950
Notifiable Diseases	Carried out under PH Laws of Fiji	First Schedule	Pre 1970
Polio Pertissis Measles Diptheria Tetanus	EPI	Revised Schedule of Immunisation Targets of Zero incidence	1964
Rubella	National Immunization policy		
Viral Diseases	Disease Control & Research	Welcome Virus Laboratory	1970

2) Please describe the process and the reason of the above decision.

Tuberculosis – Intensive institutionalizes care began during World War II and the Control programme after World War II period because of increasing incidence in young adult and TB miningths in children.

Leprosy – An old disease -- Introduction of Multidrug Therapy to vouch for early therapy and prevention of deformity.

Filariasis – is endemic in Fiji and one of the major causes of morbidity and disability – Pilot project started in 1983 as a follow up to the Filariasis Campaign in the 1970's.

Venereal Diseases – STD Control established 20–30 years ago is now being strengthened due to increasing trend 22.3 % rate of increase between 1980–1984.

Notifiable Diseases – Control is covered under Infections Disease Law (PH)
Influenza – high morbility, Dengue – Endemic, Chicken pox – Endemic, Enteric fever & Dysentery are endemic, Infective Hepatitis is endemic in Fiji. Measles (Morbilli) – Serious Complications – Pneumonia & Meningitis – (Rubella) – Congenital Deformities.

Immunizable Diseases – EPI – most cost effective preventive and disease control method.

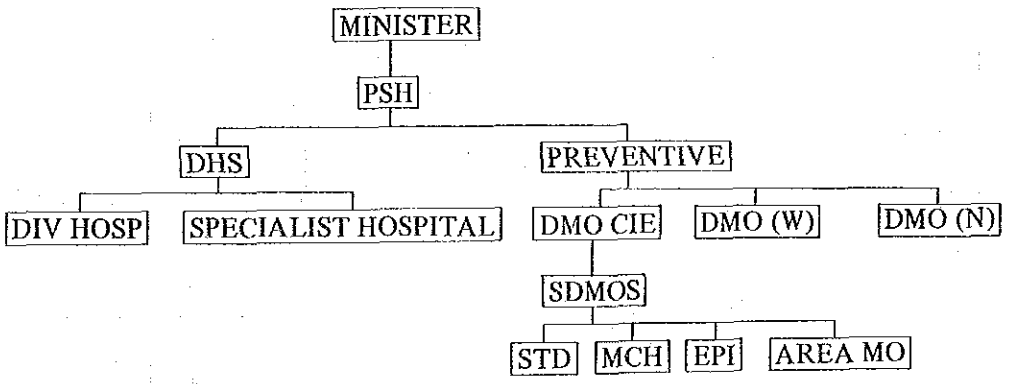
1.4 Responsible division(s) for infectious diseases control on national level.

Please specify the names.

name of division	name of personnel in charge
Tuberculosis Control	Dr. Bera
Leprosy	Dr. Doulako
	Dr. Mataika
Sexually	Dr. Nawabvua
EPI, CDD, ARI	Dr. Naivahileon
Medical Statistics Section	Mr. Eseroma
AIDS Programme	Dr. Varea

1.5 Infectious diseases control system on national, regional, and local level.

1) Please describe the organizational chart.



2) Please describe the functional roles.

MINISTER – POLICY DICISSION
PSH – POLICY FORMULATION
DPPHS & DHS – ADMINISTRATION
ADPPHS – COORDINATIVE ROLE
DMO – EXECUTIVE ROLE
SDMO – SUPERVISING ROLE
A/MO – IMPLEMENTATION & OPERATIONAL ROLE

1.6 Resources for infectious diseases control on national, regional, and local level.

Please fill out.

level	human resources	institutional resources	financial resources	others
National	90	3 (Hospitals)	$1,062,700	
Divisional Regional	2019	3 (Hospitals)	$13,777,800	
Subdivisional & Local Area	508	162 (Hospital, Health Centres, Units, Nurses, etc.)	$5,328,500	

1.7 Major research institute(s) for infectious diseases.

Please fill out.

name of institute	main theme of researches	results of research in the past 5 years	# of researchers
Welcome Virus Laboratory	Virus & Insertions Diseases	Filariasis, Rubello Virus etc.	3
CWM Hospital Pathological Laboratory	Hospital Back-up & Disease Control	Cancer, Diabetes Infections Diseases etc.	4
Lautoka Hospital Pathological Laboratory			2
Labasa Hospital Pathological Laboratory			1

1.8 Laws and regulations relating to infectious diseases control.

Do you have any specific laws and regulations relating to infectious diseases control?

☐ no

☑ yes —— please specify them.

name of laws and regulations	contents (target disease, objective, etc)
Public Health Law of Fiji Part VII Infections Diseases	All notifiable diseases in first schedule. Control, prevention and zero encidence

1.9 Problems in the implementation of infectious diseases control.

Please specify, if any.

Manpower – Lack of specialists, technicians and clerical staff. High technical but low political priority – Low moral code as in STD.

Facilities – Inadequate

Funds – Inadequate

1.10 Financial and technical cooperation received from WHO or other UN's agencies between the period of 1976–1985.

Please fill out.

name of agency	name of programme	year started	expected year of expiration	contents	funds	
					foreign	national
WHO	Filariasis Pilot Project	1983	1989	Funds, Logistics, Drugs and Consultants	√	
	EPI	1964	1990	Training, Vaccines, Refrigerators, Consultants	√	√
	CDD	1982	1990	Logistics & Training	√	√
UNICEF	EP	1964	1990	Vaccines & Logistics	√	–

1.11 Financial and technical cooperation received from bilateral cooperation agencies between the period of 1976–1985.

Please fill out.

name of country or agency	name of programme	year started	expected year of expiration	contents	funds	
					foreign	national
WHO	EPI	1978		Training & Documents Consultants All EPI Diseases		
	STD	1983		Equipment & Consultants		
UNICEF	CDD, EPI & Growth monitory	1982		Vaccines, Training Consultants & Logistics		
Leptosy Trust Board	Leprosy MDT	–	–	Training, Logistics Consultant		

2. Technical Aspects of Immunization

2.1 Current immunization programme(s).

Please fill out.

name of target disease	type of vaccine	time of immunization	target population	# of target population	# of immunized persons	rate of coverage (%)		others
						private	mass	
Diptheria	DPT DT	2,3, & 4 months Preschool & School Children	Infant Children	20,439	14,426	71%		
Pertussis	DPT	2,3, & 4 months	Infant	20,439		71		
Tetanus	DPT	2,3, & 4 months	Infant	20,439		71		
Polio	Polio OPV	Birth, 2,3 & 4 months			14,804	73		
Measles	Measles Vaccines	9 months			12,441	61		
TB	BCG	Birth School Entry School Leaved	 Children	20,439	19,626	96		
Rubella	Rubella	11 Years	Female					
Hepatitis B	HBV	Birth, 2 & 4 months	Infant					

2.2 Amount and price of currently used vaccines.

Please fill out.

	name of vaccine	amount in a year	price per capita	amount of current storage
import	Rubella Cholera Yellow Fever TAB HBV	4,915 vials 50 vials 2 vials 1,000 13 vials Special order	Aust Aid	Cool Room
domestic production	NIL	NIL	NIL	NIL
donation	Polio OPV DPT Tetanus Toxoid Measles BCG	8000 × 20 mls 4000 × 10 7000 × 10 mls 7000 × 10 mls 8000 × 1 mls	WHO – US$0.56 WHO – US$0.65 WHO – US$0.50 WHO – US$1.20 WHO – US$1.30	Deep Fridge Cool Room Cool Room Cool Room Cool Room

2.3 Professional qualification of vaccinator. Doctors Nurses & Medical Assistants

Who is qualified to give vaccine?

Please specify.

Nurses & Health Sisters
Medical Assistants
Doctors

Number of vaccinator 2420 +

☑ sufficient ☐ not sufficient

2.4 Problems in the implementation of immunization programmes.

Please specify.

☐ shortage of vaccine

☑ poorly organized supporting system

☑ lack of cold chain system

☑ lack of support by residents

☑ others ——— please specify

- Wrong interpretation of the schedule by Health Sisters e.g. simultaneous administration of EPI vaccines was not permissible.
- Contraindication of giving vaccines were mild fever and illness.

2.5 Evaluation of immunization programme.

Do you evaluate immunization programme?

☐ no

☑ yes —— please describe the method for evaluation

A chester survey of communization coverage for all children under 24 months in the Central Division carried out by participant to the workshop of EPI Managers conducted by WHO in 1978.
National Review of EPI in 1983 in collaboration with WHO carried out in conjunction with sample survey of Children aged 12 to 23 months as a part of the National Primary Health Care Evaluation.

2.6 Plan for additional immunization programme.

Do you have any plan?

☐ No

☑ Yes —— please specify

- Revision of Immunization Policy on May 1987.
- Participation in the national programme of immunization.
- Review of immunization schedule.
- Replacement of equipment and strengthening of cold chain.
- Introduction of HBV an collaboration with the Japanese Government.

2.7 List of target population for immunization programme.

Do you make a list?

☐ no

☑ yes ——— please specify a responsible personnel to make the list.

The Director of Primary & Presentive Health Services in consultation with the Assistant Director of Primary & Preventure Health Services (Professional) and the Director of Nursing Services.

1. Infants – for all EPI diseases
   – and Hepatitis B.

2. School Children – All EPI Diseases

3. Girls 11 years – Rubella

4. Pregnant women & Neonates } Tetanus txoils

5. Population at Rish – Tetanus, Cholera, TAB, Polio and Yellow fever.

6. Adults – Immigration purposes and contacts.

3. Production of Vaccine

3.1 Domestic production of vaccine.

Have you produced vaccine(s) in the past 5 years?

☑ no

☐ yes ——— please specify

name of vaccine	method of production	name of factory	amount of production	sufficient to meet the need (yes or no)

3.2 Financial and technical cooperation in domestic vaccine production

Have you ever received any cooperation for domestic vaccine production in the past 5 years?

☐ yes —— please specify

name of vaccine	agency or country	year	contents of cooperation

☑ no

Do you have any necessity of cooperation in domestic vaccine production in the future?

☐ no

☑ yes —— please specify the type of cooperation required.

name of vaccine	contents of cooperation required
Hepatitis B. Vaccines	With the Japanese Government – we provide the serum and Japan manufactures the vaccine.

3.3 Inspection on quality control of vaccine by WHO or by bilateral cooperation agencies in the past 5 years.

Have you received inspection on quality control of vaccine by WHO or bilateral cooperation agencies in the past 5 years?

☑ no

☐ yes ——— please specify

name of vaccine	WHO or bilateral agency	year	details

3.4 Resources for vaccine production.

Please specify.

technicians	☐ sufficiently staffed		☑ not
facilities	☐ yes	☑ no	
stable supply of electricity and water		☑ yes	☐ no
national assay	institutes	☐ yes	☑ no
	experimental animals	☑ yes	☐ no

3.5 Research on development of domestic vaccine production.

Are you conducting any study on the development of domestic vaccine production?

☑ no

☐ *yes* *please specify the name of vaccine*

3.6 Plan of improvement and/or increase in the production of domestic vaccine(s)

Do you have any plan?

☑ no

☐ yes —— please describe the plan

3.7 Distribution system (logistic system) for vaccine.

Please describe the system.

Central Storage at Government Pharmacy-Cols Storage Room. Divisional Support System of Refrigerator capable of 3 months storage.
Subdivisional Storage by refrigerator capable of storing vaccines for one month to 2 months Area Hospital of health centres for up to one month storage capability.
Nursing station up to one month.
Transport is carried out either by plane or boat with cold storage facilities – Cold boxes (portable) are also used for up to 48 hours by vehicle or on foot.

Appendix

Questionnaire on General Health Indicators

1. Indicators

	Year	Data	
1) Health manpower		Number	Ratio per 10000
Physicians	1987	294	4.12
Medical assistants		61	0.85
Professional Nursing/Midwifery Personnel		1201	16.8

2) Ten leading causes of morbidity (ICD code)		No. of Cases	Ratio per 100000
1 Resperatory Diseases	1984	5113	740.3
2 Injury & Poisoning		4003	579.6
3 Circulatory Diseases		3807	551.2
4 Infective & Parasitic Diseases		3562	515.7
5 Genito – Urinary		3346	484.4
6 Disease of Digestive System		2795	404.7
7 Disease of Skin & Subcutaneous Tissue		1820	263.5
8 Symptoms, Signs & illdefined conditions		1868	270.5
9 Endocrine, Metabolic & Nutritional Diseases		1417	205.2
10 Complication of Child birth, Pregnancy & Puirperum		21336	3089.1

3) Ten leading causes of mortality (ICD code)		No. of Deaths	Ratio per 100000
1 Circulatory Diseases	1984	316	45.8
2 Neoplasm		117	16.9
3 Infective & Parasitic		88	12.7
4 Respiratory Diseases		79	11.4
5 Injury and Poisoning		75	10.9
6 Diseases of Digestive System		62	8.9
7 Diseases of Genito-Urinary System		49	7.1
8 Endocrine, Nutritional & Metabolic Diseases		47	6.8
9 Diseases of Nervous & Sense Organs		33	4.8
10 Symptoms, signs, illdefined conditions		26	3.8

4) Cases and deaths for six diseases under the WHO-EPI	Year	Cases	Deaths
Diphtheria	1986	NIL	NIL
Pertussis	1986	NIL	NIL
Tetanus	1986	2	NIL
Poliomyelitis	1986	NIL	NIL
Tuberculosis	1986	199	
Measles	1986	385	NIL

5) Hospitals and other medical establishments with beds

Category of establishments	Number	Beds	Admissions	Discharges
Specialist Hospitals	3	450	653	
Divisional Hospitals	3	829	40,853	
Subdivisional Hospitals	15	364	21,263	
Area Hospitals	4	60	2,282	
Private Hospitals	2	–		
Health Centre & Holding Beds	4	12	–	

2. Registry system for morbidity and mortality.

Please describe the system.

1. Morbidity – Collected from hospital discharges through the search page of Inpatient Record which is a tear-off portion.

2. Mortality – Extracted from hospital discharges as in morbidity notification.

The analysis involves 60,000 Records and analysed manually.

西サモア（回答）

QUESTIONNAIRE
ON
INFECTIOUS DISEASES CONTROL

JAPAN INTERNATIONAL COOPERATION AGENCY
INFECTIOUS DISEASES CONTROL SURVEY TEAM

1. Infectious Diseases Control Programme
(including immunization programme)

1.1 System and process of decision making on national health care policy.

Please outline them.

Recommendations from within The Ministry of Health are submitted in the form of proposals to Cabinet for their review, study, and final approval for adoption or otherwise as National Policies.

1.2 Priority of infectious diseases control in the national health care policy.

1) Please describe how much priority has been given to infectious diseases control.

Infectious diseases control is given high priority at all times in the Health Ministry's activities and delivery of health services at all levels.

2) Please describe the process and the reason of the above decision.

Through allocation of available resources, government and aid sources to appropriate programmes for purposes of preventing during and hopefully eradicating infectious diseases acute and chronic.

1.3 Major infectious diseases and their control programme(s).

1) Please specify the diseases and their control programme(s)

name of major infectious diseases	control programme	contents	year
Major Childhood Immunisation Diseases	EPI		
T.B.	TB / Leprosy Control Programme		
Leprosy			
Rheumatic Health Disease			

2) Please describe the process and the reason of the above decision.

See 1.2 2)

1.4 Responsible division(s) for infectious diseases control on national level.

Please specify the names.

name of division	name of personnel in charge
Public Health Division primarily	Chief Division of Public Health

1.5 Infectious diseases control system on national, regional, and local level.

1) Please describe the organizational chart.

From the Top Executive i.e. The Director General of Health down & up & lines of responsibility and authority down to grass root operational levels.

2) Please describe the functional roles.

Director ship, supervisory, incharge to operational rank and file grass root levels.

1.6 Resources for infectious diseases control on national, regional, and local level.

Please fill out.

level	human resources	institutional resources	financial resources	others
national	Medical Staff Nursing staff Relevant appropriate Health workers	Governments approved Annual budget for Ministry of Health Health Department and appropriate governmental sectors	” ”	WHO UN Bilateral and multi- lateral aid
regional	” ”	” ”		
local	Same as above plus women's other local village committee	” ”		

1.7 Major research institute(s) for infectious diseases.

Please fill out.

name of institute	main theme of researches	results of research in the past 5 years	# of researchers
There are no major research institutes organised to operate and function as such government or private.			

1.8 Laws and regulations relating to infectious diseases control.

Do you have any specific laws and regulations relating to infectious diseases control?

☑ no

☐ yes ——— please specify them.

name of laws and regulations	contents (target disease, objective, etc)
Health Ordinance 1959	Section 7 (b): To prevent limit an suppress Infectious & other diseases Part IV: Infectious Diseases
Food & Drug Feb 1967	

1.9 Problems in the implementation of infectious diseases control.

Please specify, if any.

Resource Constraints
- Personnel
- Material (Transport)
- Finance

1.10 Financial and technical cooperation received from WHO or other UN's agencies between the period of 1976–1985.

Please fill out.

name of agency	name of programme	year started	expected year of expiration	contents	funds	
					foreign	national
WHO/ UNICEF	Communicable Diseases Programme		1990		$60,000	20,000

1.11 Financial and technical cooperation received from bilateral cooperation agencies between the period of 1976–1985.

Please fill out.

name of country or agency	name of programme	year started	expected year of expiration	contents	funds	
					foreign	national
NZ & NZ Leper Board	TB Leprosy					

2. Technical Aspects of Immunization

2.1 Current immunization programme(s).

Please fill out.

name of target disease	type of vaccine	time of immunization	target population	# of target population	# of immunized persons	rate of coverage (%)		others
						private	mass	
Tuberculosis	BCG	At birth and School Infant	0–11 month 5-years	3%	97%			
Diphtheria Pelvis Tetanus	DPT	1. 2-3 month 2.6 month 3.9 month	0–11 month	3%	1 – 96% 2 – 94% 3 – 92%			
Polio	Polio vaccine	1-2-3 month 2-6 + month 3-9 + month	0–11 month	3%	1 – 96% 2 – 94% 3 – 92%			
Measles	Measles vaccines	9 + month	9 month +	3%	1 – 91%			
Tetanus	Tetanus Toxoid	7 month pregnant 8 month pregnant	Pregnant non IL	19%	1 – 54%			

2.2 Amount and price of currently used vaccines.

Please fill out.

	name of vaccine	amount in a year	price per capita	amount of current storage
import				
domestic production	No			
donation	BCG DPT Polio Measles DT Tetanus Toxoid	14,000 Doses 14,000 " 14,000 " 12,000 " 8,000 " 13,000 "	UNICEF	14,000 14,000 14,000 12,000 8,000 13,000

2.3 Professional qualification of vaccinator.

Who is qualified to give vaccine? Public Health Nurses

Please specify.

Public Health Nurses CSR Distract Nurses.

Number of vaccinator

☑ sufficient ☐ not sufficient

2.4 Problems in the implementation of immunization programmes.

Please specify.

☑ shortage of vaccine

☐ poorly organized supporting system

☑ lack of cold chain system

☐ lack of support by residents

☑ others ——— please specify Constant shortage of vehicles in the Ministry for the Immunization programme.

2.5 Evaluation of immunization programme.

Do you evaluate immunization programme?

☐ no

☑ yes ——— please describe the method for evaluation

Cluster Survey by WHO = 1985 (August)

2.6 Plan for additional immunization programme.

Do you have any plan?

☐ No

☑ Yes ——— please specify Hepatitis B. to be added to the present Immunization Programme.

2.7 List of target population for immunization programme.

Do you make a list?

☐ no

☑ yes ——— please specify a responsible personnel to make the list.

– Public Health Nurses – Keep a Immunization Register Books for each Health Area.

3. Production of Vaccine

3.1 Domestic production of vaccine.

Have you produced vaccine(s) in the past 5 years?

☑ no

☐ yes —— please specify

name of vaccine	method of production	name of factory	amount of production	sufficient to meet the need (yes or no)

3.2 Financial and technical cooperation in domestic vaccine production

Have you ever received any cooperation for domestic vaccine production in the past 5 years?

☐ yes —— please specify

name of vaccine	agency or country	year	contents of cooperation

☑ no

Do you have any necessity of cooperation in domestic vaccine production in the future?

☑ no

☐ yes —— please specify the type of cooperation required.

name of vaccine	contents of cooperation required

3.3 Inspection on quality control of vaccine by WHO or by bilateral cooperation agencies in the past 5 years.

Have you received inspection on quality control of vaccine by WHO or bilateral cooperation agencies in the past 5 years?

☑ no

☐ yes ——— please specify

name of vaccine	WHO or bilateral agency	year	details

3.4 Resources for vaccine production.

Please specify.

technicians	☐ sufficiently staffed	☐ not	
facilities	☐ yes	☐ no	
stable supply of electricity and water		☐ yes	☐ no
national assay	institutes	☐ yes	☐ no
	experimental animals	☐ yes	☐ no

3.5 Research on development of domestic vaccine production.

Are you conducting any study on the development of domestic vaccine production?

☐ no

☐ yes please specify the name of vaccine

3.6 Plan of improvement and/or increase in the production of domestic vaccine(s)

Do you have any plan?

☑ no

☐ yes ——— please describe the plan

3.7 Distribution system (logistic system) for vaccine.

Please describe the system.

WHO/Suva Ships Immunization vaccines to Samoa, twice a year. (January/June).

Appendix

Questionnaire on General Health Indicators

1. Indicators

1) Health manpower	Year	Data	
	1987	Number	Ratio per 10000
Physicians		45	2.8 per 10,000
Medical assistants		–	
Professional Nursing/Midwifery Personnel	1987	280	17.5 per 10,000

2) Ten leading causes of morbidity (ICD code)			1985	No. of Cases	Ratio per 100000
1	Influenza	487		7,803	4876.8
2	Normal Delivery	650		2,080	1300.0
3	Pneumonia	486		1,556	972.5
4	Gastroenteritis/Diarrhoea	009.3		1,446	903.7
5	Measles	055		1,095	684.3
6	Bronchitis/Emphusema	490		867	541.8
7	Conjunctivitis	372.3		530	331.2
8	Infection of the skin & subcutaneous tissue	686.9		322	201.2
9	Unspecified diseases of the digestive system	570-579		256	160.0
10	Acute upper respiratory Inf.	478.9		231	144.3

3) Ten leading causes of mortality (ICD code)			1985	No. of Deaths	Ratio per 100000
1	Pneumonia	486		42	26.2
2	Congestive Heart Failure	428		35	21.8
3	Cerebrovascular Diseases	436		30	18.7
4	Suicide	E950-E959		19	11.8
5	Sumptoms, signs, conditions	799		18	11.2
6	Cronic liven diseases and urrhosis	571		14	8.7
7	Infections and Parasitic	136.9		14	8.7
8	Septcemia	038		13	8.1
9	Diabetes Merritus	250		11	6.8
10	Nephritis, Nephronic Syndrome & Nephrosis	580-589		11	6.8

4) Cases and deaths for six diseases under the WHO-EPI	Year	Cases	Deaths
Diphtheria	1987		
Pertussis	1987		
Tetanus	1987	1	1
Poliomyelitis	1987	–	–
Tuberculosis	1987	62	–
Measles	1987	–	–

5) *Hospitals and other medical establishments with beds*

Category of establishments	Number	Beds	Admissions	Discharges
– National Hospital	1	339	7311	7385
– District Hospitals	7	178	4108	4063
– Health Centres	8	169	1831	1794

2. Registry system for morbidity and mortality.

Please describe the system.

クック諸島（回答）

QUESTIONNAIRE
ON
INFECTIOUS DISEASES CONTROL

JAPAN INTERNATIONAL COOPERATION AGENCY
INFECTIOUS DISEASES CONTROL SURVEY TEAM

1. Infectious Diseases Control Programme
(including immunization programme)

1.1 System and process of decision making on national health care policy.

Please outline them.

Through evaluation of disease pattern and consultation among responsible health worker, national health care policies are designed. All relevant factors are considered which includes disease morbidity, motality, corrective or curative measures, prevention available resources, cost and feasibility.

The Cook Islands like most other countries have vaccination programmes for the six childhood infections diseases namely tuberculosis diptheria, pertussis, measles, tetanus and polio.

1.2 Priority of infectious diseases control in the national health care policy.

1) Please describe how much priority has been given to infectious diseases control.

Control of infections diseases had received high priority in the past and continues to be so.

2) Please describe the process and the reason of the above decision.

It is realized that infections diseases particularly in children can and does cause illhealth land death. Furthermore tools for prevention is available and is effective.

1.3 Major infectious diseases and their control programme(s).

1) Please specify the diseases and their control programme(s)

	name of major infectious diseases	control programme	contents	year
1.	Tuberculosis and Leprosy	TB/Leprosy	Immunization Regular medications	
2.	Gonorrhoea	STD (Sexually transmitted diseases)	Immunization	
3.	Measles	Expanded Programme on Immunisation	Treatment, Contact tracing, Education	
4.	Chicken pox	Child Care	Health education Health education	
5.	Mumps		Health education and Medication	
6.	Scabies			
7.	Hepatitis		Education	

2) Please describe the process and the reason of the above decision.

The above infections disease are present in the Cook Islands. They were prevalent in the past but in recent times its important as cause of morbidity/mortality is somewhat less.

Nevertheless, there is need to maintain existing control measures and we are considering when possible to introduce immunization for such infections diseases as hepatitis B and possibly rubella.

1.4 Responsible division(s) for infectious diseases control on national level.

Please specify the names.

name of division	name of personnel in charge
Public Health Division	
a) Public Health Nursing	Sister N. Short, Chief of Public Health Nursing
b) Disease Control	Senior Health Inspector, T. Ringiao

1.5 Infectious diseases control system on national, regional, and local level.

1) Please describe the organizational chart.

Director of Public Health is responsible for this at national level.

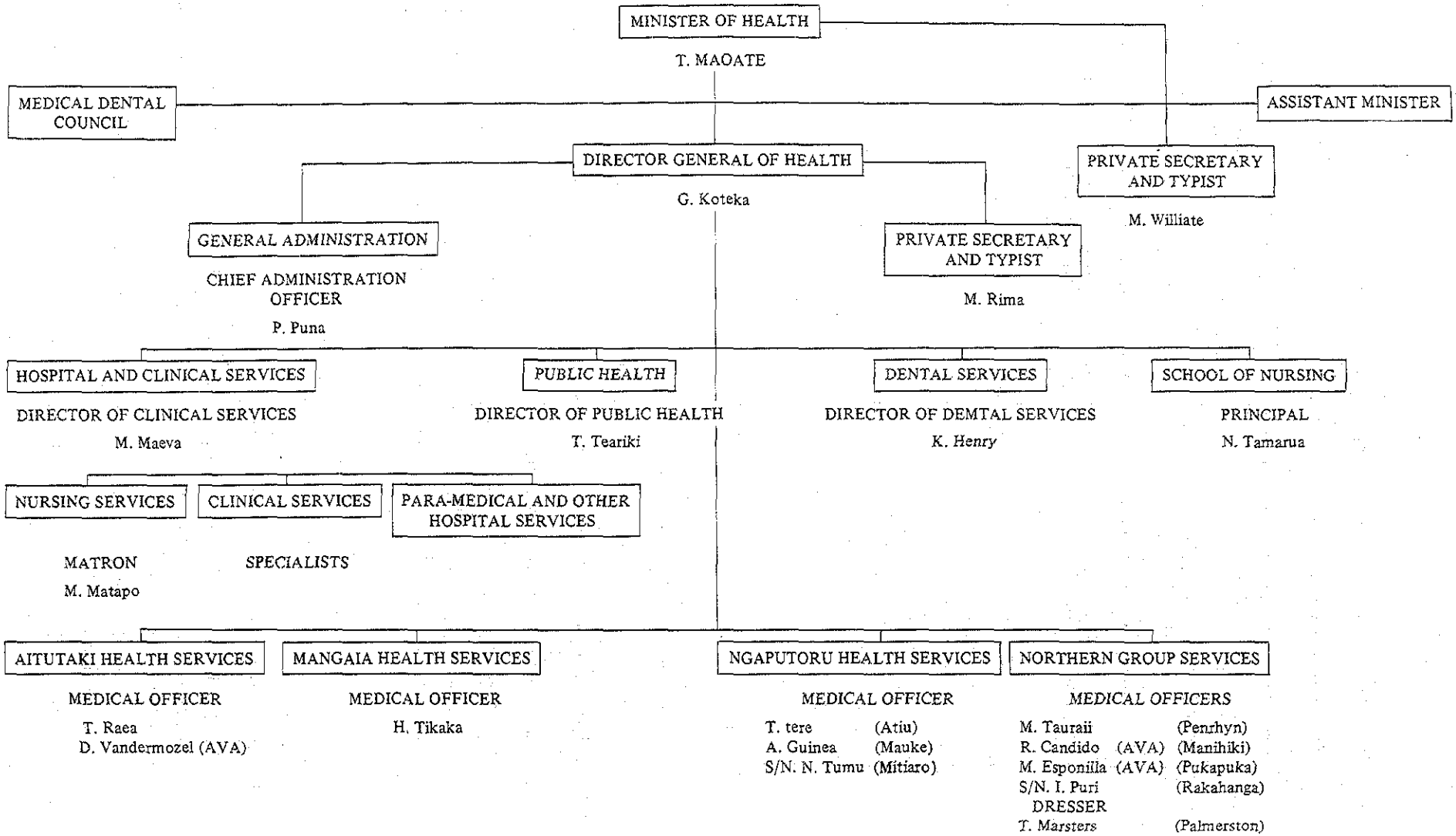
At local levels the controlling medical officer is responsible. Chief Public Health Nurse co-ordinates the execution of policy on immunization.

2) Please describe the functional roles.

The Director of Public Health ensures that policy decision at national level is executed by those responsible of lower level of the health service organisation and evaluate such as appropriate.

The C.P.H.N. Keeps in touch with the field workers through supervision and technical advice.

The controlling medical officers who is in charge of health units similarly supervises programmes in his health area.


MINISTER OF HEALTH
T. MAOATE
MEDICAL DENTAL COUNCIL
ASSISTANT MINISTER
DIRECTOR GENERAL OF HEALTH
G. Koteka
PRIVATE SECRETARY AND TYPIST
M. Williate
GENERAL ADMINISTRATION
CHIEF ADMINISTRATION OFFICER
P. Puna
PRIVATE SECRETARY AND TYPIST
M. Rima
HOSPITAL AND CLINICAL SERVICES
DIRECTOR OF CLINICAL SERVICES
M. Maeva
PUBLIC HEALTH
DIRECTOR OF PUBLIC HEALTH
T. Teariki
DENTAL SERVICES
DIRECTOR OF DEMTAL SERVICES
K. Henry
SCHOOL OF NURSING
PRINCIPAL
N. Tamarua
NURSING SERVICES
CLINICAL SERVICES
PARA-MEDICAL AND OTHER HOSPITAL SERVICES
MATRON
M. Matapo
SPECIALISTS
AITUTAKI HEALTH SERVICES
MEDICAL OFFICER
T. Raea
D. Vandermozel (AVA)
MANGAIA HEALTH SERVICES
MEDICAL OFFICER
H. Tikaka
NGAPUTORU HEALTH SERVICES
MEDICAL OFFICER
T. tere (Atiu)
A. Guinea (Mauke)
S/N. N. Tumu (Mitiaro)
NORTHERN GROUP SERVICES
MEDICAL OFFICERS
M. Tauraii (Penrhyn)
R. Candido (AVA) (Manihiki)
M. Esponilla (AVA) (Pukapuka)
S/N. I. Puri (Rakahanga)
DRESSER
T. Marsters (Palmerston)

1.6 Resources for infectious diseases control on national, regional, and local level.

Please fill out.

level	human resources	institutional resources	financial resources	others
national	Public Health Personnel	Not Applicable	No specific budget for infections diseases Control but within Public Health allocation	UNICEF supplies Vaccines.
regional	Not applicable	Not applicable		
local	Public Health Personnel	Not applicable		

1.7 Major research institute(s) for infectious diseases.

Please fill out.

name of institute	main theme of researches	results of research in the past 5 years	# of researchers
Not applicable in the Cook Islands			

1.8 Laws and regulations relating to infectious diseases control.

Do you have any specific laws and regulations relating to infectious diseases control?

☐ no

☑ yes —— please specify them.

name of laws and regulations	contents (target disease, objective, etc)
1. Notifiable Diseases Ordinance 1953	1. Leprosy Tuberculosis Venereal Disease Objective is to effect its control
2. Manufacture and Sale of Food Ordinance 1948.	2. The restriction of food handlers who may have contracted a infectious disease.

1.9 Problems in the implementation of infectious diseases control.

Please specify, if any.

No major problem about disease apart from the difficulty at times in contact tracing for such sexually transmitted diseases whereby certain information is not readily available, for the purpose of effective control.

1.10 Financial and technical cooperation received from WHO or other UN's agencies between the period of 1976–1985.

Please fill out.

name of agency	name of programme	year started	expected year of expiration	contents	funds	
					foreign	national
UNICEF	Expanded Programme on Immunization	1976	Uncertain	Vaccine supply	Unknown	

1.11 Financial and technical cooperation received from bilateral cooperation agencies between the period of 1976–1985.

Please fill out.

name of country or agency	name of programme	year started	expected year of expiration	contents	funds	
					foreign	national

2. Technical Aspects of Immunization

2.1 Current immunization programme(s).

Please fill out.

name of target disease	type of vaccine	time of immunization	target population	# of target population	# of immunized persons	rate of coverage (%)		others
						private	mass	
1. Tuberculosis	B.C.G.	3 months	1 year	400	334	90%		
2. Diphtheria	DPT	3.6.9 months	1 year	"	354	87%		
3. Pertusis	"	" " "	1 year	"	354	"		
4. Tetanus	"	" " "	1 year	"	365	"		
5. Polio	Polio	" " "	1 year	"	"	"		
6. Measle	Measles	10 months	10 months	"	292	"		
7. D.T. (Diphtheria/ Tetanus)	Toxoid Oral	5 & 6 years	School Entrance	"	"	"		
8. Polio	Polio	" "	School "	"				
9. Tuberculosis	BCG	" "	School "		"	"		
10. Tetanus	Toxoid	10 yrs and 15 years	School " Children	"	"	"		
11. Tetanus		Pregnant Women	Pregnant Women					

2.2 Amount and price of currently used vaccines.

Please fill out.

	name of vaccine	amount in a year	price per capita	amount of current storage
import	Cholera 1ml vial Yellow Fever 1 dose vial Dried smallpox 100 dose amp. *Typhoid 10ml vial *procured when required (For	24 x 1 ml vial 10 x 1 dose vial 100 doses 5 x 10ml vials Nil International travellers)	NZ$ 4.42 NZ$ 15.00 NZ$ 2.20 NZ$ @$.#) Nil	10 x 1ml vial 5 x 1 dose vial 5 x 100 dose amp Nil Nil
domestic production	NOT	APPLICABLE		
donation	B.C.G. Tetanus Toxoid Diptheria and Tetanus Diptheria Pertussis and Tetanus Polio Measles	2200 doses 6200 doses 800 doses 2400 2600 1000	Unknown	2000 doses 2660 doses 760 doses 2640 doses 1640 doses 850

2.3 Professional qualification of vaccinator.

Who is qualified to give vaccine?

Please specify.

Qualified Public Health Nurses
Qualified Public Health Inspectors
Medical Officers

Number of vaccinator

☑ sufficient ☐ not sufficient

2.4 Problems in the implementation of immunization programmes.

Please specify.

☑ shortage of vaccine

☐ poorly organized supporting system

☑ lack of cold chain system

☐ lack of support by residents

☑ others ——— please specify – poor management and coverage in Outer Islands.

– Need frequent followup visits and on the spot continuing education for the vaccinators in the Outer Islands
– Poor maintenance and replacement of cold chain – Outer Islands

2.5 Evaluation of immunization programme.

Do you evaluate immunization programme?

☐ no

☑ yes —— please describe the method for evaluation

1. Total coverage of under 1 year population
2. Analysing incidence of the 6 infectious disease in the under 1 year old
3. Routine reporting of immunizations performed
4. Programme review
5. Outbreak investigation
6. Cold chain and logistics evaluation

2.6 Plan for additional immunization programme.

Do you have any plan?

☐ No

☑ Yes —— please specify

It is intended to design immunization programme for hepatitis B in 1988 and will consider similarly for rubella if there is necessary in this community from serological assessment.

2.7 List of target population for immunization programme.

Do you make a list?

☐ no

☑ yes —— please specify a responsible personnel to make the list.

All public health nursing personnel are responsible for preparing their immunization schedules for their respective areas.

Appropriate records are maintain and monthly coverage reported.

3. Production of Vaccine

3.1 Domestic production of vaccine.

Have you produced vaccine(s) in the past 5 years?

☑ no

☐ yes —— please specify

name of vaccine	method of production	name of factory	amount of production	sufficient to meet the need (yes or no)

3.2 Financial and technical cooperation in domestic vaccine production

Have you ever received any cooperation for domestic vaccine production in the past 5 years?

☐ yes —— please specify

name of vaccine	agency or country	year	contents of cooperation

☑ no

Do you have any necessity of cooperation in domestic vaccine production in the future?

☐ no

may be ☑ yes —— please specify the type of cooperation required.

name of vaccine	contents of cooperation required
Hepatitis B	Provision of blood products if this is practical and feasible.

3.3 Inspection on quality control of vaccine by WHO or by bilateral cooperation agencies in the past 5 years.

Have you received inspection on quality control of vaccine by WHO or bilateral cooperation agencies in the past 5 years?

☑ no

☐ yes ——— please specify

name of vaccine	WHO or bilateral agency	year	details

3.4 Resources for vaccine production.

Please specify.

technicians	☐ sufficiently staffed		☐ not
facilities	☐ yes	☐ no	
stable supply of electricity and water		☐ yes	☐ no
national assay	institutes	☐ yes	☐ no
	experimental animals	☐ yes	☐ no

3.5 Research on development of domestic vaccine production.

Are you conducting any study on the development of domestic vaccine production?

☑ no

☐ yes please specify the name of vaccine

3.6 Plan of improvement and/or increase in the production of domestic vaccine(s)

Do you have any plan?

☑ no

☐ yes ——— please describe the plan

3.7 Distribution system (logistic system) for vaccine.

Please describe the system.

Vaccine on receipt from supplier is stored at national level. Subsequently this is distributed on request to health stations periodically.

Storage at control point is satisfactory but health centres where a cold storage is problem due to type of refrigerator (Kerosene or electric) and maintenance and necessary supplies.

Appendix

Questionnaire on General Health Indicators

1. Indicators

	Year	Data	
1) Health manpower	1986	Number	Ratio per 10000
Physicians	"	15	8.45
Medical assistants	"	3	1.689
Professional Nursing/Midwifery Personnel	"	57	32.1

2) Ten leading causes of morbidity (ICD code)	1986	No. of Cases	Ratio per 100000
1 Injury and external causes (800–999)	"	202	1137.2
2 Diseases of the Digestive System (520-579)	"	110	619.3
3 Diseases of the Respiratory System (460–519)	"	85	478.6
4 Diseases of the Circulatory System (390–459)	"	81	456/0
5 Diseases of the Genito Urinary System (580–629)	"	78	439.1
6 Diseases of the skin and Subcutaneous (680–709)	"	58	326.5
7 Infectious and parasitic diseases (001–139)	"	50	281.5
8 Diseases of the nervous system and sense organs (320–389)	"	35	197.0
9 Symptoms, signs and ill-defined (780–799)	"	33	185.8
10 Complication of pregnancy (630–676)	"	32	180.2

3) Ten leading causes of mortality (ICD code)	1986	No. of Deaths	Ratio per 100000
1 Malignant neoplasm (140–208)	"	16	90.0
2 Senility 797	"	16	90.0
3 Nephritis, nephrotic syndrome(500–589)	"	13	73.1
4 Pneumonia (480–485)	"	10	56.3
5 Diseases of the circulatory system (390–459)	"	9	50.6
6 Cerebrosvascular diseases (430–438)	"	8	45.0
7 Diabetes mellitus 250	"	6	33.8
8 Hypertensive diseases (401–405)	"	5	28.1
9 Prematurity 765	"	5	28.1
10 Motor Vehicle Accident (E810–E819)	"	4	22.5

4) Cases and deaths for six diseases under the WHO-EPI	Year	Cases	Deaths
Diphtheria	1986	0	0
Pertussis	1986	0	0
Tetanus	1986	0	0
Poliomyelitis	1986	0	0
Tuberculosis	1986	26	0
Measles	1986	16	0

5) Hospitals and other medical establishments with beds

Category of establishments	Number	Beds	Admissions	Discharges
Hospitals whole country	9	154	1742	1663

2. Registry system for morbidity and mortality.

Please describe the system.

1. Morbidity data are taken from the hospital admission and discharge register, outpatient consultation register of the whole country.

2. Mortality information are taken from the Death Certificate also the hospitals death register of the islands, the Resistrar of Births and Deaths.

JICA