se 156 casos da forma selvática, assim distribuídos:

Unidade \ Ano	1980	1981	1982	1983	1984	1985	1986	1987	Soma
1. Goiás	21	3	–	–	–	–	5	10	39
2. Maranhão	4	–	5	–	–	–	–	–	9
3. Pará	1	5	3	2	31	1	–	5	48
4. Rondônia	1	1	–	3	1	1	–	–	7
5. Roraima	–	3	2	–	2	–	1	–	8
6. Mato Grosso	–	5	2	–	–	5	3	–	15
7. Mato G.do Sul	–	5	12	–	–	–	–	–	17
8. Amazonas	–	–	–	1	9	–	–	1	11
9. Amapá	–	–	–	–	2	–	–	–	2
T O T A L	27	22	24	6	45	7	9	16	156

Quanto ao dengue, em 1986 e 1987 foram notificados 47.370 e 89.394 casos, respectivamente, em todo o país.

Uma síntese do trabalho realizado pelo programa de controle da febre amarela e dengue em 1987, comparativamente com os dados de 1986, encontram-se em quadro anexo.

A distribuição de casos de dengue notificados, por Unidade Federada, em 1986 e 1987, é a seguinte:

Ano \ Unidade	AL	BA	CE	MG	PE	RJ	SP	TOTAL
1986	9.383	–	4.419	–	–	33.568	–	47.370
1987	3.225	623	22.513	527	2.118	60.342	46	89.394
T O T A L	12.608	623	26.932	527	2.118	93.910	46	136.764

CONTROLE DAS ENDEMIAS FOCAIS

No programa de peste as ações de vigilância impediram que ocorressem surtos em 1987, ao contrário do sucedido no ano anterior (em 1986 uma epidemia grassou na área pestosa da Paraíba). A vigilância demonstrou intensa atividade enzoótica em roedores nos principais focos nordestinos. O risco do comprometimento humano ainda persiste inclusive em função de não ter sido possível estender a vigilância (cobertura integral) a todas as zonas pestígenas.

Dados do programa em 1987, são os seguintes:

Espécie	Área de trabalho			Re-	Pessoal			Trans-	Casos humanos
	Estados	Munic	Sup.km²	cursos	NS	NM	Total	portes	de peste
Programado	9	251	192.585	Exist.	18	404	422	128	Paraíba: 10
Executado	9	248	151.588	Neces.	25	626	651	209	Bahia: 33
%	100.0	98.8	78.7	%	72.0	64.5	64.8	61.8	R.G.Norte: 1
									Total: 44

Obs.: Pessoal: NS (nível superior); NM (nível médio).

As atividades contra as leishmanioses são desenvolvidas em 17 unidades, com a participação das Secretarias de Saúde e Universidades. Contra a leishmaniose tegumentar americana (LTA) o programa baseia-se exclusivamente na busca passiva (BP) de casos humanos e consequente tratamento de cura. Em 1987 registraram-se surtos em várias regiões e ainda existe deficit de recursos para melhorar o atendimento do problema. Até dezembro foram registrados 26.292 casos. Referente a leishmaniose visceral (LV), a realização de inquéritos caninos e a eliminação dos reservatórios (sacrifício dos animais) tem mostrado bons resultados, conforme constatado em Santarém, São Luiz, Terezina, Fortaleza e outras cidades. A cobertura, contudo, não é mais ampla por falta de recursos. Em 1987 houve ocorrência de 1.041 casos de LV.

Dados do programa de controle das leishmanioses em 1987:

Espécie	Área de trabalho			Reservatório	Cães 1.000	Recursos	Pessoal			Transportes
	Estados	Munic	Sup.Km²	A exam.	eliminar		NS	NM	Total	
Programado	24	384	977.410	712	44	Exist.	24	490	514	148
Trabalhado	24	158	977.410	300	5.9	Neces.	30	1.100	1.130	394
%	100.0	41.14	100.0	42.1	13.4	%	80.0	44.5	45.5	37.6

Obs.: Pessoal: NS (nível superior); NM (nível médio).

A campanha contra o tracoma desenvolve-se através da busca ativa de casos em "bolsões" já conhecidos e dispersos em 148 municípios dos estados do PA, MA, PI, CE, PB, PE, AL, BA, ES, GO e PR, sendo os mais importantes os localizados no sertão nordestino. Não obstante a falta de recursos humanos, a pequena participação da rede básica e atrasos no suprimento do insumo básico (pomada oftálmica), está sendo conseguido resultado positivo ao não permitir-se a evolução dos casos até a formação das seqüelas graves que ocasionam deficiência da visão.

Dados da campanha em 1987:

Espécie	Área de trabalho			Exames Oftalm. 1000	Tratamentos 1000	Recursos	Pessoal			Transportes
	Estados	Munic	Sup.Km²				NS	NM	Total	
Programado	14	148	283.063	1.621	622	Exist.	6	170	176	73
Realizado	14	148	283.063	415	108	Neces.	9	210	219	117
%	100.0	100.0	100.0	25.7	17.4	%	66.7	81.0	80.4	62.4

Obs.: Pessoal: NS(nível superior); NM (nível médio).

O programa contra a filariose produzida pela W.bancrofti realiza-se através de inquérito hemoscópico para identificação e tratamento dos portadores de microfilárias, nos focos residuais de Belém-PA e Recife-PE. Há um acentuado deficit de recursos humanos no controle dessa enfermidade - muitos servidores, a maioria oriundos do antigo DNERu, retiraram-se do serviço ativo por aposentado

ria; outros foram remanejados para outros programas, resultando uma cobertura deficiente da área com transmissão. Não obstante, os índices de prevalência tem mostrado uma sequência de redução nos últimos decênios.

Fatores agravantes do mau desempenho da campanha contra a filariose: falhas no suprimento de medicação, insuficiente integração interinstitucional e nenhuma medida antivetorial.

Dados do programa em 1987:

Espécie	Área de trabalho			Exames hemosc. 1000	Recursos	Pessoal			Transportes
	Estados	Munic	Sup.km²			NS	NM	Total	
Programado	2	5	...	373	Exist.	5	184	189	9
Realizado	2	5	514	446	Neces.	5	270	275	12
%	100.0	100.0	...	119.8	%	100.0	68.1	68.7	75.0

Obs.: Pessoal: NS (nível superior); NM (nível médio).

Na profilaxia do bócio endêmico são desenvolvidos dois sub-programas: um de iodação de sal e outro de vigilância epidemiológica. A iodação é feita com iodato de potássio fornecido pelo Instituto Nacional de Alimentação e Nutrição (INAN), cabendo a SUCAM distribuir este insumo às empresas beneficiadoras do sal, fazer a manutenção dos equipamentos, colher amostras do produto final semanalmente e analisá-las laboratorialmente. A vigilância tem o objetivo de avaliar o impacto da iodação do sal sobre a prevalência/incidência daquela patologia através da realização de inquéritos epidemiológicos em escolares.

Dados do programa em 1987:

Espécie	Indústrias Assistidas	Sal iodatado Toneladas	Iodato distrib. kg	Amostras analis. 1000	Recursos	Pessoal			Transportes
						NS	NM	Total	
Programado	186	1.8 milh.	66.7 mil	164	Exist.	14	82	96	26
Realizado	218	1.9 milh.	64.7 mil	86	Neces.	17	96	113	35
%	117.2,	105.2	97.0	52.46	%	82.4	85.4	85.0	74.0

Obs.: Pessoal: NS (nível superior); NM (nível médio).

EDUCAÇÃO EM SAÚDE - 1987

O êxito das práticas de educação em saúde no controle das endemias depende, sem dúvida, da participação das organizações públicas e privadas, e das populações alvo dos programas. Para melhor adequação das ações educativas às atuais políticas de saúde e de educação popular há necessidade da melhoria do desempenho dos educadores em saúde através de um processo de educação continuada. A ênfase dessas ações, comprometendo instituições e grupos populares, torna-se

MS/SUCAM
DECEN - DIENF
CAMPANHA CONTRA A PESTE

OPERAÇÕES DE CAMPO E NÚMERO DE CASOS NOTIFICADOS - 1987

UNIDADES DA FEDERAÇÃO	MUNIC. TRAB.	OPERAÇÕES DE CAMPO				CASOS DE PESTE NOTIFIC.
		Roedores Capturados	Pulgas Coletadas	Prédios Desratizados	Prédios Despulizados	
Ceará	35	13.501	16.496	-	4.237	-
Rio G. do Norte	15	2.202	5.041	-	4.809	1
Paraíba	46	3.739	17.872	-	83.841	10
Pernambuco	49	6.373	11.853	-	653	-
Alagoas	14	3.446	9.195	-	-	-
Bahia	64	4.913	6.787	20	11.194	33
Minas Gerais	17	3.497	7.306	-	-	-
Rio de Janeiro	4	3.171	2.769	-	295	-
São Paulo	1	18	27	369	-	-
Piauí	3	18	7	-	56	-
TOTAL	248	40.878	77.353	389	105.085	44

Fonte: DITEC/SEST
* Dados preliminares

MS - SUCAM
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CAMPANHA CONTRA A PESTE

BRASIL, 1987

MS - SUCAM - DECEN - DIENF

CAMPANHA CONTRA A LEISHMANIOSE

CASOS DE LEISHMANIOSE OCORRIDOS NO BRASIL, EM 1987:

a) - Ocorrências de Leishmaniose Humana b) - Profilaxia/Controle

UNIDADES DA FEDERAÇÃO TRABALHADAS	LEISHMANIOSE HUMANA			Nº DE CÃES ELIMINADOS	CAPTURA DE FLEBÓTOMOS			BORRIFAÇÃO	
	Municípios Trabalhados	Casos de L.V.	Casos de L.T.A.		Casas Pesquisadas	Positivas	%	LOCALIDADES TRABALHADAS	CASAS BORRIFADAS
AC	12	-	685	-	-	-	-	-	-
AM	49	-	2.579	-	-	-	-	-	-
PA	69	4	3.227	565	1.254	112	8,9	18	4.807
AP	5	-	642	-	-	-	-	-	-
RO (*)	19	-	2.991	-	-	-	-	-	-
RR	7	-	135	-	-	-	-	-	-
MA	107	38	3.899	1.545	1.764	42	2,4	90	22.970
PI	51	47	147	1.207	632	60	9,5	30	15.572
CE	116	119	3.927	380	-	-	-	-	-
RN	25	20	590	146	1.219	244	20,0	362	10.180
PB	41	12	446	550	-	-	-	24	1.935
PE	61	72	302	529	63	-	-	-	-
AL	46	60	86	-	-	-	-	-	-
SE	49	80	167	17	1.270	191	15,0	-	-
BA	183	518	2.006	301	562	36	6,4	52	174
GO	125	1	388	-	-	-	-	-	-
MT	55	-	2.378	-	-	-	-	-	-
MS	39	28	105	452	-	-	-	-	-
MG	143	28	543	198	1	12	-	-	-
ES	39	13	294	-	-	-	-	54	2.508
RJ	9	1	72	50	4	4	100,0	15	4.353
SP (**)	-	-	8	-	-	-	-	-	-
PR	151	-	673	-	-	-	-	-	-
RS (**)	-	-	2	-	-	-	-	-	-
TOTAL	1.401	1.041	26.292	5.940	6.769	701	10,3	645	62.499

MPLP/Mav.-

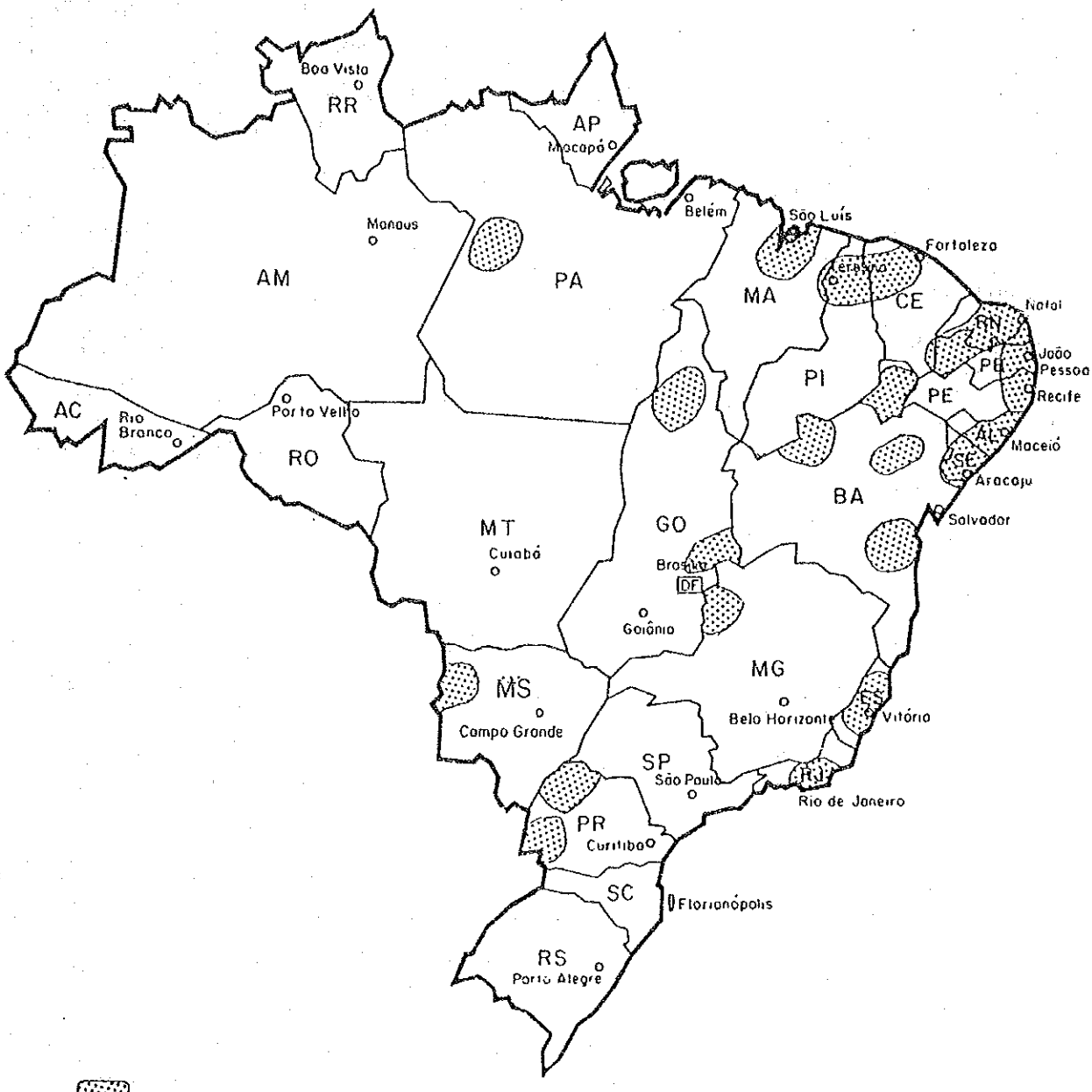
(*) - Rondônia - Dados até NOVEMBRO/87.

(**) - Casos notificados por outras Unidades da Federação

MS - SUCAM

DECEN - DIENF

CAMPANHA CONTRA AS LEISHMANIOSES



ÁREAS TRABALHADAS EM 1987

MS/SUCAM

Campanha contra a Filariose

Trabalhos Realizados em 1987

Especificação \ Unidade	Pará	Pernambuco	Total
Municípios trabalhados	1	4	5
Localidades trabalhadas	2	8	10
Pessoas tratadas	113	9.174	9.287
Exames realizados	301.342	144.989	446.331
Exames Positivos	113	1.743	1.856
%	0,04	1.20	0.42

Fonte:- DITEC/SEST.

um imperativo para que os resultados sejam cada vez mais efetivos, considerando as ações integradas de saúde (AIS).

Em 1987 a ação proposta foi a articulação com as Prefeituras Municipais e outros órgãos para implementar a ação educativa junto a professores e escolares, reestruturação e ampliação do trabalho do colaborador voluntário responsável pelo posto de notificação capacitando-o para o desempenho de atividades educativas específicas de cada endemia e orientando-o para a adoção de práticas preventivas em suas comunidades; e capacitação dos educadores em saúde da SUCAM, Prefeituras e outros órgãos para a melhoria do desempenho junto aos grupos comunitários.

Dentre as metas do programa de educação em saúde em 1987, considere-se:

a) revitalização de 20% dos postos de notificação (colaboradores voluntarios) das endemias nas diretorias regionais da SUCAM;

b) capacitação dos educadores em saúde, de nível médio, da SUCAM e de outras instituições, em áreas prioritárias;

c) articular órgãos de educação para a formação especializada dos educadores de saúde de nível superior;

d) rever 100% dos conteúdos educativos do material instrucional e audio-visual utilizados pelos programas da SUCAM;

e) articular órgãos das áreas econômica, educacional, saúde e Prefeituras Municipais para a realização de ações integradas de saúde;

f) prestar assessoria às 26 diretorias regionais da SUCAM no processo de capacitação de recusos humanos para educação em saúde.

Até junho/87 foi realizado um encontro regional de educadores da SUCAM, com 20 participantes; 5 reuniões de trabalho em diretorias regionais, reunindo educadores e equipes locais; 3 cursos para educadores em saúde de nível médio, com 90 participantes; 4 cursos para capacitação de educadores em saúde de nível superior, com 18 participantes; 4 encontros locais de colaboradores voluntários, com 240 participantes; e foi feita análise de 100% do material instrucional da SUCAM.

CAPACITAÇÃO DE RECURSOS HUMANOS - 1987

Dentre as atividades realizadas visando a capacitação de pessoal

de nível superior e técnico auxiliar que realizam atividades de controle das endemias considere-se:

a) preparo e remessa de material didático, tendo sido elaboradas apostilas e malária, sobre inseticidas e entomologia, bem como a reprodução e envio às diretorias regionais e sede de cursos, de manuais técnicos e apostilas de outras divisões;

b) levantamento das necessidades de formação de pessoal, através de ofício circular, solicitando às diretorias a remessa do programa de reciclagem de todo o pessoal de campo (Inspetor de Endemias, Guarda Chefe, Guarda, Microscopista e Auxiliar de Entomologia).

Os principais eventos realizados:

- Curso: "Educação em Saúde no Controle das Endemias", realizado em Caucaia-CE, no período de 04.05 a 05.06.87, com 23 participantes;
- Curso de "Tracoma" com 22 participantes, em Feira de Santana-BA, no período de 26.05 a 19.06.87;
- Encontro Nacional de "Técnicos do Programa de Peste no Brasil", com 28 participantes, em Campina Grande-PB, de 21 a 31.07.87;
- Simpósio sobre "Tracoma", com 25 participantes, em agosto-87, em Natal-RN;
- Curso de "Educação em Saúde no Controle das Endemias", em Carpina-PE, com 33 participantes, de 09.09 a 09.10.87;
- Seminário de "Normas Técnicas do PCDCh", em Belo Horizonte-MG, de 21 a 26.09.87, com 13 participantes;
- Curso de "Controle e Erradicação de Endemias para a Formação de Inspetor Geral", em Fortaleza-CE, com 32 participantes, de 10.08 a 10.12.87;
- O mesmo curso, em Manaus-AM, com 32 participantes, no mesmo período;
- Idem, em Recife-PE, com 32 participantes, em igual período;
- Curso de "Febre Amarela e Dengue para Técnicos de Nível Superior", em Parnaíba PI, com 29 participantes, de 12.11 a 11.12.87;
- Curso de "Malária para Técnicos de Nível Superior", em Pedreiras-MA, com 28 participantes, de 16.11 a 11.12.87.

METAS PARA 1988

Metas estimadas para o próximo exercício são apresentadas na página seguinte.

RECURSOS ORÇAMENTÁRIOS ALOCADOS À SUCAM EM 1987.

MINISTÉRIO DA SAÚDE
SUPERINTENDÊNCIA DE CAMPANHAS DE SAÚDE PÚBLICA

PERSPECTIVAS OPERACIONAIS, POR PROGRAMA, PARA 1988

Metas por programa	Unidade	Quantidade
1. Malária		
1.1. Vigilância		
- municípios a avaliar	município	1.697
- exames de sangue a realizar	amostra	3.300.000
1.2. Ataque		
- municípios a borrifar	município	517
- borrifações a realizar	borrifação	3.100.000
- população a proteger	habitante	3.700.000
2. Doença de Chagas		
2.1. Casas a visitar para capturas	casa	3.500.000
2.2. Casas a borrifar	casa	600.000
2.3. Munic.transferidos à vigilância	município	80 a 150
3. Esquistossomose		
3.1. Exames coproscópicos a realizar	exame	1.745.000
3.2. Tratamentos a realizar	tratamento	907.400
3.3. Criadouros a trabalhar	criadouro	6.920
4. Febre Amarela e Dengue		
4.1. Ataque		
- municípios a trabalhar	município	510
- prédios a inspecionar	prédio	12.200.000
- prédios a desinsetizar	prédio	8.300.000
- população a proteger	habitante	40.000.000
4.2. Vigilância entomológica		
- municípios a avaliar	município	4.098
- prédios a inspecionar	prédio	24.000.000
4.3. Vigilância epidemiológica		
- amostras de fígado a colher	amostra	1.500
- amostras de sangue a colher	amostra	20.000
4.4. Vacinação		
- população a vacinar	habitante	10.000.000
5. Peste		
5.1. Municípios a trabalhar	município	250
5.2. População a proteger	habitante	7.000.000
6. Leishmaniose		
6.1. Municípios a trabalhar	município	380
6.2. População a proteger	habitante	34.000.000
6.3. Cães a examinar	cão	750.000
6.4. Cães a eliminar	cão	50.000
7. Bócio Endêmico		
7.1. Municípios a trabalhar	município	15
7.2. Indústrias a inspecionar	indústria	188
7.3. Sal para iodação	tonelada	1.900.000
7.4. Amostras de sal a analisar	amostra	200.000
8. Filariose		
8.1. Municípios a trabalhar	município	5
8.2. População a proteger	habitante	2.700.000
8.3. Exames de sangue a realizar	exame	380.000
9. Tracoma		
9.1. Municípios a trabalhar	município	150
9.2. População a proteger	habitante	700.000
9.3. Exames oftalmológicos a realizar	exame	650.000

RECURSOS ORÇAMENTÁRIOS ALOCADOS À SUCAM EM 1987. CZ$ 1.000.00

	FONTE	2.008	2.508	2.509	2.510	2.511	2.512	2.507	2.505	2.506	2.007	TOTAL POR FONTE	TOTAL GERAL
3111.01	044	32.720	154.800	15.900	192.018	31.800	66.780	–	–	–	–	494.018	
	000	98.100	795.500	111.600	541.192	222.720	456.089	–	–	–	–	2.225.201	2.719.219
3111.02	000	36.910	824.950	175.250	609.472	125.130	480.165	–	–	–	–	2.251.877	
	053	–	–	–	–	–	5.000	–	–	–	–	5.000	2.256.877
3113.00	044	–	40.104	2.300	49.096	2.900	–	–	–	–	–	94.400	
	000	151.645	104.920	4.100	78.373	16.300	40.750	–	–	–	–	396.088	490.488
3214.00	050	–	–	–	–	–	–	82	–	–	–	82	82
3253.00	000	1.094	5.580	2.450	1.178	1.400	2.200	–	–	–	–	13.902	13.902
SUB-TOTAL		320.469	1.925.854	311.600	1.471.329	400.250	1.050.984	82	–	–	–	5.480.568	5.480.568
3120.00	000	1.714	201.712	–	–	–	–	–	100	45	270	203.841	
	044	15	66.740	3.971	56.935	25.440	–	–	–	–	–	153.101	
	015	–	400.000	26.900	200.000	80.000	–	–	–	–	–	706.900	
	048	–	3.702	–	–	–	–	–	–	–	–	3.702	
	053	–	350.000	60.000	261.000	50.000	220.000	–	–	–	–	941.000	2.008.544
3131.00	000	–	7.000	–	–	–	–	–	–	–	–	1.000	
	048	–	17.030	–	–	–	–	–	–	–	–	17.030	24.030
3132.00	000	13.500	38.020	–	–	–	–	–	55	15	180	51.770	
	044	–	9.028	387	7.694	484	–	–	–	–	–	27.590	
	015	–	100.000	8.800	80.000	10.000	–	–	–	–	–	298.800	
	048	–	16.769	–	–	–	–	–	–	–	–	16.769	
	053	–	40.000	2.000	103.000	5.000	29.484	–	–	–	–	179.484	464.416
3192.00	000	2.500	–	–	–	–	–	–	–	–	–	1.500	
	015	–	5.000	–	–	–	–	–	–	–	–	5.000	
	044	108	108	–	–	–	–	–	–	–	–	216	
	053	–	250	–	–	–	250	–	–	–	–	500	7.216
3292.00	000	500	–	–	–	–	–	–	–	–	–	500	
	053	–	250	–	–	–	250	–	–	–	–	500	1.000
SUB-TOTAL		17.337	1.255.609	102.058	708.629	170.924	249.984	–	155	60	450	2.505.206	2.505.206
4120.00	000	1.104	1.500	–	–	–	–	–	–	–	–	2.604	
	044	37	28.236	581	23.329	1.474	–	–	–	–	–	53.657	
	015	–	30.000	6.000	50.000	3.300	–	–	–	–	–	89.300	
	048	–	3.267	–	–	–	–	–	–	–	–	3.267	
	053	–	110.000	8.000	71.285	19.000	100.000	–	–	–	–	308.285	457.113
4130.00	044	–	28.516	–	46.912	–	–	–	–	–	–	75.433	
	000	–	1.600	–	–	–	–	–	–	–	–	1.630	
	048	–	3.550	–	–	–	–	–	–	–	–	3.550	
	053	–	100.000	–	140.000	–	100.000	–	–	–	–	340.000	420.613
4250.00	053	–	50	–	–	–	50	–	–	–	–	100	100
4313.00	050	–	–	–	–	–	–	10.338	–	–	–	10.338	10.338
SUB-TOTAL (CAPITAL)		1.141	306.749	14.581	331.531	23.774	200.050	10.338	–	–	–	888.164	888.164
TOTAL		338.947	3.488.212	428.239	2.511.489	594.948	1.501.018	10.420	155	60	450	8.873.938	8.823.938

Ⅴ．中南米におけるポリオ根絶計画

1. 調査目的

国際協力事業団海外医療協力委員会感染症対策専門部会において，今後の感染症分野における国際協力の主要議題としてWHOの提唱する2000年までの世界ポリオ根絶計画を支援する方向が確認されている。支援実施に当たり，特にＷＰＲＯ（ＷＨＯ西太平洋地域事務局＝Western Pacific Regional Organization）地域において同地域事務局が作成するポリオ根絶計画に我が国が如何に協力して行くかについての検討が重要な課題となっている。中南米においては既にＰＡＨＯ（ＷＨＯ米州地域事務局＝ Pan American Health Organization）が1990年に向けて同地域のPolio根絶計画を推進しており，その成果が報告されているところである。

本調査は，中南米におけるポリオ根絶計画の推進状況を学ぶことにより，ＷＨＯの2000年までの世界ポリオ根絶計画に対する我が国の支援方策の作成に当たりその参考に資することを目的とするものである。

2. 中南米におけるポリオ根絶計画

(1) 経　過

ＷＨＯの米州地域事務局としてＰＡＨＯは，北・中・南米及びカリブ海諸国を構成国（Member States）としている。同地域内において，1977年よりＥＰＩ（拡大予防接種計画＝Expanded Program on Immunization）が推進されてきており，多大な成果を納めてきた(図１)。この成果を踏まえて従来の目標に加え，ポリオ根絶を新たな目標として設定するに至り，1985年９月ＰＡＨＯのDirecting Councilにおいて同決議が行われている。

この決議は，1990年までに同地域より野性型ポリオウィルスの indigenous transmission（土着野性株の伝播）を根絶することを目標として掲げており，行動計画として以下の３点を主要目標としている。

- 同地域におけるＥＰＩの全般的進展とその目標達成に向けてのスピードアップ。
- 1990年までに野性型ポリオウィルスによる土着野性株の伝播を同地域より根絶する。
- サーベイランスシステムを確立し，ポリオの疑われる症例を迅速に調査し，感染を予防する手段を適切に講じる。

(2) 組　織

(1)で述べた計画を推進するに当たり，以下の組織的対応がなされている。

① ＩＣＣ（関係機関調整委員会＝ Inter-Agency Coordinating Committee）の設置

ＥＰＩの推進強化とポリオ根絶を目的として，ＰＡＨＯ，ＵＮＩＣＥＦ，ＵＳＡＩＤ，ＩＤＢ（Inter-American Development Bank），Rotary International の５機関よりなる調整委員会として1985年に設置された（1987年にＣＰＨＡ＝ Canadian Public Health Assoc-

iation がこれに加わった）。

② ＴＡＧ（技術顧問団＝Technical Advisory Group）の設置。

５人の専門家よりなり，行動計画の実施に関する指導を行うことを目的として1985年に設置された。

①②いずれも年２回以上会議を開催し，計画の評価と必要な勧告を行うこととされている。また，ＩＣＣについては，加盟諸国の保健省関係者と３ケ月に１回各国の行動計画の実施に関する協議を行うことが勧告されている。

(3) 事業実施戦略計画

① ＴＡＧによるポリオ根絶のための基本戦略

ⅰ）高予防接種率の構成と維持

ⅱ）強力なサーベイランスと積極的な症例調査

ⅲ）症例発生後の協力な封じ込め対策

② カテゴリー別戦略

ⅰ）Group Ⅰ： ポリオ感染国－過去３年のうちに土着野性株のポリオ発生をみたもの。

ⅱ）Group Ⅱ： ポリオ非発生国－過去３年のうちに土着野性株のポリオ発生をみないもの。

更にこのグループは２分され

Group ⅡA：高危険国－１才以下の子供に対する過去３年のポリオ予防接種率（最少の地理的，行政的区分において）がいずれかの年において80％を下回るもの。

Group ⅡB：低危険国－過去３年の予防接種率が全て80％を上回るもの。

Group Ⅰについては，ＮＶＤＳ（国民予防接種の日＝National Vacciration Days)を活用した予防接種率の向上を中心的課題とし，Group Ⅱについては，高予防接種率の維持とサーベイランスの強化によるポリオ非発生状態の維持を中心的課題としている。

③ 国別行動計画の作成

ＩＣＣ（関係機関調整委員会）による協力と国別の実施計画を総合した国別行動計画を作成している。この特徴は 1987 ～91 年の５ケ年間のＥＰＩプログラム及びポリオ根絶計画の推進計画を，９つの構成要素別に実施計画を細分し，計画の実施費用を出資者別，年次別に作成していることである。

④ 国民予防接種の日の設定

②で述べた如く，ポリオ発生のみられる国においては，年のうち最低２回，１日または数日にわたり，予防接種強化の取組を行うとしたものである。具体的には，ポリオ根絶に係るキャンペーンを中心とした啓蒙普及活動と可能な限りの手段を用いた予防接種の実施であり，後者については日常の予防接種活動ではカバーしきれない層に対して特に働きかけを強化することとされている。

予防接種の実施に当たっては，ポリオワクチンの接種を基本的目的としているが，麻疹，D

ＰＴワクチン及び妊婦への破傷風トキソイドの接種も同時に行い，ＥＰＩ全般の予防接種率を向上させることにも資するよう勧告されている。

⑤　サーベイランスの強化と症例調査

ポリオ根絶計画の推進にとって，サーベイランスと症例調査は不可欠なものと位置付けられており，ＰＡＨＯが独自の Field Guide を作成し，その方式の統一を図っている。ポリオ発生ケースについては，週報で，Probable case と Confirmed case を報告することとされており，ＰＡＨＯ事務局に Telex で国別の発生状況が報告されている（表１p. 94）。

また，ポリオ類似疾患との鑑別（表２p. 95），及び検体検査結果の解釈（表３，表４）も示している。

⑥　ポリオ症例発生封じ込め

⑤のサーベイランスにより Probable case が判定されると周辺住民全員を対象にして，ポリオワクチンの投与を過去の投与歴に関係なく行い，感染を断つこととしている。発生状況によりワクチン投与の範囲は異なると考えられるが，前述の Field Guide にその基準が示されている（図２ p. 101）。

(4)　事業実施の現状と評価

①　ポリオ症例発生

1988 年の１－31 週までに，12 ケ国及び１地域（カリビアン地域）より 623 例の報告があり，うち 250 例がポリオと確認されている。図３に示す如く，1988 年の第31週目の weekly report によれば，対前年同期に対して22週目頃より confirmed case の報告が減少して来ており，このトレンドが今後どの様に推移するかが注目される。また，発生地域の限局化を観察する為に郡（county）のレベルでの報告を集計しているが，上記 weekly report の30週目の報告では，1986 年 459 郡，1987 年 407 郡，1988 年（第 30 週まで）171 郡となっており，発生地域の減少が観察されている。

②　予防接種率

1986 年に域内全体ではポリオワクチンの予防接種率は 81％とはじめて 80％を超えた。'87 年も引き続き 80％を超えているものと推定されている（図４）。また，都市周辺部の低所得階層への予防接種強化が今後の課題であるとされている。国民予防接種の日の実施は 1987 年には 13 ケ国が実施し，1988 年には 14 ケ国の実施が予定されている（図５）。

③　サーベイランス

1987 年末で 795 例の報告があった。また，'86 年は 933 例，'85 年は 869 例，'84 年は 535 例であった。サーベイランスの強化により '86 年の報告数が増加したと考えられており，'87 年については，ブラジルでのポリオ発生の大幅減少による発生数の減少の為に前年よりも報告数が減少したと考えられている（図４，表６）。サーベイランスの報告の迅速性については，未だ改善の余地が多くあることが指摘されており，特に協力ラボがポリオ症例の確認に十分な役割を

果たしていないことが問題とされている。

④　ポリオ症例発生封じ込め

これまでの評価では野性株ポリオの感染を遮断する効果が期待できる程の十分な範囲への封じ込めのための活動は行われていないとのことである。

⑤　ＴＡＧの勧告

1988年1月にペルーで開催されたＴＡＧは，上記の実施状況を評価し，全体的な事業の進展を評価した上で，1990年までのポリオ根絶は達成可能であり，一層の努力をすべしとの勧告を行うと共に，種々の問題点と改善すべき点を指摘している。

(5)　財　源

ＩＣＣにより当初提示された援助額は1987～91年の5ケ年で8,500万ドルであり，出資機関別の内訳は図6に示す通りであった。1987年末において，具体的に国別行動計画（1987～91年）を作成したのは20ケ国であり，域内人口の96％に当たる。これによると，国別行動計画を実施するのに45,000万ドルを必要とし85％を各国が負担し，15％をＩＣＣの援助によるとされている。ＩＣＣよりの援助割合は国により異なり，ブラジルの4％を最低にボリヴィアの48％が最高になっている。ＩＣＣよりの援助は75％程度が資本的支出に充てられている（コールドチェーン，トランスポート，訓練，ラボの整備，通信等）。また，運営費については90％近くが各国の財源によって賄われている。また，図7に示す如く年次を経るにつれて，ＩＣＣからの財源が減少し，僅かながら各国別支出が増加する傾向となっている。

(6)　その他

(1)～(5)はＰＡＨＯの担当者との面談及び報告書等の出版物を基にまとめたものであるが，これ以外に非公式の担当者との会話やジョン・ホプキンス大学公衆衛生大学院のヘンダーソン学長及び同スタッフ等との面談より幾つかの参考になる事項を学び得たので以下に記す。

①　ポリオ根絶の現実的見通し

ＰＡＨＯ事務局長 Dr. de Macedoによれば，1990年にＰＡＨＯ域内よりのポリオ根絶を目指しているが，1991年までかかるかも知れない旨の見通しの表明があった。

②　技術的問題の検討

上記ヘンダーソン学長より以下の分野でのリサーチの必要性が指摘された。

ⅰ）耐熱ワクチンの開発

ⅱ）ポリオの診断方法の簡易化

ⅲ）ワクチンの力価測定方法の標準化

これらについては研究費のサポートが無いので，何らかの形でのリサーチの推進を検討する必要があるとのこと。

③　特別計画終了後の取組

ポリオ根絶計画は，ルーチンの保健医療施設での予防接種あるいは健康教育よりも，国民予

防接種の日を活用した特別な取組が柱となっている。高接種率を達成した後，いつまでそのような取組を続けて行かねばならないかとの疑問が提出された。中国での試みとして，予防接種債券販売による両親へのincentiveの付与等の方法の例も紹介されたが，やはり解決は困難との事であり，基本的には保健医療施設へのアクセスビリティーの確保と教育の普及により解決されるべきであろうとの議論がなされた。

④ International Health Center構想

ポリオに限らず開発途上国に多発する感染症に関する調査研究，トレーニングプログラムの実施を行う国際保健センターの必要性が力説された。基本的な概念としては，①Labo施設，②感染症医療施設・病棟，③疫学のフィールドを構成要素とし，先進国の研究者の共同研究及び途上国。先進国スタッフの養成事業をその活動内容とするもので，財源は複数の2国間協力機関が中心となって援助し，国際機関は主に技術的援助を行うというものである。現在機能をしているのは，ダッカにおけるICDDRBのみであり，世界にもう数カ所程度は必要とのことである。

3. 各国の実情

ポリオ根絶計画はEPIプログラムの推進と密接不可分であり，EPIプログラムに係る多くの関連事項の記載は，本報告書Ⅳ各国の実情においてなされている。本稿においては，ポリオ根絶計画に固有に関係する情報を，関係者の面談により得た情報を中心に，我が国の今後の問題に関係の深いと思われる内容について記す。

(1) コロンビア

① ポリオ発生の概況

年次推移を下記に示したが，1986年のサーベイランスの強化に伴い，報告数が増加していると考えられている。

1983年	1984	1985	1986	1987	1988（31週まで）
88人	25	32	67	121	71

また，1980年代のはじめには北部アトランティック地域が主な発生地であったが現在は南下し，Bogota周辺が主な発生地となっているとのことである。Bogota周辺にはスラムが存在し，予防接種率の向上が困難となっている。

② 予防接種率

PAHOへの報告では，1986年に1才未満で3回接種を終えた者の割合は65%と低くなっているが，国民予防接種日の積極的活用により，本年（1988）には，2度の国民予防接種日の接種率は，4才児以下で共に90%を超えているとのことであった。

③ ポリオ根絶計画の取組の概況

ⅰ）実施体制

ポリオ根絶計画の企画は保健省が行い，サーベイランス等の実施は国立衛生研究所が行っている。

ii）サーベイランス

サーベイランスについては，保健省の医務局と疫学局のスタッフ及び国立衛生研究所のスタッフがサーベイランスチームを形成し，毎週ポリオ報告ケースの認定等を行っている。

地方より報告のあったポリオ疑似症例は，上記サーベイランスチームが現地に赴き調査に当たっている。

検体は国立衛生研究所に送付され，血清学的検査，ウイルス分離，野性株由来とワクチン由来との鑑別が行われている。なお，国立衛生研究所は，ＰＡＨＯの協力ラボに指定されており，隣国のペルー，エクアドル，ベネズエラからも検体を受け入れている。

iii）要員のトレーニング

中央政府では，地方保健局レベルのスタッフの養成，トレーニングを行い，地方保健局以下のスタッフについては，地方保健局がそれぞれ行っている。また，中央政府では，ポリオに関するシンポジウムを開催し，その啓蒙普及に努めているとのことである。

iv）国際機関等との協力関係

国別行動計画に基づき，1987～91年の5カ年にＩＣＣ構成メンバーより事業実施予算の34.7％の財政的協力援助を受けることになっている。また，技術的活動についてはＰＡＨＯの技術顧問（周辺数カ国も担当）が常駐しており，適宜指導等を受けることとされている。フィールドスタッフ等のポリオ根絶計画実施に当たっての実施要員については，ＷＨＯ，ＵＮＩＣＥＦを含め，一切の援助を求めておらず，自国のスタッフで実施しているとのこと。

④ 実施上の問題点等

i）予算

国別行動計画に盛られた実施必要額が確保できている。

ii）要員

国立衛生研究所のポリオ関連ラボスタッフが現在2名であるが，1月当たり国内100検体，国外30検体を扱っており，人手が不足しているとのこと。

iii）予防接種率

大都市周辺のスラム地域及び特定の宗教グループ等に予防接種を行うことが困難であり，その強化のための集中的取組が必要である。

iv）ワクチン

現在ポリオワクチンは輸入に頼っており，将来は国内生産による自国供給を行う必要があると考えており，技術協力への期待も表明された。

(2) ブラジル

① ポリオ発生の概況

ブラジルにおいては，1980年よりポリオ根絶のキャンペーンが行われ，年2回の国民予防接種の日の取組実施により，1980～83年まではほぼ100％の接種率を達成し，ポリオ症例の発生も減少し，根絶も間近と考えられたが，1984，1985，1986年と発生数の増加がみられた（図8）。1987年は238例と減少しており，これはブラジルの北部及び北東部における報告例の減少によりもたらされたものである（図9）。全体として発生が局在してきているとのことである。

② 予防接種率

PAHOの1990年ポリオ根絶計画に呼応して再び1986年より接種率の向上がみられており，1986年は89％，1987年は90％に達している。①のポリオ発生数の報告と予防接種率との関係については次のように説明されている。即ち，1980年代前半のキャンペーンによりポリオが減少し，ポリオに対する関心が薄れ，1984年より麻疹の同時接種を行ったことにより，大々的取組が困難になり，ポリオの予防接種率が低下し，それによりポリオが再び増加したが，ポリオワクチン単独投与の切換えとキャンペーンにより接種率を向上させたことにより，発生が低下したとのことである。また，同国北東部における発生の増加を分析したところ，ワクチンの3型の component が300,000 TCID 50と低く，これを600,000 TCIDに改善したところ，1987年の北部，北東部の3型の発生の低下につながったとのことである。予防接種率の向上とワクチンの改良のいずれが寄与したのか詳細な分析を行うデータを入手し得なかったが，後者の影響が大だとすれば，熱帯地方における免疫獲得能の向上方策への1つの手がかりとなるかもしれない。調査団の訪問した北東部のベルナムブコ州においても，年2回の国民予防接種日に加えて，州独自に予防接種日を設定しており，また，知事夫人がキャンペーンの先頭に立つなど，積極的な取組がなされており，表7（p.99）に示すように1987，1988年と急速な減少を示している。

余談であるが，レセフェ（ベルナムブコ州の州都）の街などでは，小児マヒで足の細い子供，青年を数名見かけた。筆者も実際に小児マヒ患者をみるのは初めてであり，死亡とは異なる社会的対応を要するポリオの問題の重要性を痛感したところである。

③ ポリオ根絶計画の取組の概況

i）実施体制

1986年にEP1と並ぶポリオ根絶計画の担当課が保健省に設置され，8名のスタッフ（コーディネーター1名，疫学者4名，アシスタント3名）で計画を推進している。各州政府にも保健省がポリオコーディネーターを指定し，EPIコーディネーターと並んでポリオ対策に取組んでいる。

ii）サーベイランス

保健省がマニュアルを作成し，州政府に配布し，これに基づき，サーベイランスが行われている。PAHOの作成したField Guideに忠実に従っているとのことである。症例報告

のルートは，病院又は保健センターから情報を市→州→連邦政府の順で報告するもので，電話にて行われているとのことである。発生のケースについては市より調査員が赴き，詳細な情報を採り，ポリオ症例の確認については州の保健省と連邦政府の保健省の協議により決定する。検体検査については，オズワルドクルス財団（政府出資の特殊法人類似の組織）研究所とその７つの地方支所が担当しており，地方支所においては血清学的検査とウィルス分類を行い，野性株とワクチン由来の鑑別はオズワルドクルス財団研究所が行っている。

現主，ウィルスの分離率は30％とのことで，症例発生から報告までと報告から検体送付までの期間が長いため，分離率が低くなるとの説明であった。

iii）要員のトレーニング（略）

iv）国際機関等との協力

国別行動計画では，全事業費の４％の援助をＩＣＣより受ける計画である。また，技術的援助ではＰＡＨＯのstaff １名が，当初の計画作成を援助し，現在は連邦政府保健省にやはりＰＡＨＯのスタッフが１名常駐し，州のポリオコーディネーターの指導に当たっているとのことである。フィールドスタッフ等の実施にあたる要員は一切国内で賄われている。

v）ポリオ症例発生封じ込め

Probable caseの発生に対して周囲に広く予防接種を行っているとのこと。

vi）ワクチン

ポリオワクチンの国内生産は行われておらず，全て輸入に頼っている。

④ 実施上の問題点（略）

4. 調査の印象と今後の我が国のポリオ根絶計画支援の取組に対する示唆

１調査の目的に記した如く，調査団の関心事はＷＨＯの掲げる2000年までの世界ポリオ根絶計画に我が国がどの様に協力し得るかを探ることであった。その様な観点から調査全体を振り返り，ポイントを考察してみる。

(1) 技術的検討課題

ＰＡＨＯ域内での経験から，地球的規模でのポリオ根絶に当たっては次の点の技術的検討が必要と考えられる。

① 耐熱ワクチンの開発

ジョン・ホプキンス大学のDr. ヘンダーソンの指摘にもあるように，アフリカを念頭に置いた場合，耐熱ワクチンの開発が重要であると考えられる。中南米においては，比較的保健医療システムが整っていると考えられ，コールドチェーンも整備されているようであるが，ブラジルにおいても必ずしも十分では無いようであり，アフリカでの体制整備には相当の時日を要すると考えられる。

② リサーチの促進

ⅰ）ワクチンの力価測定の標準化

ⅱ）簡易な診断方法の開発

サーベイランスの推進に当たり，迅速かつ正確な報告システムの確立が不可欠であるが，ＰＡＨＯ域内での状況をみる限り必ずしも初期のレベルを達成し得ていないようである。地域特性での同一手法の適用を考えるとcase definitionの検討と診断基準の簡易化が必要である。

(2) ロジスティックスの検討

ＷＨＯの地域事務局管内を１つの単位とした取組が今後推進されると考えられるが，その際のロジスティックスについて以下の点が印象的であった。

① レファランスラボの確立とそのクウォリティーコントロール

ＰＡＨＯ域内において７つの協力レファランスラボが指定されているが，十分には機能していない様子である。体制整備を図ると共に，そのクウォリティーの確保が重要であると考えられる。

② 関係者の合議機関及び助言機関の設定

ＰＡＨＯにおいては，ＩＣＣ及びＴＡＧが設置され，関係者（国際機関，２国間援助機関，当該国）間の協力，連携及び技術的観点から分析・評価・助言が成されており，計画の推進に有効な役割を果たしている様である。

(3) 実施国とＷＨＯとの関係の検討

① 実施国の主体性

実施国は各々国別行動計画を作成しており，自立したシステムにおいて計画を実施している。特別プログラム終了後に向けて，各国の主体性を維持し自己完結性を目指した取組が重要であると考えられる。コロンビア，ブラジルでのポリオ根絶に向けての政府レベルの強い取組姿勢が印象的であり，そのような気運の盛り上げが重要であるとの感を深くした。

② ＰＡＨＯを含めた外国援助機関の役割

ＰＡＨＯが主導的役割を果たし，技術指導及び域内の計画推進にあたっており，UNICEFはコールドチェーン等の資材の供給を，国際ロータリーはワクチンの供給を，ＵＳＡＩＤは資金援助を行っている。①の実施国の自立性を尊重した形での協力が国別行動計画等を通じて行われている。

(4) ＥＰＩプログラム等関連プログラムとの関係の検討

ＰＡＨＯのポリオ根絶計画においては，ＥＰＩプログラム全般の推進がポリオ根絶に不可欠であると位置付けられると同時に，ポリオ根絶計画の推進が，ＥＰＩ全体をも推進すると位置付けられている。従って，国民予防接種の日等の活用に当たっては，３種混合，麻疹，妊婦への破傷風トキソイドの接種も併せて行うよう勧告しており，それらの接種率の向上を期待している。ブラジルの経験では，両者の同時実施は却って，ポリオワクチン接種の取組を妨げるとして，これに否定的な見解が出されており，今後の検討が必要であろう。

表1

EXPANDED PROGRAM ON IMMUNIZATION
POLIO SURVEILLANCE IN THE AMERICAS

WEEKLY BULLETIN VOL. III, NO. 31 FOR THE WEEK ENDING 6 AUG 1988

PROBABLE AND CONFIRMED POLIOMYELITIS CASES+ (PROVISIONAL DATA)

SITE	TOTAL 1987*	CUMULATIVE 1987*	CUMULATIVE 1988#	WKS 1-4	WKS 5-8	WKS 9-12	WKS 13-16	WKS 17-20	WKS 21-24	WKS 25-28	WEEK 29	WEEK 30	WEEK 31
ARG	1	0	1	0	0	1	0	0	0	0	0	0	?
BOL	4	4	9	2	2	0	2	0	2	0	0	1	0
BRA	236	142	273	6	10	19	16	35	53	78	13	25	18
CAN	0	0	0	0	0	0	0	0	0	0	0	0	0
CAR**	0	0	1	0	0	0	0	0	0	1	0	0	0
CHI	1	0	0	0	0	0	0	0	0	0	0	0	0
COL	114	62	71	9	4	8	4	11	7	10	6	7	5
COR	0	0	0	0	0	0	0	0	0	0	0	0	?
CUB	0	0	0	0	0	0	0	0	0	0	0	0	0
DOR	2	0	0	0	0	0	0	0	0	0	0	0	0
ECU	10	10	5	0	1	1	0	1	0	0	2	0	0
ELS	54	25	21	4	4	1	2	2	1	3	2	2	0
GUT	22	7	33	3	1	2	2	3	8	8	2	3	1
HAI	12	10	4	0	0	3	1	0	0	0	0	0	?
HON	15	7	35	4	4	5	4	5	3	3	6	1	0
MEX	80	44	74	17	6	7	4	7	6	7	9	5	6
NIC	0	0	0	0	0	0	0	0	0	0	0	?	?
PAN	0	0	0	0	0	0	0	0	0	0	0	0	0
PAR	0	0	0	0	0	0	0	0	0	0	0	0	0
PER	45	20	54	1	1	5	5	11	10	17	1	2	1
URU	0	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0	0
VEN	39	20	42	1	8	5	5	7	5	6	1	2	2
TOTAL	635	351	623	47	41	57	45	82	95	133	42	48	33

+ - INCLUDES PROBABLE + CONFIRMED AS OF WEEK OF FIRST REPORT.
WEEKLY CASE DISTRIBUTION IS UPDATED WITH FINAL CASE CLASSIFICATION.
* - INCLUDES CONFIRMED CASES ONLY.
# - INCLUDES PROBABLE & CONFIRMED CASES. PLEASE NOTE THAT OF THE 623 CASES REPORTED TO DATE IN 1988 ONLY 250 HAVE BEEN CONFIRMED
**- INCLUDES INFORMATION FROM ALL CAREC MEMBER COUNTRIES.
? - INDICATES REPORT(S) NOT RECEIVED.
SOURCE: WEEKLY TELEXES FROM COUNTRIES.
1987 ARG,CHI & DOR CASES ARE VACCINE-RELATED. 1988 MEX CUMULATIVE INCLUDES 11 CASES WITH ONSET IN 1987. CAREC CASE REPORTED BY SURINAME.

表2

Clinical Aspects of Polio, Guillain-Barré Syndrome, and Transverse Myelitis

Signs & Symptoms	Poliomyelitis	Guillain-Barré Syndrome	Transverse Myelitis
Fever at onset of paralysis	Present	Absent	May be present or absent
Meningeal irritation*	Usually present	15-50% of pediatric patients have mild involvement	Absent
Paralysis	Usually asymmetric (unequal)	Symmetric and ascending (from the legs up)	Symmetric and stationary
Sensation	Normal	May be reduced	Reduced
Progression of paralysis	3-4 days	2 weeks	Rapid, usually several hours
Paresthesia**	Rare	Frequent	Frequent
Residual paralysis	Usually present	Usually absent	Variable
Deep tendon reflexes	Reduced or absent	Reduced, may return in days	Absent, may return in 1-3 weeks
Cerebrospinal fluid early in illness	Elevated white cell count; normal or elevated in protein (up to 25% above normal value)	Normal or slightly elevated white cell count; markedly elevated protein***	Normal or elevated white cell count; mild or major elevation in protein
Case Fatality Rate	2-20%	5-10%	Less than 1%

* Usually characterized by stiff neck, headache and vomiting.
** Abnormal sensation, such as burning, itching or prickling.
*** Usually in second week after onset of paralysis.

表3

Interpretation of Results of Neutralizing Antibody Tests for Poliovirus*

Acute Serum (S1) (0-7 days after onset)	Convalescent Serum (S2) (More than 21 days after onset)	Interpretation	Recommendations
Absence of neutralizing antibodies (titer less than 1:8)	Absence of neutralizing antibodies (titer less than 1:8)	Absence of recent infection; not polio	
	Presence of neutralizing antibodies (titer equal to 1:8)	*Inconclusive*	*Collect third serum. If same* results, not polio
	Presence of neutralizing antibodies (titer equal to or greater than 1:16)	Confirms recent poliovirus infection *	
Presence of neutralizing antibodies (titer equal to or greater than 1:8)	Presence of neutralizing antibodies at same titer as acute serum OR difference less than four times	Inconclusive	Collect third serum. If same results, not polio
	Presence of neutralizing antibodies in titer greater than acute serum (difference equal to or greater than four times)	Confirms recent poliovirus infection*	
	Presence of neutralizing antibodies in same titer as acute serum and at titers equal to or greater than 1:512)	Suggests recent poliovirus infection	Collect third serum. If same results, inconclusive

* Recent immunization with OPV can also provide a fourfold rise in neutralizing antibody titer.

NOTES: If first specimen is collected more than 7 days and less than 6 weeks after onset of paralysis: collect S1 and S2 and interpret as indicated here.

If first specimen is collected 6 weeks or more after onset of paralysis, interpret on result of S2 alone: ≤ 1:8 = not polio, 1:8 to 1:256 = inconclusive; ≥ 1:512 = recent infection.

In cases where there is a discrepancy between virus isolation and serological results, all specimens should be sent to a reference laboratory for testing.

Interpretation of Results of Complement Fixing Antibody Tests for Poliovirus

Acute Serum (S1) (0-7 days after onset)	Convalescent Serum (S2) (More than 21 days after onset)	Interpretation	Recommendations
Absence of complement fixing antibodies (titer less than 1:4)	Absence of complement fixing antibodies (titer less than 1:4)	Absence of recent infection. If neutralizing antibody test is also negative, not polio	
	Presence of complement fixing antibodies (titer equal to 1:4)	Inconclusive	Collect third serum. If same results, not polio
	Presence of complement fixing antibodies (titer equal to or greater than 1:8)	Confirms recent poliovirus infection	
Presence of complement fixing antibodies (titer equal to or greater than 1:4)	Presence of complement fixing antibodies in same titer as acute serum, or difference is less than 4 times	Inconclusive	Collect third serum. If same results, not polio
	Presence of complement fixing antibodies in titer greater than acute serum (difference equal to or greater than 4 times)	Confirms recent poliovirus infection	

NOTES: If first specimen is collected more than 7 days and less than 6 weeks after onset of paralysis, collect S1 and S2 and interpret as indicated here.

If first specimen is collected 6 weeks or more after onset of paralysis, interpret on result of S2 alone: ≤ 1:4 = absence of recent infection. If neutralizing antibody test is also negative: 1:4 to 1:16 = inconclusive; ≥ 1:32 = recent infection.

In cases where there is a discrepancy between virus isolation and serological results, all specimens should be sent to a reference laboratory for testing.

表5 1987 NATIONAL VACCINATION CAMPAIGNS

COUNTRY	MONTHS											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Bolivia				12		12			4			
Brazil		21			23			15			14	
Colombia							25		26		9-4[a]	
Dominican Republic					22-30		21-25[b]				20-24[c]	
Ecuador						7		2		•d		
El Salvador		1	1	3								
Guatemala												
Honduras				25						9		
Mexico	24[e]		28[e]							•d,f		
Nicaragua		14-15		4-5	16-17							
Paraguay									26	7		
Peru									6	25		
Venezuela		9-13		27 to 8		15-19						

a. Accelerated activities.
b. Polio and DPT (<2 years).
c. Measles (<2 years).
d. Each province will determine a particular date.
e. Polio and DPT.
f. Measles.

Source: Telexes to PAHO.

表6 REPORTED CASES OF POLIOMYELITIS, BY COUNTRY, 1984, 1985, 1986 AND 1987*
REGION OF THE AMERICAS

COUNTRY	1984	1985	1986	1987
ARGENTINA	1	1	–	1
BOLIVIA	0	0	4	5
BRAZIL	82	461	612	345
CANADA	1	1	–	–
COLOMBIA	18	36	64	142
DOMINICAN REPUBLIC	–	2	1	–
ECUADOR	–	1	20	8
EL SALVADOR	19	10	23	55
GUATEMALA	17	29	33	19
HAITI	63	90	34	12
HONDURAS	76	4	6	19
MEXICO	137	148	66	67
PARAGUAY	3	3	0	–
PERU	102	67	39	54
UNITED STATES	7	8	2	–
VENEZUELA	9	8	27	68
TOTAL CASES	535	869	933	795

– No cases
* Countries not listed have not reported any cases of poliomyelitis since 1984.
Source: PAHO

表7 PE 1980–1988

ANOS	CASOS	COEF. de INCID	ÓBITOS	COEF. de MORT.	LETAL.
1980	111	1,8	13	0,2	11,7
1981	12	0,2	2	0,03	16,1
1982	12	0,2	1	0,01	8,3
1983	9	0,1	–	–	–
1984	9	0,1	–	–	–
1985	36	0,5	4	0,06	11,1
1986	79	1,1	4	0,06	5,1
1987	15	0,2	–	–	–
1988	1	0,02	–	–	–

Fonte CORPI

Dados até o mês de agosto de 1988 (semana 33)

図1

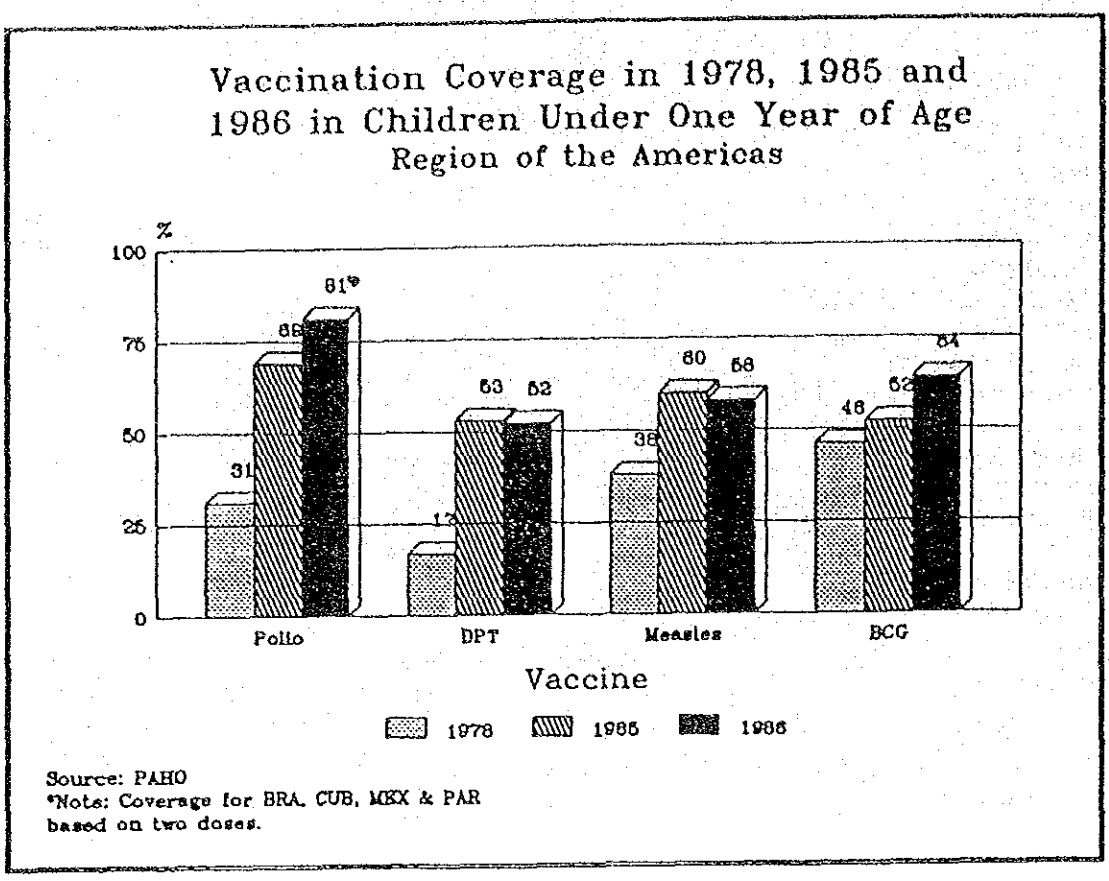

Vaccination Coverage in 1978, 1985 and 1986 in Children Under One Year of Age
Region of the Americas
%
100
75
50
25
0
81*
86
31
63
62
13
60
58
38
64
62
46
Polio
DPT
Measles
BCG
Vaccine
1978
1985
1986
Source: PAHO
*Note: Coverage for BRA, CUB, MEX & PAR
based on two doses.

図2

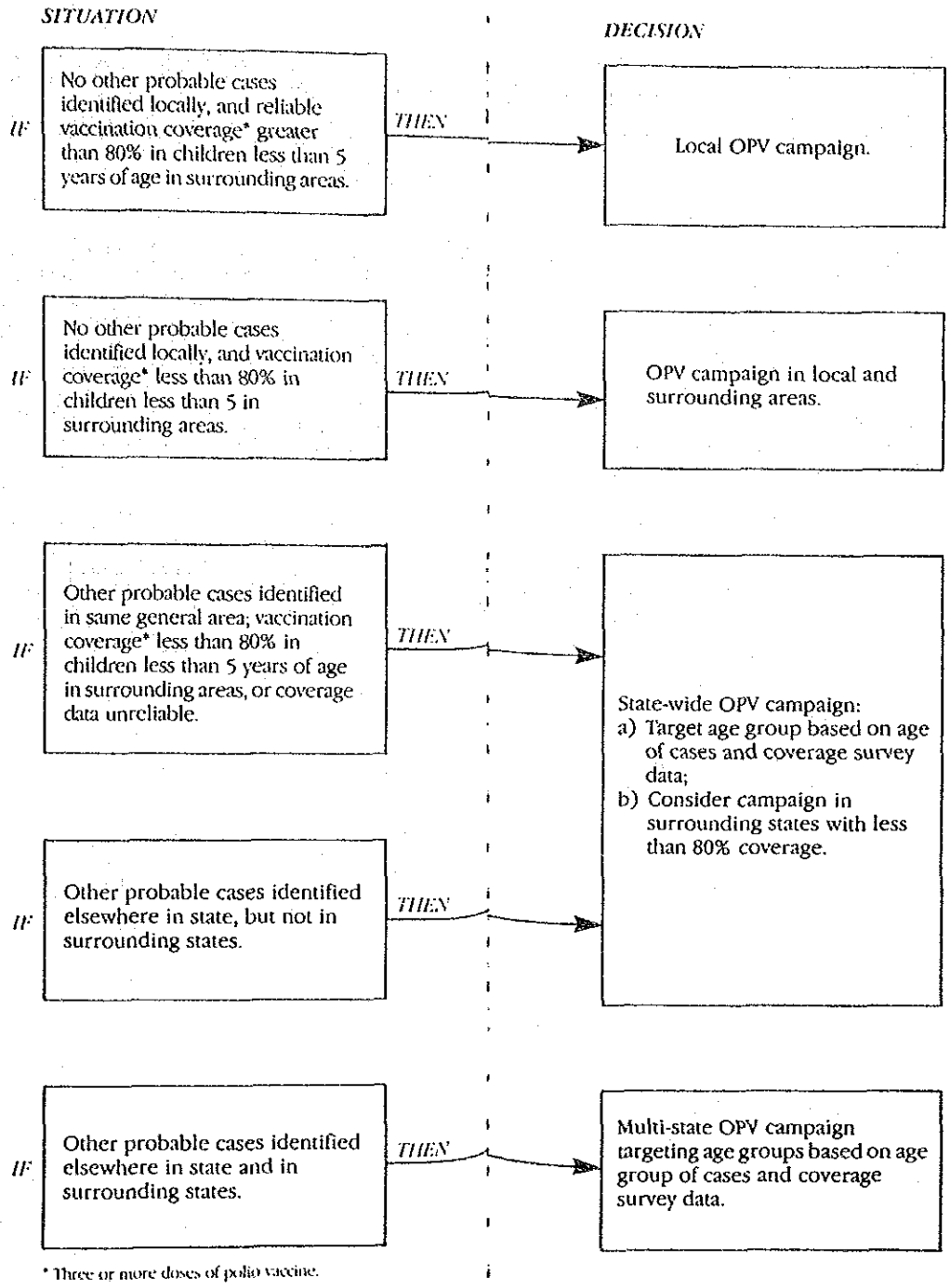
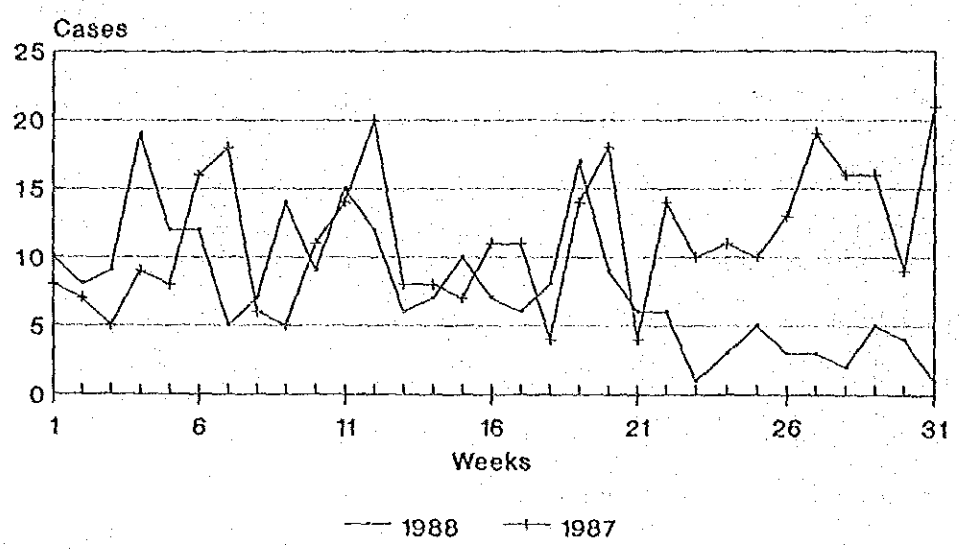

SITUATION
DECISION
IF
No other probable cases identified locally, and reliable vaccination coverage* greater than 80% in children less than 5 years of age in surrounding areas.
THEN
Local OPV campaign.
IF
No other probable cases identified locally, and vaccination coverage* less than 80% in children less than 5 in surrounding areas.
THEN
OPV campaign in local and surrounding areas.
IF
Other probable cases identified in same general area; vaccination coverage* less than 80% in children less than 5 years of age in surrounding areas, or coverage data unreliable.
THEN
State-wide OPV campaign:
a) Target age group based on age of cases and coverage survey data;
b) Consider campaign in surrounding states with less than 80% coverage.
IF
Other probable cases identified elsewhere in state, but not in surrounding states.
THEN
IF
Other probable cases identified elsewhere in state and in surrounding states.
THEN
Multi-state OPV campaign targeting age groups based on age group of cases and coverage survey data.
* Three or more doses of polio vaccine.

図3

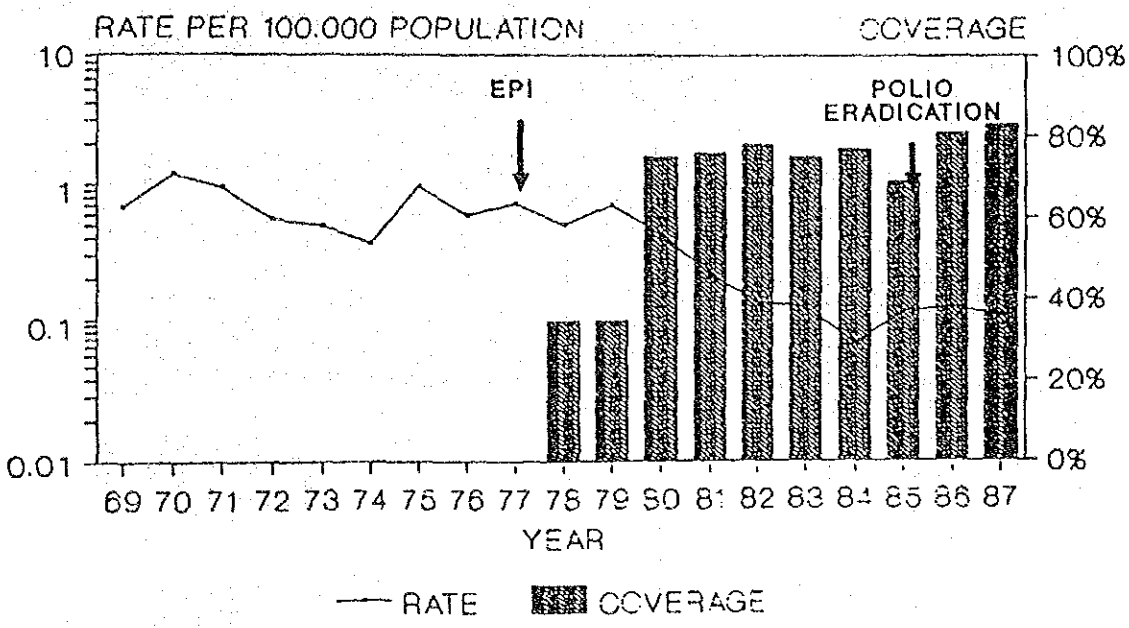
POLIO IN THE AMERICAS
CONFIRMED CASES, BY WEEK OF CONFIRMATION
WEEKS 1 - 31, 1987 AND 1988*



Source: Weekly telexes to PAHO
* Provisional data

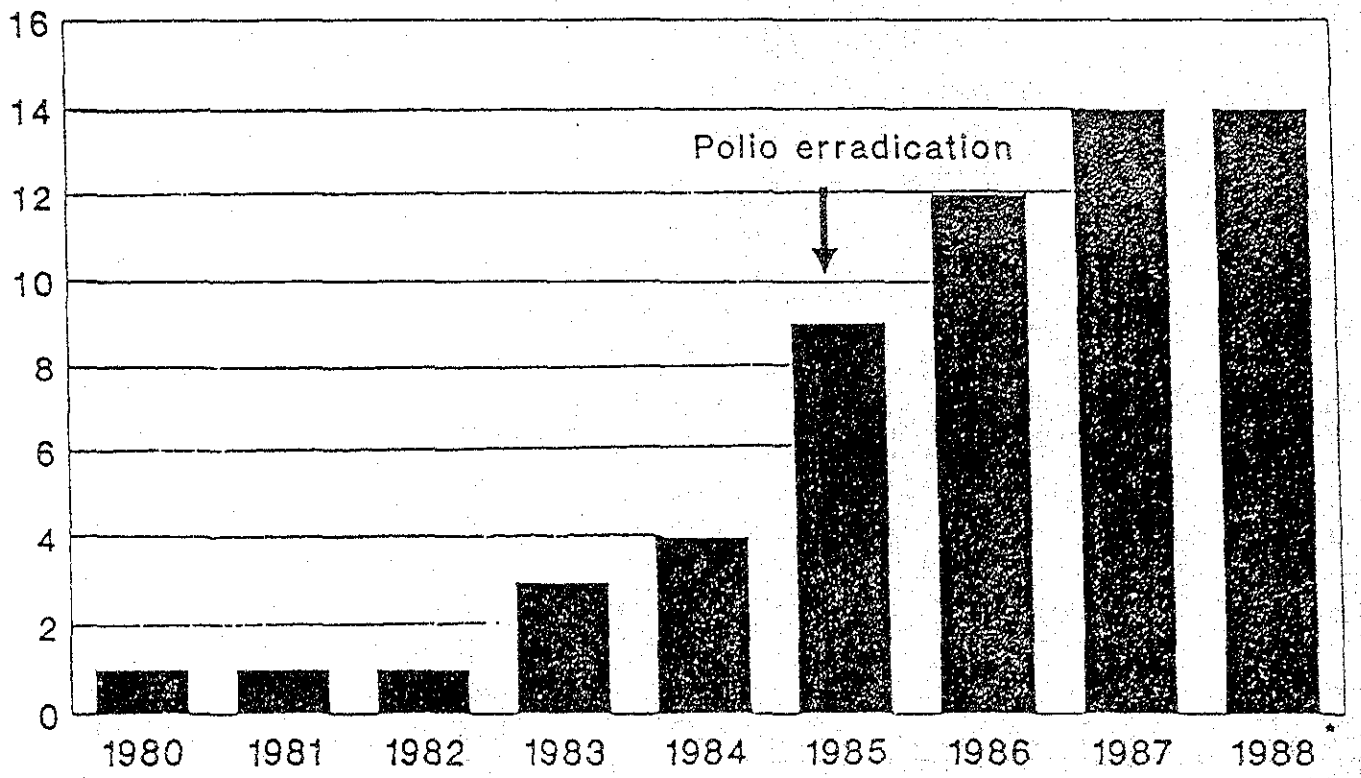
図4

ANNUAL REPORTED POLIOMYELITIS MORBIDITY & OPV COVERAGE IN < 1 YEAR OF AGE AMERICAS, 1969 - 1987



SOURCE: PAHO
* ESTIMATED COVERAGE DATA

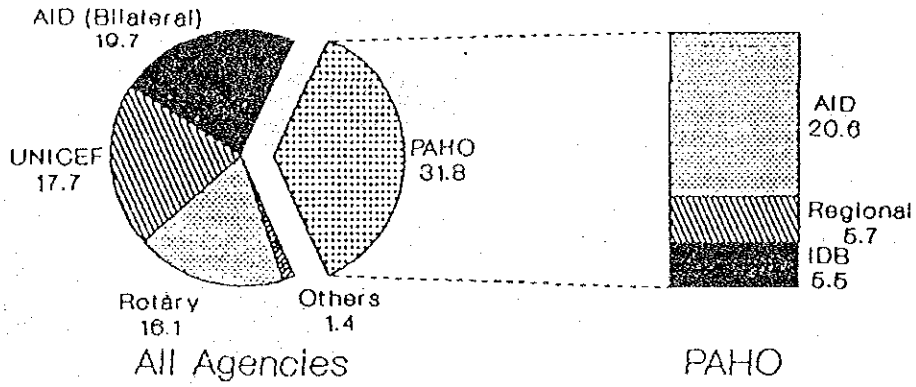
☒5 NUMBER OF COUNTRIES HOLDING NATIONAL VACCINATION DAYS REGION OF THE AMERICAS, 1983-1988



Source: PAHO
• Planned

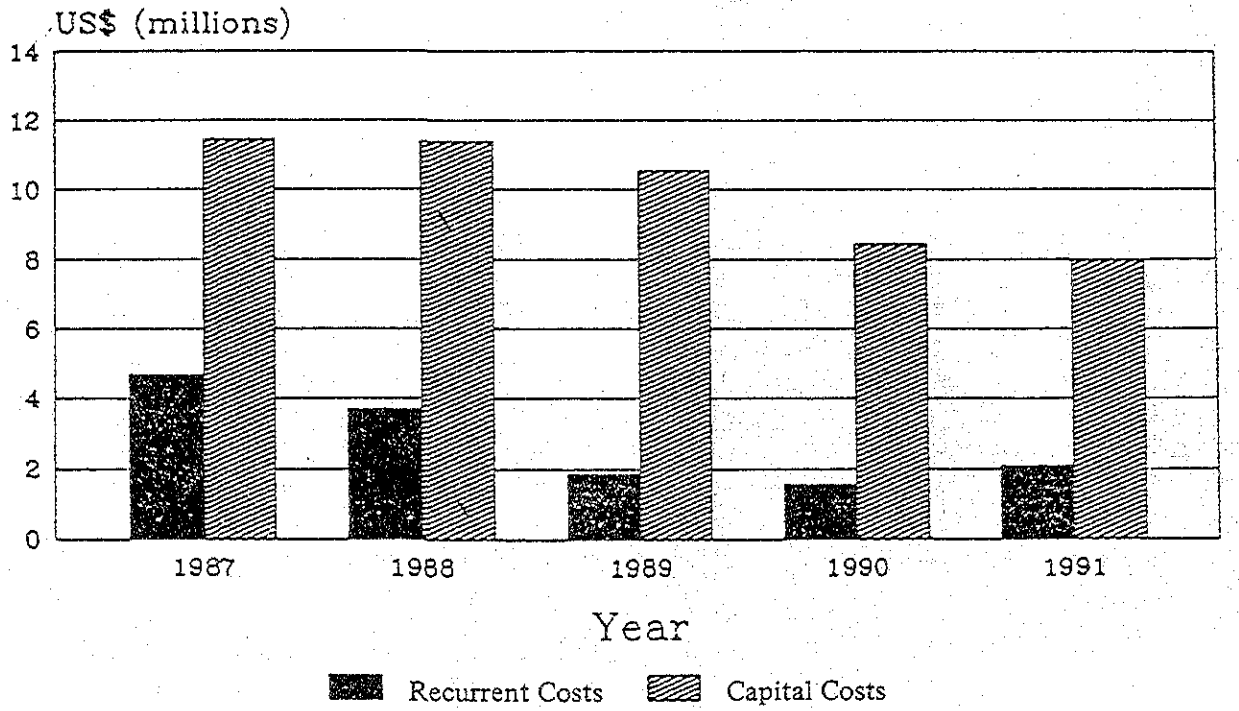
図6

EPI IN THE AMERICAS
Inputs from External Agencies*
1987-1991, US$ (millions)



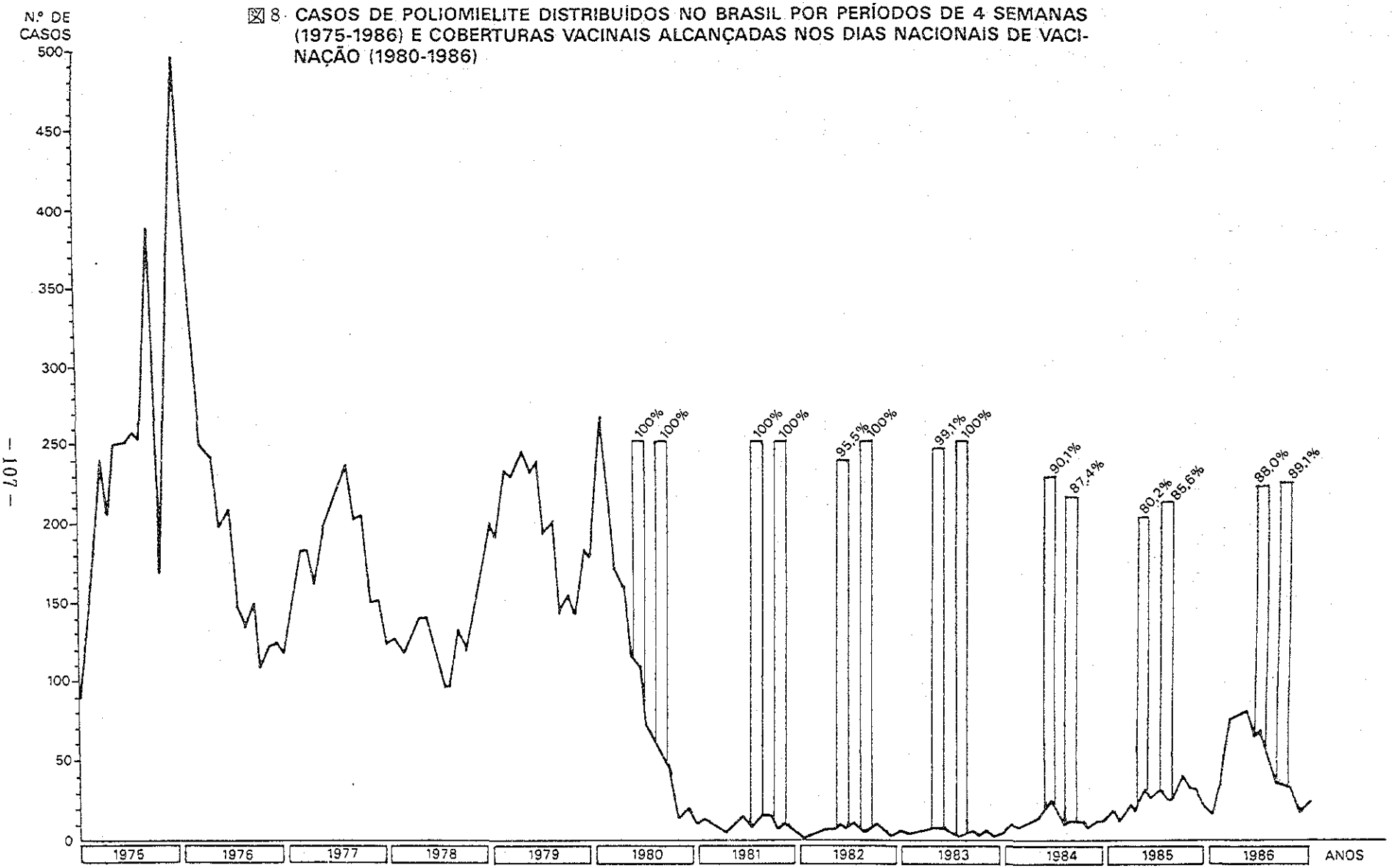
* Provisional data
Source: PAHO

図7 External Inputs, Capital Costs and Recurrent Costs, 1987–1991 Region of the Americas



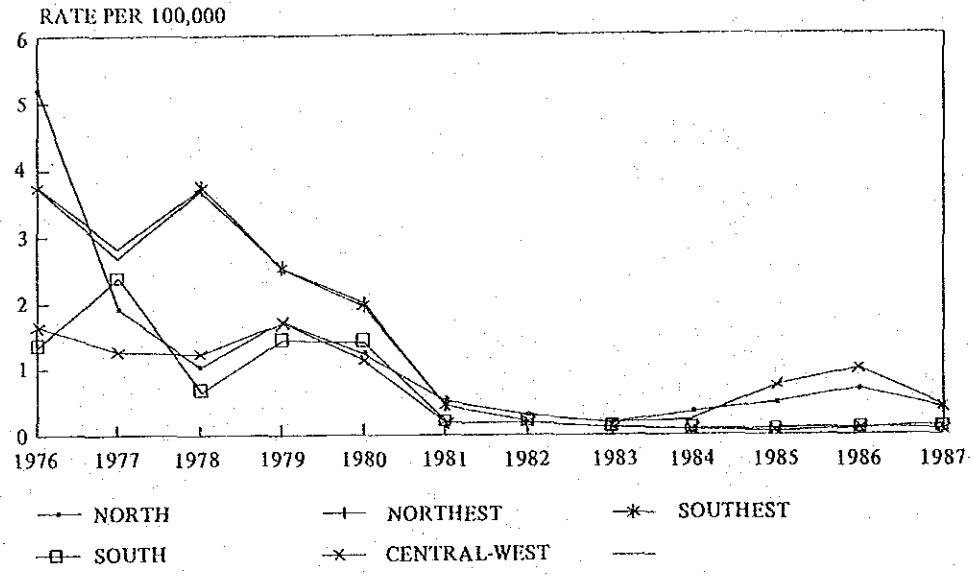
*Provisional data (19 COUNTRIES)
Source: PAHO

8 CASOS DE POLIOMIELITE DISTRIBUÍDOS NO BRASIL POR PERÍODOS DE 4 SEMANAS (1975-1986) E COBERTURAS VACINAIS ALCANÇADAS NOS DIAS NACIONAIS DE VACINAÇÃO (1980-1986)



Fontes: Divisão de Epidemiologia da FSESP
Divisão Nacional de Epidemiologia - SNABS/MS
GTE-PÓLIO/SNABS-MS

図 9　MORBIDITY RATES OF CONFIRMED POLIO CASES BY REGION, BRAZIL 1976--1987



Source: PAHO

ブラジル（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 brazilian health system includes a large variety of public and private institutions with different administrative linkages, which have responsibilities at national, state or local levels, but without well defined mechanisms of coordination. In recent years, deep changes in its organization have been implemented, aiming at the unification and descentralization of command at different levels.

At present, the general aspects concerning health policy are established by a Coordinating Committee (CIPLAN) with representatives of the Ministries of Health, Social Assistance, Education and Labour. At the state level, integrated programs are being developed under the coordination of the State Health Secretariats.

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.

The Ministry of Health in Brazil was organized primarily on the basis of experience gained with the implementation of infectious disease control programmes. Such programmes still account for an important proportion of the programmatic action of the Ministry of Health.

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

In spite of much progress achieved in the past few decades, infectious diseases are still a leading cause of morbidity and mortality in some regions of Brazil. Special programmes against endemic diseases in rural areas (malaria, schistosomiasis, Chagas disease, yellow fever) are carried out by an independent organization (SUCAM). Among those performed through the regular health infrastructure, the immunization programme is one of the most important.

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
poliomyelitis	yes	immunization, surveillance, vaccine production and quality control, training, supervision, health education, research, laboratory support.	1973
measles	yes		
diphtheria	yes		
tetanus	yes		
pertussis	yes		
meningococcal disease	yes		
rabies	yes		
viral hepatitis	–		
dengue	yes		
leptospirosis	yes		

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

The immunization programme was stablished at national level in 1973, following the success of smallpox eradication. Efforts are now directed towards eradicating the transmission of wild polioviruses, to expanding vaccine coverage and to achieving national sef-reliance in the production of essencial biologicals.

Meningococcal disease is a continuous threat after a huge epidemic in the early 70's. In recent years, an increase in incidence with predominant sorogroup B is a cause of concern. Hepatitis B is highly endemic in the western Amazon basin, where a vaccination programme is needed.

Rabies, dengue fever and leptospirosis are some of the urban zoonosis requiring the strengthening of permanent control activities at the local level.

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

Please specify the names.

name of division	name of personnel in charge
– Secretaria Nacional de Ações Básicas de Saúde	João B. Risi Jr.
– Serviço de Vigilância Epidemiológica	Ana Rosa dos Santos
– Programa de Imunizações	Ivanildo T. Pranzosi
– Erradicação da Pólio	Helvécio Bueno
– Auto-suficiência em *imunobiológicos*	Suzana M. Ávila
– Divisão de Laboratórios de Saúde Pública	Aroldo Leal Fonseca
– Controle de Zoonoses	Carlos Alberto V. Costa

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

1) Please describe the organizational chart.

At the national level, the Secretaria Nacional de Ações Básicas de Saúde (SNABS) is responsible for the coordination and implementation of infectious disease control, although some specific programs are carried out by other organisms. Programmatic areas of SNABS are listed above.

At the regional level, the State Health Secretariats are responsible for planning and implementing programmes, according to technical norms defined at the national level.

2) Please describe the functional roles.

The basic functions of the Ministry of Health, through SNABS and other organisms, is to promote and coordinate efforts to overcome health problems of national importance, through mobilization of different institutions. Coordination is descentralized to the state governments, which are autonomous both politically and administratively. Only in few cases health programmes are descentralized to the local governments.

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	large numbers of professionals in different institutions	of different kinds, including: – training – coordination of programs – execution of special programs – research and lab. support – production and control of biologicals	20.0 US$ million, including nearly 70 % budgeted for vaccine production and supply	
regional	Situation varies from one state to another. In general, the technical staff is very limited.	– program coordination – laboratory support – hospitals for infectious disease.		
local	according very different stages of development of the health services.	– public health centers – general hospitals (public and private)		

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
Instituto Adolfo Lutz	Bacteriologia, Virologia, Imunologia		52
Instituto Oswaldo Cruz	Virologia		28
Instituto Evandro Chagas	Virologia, Parasitologia		38
Biomanguinhos	Produção reativos		

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)
– Epidemiological Surveillance and the National Immunization Program – 1975	organization, immunization schedule, compulsory vaccination and disease reporting.

1.9 Problems in the implementation of infectious diseases control.

Please specify, if any.

– insufficient organization of health services

– deficiencies in program management at all levels, due to insufficient staff and administrative constraints

– inadequate laboratory support

– operational difficulties to reach high risk areas or population groups

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

Please fill out. No special cooperation before 1987, besides routine assistence provided by the Panamerican Health Organization (PAHO)

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

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
J I C A	Technology transfer on measles and poliomyelitis vaccine production	1980				

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 (%)		number of others doses given 1–4 yo	%
						private	mass		
Diphteria Tetanus Whooping Cough	DPT	2, 4, 6 mo.	– infants less 1 yo – 1–4 ys.o.	4,217,875	2,368,024		57,3 %	778,517	5,2 %
Poliomyelitis	TOPV	2, 4, 6 mo (rout) twice yr (camp)	0–4 ys.o.	19,520,308	17,343,866 (campaign)		87,6 % (campaign data)		
Measles	Biken CAM-70	9 mo	– infants less 1 yo	4,217,875	2,812,011		68,0 %	4,935,318	33,0 %
Tuberculosis	BCG	At birth	– infants less 1 yo	4,217,875	2,798,908		67,7 %	728,856	4,8 %
Tetanus	Tetanus toxoid	6th and 8th mo of pregnancy	pregnant women (4 % of total pop.)	5,478,980	919,210		16,8 %		

1987 Data
Others: Programme priority is the population under 1 year of age. However, because of poor coverage rates in this group, the programme also works with children 1–4 years old. Doses applied in this age group are shown in the others column.

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	Polio vaccine	78,025,935	14.4 Cz	4,169,351 doses
	Tetanus toxoid	12,952,460	–	1,406,487 doses
domestic production	DPT	19,012,040	68.3 Cz	3,339,670 doses
	BCG	11,072,444	2.88 Cz	827,850 doses
	Measles	31,183,578	5.6 Cz	3,116,578 doses
donation				

++ As of January 1988

2.3 Professional qualification of vaccinator.

Who is qualified to give vaccine?

Please specify.

Nurse attendants, nurse auxiliaries and health agents are specifically trained in vaccine conservation and vaccination. Training is given by registered nurses or other graduated health personnel.

Number of vaccinator

[X] sufficient [ ] not sufficient

2.4 Problems in the implementation of immunization programmes.

Please specify.

[ ] shortage of vaccine

A [X] poorly organized supporting system

[ ] lack of cold chain system

B [X] lack of support by residents

C [X] others ——— please specify

A – Lack of or poor definition of programme priorities by the states, causing difficulties for the acquisition of supplies and equipment, transportation, and for staffing (personnel).
– Work shifts of less than 8 hours, causing problems to the continuity of immunization work.
– Poor distribution of vaccination posts in some units, creating access problems in some areas and superposition of facilities in others.

B – Lack of participation of the population, particularly in the operational activities of immunization campaigns.
– Lack of immunization posts in rural areas with low populational density.
– General lack of involvement, orientation, education of the population in relation to vaccination.

C – Problems in cold chain management
Rural areas without energy
Lack of technicians for cold chain repair and upkeeping.
Improper use of equipment
Lack of training and refresher-training of personnel
Lack of cold chain supervision

2.5 Evaluation of immunization programme.

Do you evaluate immunization programme?

☐ no

☒ yes —— please describe the method for evaluation

Programme evaluation is based on two methods:

- *administrative method, evaluating the efficiency.* This administrative method is based on following and analysing the coverage rates obtained in the target groups, the strategies utilized, and the vaccine utilization rates (and control of vaccines used). It involves:
  - *follow-up and analysis of vaccine coverage rates;*
  - follow-up of the programme activities;
  - calculation of drop-out rates.

- *statistical method*
  Technical evaluation
  - evaluation of vaccine utilization;
  - evaluation of programme quality, through supervision at the local level, following actual vaccination procedures, storage, and data collection and registration.

2.6 Plan for additional immunization programme.

Do you have any plan?

☐ No

☒ Yes —— please specify

- Continuation of National Poliomyelitis Campaigns (twice yearly)
- Continuation of Additional Regional Poliomyelitis Campaign in the Northeast (one additional day yearly)
- Poliomyelitis blockage vaccinations
- Intensification of vaccination in the rural areas of some states, with problems of difficult access, working in cooperation with other health sector institutions (SUCAM, FSESP, others)

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 targets for the immunization programme are set after calculations by the programme coordination at the state level, as well as by the coordination team at the national level.

Targets are set for all children under 1 year of age, residual population in the 1–4 year-old group who did not receive vaccination in previous years, and population of pregnant women.

The populations used for calculations are those of the 1980 National Census, adjusted for growth during the intercensus period.

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)
Measles (Biken CAM 70)	Tissue culture in chick embryo fibroblasts	Biomanguinhos	Between 10–20 million doses/year, depending on need	Yes
DPT	D + T toxoids – solid medium P – fermentation	Inst. Butantan	App. 3 million doses/yr	No
BCG (strain Moreau Rio de Janeiro)	Standard	F. Ataulfo de Paiva Butantan	App. 12–14 million/yr	Yes
Tetanus Toxoid	Solid medium (B) Fermentation (IVB)	Butantan Inst. Vital Brasil	App. 5 million	No
Yellow Fever	Culture in embryonated chicken eggs	Biomanguinhos	Over 20 million doses/yr	Yes
Rabies	Brains of Lactating Mice	Butantan, Inst. Vital Brasil, Tecpar, Inst. Pesq. Biolog.	App. 3 million doses/yr	Yes
Typhoid fever	Fermentation	Biomanguinhos	App. 100 th. doses/yr	Yes
Cholera	Fermentation	Biomanguinhos	App. 50 th. doses/year	Yes
Meningitis A–C	purified polisaccaryde	Biomanguinhos	App. 3 million doses/yr	Yes

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
Measles	JICA	82–86	Technology Transfer

☐ 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
Acellular Pertussis	Technical Cooperation or Technology Transfer
Poliomyelitis	Technology Transfer
Hepatitis B	Technical Cooperation
Meningitis B (meningococcal)	Technical Cooperation for Development

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
All vaccines are controlled by the INCQS – Instituto Nacional de Controle de Qualidade em Saúde. This institute uses PAHO reference laboratories for external control of quality. This control has been carried out by: – consultancies and evaluation of INCQS in loco; – exchange of samples for confirmation of testing; – trainment or update of personnel in the reference laboratories. The laboratories used as resources for the different vaccines are PAHO's reference laboratories in the areas, and are: BCG – Seruminstitut (Copenhagen) and Cepanzo (Buenos Aires) Rabies – Cepanzo(Buenos Aires) Viral Vaccines – Mexican Virology Laboratory (Mexico) and NIH (USA) Other vaccines – PAHO's reference laboratories			

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

Yellow Fever – change to cellular growth

Pertussis – studies for development of acellular vaccines

DT – Purification of antigens and toxins for improving toxoid production

– development for production in cellular growth

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

The Programme of National Autosufficiency in Immunobiological Products, started on the second semester of 1985, is a plan of investment in the physical, structural, technological and managerial modernization of all the Brazilian laboratories involved in vaccine and sera production, in order to make the Brazilian official immunization programmes independent from importation of immunobiological products.

Eight laboratories involved in production and one reference laboratory for quality control make up the plan. These are: Inst. Butantan, Inst. Vital Brazil, Inst. de Tecnologia em Imunobiológicos – Biomanguinhos, Inst. de Tecnologia do Paraná (TECPAR), Ins. de Pesquisas Biológicas, Fundação Ezequiel Dias, Fundação Ataulpho de Paiva, Indústria Química do Estado de Goiás, e Instituto Nacional de Controle de Qualidade em Saúde.

The target for attaining autosufficiency is 1991; strategies for it include the definition of quotas for each participating laboratory, and support to their technological development, with national production norms and standards.

The Federal Government has so far invested Cz$ 1,271,456,421.00 (non-adjusted values) in the Plan.

3.7 Distribution system (logistic system) for vaccine.

Please describe the system.

Each lot of vaccines (imported or manufactured in Brazil) is analized in the National Control Laboratory (INCQS) before distribution. There is a national center for vaccine storage and shipment (CENADE) in Rio de Janeiro. Vaccine supply is carried out according to annual plans established by national and state coordinators of EPI. Coverage assessment is routinely available at the national level, on the basis of a monthly report sent by each State. National coordination of EPI provides technical assistance on operational activities, including organization of mass campaigns and monitoring of the cold chain. An important project of social communication for EPI is presently under way.

Appendix

Questionnaire on General Health Indicators

1. Indicators

	Year	Data	
1) Health manpower		Number	Ratio per 10000
Physicians			
Medical assistants			
Professional Nursing/Midwifery Personnel			

2) Ten leading causes of morbidity (ICD code)		No. of Cases	Ratio per 100000
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

3) Ten leading causes of mortality (ICD code)		Year	No. of Deaths	Ratio per 100000
1	DOENÇA CÉREBRO-VASCULAR	1985	73.209	81,1
2	NEOPLASMAS MALIGNOS	1985	69.819	77,3
3	DOENÇA ISQUÊMICA DO CORAÇÃO	1985	62.108	68,8
4	DOENÇA DA CIRCULAÇÃO PULMONAR E OUTRAS FORMAS DE DOENÇAS DO CORAÇÃO	1985	52.747	58,4
5	CAUSAS PERINATAIS	1985	46.027	51,0
6	INFECÇÕES RESPIRATÓRIAS AGUDAS	1985	33.891	37,5
7	ACIDENTES TRÂNSITO VEÍCULO A MOTOR	1985	24.299	26,9
8	OUTROS ACIDENTES	1985	23.889	26,5
9	DOENÇAS INFECCIOSAS INTESTINAIS	1985	23.362	25,9
10	HOMICÍDIOS	1985	19.748	21,9

4) Cases and deaths for six diseases under the WHO-EPI	Year	Cases /87	Deaths /85
Diphtheria		1,282	318
Pertussis		16,901	177
Tetanus		2,311	1.239
Poliomyelitis		237	36
Tuberculosis		81,826	6.792
Measles		65,996	1.477

5) *Hospitals and other medical establishments with beds*

Category of establishments	Number	Beds	Admissions	Discharges

2. Registry system for morbidity and mortality.

Please describe the system.

The reporting system starts at the municipio level, where information is collected at the health centers and transfered on a weekly basis to the regional and state levels. The State Health Secretariats send weekly reports to the Ministry of Health (SNABS), which is in charge of analysis and dissemination of data through the National Epidemiological Bulletin (BNE) published monthly.

The mortality system is based on the records of Death Certificates, collected by the State Health Secretariats from the local Register Offices. The basic cause of death is coded according to the International Cassification of Diseases (ICD-9). Data are computorized at the Ministry of Health and published in the Mortality Year Book. Special tabulations can be provided according to a number of variables.

Ministry of Health (MS)

National Secretariat of Special Programmes (SNPES)

National Division Sanitary Dermatology (DNDS)

JICA SURVEY MISSIONS

NOTE

The National Division of Sanitary Dermatology (DNDS), has not receive financial and technical cooperation from JICA Survey Missions, in the present administration.

Thus, we are interested, to prepare projects according to programmes, in the areas below:

Hansen's Disease Control

Bacilloscopy of Hansen's and Tuberculosis programmes – Laboratory Organization at central (state) regional and local level. States involved: 10 states with high magnitude and trend of Hansen's endemy.

Coordination: Divisão Nacional de Dermatologia Sanitária (DNDS)

(MS) Divisão Nacional de Pneumologia Sanitaria (DNPS) and Divisão Nacional de Laboratório de Saúde Pública (DNLSP)

Endemic Penfhigus Foliaceus (Fogo Selvagem)

Prospective epidemiology Studies in Center-Western region (the highest endemy in Brazil), and Paraná state endemic foccus.

Coordination: Brasilia University and Divisão Nacional de Dermatolegia Sanitaria (DNDS)

Maria Leide Wand-Del-Rey de Oliveira

Directora DNDS

GENERAL INFORMATION ABOUT

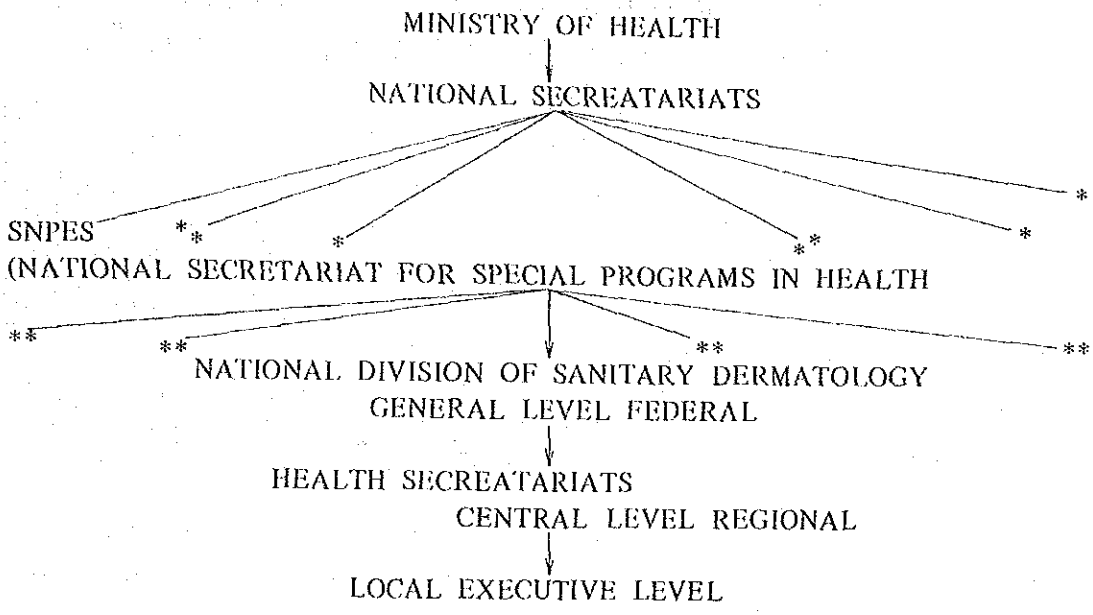
Infectious Dermatosis Disease

1. Infectious Diseases Control Programme
(including immunization programme)

Ministry of Health (MS)
National Secretariat of Special Programmes (SNPES)
National Division Sanitary Dermatology (DNDS)

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

Please outline them.



* Others National Secretariats
** Others National Divisions

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.

In the present situation Hansen's disease control is considered a priority in defferent levels of health public system in Brazil.

The recent assessment of the National Program for the control of Hansen's disease in Brazil featured as the main recommendation the restructuring of the program in question, within a framework of new guidelines, aimed at having an impact on the control of the disease, so that the present trends in the endemic might be reversed (table 1, 2 and 3).

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

An identification was made of several operational himdrances to the development of control activities and goals, laboratory diagnosis and to the qualitative and quantitative shortcomings in human resources. There are other hindrances as well, derived from the fact that the institutious have not given due priority to the Program.

The aforementioned factors, together with the magnitude and the significance of thr program at the national level (table 1) have triggered a number of initiatives on the part of the Ministry of Health through the National Secretariat for Special Programs in Health/National Division of Sanitary Dermatology-SNPES/DNDS, intended to change the current situation.

TABLE

FINANCIAL RESOURCES UTILIZED IN THE NATIONAL LEPROSY CONTROL PROGRAMME ACCORDING TO SCHEME OF TREATMENT – MDT (OMS) AND CLASSIC (DNS) – INCLUDING FINANCIAL SOURCE

BRAZIL – 1987

ORIGIN OF FINANCING	SCHEMES						GROSS TOTAL	
	CLASSICS (DNDS)			MDT (WHO)				
	CZ$	US$	%	CZ$	US$	%	CZ$	US$
PAHO–WHO	409.920,00	8,000.00	1,0	1.537.200,00	30,000.00	4,0	1.947.120,00	38,000.00
CERPHA–ALM*	–	–	–	12.275.102,00	235,652.00	36,0	12.275.102,00	235,652.00
DNDS/SNPES/MS**	47.194.801,00	921,054.00	99,0	20.222.057,00	394,654.00	60,0	67.416.858,00	1,315,708.00
TOTAL	47.604.721,00	929,054.00	100,0	34.034.359,00	660,306.00	100,0	81.639.080,00	1,589,360.00

(SOURCE) DNDS/SNPES/MS and CERPHA/ALM

* Not including financial resources directly to local project by others NGO

** Not including financial resources Health Secretaries (Local Funds)

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
HANSEN'S DISEASE	HANSEN'S DISEASE CONTROL		
MUCOCUTANEONS LEISHMANIASIS	MUCOCUTANEONS LEISHMANIASIS CONTROL		
ENDEMIC PEMPHIGUS FOLIACEOUS	ENDEMIC PEMPHIGUS FOLIACEOS CONTROL		

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

see 1.2 and 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
NATIONAL DIVISION OF SANITARY DERMATOLOGY	Dra. Maria Leide Wand-Del-Rey de Oliveira Director Dr. Gerson F.M. Pereira (epidemiologyst) Dr. Gerson O. Penna (dermatologyst) Dr. José Jorge A. Pereira (sanitaryst) Enfª Maria Bernadete Rocka Moreira Enfª Acassia Lucena Rodriguez Jonice Maria V. Ledra (planing)

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

1) Please describe the organizational chart.

see 1.1

2) Please describe the functional roles.

NATIONAL OR FEDERAL LEVEL

NATIONAL DIRETRIX, PLANNING, SUPERVISION AND EVALUATION

REGIONAL OR STATE LEVEL

REGIONAL PLANNING, PROGRAMING, SUPERVISION AND EVALUATION

LOCAL EXECUTIVE LEVEL

LOCAL PROGRAMING AND ATTENDANCE OF PATIENTS.

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

Please fill out.

NO INFORMATION

level	human resources	institutional resources	financial resources	others
national				
regional				
local				

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
MINISTRY OF HEALTH	NO INFORMATION		

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 ——— Official norms please specify them.

name of laws and regulations	contents (target disease, objective, etc)
Portaria nº 01/DNDS Normative Instructions 1987 Portaria nº 497/GM/MS comites tecnicos 1987	Official norms to management the control programmes and (local) attendance

1.9 Problems in the implementation of infectious diseases control.

Please specify, if any.

The large size of the country and the marked regional differences.

The present situation of Brazilian health system, which is undergoing a turbulent phase, because of the structural and political reforms under way.

The lack of sufficient supervision at the level of the individual units of the Federation.

The necessity of technical support for the local team.

コロンビア（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.

En Colombia la prestación de servicios de salud está organizado a través del Sistema Nacional de Salud, compuesto por el nivel central o Ministerio de Salud, 33 Servicios Seccionales de Salud y 106 hospitales regionales, 404 hospitales locales y 3.393 centros y puestos de salud.

El Ministerio fija las políticas y los organismos las adoptan y aplican de acuerdo a sus propias características. El esquema es centralización de las políticas y descentralización administrativa y operativa.

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.

Las enfermedades infecciosas han tenido la máxima prioridad en el país en los últimos seis (6) años.

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

Una de las areas de especial atención en salud es la población infantil.

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

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

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

Please specify the names.

name of division	name of personnel in charge

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

1) Please describe the organizational chart.

2) Please describe the functional roles.

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	SUFICIENTE	1	US$ 2.885.000	
regional	SUFICIENTE	106		
local	SUFICIENTE	3.797		

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

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)
Resolución No. 011509 de Diciembre 14 de 1978	Por la cual se crea el Comité de Vacunación al niño.
Resolución No. 7094 de Agosto 28 de 1979	Por la cual se dicta una norma sobre vacunación.

1.9 Problems in the implementation of infectious diseases control.

Please specify, if any.

Dificultades en:

a). Comunicaciones con el nivel operativo y administrative seccional.

b). Procesamiento y análisis de los dátos en el nivel seccional, que impiden la toma rápida de acciones correctivas.

c). Transporte para asesoría y supervisión.

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 1987	expected year of expiration 1988	contents	funds	
					foreign US$	national
OPS/OMS	– Eda – Ira – Inmunizaciones – Vigilancia Epidemiológica – TBC, Lepra, ETS				44.100 17.000 25.000 59.000 29.300	

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	

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	SARAMPION	2.818.000	US$ 0.13	
	B.C.G.	1.574.000	0.0988	
	T.T.	4.378.000	0.026	
	D.P.T.	4.600.000	0.0312	
domestic production	B.C.G.	170.000	US$ 0.0988	
	D.P.T.	510.000	0.0312	
	T.T.	486.000	0.026	
donation	POLIO	12.264.322	US$ 0.0442	

2.3 Professional qualification of vaccinator.

Who is qualified to give vaccine?

Please specify.

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

2.5 *Evaluation of immunization programme.*

Do you evaluate immunization programme?

☐ no

☒ yes ——— please describe the method for evaluation

Según informes suministrados por todas las Instituciones del país que se consolidan posteriormente.

Se analizan aspectos como: dosis aplicadas por biológico, coberturas, esquemas de vacunación, observación de normas, vigilancia epidemiológica, cadena de frío, administración.

2.6 Plan for additional immunization programme.

Do you have any plan?

☒ No

☐ Yes ——— please specify

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.

División de Información del Ministerio de Salud.

Se entregó documento in extenso a la Misión, sobre este capítulo, preparado por el Instituto Nacional de Salud (INS).

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.

Appendix

Questionnaire on General Health Indicators

1. Indicators

	Year	Data	
1) Health manpower		Number	Ratio per 10000
Physicians	1985	23.500	8.4
Medical assistants			
Professional Nursing/Midwifery Personnel		6.500	2.3

2) Ten leading causes of morbidity (ICD code)		No. of Cases	Ratio per 100000
1 Parto Normal	1986	337.314	1205.7
2 Embarazo terminado en aborto		61.587	220.1
3 Complicaciones del parto		57.940	207.1
4 Complicaciones en el embarazo		49.602	177.3
5 Asistencia del Embarazo		47.103	168.3
6 Enteritis y otras enf. diarreicas		40.976	146.5
7 Otras enfermedades org. genitales		40.372	144.3
8 Neumonias		40.308	144.1
9 Signos y sintom. estados morbosos mal definidos.		32.303	115.5
10 Hernia cavidad abdominal		30.489	108.9

3) Ten leading causes of mortality (ICD code)		No. of Deaths	Ratio per 100000
1 Homicidios	1986	14.291	51.0
2 Infarto agudo miocardio		11.930	42.6
3 Otras enfermedades del corazón		10.779	38.5
4 Enfermedades cerebro-vasculares		10.353	37.0
5 Sign y síntom. estado morboso mal definido.		6.118	21.9
6 Tumor maligno localizados		5.617	20.1
7 Neumonias		4.930	17.6
8 Accidentes vehículos motor		4.112	14.7
9 Enfermedades hipertensivas		3.791	13.6
10 Enteritis y otras enferm. diarreic		2.103	7.5

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

5) Hospitals and other medical establishments with beds

Category of establishments	Number	Beds	Admissions	Discharges

2. Registry system for morbidity and mortality.

Please describe the system.