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**PASCA**  
Programa para fortalecer la  
respuesta centroamericana al VIH



TECHNICAL REGIONAL CONSULTATION ABOUT ANTIRETROVIRAL TREATMENT  
Harmonization and efficiency

# -Planning and funding of TARV programs-

Lucía Merino

Santo Domingo, Dominican Republic  
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## CENTRAL AMERICA



- Belize - Guatemala - El Salvador -  
Nicaragua - Costa Rica - Panama –  
**Region** (including Honduras)

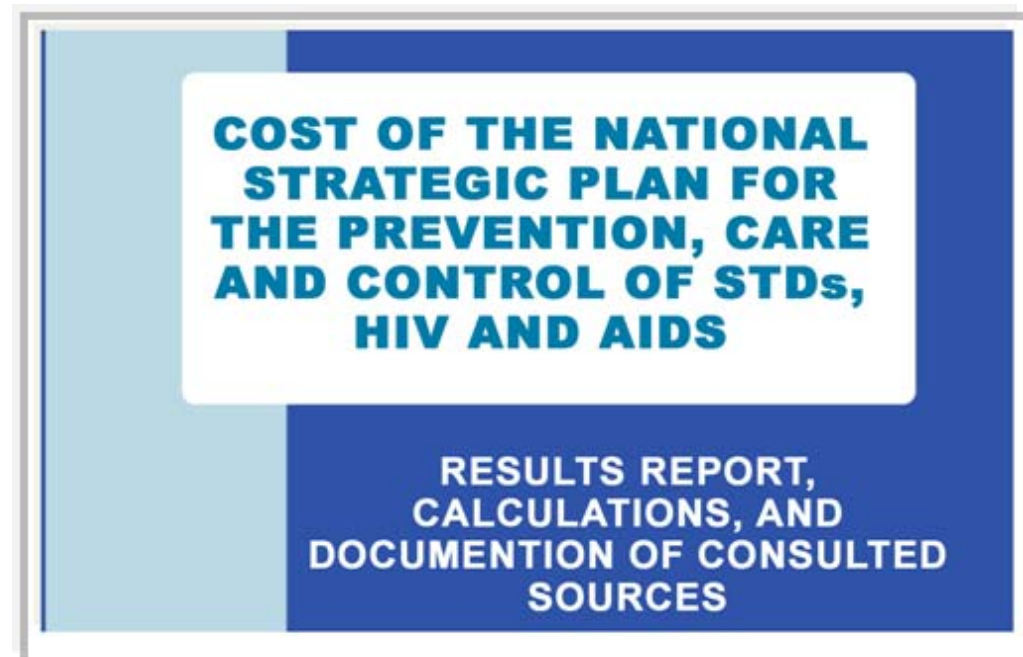
## FRAMEWORK

1. Public policies and operational policies on HIV (PEN, PER, POA, FM)
2. Monitoring and assessment of the response to HIV (information systems, M and A plans, FM)
3. Political dialogue and multisectoral participation in the response (Gov, NGO, PV, MARP, HR networks, other)
4. HIV policies in the workplace (private initiative)
5. Strategic information

# PLANNING OF RESOURCES AND FUNDING OF STRATEGIC PLANS

## Funding model to estimate the resources required (RNM or MRN)

- Estimates the total resources required to implement HIV and AIDS interventions at the national level
- Mainly used to fund the efforts of the National Strategic Plans



# FUNDING MODEL *RNM*

BASED ON A COMPREHENSIVE PLAN INCLUDING DIFFERENT INTERVENTIONS

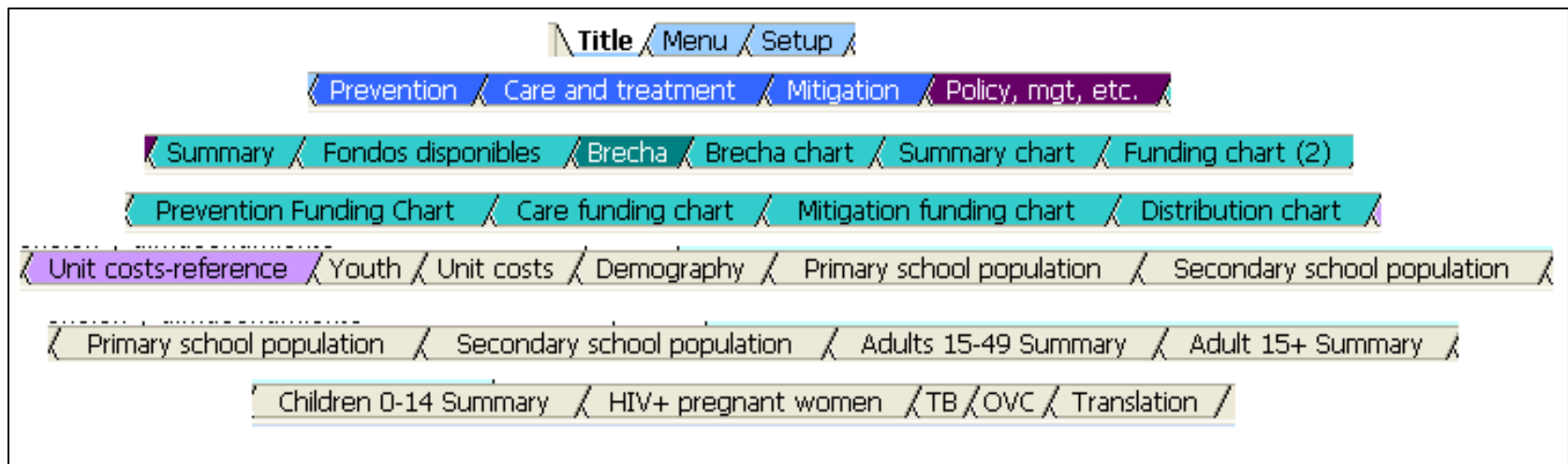
- **Prevention model**
  - Interventions focused on high risk populations
  - Interventions in the general population
  - Associated medical services
- **Model for care and treatment**
- **Mitigation model**
- **Policy and management module**

# MODEL FOR CARE AND TREATMENT

- Antiretroviral therapy (ART), including lab tests for the monitoring of ARV and treatment of opportunistic infections while on ART.
- Care and prophylaxis in the absence of ART
- HIV diagnostic tests
- Home care
- Palliative care
- Treatment for tuberculosis
- Nutritional support
- ART trainings

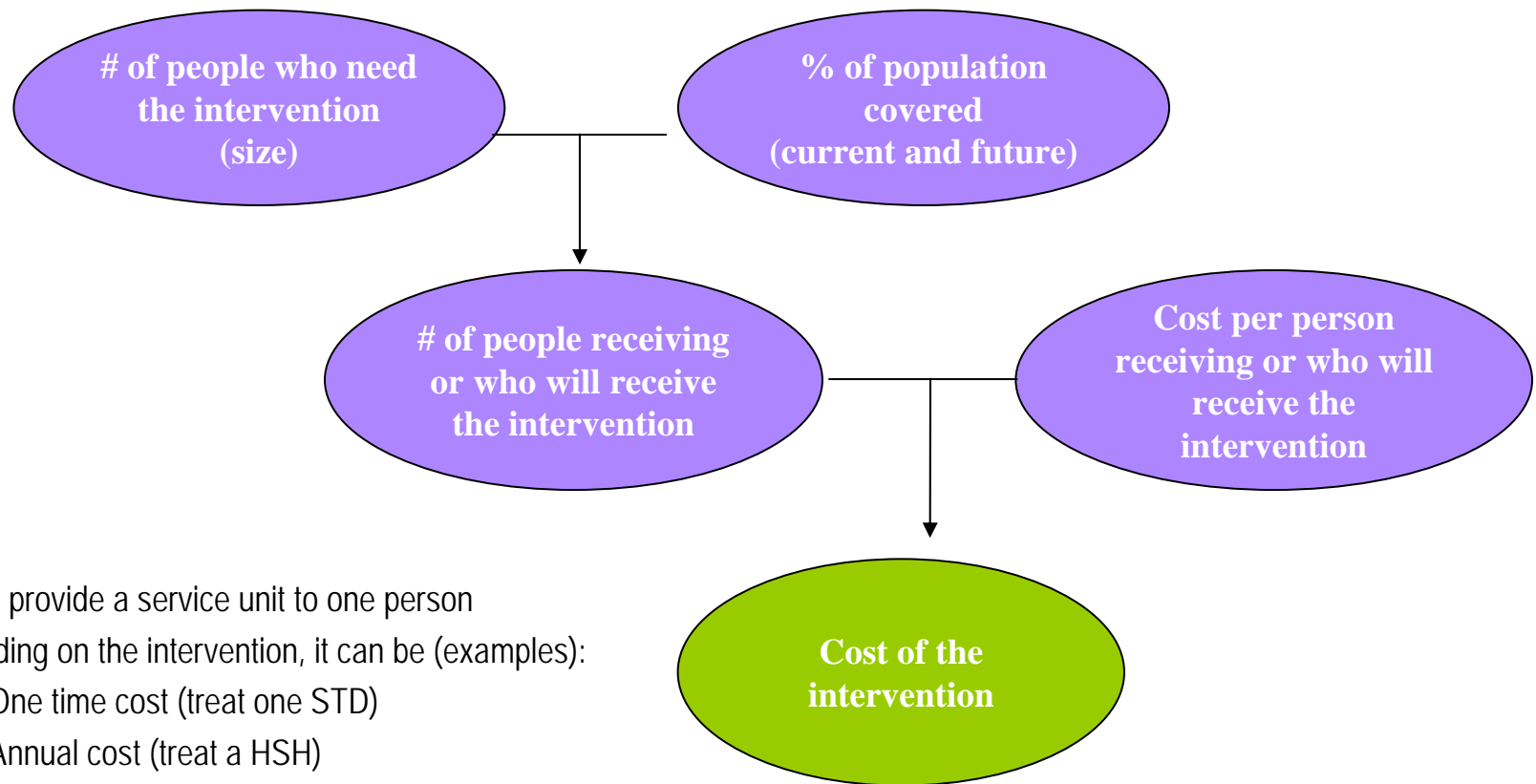
# CHARACTERISTICS OF THE FUNDING MODEL

- The model consists of a series of spreadsheets linked to each other
- There is one spreadsheet (model) for each intervention
- There are spreadsheets to enter demographic information (Spectrum) and unit costs



# OPERATION OF THE FUNDING MODEL

**For each intervention:**



- Cost to provide a service unit to one person
- Depending on the intervention, it can be (examples):
  - One time cost (treat one STD)
  - Annual cost (treat a HSH)
  - Cost that occurs periodically (train a teacher)

# PARAMETERS OF THE FUNDING MODEL

## GENERAL AND SPECIFIC

Microsoft Excel - ERM Guatemala final 5jun08

País: Guatemala  
 Idioma: Español  
 Año de inicio: 2006  
 Moneda del país: Quetzal  
 Moneda exhibida: US\$  
 Moneda del país por dólar este: 7.43

Nivel de inflación: 2006\*, 2007\*, 2008\*, 2009\*, 2010\*, 2011\*, 2012

Indicadores demográficos:

	2006*	2007*	2008*	2009*	2010*	2011*	2012	Gravh rate
Población total	13,281,000	13,578,024	13,908,340	14,239,771	14,576,000	14,912,265	15,250,888	2.4%
Población masculina de 15 a 49 años	3,108,266	3,205,205	3,295,114	3,387,892	3,478,077	3,566,000	3,654,411	2.4%
Población femenina de 15 a 49 años	3,179,830	3,288,309	3,385,807	3,484,321	3,581,386	3,678,240	3,774,894	2.4%
Población masculina de 15 a 64 años	3,886,892	3,970,469	4,057,811	4,147,811	4,240,719	4,336,619	4,435,811	
Población femenina de 15 a 64 años	3,833,889	3,948,148	4,065,980	4,188,248	4,314,489	4,444,163	4,574,111	
Indicador de desarrollo humano	0.7	0.7	0.7	0.7	0.7	0.7	0.7	
Niños en edad escolar primaria	2,464,421	2,488,309	2,514,721	2,543,471	2,574,687	2,609,172	2,647,811	2.4%
Niños en edad escolar secundaria	1,794,806	1,811,248	1,829,411	1,849,000	1,870,000	1,892,488	1,916,211	2.4%
Población adulta con VIH	52,811	52,861	52,941	53,058	53,211	53,398	53,614	
Población infantil con VIH	6,485	6,238	6,041	5,891	5,759	5,632	5,511	
Adultos seropositivos recientes	5,114	5,101	5,081	4,914	4,825	4,748	4,681	
Niños seropositivos recientes	827	888	924	912	875	828	771	
Muertes de adultos por VIH	3,461	3,108	3,244	3,392	3,548	3,712	3,884	
Muertes pediátricas por VIH	628	688	761	848	941	1,041	1,148	
Indicadores epidemiológicos	2006	2007	2008	2009	2010	2011	2012	
Prevalencia de VIH en adultos	0.8	1.0	1.1	1.2	1.3	1.4	1.5	
Prevalencia de VIH en niños	1.4	1.4	1.5	1.5	1.5	1.5	1.5	

Días productivos en el año: 320  
 Conversión: 0.000001043990

➔ **General:** country, language, exchange rate, level of inflation, demographic indicator, etc.

**Specific:** For each intervention, the number of people receiving the service multiplied by the cost per capita, which provides the annual cost of the intervention



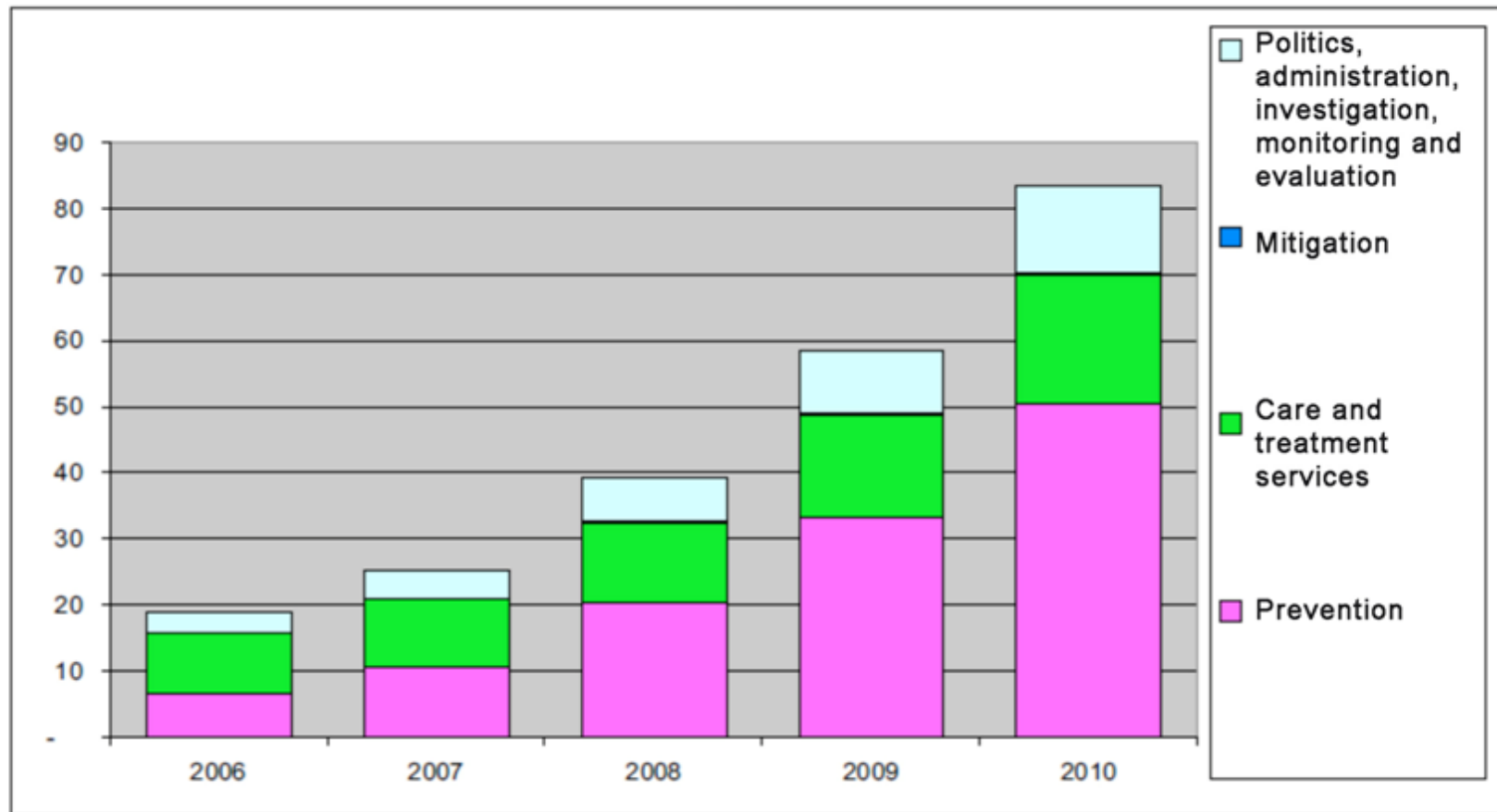
	A	B	C	D	E	F
<b>Cantidad de personas que necesitan atención</b>		2006	2007	2008	2009	2010
Cantidad de adultos que comenzaron a presentar síntomas de VIH		5,114	5,101	5,021	4,916	4,825
Cantidad de niños que comenzaron a presentar síntomas de VIH		927	888	839	812	775
<b>Total de personas que comienzan a necesitar atención</b>		6,041	5,987	5,860	5,728	5,700
<b>Total de adultos y niños desahuciados, suponiendo</b>		4,110	3,786	3,808	3,702	3,661
Proporción en niños		15%	17%	17%	17%	16%
Relación entre el costo del medicamento ARV infantil y el adulto		1.42				
Numero de centros		7.0	10	12	15	18
<b>Costos unitarios – calculados, ajustados para inflación US\$</b>						
Primeros 6 meses de la primera línea	\$	442	\$ 442	\$ 442	\$ 456	\$ 469
Annual de la primera línea	\$	885	\$ 885	\$ 885	\$ 911	\$ 939
Primeros seis meses de la segunda línea	\$	1,178	\$ 1,178	\$ 1,178	\$ 1,213	\$ 1,250
Annual de la segunda línea	\$	2,356	\$ 2,356	\$ 2,356	\$ 2,427	\$ 2,499
No de resultado desahuciado	\$	1,415	\$ 1,415	\$ 1,415	\$ 1,457	\$ 1,501
desahuciado	\$	373	\$ 373	\$ 373	\$ 385	\$ 396
<b>US\$</b>						
Primeros 6 meses de la primera línea		442	442	442	456	469
Annual de la primera línea		885	885	885	911	939
Primeros seis meses de la segunda línea		1,178	1,178	1,178	1,213	1,250
Annual de la segunda línea		2,356	2,356	2,356	2,427	2,499
No de resultado desahuciado		1,415	1,415	1,415	1,457	1,501
desahuciado		373	373	373	385	396
<b>Cantidad de personas con acceso a la atención</b>						
Cantidad de adultos que inician terapia ARV		1,534	2,091	2,962	3,785	4,679
Cantidad de niños que inician terapia ARV		278	351	495	625	736
Cantidad de pacientes que inician HAART		1,812	2,442	3,457	4,411	5,415
Total equivalente adulto de HAART		5,785	6,760	8,498	11,111	14,132
Equivalente en años paciente además de los que comienzan		5,001	5,685	7,032	9,234	11,851
En la SL		1,350	1,325	1,401	1,458	1,554
No de resultado		650	682	704	714	737
Costos para un nuevo centro de atención integral		244,839				
<b>Equivalentes de atención en año persona</b>						
Equivalentes de medio año que inician ART al año anterior		1,569	2,125	3,008	3,841	4,729
Equivalentes de año completo que reciben ART de PL > 6 meses		3,000	3,898	4,927	7,032	9,461
Equivalencia de medio año que comienzan SL el año pasado		650	682	704	714	737

*Interventions can be added or deleted to adapt the model to each country's context.*

# TOTAL ESTIMATED RESOURCES

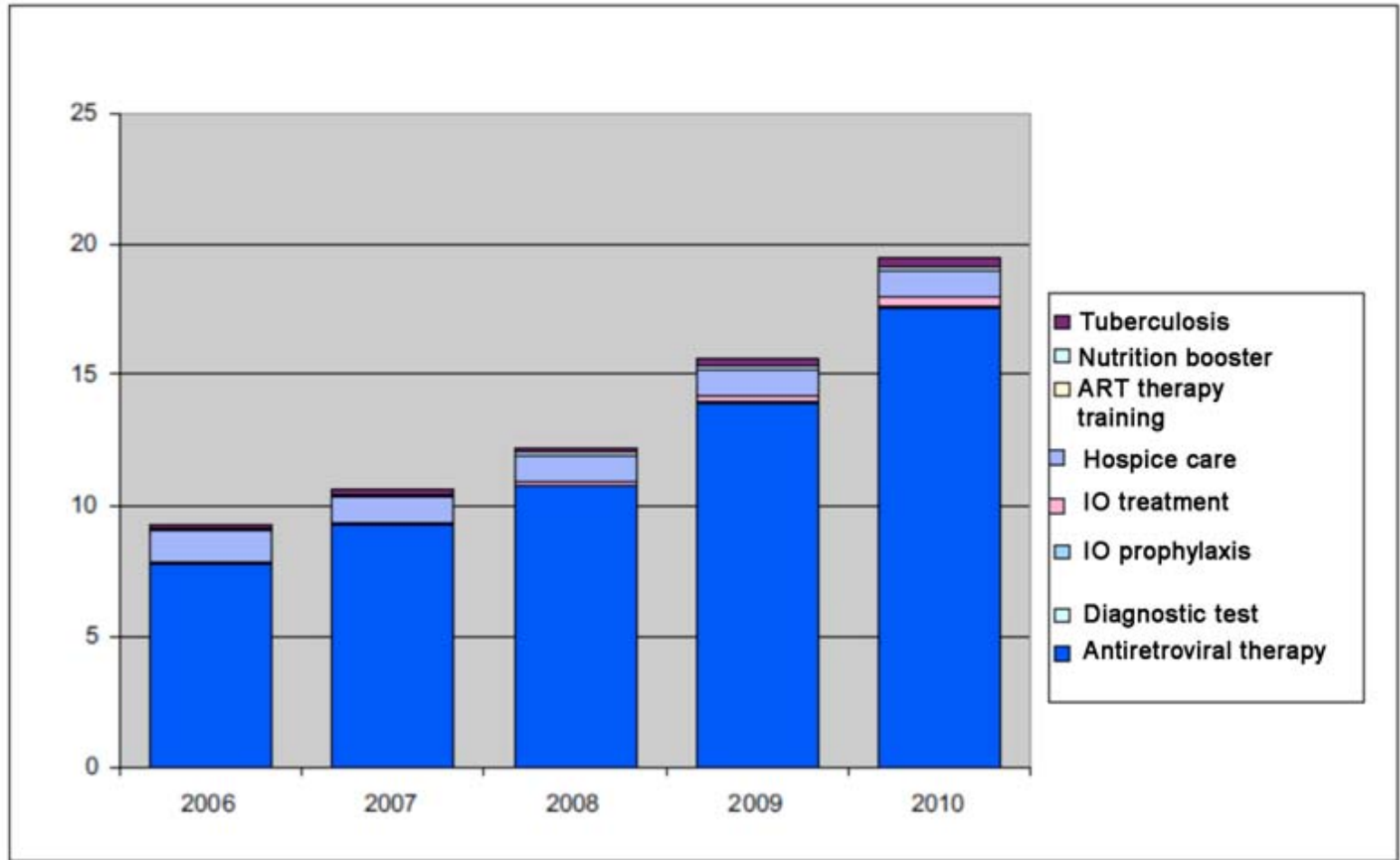
## RESULTS FOR THE STRATEGIC PLAN IN CENTRAL AMERICAN COUNTRIES

(Millions of US\$)



# ESTIMATED RESOURCES FOR CARE AND TREATMENT

## RESULTS FOR A CENTRAL AMERICAN COUNTRY (Millions of US\$)



Source: Costeo del Plan Nacional Estratégico para la prevención, atención y control de ITS, VIH y sida. Results report, estimate memorandum and documentation of sources researched. Ministerio de Salud Pública y Asistencia Social, USAID/HPI/PASCA. Guatemala, June, 2008.

# ESTIMATED COST OF THE INTERVENTIONS

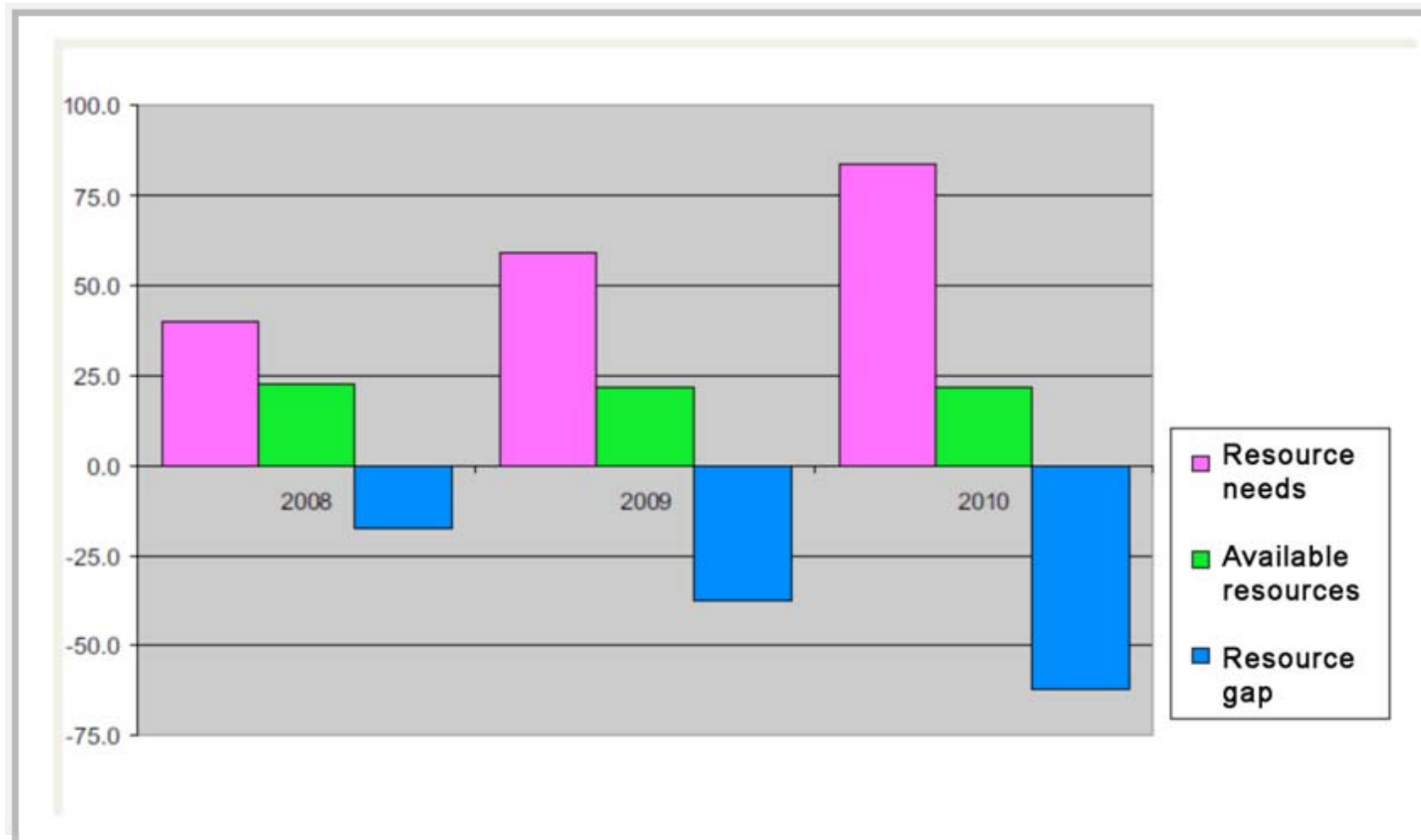
## RESULTS FOR A CENTRAL AMERICAN COUNTRY - 2006-2010 period (Millions of US\$)

- Total cost of the Strategic Plan \$227.3
- Care and treatment \$67 million (29.5%)
- Antiretroviral therapy \$59.3 million
  - 88.5% care and treatment
  - 26% of the total response

	2006	2007	2008	2009	2010	2006-2010
<b>Prevention</b>	7	10	21	34	51	122.3
<b>Priority populations</b>						
Youth-oriented interventions	0.2	0.3	0.3	0.4	0.4	1.6
Sex workers and clients	1.3	2.0	2.3	2.8	3.6	11.9
Workplace	0.3	0.6	0.9	1.2	1.5	4.5
Men who have sex with men	0.3	0.7	1.0	1.2	1.5	4.7
People who have no freedom	1.04	0.2	0.2	0.2	0.2	0.8
Transient population	-	0.4	0.8	1.3	1.8	4.3
<b>Service rendering</b>						
Contraceptive delivery	0.6	0.7	0.8	1.0	1.1	4.3
STD care	1.1	1.2	1.2	1.3	1.3	6.1
PCV	0.1	0.7	4.8	8.9	13.6	28.3
Mother-child transmission prevention	0.7	1.7	4.0	6.9	12.6	25.9
Mass communication media	1.1	1.1	3.6	4.9	5.7	16.4
<b>Health care</b>						
Non-contaminated blood	0.5	0.5	0.5	3.3	6.8	11.5
Post-exposure prophylaxis	1.02	0.02	0.03	0.03	0.04	0.14
Universal precautions	0.3	0.3	0.4	0.4	0.4	1.9
<b>Care and treatment services</b>	9	11	12	16	19	67
Antiretroviral therapy	8	9.3	10.7	13.9	17.6	59.3
Diagnostic test	0.004	0.005	0.007	0.009	0.011	0.036
Prophylaxis against opportunists (annual)	0.001	0.007	0.017	0.034	0.059	0.119
Treatment against opportunist infections	0.03	0.1	0.1	0.2	0.3	0.7
Hospice care	1	1.0	1.0	1.0	1.0	5.2
Patient care training	0.02	0.02	0.02	0.02	0.02	0.11
TAR						
Nutrition booster	0.1	0.1	0.1	0.1	0.2	0.5
Tuberculosis	0.1	0.1	0.2	0.3	0.4	1.1
<b>Social mitigation</b>	-	-	0.17	0.22	0.28	0.7
<b>Politics, administration, investigation, monitoring and evaluation</b>	3	4	7	10	13	37.2
<b>Total</b>	19	25	40	59	84	227.3

# ESTIMATED RESOURCE GAP

RESULTS FOR A CENTRAL AMERICAN COUNTRY (Millions of US\$)



Source: Costeo del Plan Nacional Estratégico para la prevención, atención y control de ITS, VIH y sida. Results report, estimate memorandum and documentation of sources researched. Ministerio de Salud Pública y Asistencia Social, USAID/HPI/PASCA. Guatemala, June, 2008.

# IMPLICATIONS OF REGIONAL HARMONIZATION

## IN THE PLANNING AND FUNDING OF ART

- Prioritization of public policy
- Legal reforms
- Unification of criteria
- Incorporation of quality of life approach vs. reduction of mortality
- Changes in care and follow-up protocols
- Securing financial resources
- Changes in structures and systems
- Strengthening of the information systems
- Monitoring and assessment of the epidemic and response
- Availability and access to information

# REGIONAL CHALLENGES IN RESPONSE TO HIV

## THAT AFFECT THE STRATEGIC PLANNING AND FUNDING PROCESSES OF ART

- Obstacles in the implementation of policies
- Barriers in the access to prevention and care
- Harmonization of information subsystems
- Monitoring of the epidemic behavior
- Planning, prioritization and establishment of goals
- Focus on more vulnerable populations
- Institutionalization of the response
- High population mobility
- Stigma and discrimination



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Thank you!