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Ministry of Public Health

Five-Year Plan of the National Immunization Program

Cuba: 2007-2011

Executive Summary

The National Immunization Program was established in 1962, based on the principles of integration of primary healthcare, active community participation involving the entire population and the absence of charges of any kind. Its benefits to public health have been very significant, including: the eradication of five vaccination-preventable diseases (poliomyelitis, diphtheria, measles, rubella and whooping cough); the elimination of two clinical presentations (tuberculous meningitis in infants under 1 year and neonatal tetanus).

Tetanus and meningitis caused by *Haemophilus influenzae type b* are no longer a health problem, with rates below 0.1 per 100,000 habitants.

Other diseases such as hepatitis B, typhoid fever, meningococcal disease, and parotiditis have had a reduction in their morbidity and mortality by over 95%.

Since the establishment of the National Immunization Program in 1962, the program has been funded entirely by the government. PAHO/WHO support for the immunization program has been enjoyed since the early 1980s, in the forms of technical advice, international evaluations, cross-border exchange of information, access to the Revolving Fund for Immunization, donations of cold chain equipment, etc. This cooperation has been maintained to date. In 1993 Cuba sought UNICEF aid in respect of donations of MMR, DPT, Dt and BCG vaccines, involving average annual financing of 240,000 US dollars. During the period 1994-2000, the Mexican Rotary Club donated oral polio vaccine at an annual cost of 120,000 US dollars.

Funding by the Cuban government has averaged 99% (approximately 16 million US dollars) over the years; external cooperation has represented 1% (157,000 US dollars), provided mainly by UNICEF and PAHO/WHO.

The Five-year Plan of the NIP for 2007-2011 is based on a situation analysis of the program, together with recommendations of the Technical Advisory Group (TAG) on vaccine-preventable diseases for the Americas and the Conclusions and Recommendations of the International Evaluation of the National Immunization Program conducted in November and December of 2004. Medium-term objectives, targets and approaches have been defined for 12 components: political priority and legal basis; organization and coordination; vaccines, syringes and other supplies; cold chain; execution; training; epidemiologic surveillance; vaccination safety; mass communication; supervision and evaluation; and research.

The Plan reflects the national commitment to maintaining the progress achieved and incorporating new vaccines and technologies to ensure protection of the community. It is a tool for directing and managing domestic and external funding, and represents continued efforts by the people and government of Cuba to ensure fulfilment of its objectives and maintain its financial sustainability.

Introduction

Since 1984, primary healthcare was strengthened through family physician and nurses which guarantee coverage of 100% of the population's medical services. The program's 5-year action plan, reproduced below, has been drawn up on the basis of the situation analysis of the NIP and the recommendations of the international evaluation carried out in the last quarter of 2004. The plan defines the objectives, targets, main strategic approaches, activities, expected results and proposals for funding by government and the external cooperation agencies.

Overall aim

Ensure eradication or control of the vaccination-preventable diseases covered by the national vaccination schedule.

Specific objectives

1. Maintain elimination of poliomyelitis, measles, rubella, diphtheria, whooping cough and neonatal tetanus.
2. Maintain the incidence of tetanus to below 0.1 per 100,000 habitants.
3. Maintain the reduction in morbidity and mortality due to *Haemophilus influenzae type b* and hepatitis B in 95%.
4. Guarantee that 100% of vaccinations comply with correct injection safety practices.
5. Guarantee that all vaccines used in the National Immunization Program are of the required quality.
6. Strengthen the cold chain to ensure correct vaccine preservation.
7. Strengthen the epidemiological surveillance of vaccine-preventable diseases.

Targets

1. Annual overage exceeding 95% in all municipalities for all vaccines in the national vaccination schedule.
2. By 2007, guarantee the use of auto-disable syringes for all vaccinations of the national immunization schedule to infants less than 2 years old, and for all the population by 2008.
3. Optimal operation of the cold chain in eastern Cuba through provision of refrigeration equipment.
4. Achievement of over 80% of the international surveillance indicators for diseases in the process of elimination and eradication.

Baseline and Annual Targets

Number		Baseline and targets						
		2005	2006	2007	2008	2009	2010	2011
Births		120, 587	112,000	110,000	113,000	115,000	118,000	120,000
Infants' deaths		746	627	605	655	655	649	660
Surviving infants		119,970	111,373	109,395	112,345	114,345	117,351	119,340
Pregnant women		120, 587	112,000	110,000	113,000	115,000	118000	120,000
Infants vaccinated with BCG		119,269	110,880	108,900	111,870	113,850	116,820	118,800
BCG coverage*		99	99	99	99	99	99	99
Infants vaccinated with OPV3		127,081	109,145	107,207	110,098	112,058	115,002	116,953
OPV3 coverage**		100	98	98	98	98	98	98
Infants vaccinated with (DTP3 in 2005) Pentavalent3***		101,185	106,918	105,019	107,851	109,771	112,656	114,566
(DTP3 in 2005) Pentavalent3 coverage**		143 ¹	96	96	96	96	96	96
Infants vaccinated with DTP1***		44,425	109,145	107,217	110,098	112,058	115,003	116,953
Wastage rate in base-year and planned thereafter		21	25	25	25	25	25	25
Infants vaccinated with Measles		124,787	109,145	107,207	110,098	112,058	115,003	116,953
Measles coverage**		98	98	98	98	98	98	98
Pregnant women vaccinated with TT+		120, 587	112,000	110,000	113,000	115,000	118,000	120,000
TT+ coverage****		100	100	100	100	100	100	100
Vit A supplement	Mothers (<6 weeks from delivery)	Not applicable						
	Infants (>6 months)	Not applicable						

¹ In 2004, due to DTP vaccine shortage, its coverage rate was 89%, while it was 100% for HepB. Children under 1 year of age with a pending dose from 2004 were vaccinated during the first months of 2005; therefore, the coverage for DTP3 was greater than that of HepB3 for that year. Tetravalent DTP-HepB vaccine was introduced in March 2005 for vaccination of children born from January 2005 on; DTP and HepB vaccines were still used for children born in 2004. In the 2005 JRF, the number of children reported as vaccinated with DTP3 correspond to the first 6 months of the year (January-June), while the number reported for Hib3 corresponds to children born in a 12-month period (July 2004 – June 2005). Hence, in 2005, the vaccination figures for Hib vaccine are double those reported for DTP-HepB.

Current Vaccination Schedule: Traditional, New Vaccines and Vitamin A Supplement

Vaccine <i>(do not use trade name)</i>	Ages of administration <i>(by routine immunization services)</i>	Indicate by an "x" if given in:		Comments
		Entire country	Only part of the country	
BCG	At birth	X		
HepB	At birth	X		
DTP + HepB + Hib	2, 4, and 6 months	X		Introduction date: 01September2006
AM-BC	3 and 5 months	X		Anti-meningococcus serotypes B and C
MMR	12 months and 6 years	X		
DPT-R	18 months	X		Pending results of reactivation studies for pentavalent vaccine at 18 months, to be completed in 2006.
Hib-R	18 months	X		Pending results of reactivation studies for pentavalent vaccine at 18 months, to be completed in 2006.
Polio	Less than 1 year, 1 year, 2 years, 9 years	X		
DT	6 years	X		
AT(Vi)	13 years	X		Anti-typhoid (polysaccharide Vi)
TT-R	14 years From 15-55 years: every 10 years From 60 years: every 5 years	X		

Strategic guidelines within the program's main components, for the period 2006-2011

Political priority & legal basis

- Approval, dissemination, and implementation of the national regulations for management of hazardous wastes at health service establishments.
- Updating of the Norms of the National Immunization Program

Organization & coordination

- Functioning of the Inter-Agency Coordination Committee (ICC) of the National Immunization Program.

Vaccines, logistics and inputs

- Incorporation of new vaccines into the national schedule, including those against *Streptococcus pneumoniae* and rotavirus.
- Replacement of the Tetanus Toxoid Vaccine (TT) vaccine with the Tetanus & Diphtheria (Td) Vaccine
- Replacement of reusable syringes with autodisable for the administration of vaccines under the national schedule.

Cold chain

- Strengthening of the national cold chain, emphasizing equipment of polyclinics and hospitals of three eastern provinces.
- Continuous updating of the national cold chain inventory.

Execution

- Strengthening of the regular vaccination activities in public health establishments and in schools.

Training

- Training of healthcare personnel in updated norms of the National Immunization Program, including injection safety practices
- Integration of a “safe vaccination” component in the curricula of healthcare personnel training centers.

Epidemiological surveillance

- Maintenance of active epidemiological surveillance of vaccine-preventable diseases and adverse events attributable to vaccination.
- Carry out disease burden analyses for vaccination-preventable diseases for which safe and effective vaccines are available.
- Strengthen the information network of the National Immunization Program at the central, provincial, and municipal levels.

Vaccination Safety

- Guarantee procurement of high quality vaccines.
- Implementation of a national injection safety plan.

Mass communication

- Strengthening of the process of information, communication, and education in immunizations for healthcare personnel and the population in general.

Supervision & evaluation

- Maintenance of periodical supervisions at all levels of the National Immunization Program.
- Semi-annual evaluations of all components of the National Immunization Program at national level.

Research

- Dissemination and publication national research related to immunization.

Activities, Expected Results and Financing

- The activity plan is reproduced below.

Summary of current and future immunization program budget

	Estimated costs per year (US\$)					
Budget chapter	2006	2007	2008	2009	2010	2011
Political priority and legal basis	1,000	1,200	1,400	1,600	1,300	1,550
Organization and Coordination	340	380	400	450	500	600
Programming	4,000	4,500	4,700	5,000	5,300	5,100
Vaccines and supplies	11,691,939	11,193,979	11,199,339	11,201,339	11,579,400	12,125,400
Cold chain	10,000	117,905	127,905	132,905	142,905	77,745
Execution	5,375,160	5,656,418	5,938,614	6,234,920	5,392,620	6,285,000
Training	12,000	44,375	46,875	49,875	80,875	95,900
Epidemiological Surveillance	68,000	129,545	131,545	132,545	139,545	237,013
Vaccination Safety	180,500	142,750	147,750	170,000	198,000	170,000
Social Mobilization	144,110	153,320	160,900	168,828	140,000	80,000
Supervision and Evaluation	26,940	119,548	120,948	122,348	146,548	79,258
Investigation	14,000	12,000	17,000	17,000	0	0
Grand Total	17,527,989	17,575,920	17,897,376	18,236,810	17,826,993	19,157,566

Financial Summary According to Funding Source

		Financing per Year (US\$)					
Component	Source	2006	2007	2008	2009	2010	2011
Political priority and legal basis	MINSAP	1,000	1,200	1,400	1,600	1,300	1,550
Organization and Coordination	MINSAP	340	380	400	450	500	600
Programming	MINSAP	4,000	4,500	4,700	5,000	5,300	5,100
Vaccines and supplies	MINSAP	11,559,339	11,059,339	11,059,339	11,059,339	11,419,400	11,985,400
	UNICEF	132,600	134,640	140,000	142,000	160,000	140,000
Cold chain	MINSAP	10,000	15,000	25,000	30,000	40,000	20,000
	GAVI	0	102,905	102,905	102,905	102,905	57,745
Execution	MINSAP	5,375,160	5,643,918	5,926,114	6,222,420	5,380,120	6,285,000
	GAVI	0	12,500	12,500	12,500	12,500	0
Training	MINSAP	3,000	4,500	5,000	6,000	43,000	45,000
	PAHO	6,000	6,000	8,000	10,000	4,000	3,000
	UNICEF	3,000	3,000	3,000	3,000	3,000	4,000
	GAVI	0	30,875	30,875	30,875	30,875	43,900
Epidemiological Surveillance	MINSAP	64,000	66,000	67,000	68,000	80,000	78,000
	PAHO	4,000	4,000	5,000	5,000	0	0
	GAVI	0	59,545	59,545	59,545	59,545	159,013
Vaccination Safety	MINSAP	10,000	10,000	15,000	170,000	198,000	170,000
	GAVI ²	170,500	132,750	132,750	0	0	0
Social Mobilization	MINSAP	144,110	151,320	158,900	166,828	140,000	80,000
	UNICEF	0	2,000	2,000	2,000	0	0
	GAVI	0	0	0	0	0	0
Supervision and Evaluation	MINSAP	23,940	25,000	26,400	27,800	55,000	40,000
	PAHO	3,000	3,000	3,000	3,000	0	0
	UNICEF	0	0	0	0	0	0
	GAVI	0	91,548	91,548	91,548	91,548	39,258
Investigation	MINSAP	12,000	10,000	15,000	15,000	0	0
	PAHO	2,000	2,000	2,000	2,000	0	0
TOTAL INVESTMENT BY GOVERNMENT		17,206,889	16,991,157	17,304,253	17,617,437	17,362,620	18,710,650
GRAND TOTAL		17,527,989	17,575,920	17,897,376	18,236,810	17,826,993	19,157,566

² Pending 2006 GAVI INS DL.

**National Immunization Program (NIP):
Five-year Action Plan by Component, 2007**

Component: 01 Political priority & legal bases

Activity	Expected result	Period				Responsibility	TOTAL COST \$US	Total national financing		External sources			Total external funding	%
		I	II	III	IV			Govt.	%	UNICE F	PAHO	GAVI		
1. Sustain actions that ensure political priority for the program in every community	Maintain program achievements and introduce new vaccines to protect the population	X	X	X	X	Ministry of Public Health								
2. Promulgate ministerial resolution on hazardous waste regulations	Ministerial decree issued		X	X		Health Minister	500	500	100					
3. Dissemination of the regulations on management of hazardous solid waste at health service establishments	Phased application of the regulations by the establishments			X		Vice-Minister of Hygiene & Epidemiology	700	700	100					
SUBTOTAL							1,200	1,200	100					

**National Immunization Program (NIP):
Five-year Action Plan by Component, 2007**

Component: 02 Organization & Coordination

Activity	Expected result	Period				Responsibility	TOTAL COST \$ US	Total national financing		External sources			Total external funding	%
		I	II	III	IV			Govt.	%	UNICEF	PAHO	GAVI		
1. Continue with coordination meetings between the program and primary care at all levels	Maintain the integration of the program with primary healthcare	X	X	X	X	Hygiene & Epidemiology Authority, NIP & primary care	0	0	0					
2. Hold three meetings of the Inter-Agency Coordination Committee (ICC)	Maintain links with cooperating bodies to identify potential program support	X	X		X	Head of NIP	380	380	100					
Subtotal							380	380	100					

**National Immunization Program (NIP):
Five-year Action Plan by Component, 2007**

Component: 03 Programming

Activity	Expected result	Period				Responsibility	TOTAL COST \$US	Total national financing		External sources			Total external funding	%
		I	II	III	IV			Govt.	%	UNICEF	PAHO	GAVI		
1. Annual drafting & management of the NIP action plan	Annual plans based on review of program status	X			X	Program, provincial & municipal team	1,500	1,500	100					
2. Definition of goals for the program's target population at all levels	Monthly monitoring of immunization target population at national level	X			X	Program, provincial & municipal team	3,000	3,000	100					
Subtotal							4,500	4,500	100					

**National Immunization Program (NIP):
Five-year Action Plan by Component, 2007**

Component: 04 Vaccines, syringes and supplies

Activity	Expected result	Period				Responsibility	TOTAL COST \$US	Total national financing		External sources			Total external funding	%
		I	II	III	IV			Govt.	%	UNICEF	PAHO	GAVI		
1. Annual purchasing of vaccines under the NIP	Supply of national Program vaccines to polyclinics & hospitals providing vaccination service	X	X	X	X	Office of the Deputy Minister for Economy; Head of NIP	11,069,979	10,935,339	99	134,640			134,640	1
2. Purchase of auto-disable syringes for basic-schedule vaccinations and sharps containers for elimination of these	Supply of auto-disable syringes to polyclinics & hospitals providing vaccination service	X	X	X	X	Medical supplies firm See Injection Safety	0	0	0				0	0
3. Annual purchase of 60,000 syringes & 3 million disposable needles for remaining national-schedule vaccinations not included in the GAVI proposal	Supply of disposable syringes to polyclinics & hospitals providing vaccination service	X	X	X	X	Medical supplies firm	66,000	66,000	100				0	0
4. Purchase & distribution of cotton swabs for vaccinations under the national schedule	Supply of swabs to polyclinics & hospitals providing vaccination service	X	X	X	X	Farmacuba	10,000	10,000	100				0	0
5. Quarterly national distribution of vaccine, syringes, sharps containers & consumables	Polyclinics & hospitals providing basic-schedule vaccination service	X	X	X	X	Farmacuba	8,000	8,000	100				0	0
6. Purchase & distribution of NIP system stationery (ID card, 18-30 Form pads)	NIP information system functional at all levels	X	X	X	X	Statistics Authority	34,000	34,000	100				0	0
Subtotal							11,187,979	11,053,339	99	134,640	0	0	134,640	1

**National Immunization Program (NIP):
Five-year Action Plan by Component, 2007**

Component: 05 Cold chain

Activity	Expected result	Period				Responsibility	TOTAL COST \$US	Total national financing		External sources			Total external funding	%
		I	II	III	IV			Govt.	%	UNICEF	PAHO	GAVI		
1. Annual updating of cold chain inventory	Management decision-making on the basis of needs & status of cold chain	X	X	X	X	NIP managers at national, provincial, municipal & health area levels	117,905	15,000	13			102,905	102,905	87
2. Purchase of 200 electric refrigerators for polyclinics participating in national refurbishment scheme	Polyclinics administering properly-conserved vaccines	X	X	X	X	Deputy Minister in charge of the Revolution's Programs	0		0				0	0
Subtotal							117,905	15,000	13	0	0	102,905	102,905	87

**National Immunization Program (NIP):
Five-year Action Plan by Component, 2007**

Component: 06 Execution

Activity	Expected result	Period				Responsibility	TOTAL COST \$US	Total national financing		External sources			Total external funding	%
		I	II	III	IV			Govt.	%	UNICEF	PAHO	GAVI		
1. Stable vaccination service provision at 444 polyclinics & 90 hospitals	Coverage >95% for all vaccines under the national scheme	X	X	X	X	NIP, teams at provincial and municipal, levels	2,447,118	2,447,118	100					
2. Stable vaccination service at schools nation-wide	Coverage >95% for all vaccines under the national scheme	X	X	X	X	NIP, teams at provincial and municipal levels	2,920,200	2,920,200	100					
3. Two anti-polio vaccination campaigns per year	Polio vaccination coverage >95% of infants under 1 yr.	X	X			NIP, teams at provincial and municipal level	276,600	276,600	100					
4. GAVI-HSS execution		X	X	X	X	PNI	12,500		0			12,500	12,500	100
Subtotal							5,656,418	5,643,918	100	0	0	12,500	12,500	0

**National Immunization Program (NIP):
Five-year Action Plan by Component, 2007**

Component: 07 Training

Activity	Expected result	Period				Responsibility	TOTAL L COST \$US	Total national financing		External sources			Total external funding	%
		I	II	III	IV			Govt.	%	UNICEF	PAHO	GAVI		
1. Holding of 3 training workshops for health service personnel on current NIP standards including Injection Safety	Health service personnel applying current NIP standards		X	X	X	NIP managers at national, provincial, municipal & health area levels	10,700	3,700	35	3,000	4,000		7,000	65
2. Inclusion of 'safe vaccination' in curricula of medical schools	Health service personnel graduating from medical schools who apply 'safe vaccination' standards		X	X	X	Teaching & nursing HQs	300	300	100				0	0
3. Drafting of regulation guidelines for safe vaccination, highlighting injection safety	Safe vaccination guidelines included in current NIP standards		X			Head of NIP	500	500	100				0	0
4. Printing of current NIP standards	4,000 copies of NIP standards printed & distributed		X			Head of NIP	2,000		0		2,000		2,000	100
5. Participation of NIP personnel at international forums	International recommendations implemented		X			Heads of NIP & Head of Surveillance	30,875		0			30,875	30,875	100
Subtotal							44,375	4,500	10	3,000	6,000	30,875	39,875	90

**National Immunization Program (NIP):
Five-year Action Plan by Component, 2007**

Component: 08 Epidemiological surveillance

Activity	Expected result	Period				Responsibility	TOTAL COST \$US	Total national financing		External sources			Total external funding	%
		I	II	III	IV			Govt.	%	UNICEF	PAHO	GAVI		
1. Enhance the NIP information network at central & provincial level	Prompt analysis of surveillance of vaccination-preventable diseases, supported by computerized systems	X	X	X	X	Head of NIP, and VPD Surveillance of the NIP	61,545	2,000	3			59,545	59,545	97
2. Follow-up on project to determine incidence of disease caused by pneumococcus or rotavirus, submitted to PAHO	Project approved	X	X	X	X	National Epidemiology coordinator for the Maternal and Child Program	0		0				0	0
3. Maintain active surveillance of vaccination-preventable diseases	>80% achievement of corresponding national & international indicators of VPD	X	X	X	X	NIP, Epidemiology lab. at national, provincial, municipal & clinic level	32,000	32,000	100				0	0
4. Purchase of reagents & materials for processing polio, measles, rubella and parotids specimens	Control of internal & external quality of specimens from cases of vaccine-preventable disease	X	X	X	X	Pedro Kourí Institute Laboratory of reference for vaccine-preventable diseases	36,000	32,000	89		4,000		4,000	11
Subtotal							129,545	66,000	51	0	4,000	59,545	63,545	49

**National Immunization Program (NIP):
Five-year Action Plan by Component, 2007**

Component: 09 Safe Vaccination

Activity	Expected result	Period				Responsibility	TOTAL COST \$US	Total national financing		External sources			Total external funding	%
		I	II	III	IV			Govt.	%	UNICEF	PAHO	GAVI		
1. Preparation of draft budget for phased replacement of disposable syringes for use with the rest of the NIP vaccines	Proposal reviewed and incorporated in the budget for 2006		X			Deputy Minister of Hygiene & Epidemiology & Head of NIP	1,000	1,000	100				0	0
2. Refurbishment of vaccination points at polyclinics & hospitals providing vaccination services as part of the relevant project of the Revolution (equipment and furnishings)	Polyclinics & hospitals that provide vaccination service compliant with bio-safety standards	X	X	X	X	Deputy Minister in charge of the Revolution's Programs	7,000	7,000	100				0	0
3. National publication of the Injection Safety Plan	Head of national, provincial, municipal & clinic NIP	X	X	X	X	Head of NIP	2,000	2,000	100				0	0
4. Purchase of auto-disable syringes for basic-schedule vaccinations and sharps containers for elimination of these	Supply of auto-disable syringes to polyclinics & hospitals providing vaccination service	X	X	X	X	Head of NIP	138,750	6,000	4			132,750	132,750	96
Subtotal							148,750	16,000	11	0	0	132,750	132,750	89

**National Immunization Program (NIP):
Five-year Action Plan by Component, 2007**

Component: 10 Mass communication

Activity	Expected result	Period				Responsibility	TOTAL COST \$US	Total national financing		External sources			Total external funding	%
		I	II	III	IV			Govt.	%	UNICEF	PAHO	GAVI		
1. Intensification of information, communication & education process on vaccination aimed at health service personnel & the general public	Spontaneous public demand for vaccination	X	X	X	X	National Health Education Centre	12,000	12,000	100				0	0
2. Production of printed NIP material to support the ongoing program, covering injection safety	Educational material printed & distributed nation-wide	X	X	X	X	National Health Education Centre	58,000	56,000	97	2,000			2,000	3
3. Dissemination of educational messages via radio, TV & newspapers on the ongoing vaccination program & on campaigns	National vaccination coverage of >95%	X	X	X	X	National Health Education Centre	80,000	80,000	100				0	0
4. Design & implementation of a social communication strategy on injection safety	Health service personnel and general public informed about injection safety			X	X	National Health Education Centre	3,320	3,320	100				0	0
Subtotal							153,320	151,320	99	2,000	0	0	2,000	1

**National Immunization Program (NIP):
Five-year Action Plan by Component, 2007**

Component: 11 Supervision & evaluation

Activity	Expected result	Period				Responsibility	TOTAL COST \$ US	Total national financing		External sources			Total external funding	%
		I	II	III	IV			Govt.	%	UNICEF	PAHO	GAVI		
1. Monthly monitoring of injection safety plan indicators at all levels of the public health system	Injection safety practice applied in vaccination at all levels	X	X	X	X	Head of NIP at provincial, municipal & health area levels	30,816	300	1			30,516	30,516	99
2. Inclusion of Injection Safety in NIP supervision activity	Regular supervision of the NIP at all levels	X	X	X	X	Head of NIP at provincial, municipal & health area levels	35,516	5,000	14			30,516	30,516	86
3. Inclusion of Injection Safety in the semi-annual NIP evaluation	The NIP status determined and relevant practices aligned		X		X	Head of NIP; provincial, municipal & health area levels	53,216	19,700	37		3,000	30,516	33,516	63
Subtotal							119,548	25,000	21	0	3,000	91,548	94,548	79

**National Immunization Program (NIP):
Five-year Action Plan by Component, 2007**

Component: 12 Research

Activity	Expected result	Period				Responsibility	TOTAL COST \$ US	Total national financing		External sources			Total external funding	%
		I	II	III	IV			UNICEF	PAHO	GAVI				
											Govt.	%		
1. Study of titres of antibodies against measles, rubella and parotiditis among the population aged 1-33 yrs.	Known degree of protection of vaccinated Cuban population from measles & rubella as input to strategy		X	X	X	Health Ministry Hygiene & Epidemiology dept.; Pedro Kourí Virology lab.	10,000	10,000	100				0	0
2. Publication of results of study of IVP vaccine	International awareness of research done on IPV		X			Head of NIP	2,000		0		2,000		2,000	100
Subtotal							12,000	10,000	83	0	2,000	0	2,000	17

**National Immunization Program: Consolidated Five-year Action Plan
by Component, 2006**

COMPONENT	Total cost \$ US	Total national financing		External sources			Total external funding	%
		Govt.	%	UNICEF	PAHO	GAVI		
Political priority & legal basis	1,000	1,000	100				0	0
Organization & coordination	340	340	100				0	0
Programming	4,000	4,000	100				0	0
Vaccines & inputs	11,691,939	11,559,339	99	132,600			132,600	1
Cold chain	10,000	10,000	100				0	0
Execution	5,375,160	5,375,160	100			0	0	0
Training	12,000	3,000	25	3,000	6,000		9,000	75
Epidemiological surveillance	68,000	64,000	94		4,000		4,000	6
Safe vaccination	180,500	10,000	6			170,500	170,500	94
Mass communication	144,110	144,110	100			0	0	0
Supervision & evaluation	26,940	23,940	89		3,000		3,000	11
Research	14,000	12,000	86		2,000		2,000	14
Total	17,527,989	17,206,889	98	135,600	15,000	170,500	321,100	2

**National Immunization Program: Consolidated Five-year Action Plan
by Component, 2007**

COMPONENT	Total cost \$ US	Total national financing		External sources			Total external funding	%
		Govt.	%	UNICEF	PAHO	GAVI		
Political priority & legal basis	1,200	1,200	100				0	0
Organization & coordination	380	380	100				0	0
Programming	4,500	4,500	100				0	0
Vaccines & inputs	11,193,979	11,059,339	99	134,640			134,640	1
Cold chain	117,905	15,000	13			102,905	102,905	87
Execution	5,656,418	5,643,918	100			12,500	12,500	0
Training	44,375	4,500	10	3,000	6,000	30,875	39,875	90
Epidemiological surveillance	129,545	66,000	51		4,000	59,545	63,545	49
Safe vaccination ³	142,750	10,000	7			132,750	132,750	93
Mass communication	153,320	151,320	99	2,000			2,000	1
Supervision & evaluation	119,548	25,000	21		3,000	91,548	94,548	79
Research	12,000	10,000	83		2,000		2,000	17
Total	17,575,920	16,991,157	97	139,640	15,000	430,123	584,763	3

³ Pending 2006 GAVI DL.

**National Immunization Program: Consolidated Five-year Action Plan
by Component, 2008**

COMPONENT	Total cost \$ US	Total national financing		External sources			Total external funding	%
		Govt.	%	UNICEF	PAHO	GAVI		
Political priority & legal basis	1,400	1,400	100				0	0
Organization & coordination	400	400	100				0	0
Programming	4,700	4,700	100				0	0
Vaccines & inputs	11,199,339	11,059,339	99	140,000			140,000	1
Cold chain	127,905	25,000	20			102,905	102,905	80
Execution	5,938,614	5,926,114	100			12,500	12,500	0
Training	46,875	5,000	11	3,000	8,000	30,875	41,875	89
Epidemiological surveillance	131,545	67,000	51		5,000	59,545	64,545	49
Safe vaccination	147,750	15,000	10			132,750	132,750	90
Mass communication	160,900	158,900	99	2,000			2,000	1
Supervision & evaluation	120,948	26,400	22		3,000	91,548	94,548	78
Research	17,000	15,000	88		2,000		2,000	12
Total	17,897,376	17,304,253	97	145,000	18,000	430,123	593,123	3

**National Immunization Program: Consolidated Five-year Action Plan
by Component, 2009**

COMPONENT	Total cost \$ US	Total national financing		External sources			Total external funding	%
		Govt.	%	UNICEF	PAHO	GAVI		
Political priority & legal basis	1,600	1,600	100				0	0
Organization & coordination	450	450	100				0	0
Programming	5,000	5,000	100				0	0
Vaccines & inputs	11,201,339	11,059,339	99	142,000			142,000	1
Cold chain	132,905	30,000	23			102,905	102,905	77
Execution	6,234,920	6,222,420	100			12,500	12,500	0
Training	49,875	6,000	12	3,000	10,000	30,875	43,875	88
Epidemiological surveillance	132,545	68,000	51		5,000	59,545	64,545	49
Safe vaccination	170,000	170,000	100				0	0
Mass communication	168,828	166,828	99	2,000			2,000	1
Supervision & evaluation	122,348	27,800	23		3,000	91,548	94,548	77
Research	17,000	15,000	88		2,000		2,000	12
Total	18,236,810	17,772,437	97	147,000	20,000	297,373	464,373	3

**National Immunization Program: Consolidated Five-year Action Plan
by Component, 2010**

COMPONENT	Total cost \$ US	Total national financing		External sources			Total external funding	%
		Govt.	%	UNICEF	PAHO	GAVI		
Political priority & legal basis	1,300	1,300	100				0	0
Organization & coordination	500	500	100				0	0
Programming	5,300	5,300	100				0	0
Vaccines & inputs	11,579,400	11,419,400	99	160,000			160,000	1
Cold chain	142,905	40,000	28			102,905	102,905	72
Execution	5,392,620	5,380,120	100			12,500	12,500	0
Training	80,875	43,000	53	3,000	4,000	30,875	37,875	47
Epidemiological surveillance	139,545	80,000	57			59,545	59,545	43
Safe vaccination	198,000	198,000	100				0	0
Mass communication	140,000	140,000	100				0	0
Supervision & evaluation	146,548	55,000	38			91,548	91,548	62
Research	0	0	100				0	0
Total	17,826,993	17,362,620	97	163,000	4,000	297,373	464,373	3

**National Immunization Program: Consolidated Five-year Action Plan
by Component, 2011**

COMPONENT	Total cost \$ US	Total national financing		External sources			Total external funding	%
		Govt.	%	UNICEF	PAHO	GAVI		
Political priority & legal basis	1,550	1,550	100				0	0
Organization & coordination	600	600	100				0	0
Programming	5,100	5,100	100				0	0
Vaccines & inputs	12,125,400	11,985,400	99	140,000			140,000	1
Cold chain	77,745	20,000	26			57,745	57,745	74
Execution	6,285,000	6,285,000	100				0	0
Training	95,900	45,000	47	4,000	3,000	43,900	50,900	53
Epidemiological surveillance	237,013	78,000	33			159,013	159,013	67
Safe vaccination	170,000	170,000	100				0	0
Mass communication	80,000	80,000	100				0	0
Supervision & evaluation	79,258	40,000	50			39,258	39,258	50
Research	0	0	100				0	0
Total	19,157,566	18,710,650	98	144,000	3,000	299,916	446,916	2

**National Immunization Program:
Consolidated Five-year Action Plan,
by Component, 2007 - 2011**

Component	Financing - \$ US					
	2006	2007	2008	2009	2010	2011
Political priority & legal basis	1,000	1,200	1,400	1,600	1,300	1,550
Organization & coordination	340	380	400	450	500	600
Programming	4,000	4,500	4,700	5,000	5,300	5,100
Vaccines & inputs	11,691,939	11,193,979	11,199,339	11,201,339	11,579,400	12,125,400
Cold chain	10,000	117,905	127,905	132,905	142,905	77,745
Execution	5,375,160	5,656,418	5,938,614	6,234,920	5,392,620	6,285,000
Training	12,000	44,375	46,875	49,875	80,875	95,900
Epidemiological surveillance	68,000	129,545	131,545	132,545	139,545	237,013
Safe vaccination	180,500	142,750	147,750	170,000	198,000	170,000
Mass communication	144,110	153,320	160,900	168,828	140,000	80,000
Supervision & evaluation	26,940	119,548	120,948	122,348	146,548	79,258
Research	14,000	12,000	17,000	17,000	0	0
Total	17,527,989	17,575,920	17,897,376	18,236,810	17,826,993	19,157,566