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IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IBRD-74860)

ON A

LOAN

IN THE AMOUNT OF US$25.3 MILLION

TO THE

ORIENTAL REPUBLIC OF URUGUAY

FOR A

NON-COMMUNICABLE DISEASES PREVENTION PROJECT

June 27, 2016

Health, Nutrition, and Population Global Practice
Argentina, Paraguay and Uruguay Country Management Unit
Latin America and Caribbean

CURRENCY EQUIVALENTS

(Exchange Rate Effective December 31, 2015)

Currency Unit = Uruguayan Peso (UR$)
UR$1.00 = US$0.033
US$1.00 = UR$29.29

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ASSE	State Health Services Administration (*Administración de los Servicios de Salud del Estado)*
AGESIC	Agency for the Development of Electronic Government and Information and Knowledge Society (*Agencia para el Desarrollo del Gobierno de Gestión Electrónica y la Sociedad de la Información y del Conocimiento*)
BPS	Social Security Bank (*Banco de Previsión Social*)
CAS	Country Assistance Strategy
CPF	Country Partnership Framework
CPS	Country Partnership Strategy
DALY	Disability-adjusted Life Years
DHIE	Departamental Health Insurance Entities
DIGESA	General Directorate of Health (*Dirección General de Salud)*
DIGESE	General Directorate of Secretariat (*Dirección General de Secretaría)*
DIGESNIS	General Board of the National Integrated Health System (*Dirección General del Sistema Nacional Integrado de Salud*)
EMR	Electronic Medical Records
ESU	Epidemiological Surveillance Units.
FISS I	First Health Development Project
FNR	National Resource Fund (*Fondo Nacional de Recursos*)
GOU	Government of Uruguay
HCWMP	Health Care Waste Management Plan
HCLCC	Honorable Commission for the Fight Against Cancer *(Comisión Honoraria de Lucha contra el Cancer)*
ICR	Implementation Completion and Results
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IE	Impact Evaluation
IO	Intermediate Outcome
ISR	Implementation Status and Results Report

ITC	Information and Technology Communication
LA	Loan Agreement
MEF	Ministry of Economy and Finance *(Ministerio de Economía y Finanza*s)
MSP	Ministry of Public Health *(Ministerio de Salud Pública)*
M&E	Monitoring and Evaluation
NRFS	National Risk Factor Survey
NCD	Non-Communicable Disease
NCDPP	Non-Communicable Diseases Prevention Project
NHI	National Health Insurance *(Seguro Nacional de Salud*)
NIHS	National Integrated Health System *(Sistema Nacional Integrado de Salud)*
OO	Overall Objective
PAD	Project Appraisal Document
PDO	Project Development Objectives
PGA	Participating government agencies
PSCU	Project Support and Coordination Unit
QER	Quality Enhancement Review
RBF	Result based financing
RF	Results Framework
RRHH	Human resource
RUCAF	Health Insurance Identification Database (*Registro Único de Cobertura Asistencial Formal*)
SEVES	Health Surveillance System (*Sistema de Vigilancia Epidemiológica)*
SIEMBRA	Medical Desktop Information System based on the Service Delivery Network (*Sistema Informático de Escritorio Medico Basado en la Red Asistencial*)
SISVENT	National Surveillance System on Non Communicable Diseases *(Sistema Nacional de Vigilancia de Enfermedades No Transmisibles)*
TA	Technical Assistance
WB	World Bank
YLD	Years lived with disability
YYL	Years of life lost

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URUGUAY
Non-Communicable Diseases Prevention Project (P050716)

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A. Basic Information			
Country:	Uruguay	Project Name:	UY Non Communicable Diseases Prevention Project
Project ID:	P050716	L/C/TF Number(s):	IBRD-74860
ICR Date:	06/27/2016	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	Oriental Republic of Uruguay
Original Total Commitment:	USD 25.30M	Disbursed Amount:	USD 19.82M
Revised Amount:	USD 25.30M		
Environmental Category: B			
Implementing Agencies: Ministry of Public Health *(Ministerio de Salud Pública)*			
Cofinanciers and Other External Partners:			

B. Key Dates				
Process	**Date**	**Process**	**Original Date**	**Revised / Actual Date(s)**
Concept Review:	05/15/2006	Effectiveness:	01/09/2008	01/09/2008
Appraisal:	06/11/2007	Restructuring(s):		01/22/2008 11/22/2011 11/13/2012 08/13/2014
Approval:	08/28/2007	Mid-term Review:	12/06/2010	12/10/2010
		Closing:	12/31/2012	12/31/2015

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Moderately Satisfactory
Risk to Development Outcome:	Moderate
Bank Performance:	Moderately Satisfactory
Borrower Performance:	Moderately Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)			
Bank	**Ratings**	**Borrower**	**Ratings**
Quality at Entry:	Moderately Unsatisfactory	Government:	Moderately Unsatisfactory

Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Moderately Satisfactory
Overall Bank Performance:	Moderately Satisfactory	**Overall Borrower Performance:**	Moderately Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	**Indicators**	**QAG Assessments (if any)**	**Rating**
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA):	None
DO rating before Closing/Inactive status:	Moderately Satisfactory		

D. Sector and Theme Codes		
	Original	**Actual**
Sector Code (as % of total Bank financing)		
Central government administration	23	23
Health	77	77
Theme Code (as % of total Bank financing)		
Health system performance	33	33
Injuries and non-communicable diseases	67	67

E. Bank Staff		
Positions	**At ICR**	**At Approval**
Vice President:	Jorge Familiar Calderón	Pamela Cox
Country Director:	Jesko S. Hentschel	Pedro Alba
Practice Manager/Manager:	Daniel Dulitzky	Keith E. Hansen
Project Team Leader:	Luis Orlando Pérez	Luis Orlando Perez
ICR Team Leader:	Daniela Paula Romero	
ICR Primary Author:	Daniela Paula Romero	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)
The specific development objectives of the Project were: (i) to expand accessibility and quality of primary health care services related to selected Non-communicable Diseases (NCDs)'s early detection and medical care; and (ii) to avoid and reduce exposure to selected NCD risk factors as well as their health effects.

This description of the Project Development Objectives (PDOs) differs from the one outlined in the Loan Agreement (LA) which stated that the objective of the Project was to support the Borrower's efforts to further strengthen its health delivery services and the current health policy framework for NCDs, through the expansion of the access and quality of primary health care services related to NCD's early detection, as well as the provision of specialized medical care to avoid or reduce exposure to NCD risk factors and their health effects.

The PDOs set out in the LA will be the basis for this evaluation as these are the objectives that are legally binding.

Revised Project Development Objectives (as approved by original approving authority)
Not applicable

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Percentage of hypertension cases diagnosed and under follow-up by primary care teams.			
Value quantitative or Qualitative)	54.70%	60%		62.60%
Date achieved	12/31/2006	12/31/2012		12/31/2014
Comments (incl. % achievement)	**Target surpassed (149 percent)**. 2006 baseline values for all PDO indicators measured through the first National Risk Factor Survey (NRFS) were adjusted in the 2012 restructuring according to the final data analysis of the survey.			
Indicator 2 :	Percentage of diabetes cases diagnosed and under follow-up by primary care teams.			
Value quantitative or Qualitative)	63.90%	83%	73%	77.60%
Date achieved	12/31/2006	12/31/2012	08/29/2014	12/31/2014
Comments (incl. % achievement)	**Revised target surpassed (151 percent), while original target partially achieved (72 percent).** In addition to the comment for PDO indicator 1, the target was adjusted to reflect the final baseline value in the 2012 restructuring.			

Indicator 3 :	Percentage of obesity/overweight cases diagnosed and under follow-up by primary care teams.			
Value quantitative or Qualitative)	13%	50%	20%	34.30%
Date achieved	12/31/2006	12/31/2012	08/29/2014	12/31/2014
Comments (incl. % achievement)	**Revised target surpassed (304 percent), while original target not achieved (58 percent).** In addition to the comments for PDO indicator 1, the target was adjusted to more realistic goal in the 2012 restructuring.			
Indicator 4 :	Percentage of women 50-69 covered by the public provider (State Health Services Administration - *Administración de los Servicios de Salud del Estado* - ASSE), who has had a mammogram in any given year.			
Value quantitative or Qualitative)	9.90%	45%	20%	11.63%
Date achieved	12/31/2006	12/31/2012	08/29/2014	12/31/2015
Comments (incl. % achievement)	**Target not achieved**. The indicator met 17 percent of the revised target and only 5 percent of the original target. The target population and baseline and target values were adjusted in the 2012 restructuring.			
Indicator 5 :	Crude mortality rate from Diseases of the Circulatory System (I00-I99) in the population under 70 years.			
Value quantitative or Qualitative)	75.18%		67.50%	60.30%
Date achieved	12/31/2006		08/29/2014	12/31/2014
Comments (incl. % achievement)	**Target surpassed (194 percent)**. This indicator was included in the 2012 restructuring because it was a good proxy of overall progress in preventing and controlling NCDs and also was available annually.			
Indicator 6 :	Percentage of population 45-64 years of age covered by the National Integrated Health System (NIHS) and screened for NCD risk factors.			
Value quantitative or Qualitative)	0%	65%	30%	36.70%
Date achieved	12/31/2006	12/31/2012	08/29/2014	12/31/2015
Comments (incl. % achievement)	**Revised target surpassed (122 percent), while original target not achieved (56 percent)**. The denominator was changed to include the population covered by NHIS in the 2012 restructuring. Target value was adjusted accordingly.			
Indicator 7 :	Percentage of newborns with disabilities being monitored by Early Detection and Treatment Units.			
Value quantitative or Qualitative)	0%	60%	Dropped	75.60%
Date achieved	12/31/2006	12/31/2012		10/31/2012
Comments (incl. % achievement)	**Target surpassed (126 percent).** The institutionalization of this line of work and the achievement of the original target resulted in excluding the indicator in the 2012 restructuring.			

(b) Intermediate Outcome (IO) Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	BPS, RUCAF, ASSE and FNR beneficiary databases and internal MSP databases are integrated into the National Health Information System.			
Value (quantitative or Qualitative)	BPS, RUCAF, ASSE and FNR beneficiary databases and internal MSP databases are not integrated into the National Health Information System.	BPS, RUCAF, ASSE and FNR beneficiary databases are integrated into the National Health Information System.	BPS, RUCAF, ASSE and FNR beneficiary databases and internal MSP databases are integrated into the National Health Information System.	The main databases are partially integrated.
Date achieved	12/31/2006	12/31/2012	08/29/2014	12/31/2015
Comments (incl. % achievement)	**Target partially achieved.** Key databases on life events, reportable diseases and health events, hospital infections and discharges, and national risks factors are, integrated while others are still in the process of integration.			
Indicator 2 :	Proportion of Epidemiologic Surveillance Units (ESUs) in compliance with information reporting requirements of the health surveillance system.			
Value (quantitative or Qualitative)	10%	85%		72%
Date achieved	12/31/2006	12/31/2012		12/31/2015
Comments (incl. % achievement)	**Target partially achieved (83 percent)** The description of this indicator was slightly adjusted in the 2012 restructuring to clarify which units were responsible to comply with the information requirements.			
Indicator 3 :	Number of General Directorate of Health (*Dirección General de Salud* - DIGESA) key personnel trained in Health Surveillance System (*Sistema de Vigilancia Epidemiológica* – SEVES), outbreak investigation and data for decision making.			
Value (quantitative or Qualitative)	0	20	50	110
Date achieved	12/31/2006	12/31/2012	08/29/2014	12/31/2015
Comments (incl. % achievement)	**Revised and original targets surpassed (550 percent and 220 percent, respectively)**. The scope of this indicator was adjusted in the 2012 restructuring to include all training instead of only SEVES. Target value was adjusted accordingly.			
Indicator 4 :	Proportion of communicable disease outbreaks reported by surveillance system that are managed at local level according to norms.			

Value (quantitative or Qualitative)	10%	90%		99.70%
Date achieved	12/31/2006	12/31/2012		12/31/2015
Comments (incl. % achievement)	**Target surpassed (112 percent)**. The description of this indicator was slightly modified in the 2012 restructuring to be better formulated.			
Indicator 5 :	Number of Health Departments that carry out "healthy municipality strategy", including (a) health promotion subprojects related to NCDs and (b) development of healthy spaces.			
Value (quantitative or Qualitative)	0		15	16
Date achieved	12/31/2006		08/29/2014	12/31/2015
Comments (incl. % achievement)	**Target surpassed (106 percent)**. This indicator was included in the 2012 restructuring given that it captured several dimensions of the national health promotion strategy.			
Indicator 6 :	Proportion of public schools implementing 'healthy school' strategies.			
Value (quantitative or Qualitative)	0	20%		16.20%
Date achieved	12/31/2006	12/31/2012		12/31/2015
Comments (incl. % achievement)	**Target partially achieved (81percent)**. The denominator was changed from students to public schools in the 2012 restructuring.			
Indicator 7 :	A National Promotion Advocacy group is conformed.			
Value (quantitative or Qualitative)	The National Promotion Advocacy group does not exist.	A National Promotion Advocacy group is conformed		A National Promotion Advocacy is conformed and there are 60 additional working groups in health Promotion, articulated by the MOH.
Date achieved	12/31/2006	12/31/2012		12/31/2015
Comments (incl. % achievement)	**Target achieved.** A National Promotion Advocacy group has been conformed and there are 60 additional working groups in health Promotion, articulated by the MSP.			
Indicator 8 :	Regulatory framework affecting essential NCDs and risk factors is reviewed to assess its effectiveness.			
Value (quantitative or Qualitative)	Never been reviewed	Reviewed		Reviewed
Date achieved	12/31/2006	12/31/2012		12/31/2015

Comments (incl. % achievement)	**Target achieved**. The Project supported the review of regulations on NCDs and risk factors.			
Indicator 9 :	Number of primary health care establishments that are certified and quality accredited on NCDs medical care ambulatory procedures.			
Value (quantitative or Qualitative)	0	200	100	122
Date achieved	12/31/2006	12/31/2012	08/29/2014	12/31/2015
Comments (incl. % achievement)	**Revised target surpassed (122 percent), while original target not achieved (61 percent). T**he target was adjusted downwards to consider the time required by the methodology used for quality accreditation in the 2012 restructuring.			
Indicator 10 :	Primary care team members are under permanent training system for prevalent NCDs.			
Value (quantitative or Qualitative)	100	4000	2000	2579
Date achieved	12/31/2006	12/31/2012	08/29/2014	12/31/2015
Comments (incl. % achievement)	**Revised target surpassed (130 percent), while original target not achieved (40 percent)**. The target was adjusted downwards in the 2012 restructuring to better capture the objectives and ASSE new organizational arrangements.			
Indicator 11 :	Development of a National Training Network in ASSE for primary healthcare workers.			
Value (quantitative or Qualitative)	Technical Team and training contents have not been developed and central training room has not been equipped and is not functioning."		Technical Team and training contents developed and 60 training rooms equipped and functioning.	Technical Team and contents for 5 annual training courses. There are 64 training rooms equipped and operating
Date achieved	12/31/2006		08/29/2014	12/31/2015
Comments (incl. % achievement)	**Target achieved**. This indicator was included in the 2012 restructuring to capture structural changes in ASSE training capacity.			
Indicator 12 :	Percentage of ASSE beneficiaries registered in electronic medical records.			
Value (quantitative or Qualitative)	0%		30%	94.60%
Date achieved	12/31/2006		08/29/2014	12/31/2015
Comments (incl. % achievement)	**Target surpassed (317 percent)**. This indicator was included in the 2012 restructuring as it was aligned with the development of the Integrated National Health Information System, replacing indicators #17 and 18.			
Indicator 13 :	Percentage of population between 45 to 64 years with ASSE coverage screened for NCDs risk factor.			

Value (quantitative or Qualitative)	0%	22%		1.32%
Date achieved	12/31/2006	12/31/2012		12/31/2015
Comments (incl. % achievement)	**Target not achieved (6 percent)**. The denominator and the target of this indicator was adjusted to measure only ASSE population in the 2012 restructuring.			
Indicator 14 :	Percentage of ASSE beneficiaries with risks for NCDs detected that is receiving follow up under *Previniendo* guideline.			
Value (quantitative or Qualitative)	a. Hypertension: 49.1% b. Diabetes: 73% c. Obesity/overweight: 0%	a. Hypertension: 85% b. Diabetes: 93% c. Obesity/overweight: 65%	10%	0.80%
Date achieved	12/31/2006	12/31/2012	08/29/2014	12/31/2015
Comments (incl. % achievement)	**Target not achieved (8 percent)**. The indicator was modified to capture a new preventive care guideline in the 2012 restructuring.			
Indicator 15 :	Primary care providers under Annual Performance Agreements with DHIE.			
Value (quantitative or Qualitative)	0%	85%		100%
Date achieved	12/31/2006	12/31/2012		12/31/2015
Comments (incl. % achievement)	**Target surpassed (118 percent).**			
Indicator 16 :	To develop and apply a methodology to assess the financial impact on public finances and household budgets of alternative health care reform strategies.			
Value (quantitative or Qualitative)	NA	Methodology has been developed in conjunction with the Ministry of Finance and is being implemented in any given year		Methodology has been developed
Date achieved	12/31/2006	12/31/2012		12/31/2015
Comments (incl. % achievement)	**Target achieved**.			
Indicator 17 :	Regularly report of consolidated data on number of patients diagnosed with specific NCDs and currently under treatment.			
Value (quantitative or Qualitative)	0	Report regularly available in 9 departments	Dropped	Report regularly available in 3 departments
Date achieved	12/31/2006	12/31/2012	11/08/2012	10/31/2012

Comments (incl. % achievement)	**Target not achieved (33 percent).**This indicator was replaced by a new indicator on the use of electronic medical records (EMR), included in the 2012 restructuring (indicator #12).			
Indicator 18 :	Primary health facilities uses regularly the diagnosis and monitoring system.			
Value (quantitative or Qualitative)	11	205	Dropped	
Date achieved	12/31/2006	12/31/2012	11/08/2012	
Comments (incl. % achievement)	**No available information on performance.** This indicator was replaced by a new indicator on the use of electronic medical records (EMR), included in the 2012 restructuring (indicator #12).			
Indicator 19 :	Data definitions and coding standards for pathologies issued.			
Value (quantitative or Qualitative)	24	34	Dropped	35
Date achieved	12/31/2006	12/31/2012	11/08/2012	10/31/2012
Comments (incl. % achievement)	**Target surpassed (110 percent)**. Given that this indicator was achieved in 2012, it was eliminated in the 2012 restructuring.			
Indicator 20 :	Public Health Bulletins and Surveillance Bulletins published according to norms in any given year.			
Value (quantitative or Qualitative)	0	2	Dropped	5
Date achieved	12/31/2006	12/31/2012	11/08/2012	10/31/2012
Comments (incl. % achievement)	**Target surpassed (250 percent)**. Given that this indicator was achieved in 2012, it was eliminated in the 2012 restructuring.			
Indicator 21 :	Additional DIGESA staff trained in "Data for Decision-Making".			
Value (quantitative or Qualitative)	5	20	Dropped	6
Date achieved	12/31/2006	12/31/2012	11/08/2012	10/31/2012
Comments (incl. % achievement)	**Target not achieved (30 percent)**.This indicator was eliminated in the 2012 restructuring given that it was included under indicator #3.			
Indicator 22 :	Key staff trained in laboratory safety.			
Value (quantitative or Qualitative)	0	10	Dropped	0
Date achieved	12/31/2006	12/31/2012	11/08/2012	10/31/2012
Comments (incl. % achievement)	**Target not achieved (0 percent).** This indicator was eliminated in the 2012 restructuring as it measured a Project activity that was dropped.			
Indicator 23 :	DIGESA additional key staff members trained in outbreak investigation.			
Value (quantitative	10	20	Dropped	36

or Qualitative)				
Date achieved	12/31/2006	12/31/2012	11/08/2012	10/31/2012
Comments (incl. % achievement)	**Target surpassed (260 percent)**. This indicator was eliminated in the 2012 restructuring because it was replaced by indicator #3.			
Indicator 24 :	Municipalities carry out 'healthy spaces campaigns.			
Value (quantitative or Qualitative)	0%	50%	Dropped	52.60%
Date achieved	12/31/2006	12/31/2012	11/08/2012	10/31/2012
Comments (incl. % achievement)	**Target surpassed (105 percent)**. This indicator was eliminated in the 2012 restructuring because it was replaced by indicator #5.			
Indicator 25 :	Health promotion subprojects related to NCDs are implemented in participating healthy spaces and are evaluated.			
Value (quantitative or Qualitative)	0	95%	Dropped	100%
Date achieved	12/31/2006	12/31/2012	11/08/2012	10/31/2012
Comments (incl. % achievement)	**Target surpassed (105 percent).** This indicator was eliminated in the 2012 restructuring because it was replaced by indicator #5.			
Indicator 26 :	Disability, early detection and treatment units are developed.			
Value (quantitative or Qualitative)	0	5	Dropped	9
Date achieved	12/31/2006	12/31/2012	11/08/2012	10/31/2012
Comments (incl. % achievement)	**Target surpassed (180 percent).** The institutionalization of this line of work and the achievement of the original target in 2012 resulted in dropping the indicator in the 2012 restructuring.			
Indicator 27 :	Personnel in health promotion unit are trained.			
Value (quantitative or Qualitative)	0	100%	Dropped	100%
Date achieved	12/31/2006	12/31/2012	11/08/2012	10/31/2012
Comments (incl. % achievement)	**Target achieved (100 percent)**. Given that this indicator was achieved, it was eliminated in the 2012 restructuring.			
Indicator 28 :	Annual Tobacco media campaign is developed in any given year.			
Value (quantitative or Qualitative)	0	1 each year	Dropped	6 national stop smoking campaigns, plus six national pictograph campaigns, totaling 12 media campaigns
Date achieved	12/31/2006	12/31/2012	11/08/2012	10/31/2012

Comments (incl. % achievement)	**Target achieved**. Given that this indicator was achieved, it was eliminated in the 2012 restructuring.			
Indicator 29 :	Percentage of reduction in hospital admissions for treatments more appropriately provided at lower levels: a. Hypertension crisis b. Stroke c. Ketoacidosis diabetic			
Value (quantitative or Qualitative)	To be completed in year 1	a. Hypertension crisis: 30% b. Stroke: 30% c. Ketoacidosis diabetic: 50%	Dropped	
Date achieved	12/31/2006	12/31/2012	11/08/2012	
Comments (incl. % achievement)	**No available information on performance**. This indicator was eliminated in the 2012 restructuring given that the data source was no longer available in 2010 and it was not statistically robust as results were affected by the very low number of cases.			
Indicator 30 :	Percentage reduction in the number of advanced-stage cases for specific NCDs assisted under the FNR relative to all cases in the same NCDs category: Cardiovascular disease by hypertension and Chronic Kidney failure by hypertension.			
Value (quantitative or Qualitative)	To be completed in year 1	5%	Dropped	
Date achieved	12/31/2006	12/31/2012	11/08/2012	
Comments (incl. % achievement)	**No available information on performance.** This indicator was eliminated in the 2012 restructuring given that the data source was no longer available in 2010 and it was not statistically robust as results were affected by the very low number of cases.			
Indicator 31 :	Percentage reduction in hospital admission for treatments more appropriately provided at lower levels: a. Hypertension crisis b. Stroke c. Ketoacidosis diabetic.			
Value (quantitative or Qualitative)	To be determined in year 1	a. Hypertension crisis: 70% b. Stroke: 70% c. Ketoacidosis diabetic: 70%	Dropped	
Date achieved	12/31/2006	12/31/2012	11/08/2012	
Comments (incl. % achievement)	**No available information on performance**. This indicator was eliminated in the 2012 restructuring given that the data source was no longer available in 2010 and it was not statistically robust as results were affected by the very low number of cases.			
Indicator 32 :	Percentage of reduction in the number of advanced-stage cases for cardiovascular disease and chronic kidney failure by hypertension assisted under the FNR relative to all cases in the same category.			
Value (quantitative or Qualitative)	To be determined in year 1	10%	Dropped	

Date achieved	12/31/2006	12/31/2012	11/08/2012	
Comments (incl. % achievement)	**No available information on performance**. This indicator was eliminated in the 2012 restructuring given that the data source was no longer available in 2010 and it was not statistically robust as results were affected by very low number of cases.			

G. Ratings of Project Performance in ISRs

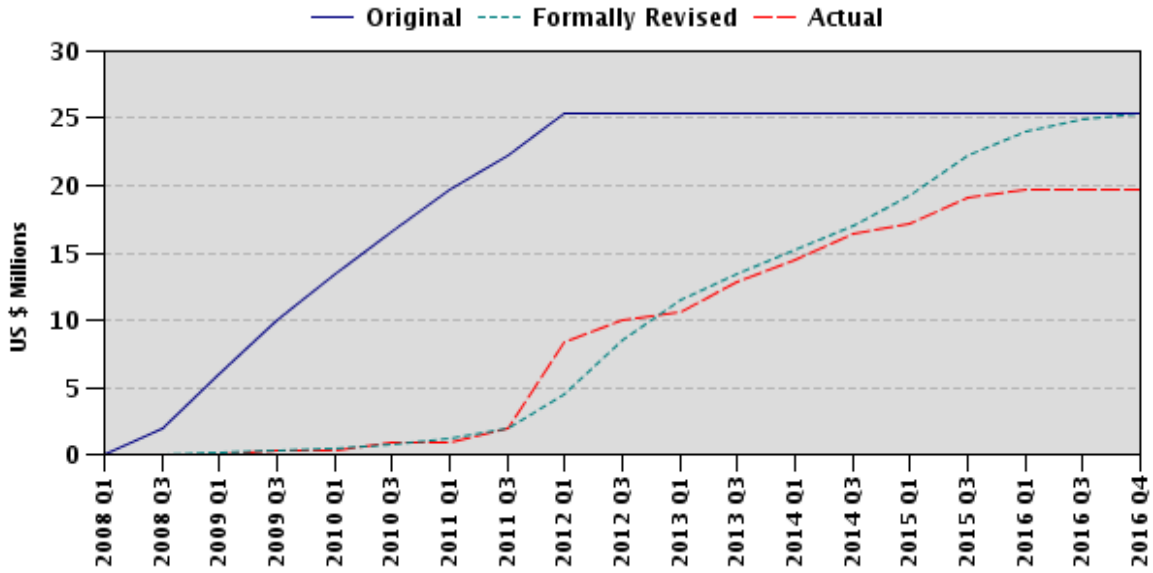
No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	12/27/2007	Satisfactory	Satisfactory	0.00
2	06/30/2008	Satisfactory	Satisfactory	0.00
3	12/30/2008	Satisfactory	Satisfactory	0.35
4	06/23/2009	Satisfactory	Moderately Satisfactory	0.35
5	12/11/2009	Moderately Satisfactory	Moderately Satisfactory	0.35
6	06/30/2010	Moderately Satisfactory	Moderately Satisfactory	0.85
7	02/27/2011	Moderately Satisfactory	Moderately Unsatisfactory	1.96
8	10/16/2011	Moderately Satisfactory	Moderately Satisfactory	8.30
9	08/13/2012	Moderately Satisfactory	Moderately Satisfactory	10.59
10	03/20/2013	Moderately Unsatisfactory	Moderately Satisfactory	12.89
11	10/22/2013	Moderately Satisfactory	Moderately Satisfactory	14.56
12	05/06/2014	Moderately Satisfactory	Moderately Satisfactory	16.45
13	11/26/2014	Moderately Satisfactory	Moderately Satisfactory	18.55
14	05/28/2015	Moderately Satisfactory	Moderately Satisfactory	19.76
15	11/30/2015	Moderately Satisfactory	Moderately Satisfactory	19.76
16	12/22/2015	Moderately Satisfactory	Moderately Satisfactory	19.76

H. Restructuring (if any)

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
01/22/2008	N	S	S	0.00	Inclusion of default interest and the front-end fee amount in the Loan Agreement.
11/22/2011	N	MS	MS	8.56	Redefinition of the "Conversion Rate" included in the Loan Agreement.
11/13/2012	N	MS	MS	11.39	First extension of the Project's closing date by 20 months, scaling up of some project activities, modification of

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
					Project indicators, and changes to implementation arrangements.
08/13/2014	N	MS	MS	16.45	Second extension of the Project's closing date by 16 months, adjustment of component cost's, reallocation of Loan proceeds, and changes to disbursement estimates.

I. Disbursement Profile



1. Project Context, Development Objectives and Design

1.1 Context at Appraisal

1. **Good economic management and favorable external developments** led to an impressive recovery and rapid growth of the Uruguayan economy following the 2001-2002 crisis. The left-wing coalition- the *Frente Amplio* –which won the 2005 election focused on fostering social inclusion, improving the investment climate and prioritizing health system reform.

2. **Uruguay's aging demographic structure was associated with a shifting epidemiological profile and a rising prevalence of NCDs**. In 2003, six out of ten deaths were linked to cardiovascular diseases and various forms of cancer related to old age. Likewise, chronic illnesses accounted for an estimated 75 percent of all lost disability-adjusted life years (DALYs). The burden of chronic NCDs was distributed inequitably, with the poor enduring more suffering than the rich. The increase in NCDs and the growing financial cost associated with their treatment posed a serious concern about the financial sustainability of the health system, with total health expenditure corresponding to 9 percent of GDP. Therefore, an emphasis on NCD and associated risk factor prevention and surveillance was crucial to contain rising health care costs and improve the financial efficiency of the health system.

3. **The Government of Uruguay (GOU) embarked on a reform of the health system that comprised two main pillars and included an important NCD strategy**. The first pillar was aimed at introducing changes to the prevailing health care model by emphasizing NCD prevention, in order to begin reducing the related burden of disease, and related high treatment costs. The second pillar sought to develop a more harmonized system through the introduction of a National Health Insurance[1] (*Seguro Nacional de Salud* - NHI), thereby promoting more equitable access to services and improved quality of care while reducing the system's financial burden.[2] The reform also included the creation of a National Integrated Health System (*Sistema Nacional Integrado de Salud* - NIHS), unifying the rules for public and private health insurance providers, and the decentralization of the State Health Service Administration (*Administración de los*

[1] The NHI is the country's sole national insurer financed through a uniform, basically contributory scheme which provides coverage to formal workers and their families while seeking to extend coverage to other population groups. The NIHS is an "umbrella" legal framework that generates a context of compulsory health coverage where the same benefit plan has to be provided to those covered by the NHI (47.4 percent of the population) and those exclusively covered by the public sector through ASSE (47.3 percent). (World Bank, 2012). The latter includes family members of uninsured households, who are generally unemployed or work in the informal sector and are more likely to be poor.

[2] To this aim, the reform also extended the social health insurance coverage to all national public employees and, in successive phases, to family dependents of active workers; unified the insurance rates across the various sub-systems and introduced capitation payments to insurers that were adjusted by: (i) age- and sex-risks and (ii) performance linked to a pre-defined set of health goals. (World Bank, 2007).

Servicios de Salud del Estado – ASSE) to transform it into a public integrated insurer and provider.

4. **The NCDs Prevention Project responded to the Government's health reform NCDs strategy**. The Project was fully aligned with the World Bank (WB) Group FY2005-10 Country Assistance Strategy (CAS) for Uruguay (Report No. 31804), discussed by the Executive Directors on June 9, 2005. The Project contributed to the CAS pillar on Improving Living Standards and through the strengthening in access and quality of health services for NCDs sought to improve the health status of the population.

1.2 Original Project Development Objectives (PDO) and Key Indicators (*as approved*)

5. According to the Loan Agreement, the objective of the Project was to support the Borrower's efforts to further strengthen its health delivery services and the current health policy framework for NCDs, through the expansion of the access and quality of primary health care services related to NCD early detection (PDO #1), as well as the provision of specialized medical care to avoid or reduce exposure to NCD risk factors and their health effects (PDO #2).

6. These objectives were translated into the following outcome indicators and targets:
PDO #1:
- 60, 83 and 50 percent of cases diagnosed under follow-up by primary care teams for hypertension, diabetes and obesity/overweight, respectively (PDO indicators #1, 2 and 3);
- 45 percent of women between 50 and 69 years of age have had a mammogram in any given year (PDO indicators #4);
- 60 percent of newborns with disabilities being monitored by Early Detection and Treatment Units (PDO indicator #7); and

PDO #2:
- 65 percent of population at NCDs risk being screened in participating departments (PDO indicator #6).

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

7. There were no revisions to the Project Development Objectives. However, key indicators and targets were revised during the 2012 Project restructuring to reflect implementation experience and streamline the Results Framework (RF). All indicators and

the adjustments made to the RF are detailed in the Data Sheet and Annex 2. Below are the PDO indicators and targets established through the 2012 Project restructuring:

PDO #1:

- 60, 73 and 20 percent of cases diagnosed under follow-up by primary care teams for hypertension, diabetes and obesity/overweight, respectively (PDO indicators #1, 2, and 3);
- 20 percent of women 50-69 covered by the public provider (ASSE), who have had a mammogram in any given year (PDO indicator #4);
- Crude mortality rate from Diseases of the Circulatory System (I00-I99) of 67.5 per 100,000 in the population under 70 years of age (PDO indicator #5); and

PDO #2:

- 30 percent of population between 45-64 years of age covered by the National Integrated Health System (NIHS) and screened for NCD risk factors (PDO indicator #6).

1.4 Main Beneficiaries

8. The primary Project beneficiaries were individuals suffering from selected NCDs and those exposed to related risk factors, in particular low-income groups with a higher incidence of NCDs. Specifically this included individuals diagnosed and under follow-up treatment for hypertension, diabetes obesity/overweight and colon cancer, women at risk of breast cancer and newborn and child with disabilities. The entire Uruguayan population benefitted from improved health promotion and regulatory measures.

1.5 Original Components (*as approved*)

9. The Project had four components (more details in Annex 2):

10. **Component 1- Strengthening of the Ministry of Public Health (MSP)'s Capacity to Address the Country's Changing Epidemiological Profile** (original Bank allocation US$5.7 million; final expenditure US$3.0 million). This component supported the improvement of the MSP's essential public health functions related to NCDs through three subcomponents to: (i) develop a health intelligence information system, including epidemiological surveillance and health monitoring and evaluation systems; (ii) develop and implement a national strategy of health promotion, aimed at promoting healthy lifestyles and NCD prevention; and (iii) create sound regulatory frameworks, ensure their adequate enforcement, and develop and utilize monitoring and management systems to enhance the effectiveness and efficiency of NCDs health programs. The MSP's General Directorate of Health (*Dirección General de Salud* - DIGESA) was responsible for the implementation of this component.

11. **Component 2 - Improving Access to Quality Health Care Services for Prevalent NCDs in Public Primary Care Facilities** (original Bank allocation US$13.2 million; final expenditure US$12.2 million). This component supported the strengthening of the capacity of Uruguay's public health system in the screening and control of selected

NCDs and their risk factors. It was organized in three subcomponents to: (i) enhance the technological infrastructure of primary health care facilities as well as secondary referral centers through the procurement of new information technology and communication (ITC) equipment and medical diagnosis equipment critical in the detection and treatment of NCDs; (ii) develop and implement modern management tools aimed at improving the efficiency of the health network, with a particular focus on NCDs; and (iii) strengthen the technical capacity of primary health care public providers through the implementation of a human resource development program for primary health care teams. ASSE was responsible for the implementation of the activities under this component.

12. **Component 3- Implementation of the *Previniendo* Pilot Program** (original Bank allocation US$3.8 million; final expenditure US$1.2 million). This component supported the development and implementation of the *Previniendo* pilot program in three Uruguayan Departments: Treinta y Tres, Tacuarembó and Rio Negro.[3] The program sought to enhance control and risk factor prevention for the selected NCDs with high prevalence in Uruguay - hypertension, diabetes, obesity/overweight, and colon cancer. Specifically, the Program financed result-based capitation payments for a package of preventive interventions and activities consisting of a bundle of cost-effective services and activities to the eligible population listed in the program's beneficiary registry.[4] The eligible population consisted of around 140,000 people older than 18 years of age from the three participating Departments served by public or private health providers. DIGESA was responsible for the implementation of the activities within this component.

13. **Component 4 - Project Management** (original Bank allocation US$ I.7 million; final expenditure US$2.8 million). This component supported Project management through the financing of operating expenses and office equipment. The component also financed a number of studies to support the design of the health insurance reform and was supposed to finance the Project's impact evaluation. The General Directorate of Secretariat (*Dirección General de Secretaría* - DIGESE) and the General Board of the National Integrated Health System (*Dirección General del Sistema Nacional Integrado de Salud* - DIGESNIS) were responsible for the implementation of the activities within this component.

1.6 Revised Components

14. **Component 3 was revised in the 2012 restructuring to scale up the *Previniendo* Pilot program** from three to all 19 departments in the country. This was in response to the Government's decision to extend NCD risk factors screening nationwide, including to the

[3] Uruguay's territory is divided in 19 Departments.

[4] This component financed capitation payments from the MSP to each participating public and private departmental health insurance entities (DHIE). These payments were adjusted by performance on program coverage and sanitary goals. Specifically, coverage goals were measured as the percentage of the total population that had received the initial screening, while sanitary goals were measured as the percentage of population receiving the planned medical services to mitigate identified NCDs risks factors. Financing to health-care providers was based on services rendered on a fee-for-service basis.

health insurance covered population. To do this, the second NHI[5] health goal was aligned with the *Previniendo* Pilot program goal on NCD risk factor screening and the *Previniendo's* eligible population was adjusted to include all ASSE beneficiaries between 45 and 64 years old (the age group with the highest prevalence of NCDs), approximately 240,000 individuals.

15. **Components 2 and 4 were revised in the 2014 restructuring to finance new studies and activities aimed at strengthening the MSP and ASSE's capacity to carry out the NCD preventive strategy.** A Rural Health Program was incorporated within Component 2 to support chronic disease prevention in the rural population, through vehicles and medical equipment that facilitated regular rural health care visits. Component 4 was adjusted to finance the acquisition of comprehensive accounting and financial management and information systems and the development of a series of new studies, including a study on burden of disease.

1.7 Other significant changes

16. **The Loan Agreement (LA) was amended** in 2008 to eliminate commitment charge and interest waivers and include a front-end fee and default interest and in 2011 to adjust the definition of the Conversion Date. In addition, two Level II restructurings introduced adjustments to improve performance and facilitate implementation. In addition to the changes mentioned in Sections 1.3 and 1.6, the 2012 Project restructuring extended the Project's closing date by 20 months to allow for completion of activities and achievement of Project objectives, and modified implementation arrangements to include Cooperating Agencies agreements to contract consultants and carry out technical assistance (TA) with the objective of accelerating implementation. In addition, the Project's focus on newborns with disabilities was phased out following the restructuring given that related-results were achieved and early detection and treatment activities were taken over and monitored by ASSE under the *Serenar* Program.

17. **The 2014 Project restructuring extended the Project's closing date by an additional 16 months to execute the remaining funds and support achievement of the Project's PDOs.** In addition, there was a reallocation of component costs and loan proceeds among disbursement categories to accommodate the financing of new studies and activities 4. As a result, the amount in the expenditure category of consultant and non-consultant services, operating costs, and training (excluding sub-projects) increased from US$6.3 to US$8.4 million, by reducing the allocation for all others expenditure categories, except for goods.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

[5] The NHI finances first level insurers through capitation payments that are adjusted for risks and health goals.

18. **The Project was relevant, addressing Uruguay's main health sector challenges, used international best practices and comprehensive national technical analysis, and took into consideration lessons learned from regional operations.** The Project sought to support a reorientation of the model of attention to match the epidemiological profile of the country, where NCDs represent the largest cause of the death, and reduce rising related costs.[6] This shift took place within the Government's health sector reform agenda. In addition, Project design was innovative, as it introduced the results-based financing (RBF) mechanism in the country, focused on prevention and used internal administrative systems.

19. **The strong focus on health sector interventions and secondary prevention measures supported the achievement of results over costs within a shorter timeframe.** The Project worked simultaneously on the supply and the demand side, achieving both a change in the model of attention toward NCDs while containing fiscal pressures. Supply-side measures re-focused the health care model toward NCD prevention and risk factors reduction, through the: (i) design of relevant policy tools (regulation, stewardship, and surveillance); (ii) strengthening of NCD screening and control related infrastructure, management and public health system human resource capacity; and (iii) establishment of and training for prevention programs. Demand side measures centered on promotion and communication activities, although at a lower scale compared to secondary prevention.

20. **Project design and implementation arrangements incorporated lessons learned from other operations and international experience.** The Project took into account lessons learned from the First Health Development Project (FISS I - P008161) and recommendations generated by a cost-effectiveness study (Uruguay MSP FISS I, 1997), which identified a set of interventions and prevention programs aimed at reducing the burden of morbidity. The *Previniendo* pilot design was built upon a successful experience in Argentina involving result-based financing health outcome improvements.[7]

21. **Project design was informed by a detailed Uruguay Health Sector Review (WB, 2005b) and the Healthy Development Report the WB's Strategy for Health, Nutrition and Population results (WB 2007a).**. The Project also benefited from the Policy and Human Resources Development Grant (TF 52535), which allowed the GOU to finance TA and preparatory studies. Activities designed under Component 1 were informed by a diagnostic study prepared by the Pan-American Health Organization of the existing epidemiological surveillance and monitoring system.

22. **Project design was highly innovative, involving higher risks that complicated and extended implementation.** The Project was the first: (a) WB-supported Project exclusively focused on NCDs prevention, (b) to be implemented using the GOU's internal administrative structure, and (c) to include a RBF mechanism in Uruguay. The Project's technical aspects relied on international best practices on NCDs and risk factor prevention. The implementation approach selected appropriately responded to the GOU's health

[6] In particular related to the treatment instead of more cost effective prevention of NCD's.

[7] Gertler et al (2014) reveal that the use of the RBF mechanisms under the Plan Nacer Program in Argentina led to an increase in the use and quality of health services and improvements in health outcomes.

reform priorities, and strengthened MSP and ASSE's long-term institutional capacity. Project components were implemented by the MSP's four main agencies (DIGESA, DIGESE, DIGESNIS and ASSE[8], called participating government agencies - PGAs), with overall support and coordination from the Project Support and Coordination Unit (PSCU). The *Previniendo* Pilot was particularly innovative, since it linked financing to outcomes related to NCD prevention activities. The use of the RBF mechanism was ideal to support a change in the model of attention since it provided incentives to insurers to promote results on NCDs screening and control at primary health care facilities, leading to early diagnosis, control and treatment of these illnesses.

23. **Some Project design features and weaknesses in quality at entry affected implementation.** The formulation of Project objectives was long and involved two different levels of objectives (Overall Objective – OO and PDOs), which were not adequately articulated (see Table No 1). In particular, it was not clear how Uruguay's health policy framework for NCDs (OO #2) was to be strengthened *through* PDO #1 and #2.

Table No. 1

Objective Level	No.	Description
Overall Objective (OO)		The objective of the Project was to support the Borrower's efforts to further strengthen:
	1	its health delivery services, and
	2	the current health policy framework for NCD, *through*
Project Development Objective (PDO)	1	the expansion of the access and quality of primary health care services related to NCD early detection , *as well as*
	2	the provision of specialized medical care to avoid or reduce exposure to NCD risk factors and their health effects

24. The Government's efforts to tackle the full spectrum of challenges associated with NCD prevention, detection and treatment improvements resulted in a complex and ambitious Project design. The Project's innovative design, while contributing to capacity building and to the health sector reform process, involved a steep learning curve impacting performance. In addition, the risk assessment conducted during Project preparation overestimated the MSP's capacity related to WB procurement rules and underestimated the potential impact of lengthy and overlapping state procedures and insufficient budget allocation on Project execution (see section 2.2 for further details). Though risks associated with low institutional capacity were identified and rated as Substantial (S) and High (H) during preparation, the proposed mitigation measures of increasing staff time dedication to Project activities turned out to be insufficient to reduce Project implementation bottlenecks. Adjustments to local regulations to supplement the civil servants salary for the additional work load took longer than expected and this mechanism was insufficient to cover the

[8] ASSE was decentralized in August 2007, two month after Project appraisal, through the Law No. 18.161. As a result, ASSE was not longer under the MSP dependency and had its own making-decision body.

capacity gaps. In addition, there were some weaknesses in the RF design, which are described in Section 2.3

2.2 Implementation

25. The Project was extended for three years, with implementation taking eight years and final disbursement reaching 76 percent of total loan funds. Implementation was affected by the following factors:

26. **High administrative and Project staff turnover.** Throughout Project implementation there were three government administrations and five Ministers of Health, which resulted in 14 different general directors from the three participating agencies. Project ownership initially decreased to then recover with each change in government. This was particularly challenging for a Project that was implemented within the MSP and ASSE's internal administrative structure as the turnover forced the PSCU and the WB team to repeatedly present and obtain support for the Project from new incoming authorities. In addition, the PSCU itself was affected by frequent staff turnover as shown by the appointment of three coordinators at the beginning of Project life.

27. **The lack of sufficient budgetary assignment prevented the Project from full disbursement of loan proceeds.** Lack of budget availability was a recurring issue during Project life implementation and was the main cause behind incomplete loan disbursement in spite of the repeated WB team interventions to help overcome this obstacle. Initially allocations were made in *ad hoc* small and split installments because Project execution was not included in the 2005-2009 budget, as it was envisioned after the budget cycle preparation. This impacted implementation because Uruguay's regulatory framework requires budget formal availability, regardless of the financing source to launch procurement and consultant processes. Therefore, the PSCU had to prioritize and postpone activities to adjust Project implementation to budget availability. This situation delayed even more implementation when the prioritized activities were not executed for other reasons (such as long a bureaucratic administrative procedures to carry out procurement and hiring processes), leading to a systematic budgetary under execution. At the end of December 2010, the Ministry of Economy and Finance *(Ministerio de Economía y Finanza*s –MEF) assigned less resources than projected and required by the MOH for the Project due to fiscal constraints, the Project's slow implementation and budget under execution during the previous years. Similarly in 2015, the decision not to increase the budget allocation caused the PSCU to cancel several procurement processes that were ready to be launched and that would have allowed the Project to reach a higher disbursement of loan proceeds.

28. **Despite issues regarding budget allocation, local financing of activities contributed to the achievement of Project objectives even considering that the WB loan was not fully disbursed.** Key activities that were originally supposed to be fully funded by the Project were carried out using MSP and ASSE resources (or a combination), providing an important step forward towards their institutionalization, as it was the case of the anti-tobacco and physical activity promotion media campaigns, the support to early

detection of congenital malformation in newborns, and the development of modern management tools in ASSE, among others.

29. **Project implementation through the MSP and ASSE's internal administrative structures implicated a steep learning curve and as a result slowed Project execution.** The PSCU and the WB team developed an innovative mechanism to implement Project activities that would also strengthen the participating agencies institutional capacity. The functional compensation model assumed that those in charge of implementation remained employed in their primary positions and were compensated for the extra hours spent working on Project activities. The operationalization of this mechanism occurred one year after Project effectiveness since it required Bank legal and fiduciary approval as well as the development of a country regulatory framework. In addition, delays in staff appointments (on average nine months), and in strategic Project implementation decisions, including those related to performance improvements (for instance, the late 2012 Project restructuring), extended Project execution and adversely affected performance. The need to restructure was identified after the end-2010 midterm evaluation, with the GOU sending the Bank a first formal request at end 2011. The request was not acted upon given that the new authorities that took office in the second half of that year embarked on a general review of the *Previniendo*. This review led to significant changes in the design and scope of the pilot that needed to be included in the restructuring, resulting in a delay in the submission of the final request, which was received by the Bank three months prior to the original closing date (December 2012).

30. **Long and bureaucratic processes hindered technical staff contracting and the procurement of goods.** In addition to MSP and ASSE's limited experience and knowledge regarding Bank procedures, in particular procurement rules, the participating agencies had their own bureaucratic and convoluted procedures.[9] As a result in 2011 the PSCU and the WB team revised the Project's implementation arrangements. This led to the establishment of several measures to accelerate implementation, such as the PSCU taking over more procurement, contracting and other administrative procedures responsibility and the inclusion of Cooperation Agencies Agreements to contract consultants and carry out TAs. These measures reduced the times involved in staff contracting and procurement of goods.

31. ***Previniendo* design and implementation issues affected the pilot's performance**. Though there were positive advances in the component, the indicators included largely failed to reach the established targets. Indicator targets were systematically not achieved and protracted payments to Department Health Insurance Entities (DHIE) reduced stakeholders incentives to participate in the pilot. These factors were highly relevant considering that 100 percent of the capitation payment was linked to the achievement of results. Private health providers exhibited a better performance than public sector ones. Results suggest that financial incentives did not sufficiently leverage the Project. In the second phase of the *Previniendo*, which exclusively focused on ASSE population**,**

[9] For instance, the double ex-ante review of procurement and hiring processes by the Delegate Accountant and the Court of Accounts Delegate at the MSP.

implementation was adversely affected by a delayed start [10] and the strategy's operationalization (see Annex 2 for further details)

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization

32. **Design.** The original RF design suffered from a number of weaknesses related to too many indicators with some of them not properly defined and lack of reliable baseline data to inform target setting. In general, the results framework was ambitious and included too many indicators, reflecting the broad scope of the Project. There were six PDO indicators and 29 Intermediate Outcome (IO) indicators, involving numerous areas responsible for providing data to measure indicators performance. Furthermore, there was an unbalance between the number of PDO indicators selected to measure PDO #1 (five PDO indicators) and PDO #2 (only 1), providing a narrow basis for assessment of the latter.

33. A number of the indicators selected to measure progress towards the PDOs were not properly defined. For instance, PDO indicator #1 "Percentage of hypertension cases diagnosed and under follow up by primary care team", did not provide information on quality of care – i.e. whether the blood pressure of patients was under control, but if it was diagnosed. Furthermore, the selection of indicators was made taking into account the data available at that time, which in many cases was difficult to obtain. Project design took this into account and sought to address it by supporting the development of a framework to monitor NCDs activities. For instance, under the *Previniendo* Pilot an information system that included data on blood pressure was developed and implemented (see Annex 2 for further details on this area achievements). In addition, PDO indicators focused exclusively on measuring coverage/access, but did not measure quality of care for NCDs, which was part of PDO #1. However, quality-focused indicators were included as IO indicators (i.e. IOs #29 and 30), but dropped following the 2012 restructuring due to difficulties in obtaining the data[11] and because they measured a very small number of cases, which resulted in a large variability of indicator performance and difficulties in measuring progress.

34. There were some difficulties in obtaining the baseline data for some PDO indicators, which hindered the setting of realistic targets. For instance, baseline data for PDO indicators #1, 2 and 3 came from the first national risk factor survey carried out in 2006, which at the time of Project appraisal only had preliminary data. Once the final data became available in 2009, it turned out that baseline values were underestimated for PDOs indicators #1 and #3 and overestimated for #2. The baseline values for IO indicators

[10] Although the program started in December 2013, full participation from the 19 departments was achieved by June 2014.
[11] Hospital discharge coding methodology was discontinued in 2010 and information for indicators 29, 30, 31 and 32 became unavailable.

measuring quality of NCD care from the hospital discharges system were not available until 2010.

35. At Project design, indicators were to be measured at two points in time: at the Project Mid-term and at completion given that information systems had to be built or strengthened in order to generate indicator data. As a result, systematic reporting of indicators only began at end 2010. The large amount of information generated by the indicators was difficult to manage, reinforcing the need to simplify the RF.

36. The 2012 restructuring streamlined the RF. Some Project indicators that achieved their targets, were taken over by the GOU or for which data was difficult to obtain were eliminated or replaced with others that reflected a major health impact related to global risk factor improvements[12] and early diagnosis and care.[13] In addition, existing indicators were modified in line with GOU's changing priorities, as mentioned in Section 1.6.[14] As a result, one PDO indicator was dropped and another one was added, while intermediate indicators fell from 29 to 16. Furthermore, targets were adjusted downward to address different circumstances: (i) to take into account changes in the indicators 'target population in line with GOU's changing priorities (i.e. PDO indicators #4 and #6), (ii) to reflect a more realistic impact of Project activities (i.e. PDO indicator #3) and (iii) to take into account the final baseline value (i.e. PDO indicator #2).

37. **Implementation.** Indicators' data source included existing and new administrative data available in MSP and ASSE's information systems, population surveys and institutional reports. The fact that the Project supported the integration and strengthening of existing MSP and ASSE systems resulted in sustainable monitoring arrangements beyond the Project. The impact evaluation for the *Previniendo* Pilot included in Project design was not carried out mainly due to the MSP's decision not to continue with an impact evaluation because of the cost of such studies. There were no other strategies to assess the impact of the Pilot nor the Project overall.

38. **Utilization**. Monitoring indicators were reviewed and used to measure progress and to identify problems for all components. Findings were used, in general, to modify procedures and to take actions. However, generated data could have been used to a greater extent by the MSP and ASSE to accelerate decision-making. For example, to restructure the Project earlier or communicate results to improve performance and gain support for

[12] Global risk factor comprises Obesity/overweight; Diabetes; Hypertension and tobacco consumption, were all focus of the Project.
[13] The indicator chosen was "Rate of crude mortality rate from Diseases of the Circulatory System (I00-I99) in the under 70 population" (PDO indicator #5).
[14] PDO indicator 4 was modified to account for a change in the target population from all population to that covered by public health providers (ASSE) whose service delivery capacity was strengthened through Component 2. Likewise, PDO indicator #6 was adjusted to account for change in the target population from population in the three *Previniendo* pilot Departments to the total population covered by the NIHS.

timely implementation of actions as in the case of the breast cancer exam or in the case of the *Previniendo* Program at the time it was extended to all ASSE beneficiaries.

2.4 Safeguard and Fiduciary Compliance

39. **Safeguard.** The Project was classified as a Category B with regard to environmental issues, triggering the OP 4.01 on Environmental Assessment. The potential impacts comprised the increased generation and disposal of waste from health facilities due to the procurement of medical equipment for the detection and treatment of NCDs. Consequently, significant and/or irreversible negative impacts were not identified. During Project preparation, an environmental assessment detected an adequate policy framework and institutional capacity for hospital waste management and concluded that the environmental impact of the Project could be managed by the existing environmental protocols mandatory for each health center in Uruguay and supervised/monitored by the MSP.

40. During the Project life environmental legislation changed and required the development of a mandatory "Health Care Waste Management Plan" (HCWMP) by health providers that had to be approved and monitored by the MSP. To this aim, the MSP had to develop hospital waste management guidelines to be used in the preparation of the HCWMP. The Project supported this activity and a diagnosis of the current state of waste management in Uruguay. Contracting of independents consultants to carry out these activities was delayed until the last year of Project life, preventing the implementation of the HCWMP during the Project life. As a result, the implementation of the environmental safeguard activities was rated as moderately satisfactory.

41. **Fiduciary.** The Project has made extensive use of country Public Financial Management systems and institutions for budget execution recording and treasury operations by the MSP and ASSE line departments. Furthermore, as it is customary in Uruguay for all public expenditures payments, Project transactions were subject to ex-ante controls exercised by both the Delegate of the Accountant General Office and the Court of Auditors in MSP and ASSE. To some extent these overlapping controls along with some cumbersome administrative procedures caused significant delays in Project financial reporting and eligible expenditure documentation provided to the WB. These issues did not entail any accountability issues.

42. No serious issues were found during post review procurement missions and in general the performance of the PSCU has improved over time. At the beginning of Project implementation there were substantial delays in procurement processes and difficulties in the implementation of the Procurement Guidelines and the Consultants Guidelines, mainly due to the participation of several actors with insufficient knowledge of WB procurement procedures and additional requirements for reviews set on local norms. However, the operations manual procedures were revised and PSCU increased its participation in the coordination of procurement, which improved quality of procurement processes.

43. Procurement training efforts were essential to improve the capacity of PSCU and streamline procurement processes with more efficiency and according to the specific methods set in the LA, and to carry out complex processes of International Competitive Bidding. The PSCU's implementation of an action plan derived from procurement post-review reports was an effort to reduce the number of observations and conclude the Project with satisfactory procurement processes.

2.5 Post-completion Operation/Next Phase

44. The combination of the Project's implementation arrangements, facilitating the institutionalization of many activities supported by the Project, and GOU commitment towards the NCDs agenda suggest that support to the development objectives will continue beyond the Project (refer to Section 4 for further details).

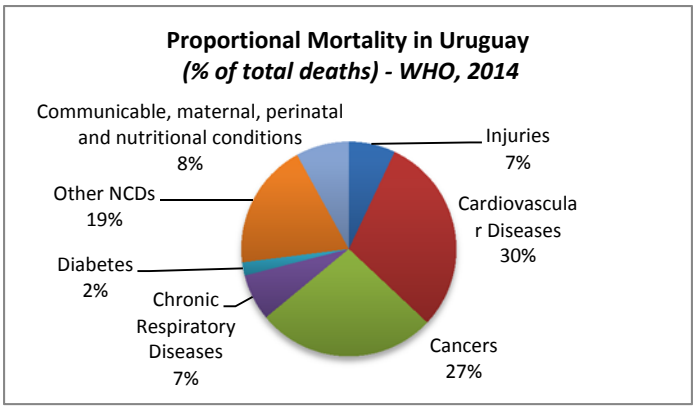
3. Assessment of Outcomes

45. The following Project outcome assessment is based on the analysis of the two Project phases resulting from the changes introduced under the 2012 restructuring in terms of scope, key outcome indicators and implementation arrangements. Phase 1 (2008-2012) encompasses the original Project design period prior to the 2012 restructuring and Phase 2 (2013-2015) assesses the Project in its redesigned form.

3.1 Relevance of Objectives, Design and Implementation

46. **The relevance of the Project's objectives, design and implementation is rated High for both phases.** The objectives, which largely seek to improve NCD prevention, surveillance and treatment, are highly relevant to the country's existing health situation, as NCDs continues being the leading causes of all deaths.

47. **The objectives are relevant to Uruguay's current national health strategy and World Bank approach**. The GOU continues to support the policies promoted in the Project as reflected in the incorporation of the National Health Objectives 2020 (Uruguay MSP, 2015b), which prioritize NCD prevention, screening and treatment. The Project objectives are consistent with the WB Group's Country Partnership Strategy (CPS) FY2010-15 (Report #55863-UY) and the recently approved WB Group's Country Partnership Framework (CPF) F2015-20 (Report #97063-UY) discussed by the Executive Director on August 18, 2010 and December 21, 2015, respectively. The CPS focused on improving inclusion and equity through support to the health sector reform while the CPF includes potential technical



support under the objective of consolidating the social compact, which could be channeled to support the health reform achievements.

48. **Relevance of Project Design is rated High** as planned activities were critical to reduce selected NCDs and many were institutionalized supporting their sustainability, both under Phase 1 and 2. The establishment of early detection treatment units for newborns with disabilities and NCD epidemiological surveillance, the adoption of the National Health Promotion and Prevention strategy as reflected in the National Health Objectives 2020 and the strengthening of the NCD regulatory framework all received Project support. Finally, the gradual improvement of the integrated information system was taken over by the MSP's Directorate of Information Systems in coordination with the Agency for the Development of Electronic Government and Information and Knowledge Society (*Agencia para el Desarrollo del Gobierno de Gestión Electrónica y la Sociedad de la Información y del Conocimiento* - AGESIC), the agency in Uruguay in charge of e-government activities. Furthermore, the relevance of the *Previniendo* design as well as its implementation arrangements is reflected by the NHI's adoption of the second health goal for the screening of chronic diseases.[15]

49. **Project implementation relevance is rated Substantial** under both phases as the operational approach using GOU's internal administrative structure ensured that the strengthened institutional capacity remained within the GOU. In addition, implementation arrangements were adjusted throughout Project life to introduce modifications needed to achieve the PDOs.

3.2 Achievement of Project Development Objectives

50. This section discusses achievements on the two PDOs as measured by the Project's outcome indicators and overall Project implementation during Phase 1 and Phase 2. The tables below present a summary of PDO and Intermediate Outcome indicators (IO) achievement across the two phases.

[15] The payment associated with target for the screening of NCDs, inspired by *Previniendo* was adopted by NHI.

Table No. 2 – Summary of PDO indicators' target achievement

Level of Achievement	PDO #1, as measured by PDO Indicators #1 to 5 and 7		PDO #2, as measured by PDO Indicator #6	
	Phase 1	Phase 2	Phase 1	Phase 2
Surpassed (HS)	2	4		1
Achieved/sustainability (S)				
Partially achieved (MS)	1			
Not achieved (MU, U, HU)	2	1	1	
Total	5	5	1	1
% surpassed, achieved or partially achieved	60%	80%	0%	100%
Rating	MU	S	HU	HS

Table No. 3 - Summary of IO indicators' target achievement

Level of Achievement	Phase 1	Phase 2
Surpassed (HS)	9	7
Achieved (S)	4	4
Partially achieved (MS)	2	3
Not achieved (MU, U, HU)	9	2
Data not available	5	0
Total indicators with data available	**24**	**16**
% surpassed, achieved or partially achieved	**63%**	**88%**
Rating	MU	S

Rating scale of target achievement HU/U (0-40%); MU (41-65%); MS (66-85%); S (86-95%); HS (96-+100%)

Outcomes*:*

PDO #1: Expand access and quality of primary health care services related to NCD early detection

51. PDO indicators #1, 2 and 3 on the percentage of cases diagnosed and under follow-up by primary care teams for the following NCDs – hypertension, diabetes, obesity/overweight, showed increased access to services at Project completion. The targets for these indicators were surpassed for all NCDs once two of the targets were revised during the 2012 restructuring, while achieved for hypertension, partially achieved for diabetes and not achieved for overweight/obesity when measured against the original target. The achievement of these indicators reflects an improvement in the diagnosis and follow-up of those NCDs and a shift in the prevailing health care model focus to respond to the country's changing epidemiological profile. Correlated to and also supporting PDO #1, PDO indicator #5 likewise measured a significant reduction in the crude mortality rate from diseases of the circulatory system (I00-I99) in the under 70 population, which

dropped from 75.18 percent in 2006 to 60.3 percent in 2014. Deaths related to diabetes and cancer have remained constant but a significant impact may take longer to demonstrate.

52. PDO indicator #7 on percentage of newborns with disabilities being monitored by early detection treatment units was achieved. During Project implementation access for newborns with disabilities was expanded through the establishment of nine disability early detection and treatment units surpassing the target of five. The institutionalization of this line of work and the achievement of the original target resulted in a dropping of the indicator following the 2012 restructuring.

53. In addition, the target's achievement of IO indicator #9 showed an increase in the number of primary health care establishments that were certified and quality accredited on NCDs medical care ambulatory procedures. As a result, quality standards were applied in 122 public and private health facilities, supporting increased quality of primary health services (PDO #1). See Annex 2 for a detailed discussion on how the outputs supported by the different components contributed to the achievement of PDOs.

54. In spite of these improvements, PDO indicator 4, the percentage of women 50-69 covered by ASSE who had a mammogram in a given year, was not met by either the original or revised targets. However, the Project succeeded in establishing the foundation for the future systematic screening of the female population under Component 2. ASSE is now managing a digital mammography network that has boosted the capacity of the health sector to prevent and control breast cancer. Furthermore, the GOU has accompanied infrastructure improvements with a law requiring mammograms and pap smears for working women who want to receive a health card, and maintain or obtain a new job.[16] The focus on screening for breast cancer is particularly important in Uruguay, since breast cancer has the highest incidence of death from cancer in women.[17]

55. Despite the failure to reach the target, the Second National Risk Factor Survey carried out in 2014 observed an improvement in the screening for breast cancers. According to data collected, 73.2 percent of women 40-64 had a mammogram in the last two years. Though the survey data does not measure the same population as that targeted in the Project indicator, better mammography equipment and the GOU's emphasis on breast cancer prevention will likely result in an increase in breast cancer screening and early treatment.

56. **Ratings.** Based on the previous analysis, the achievement of PDO #1 is rated as **Modest** for Phase 1 as two out of five PDO indicators were surpassed, one was partially achieved, and two were not achieved. In addition, progress towards the Project-supported interventions as measured by the IO indicators were Moderately Unsatisfactory. During Phase 2, four out of five PDO indicators showed overall increased access to primary health care services for NCDs early detection, while IO indicator #9 revealed the Project's success

[16] MSP's resolution No. 402/006 and Presidential Decree No. 571/006.
[17] Honorable Commission for the Fight Again Cancer. National Registry of Cancer 2007-2011.

in implementing activities that enhanced the quality of NCDs services. As a result, the rating for PDO #1 under Phase 2 is **Substantial.**

PDO #2: Provide specialized medical care to avoid and reduce exposure to selected NCD risk factors

57. PDO #2 was evaluated via PDO indicator #6 - percentage of population 45-64 years of age covered by the NHIS and screened for NCD risk factors. By Project completion nearly 37 percent of the target population had been screened for NCD risk factors, surpassing the revised target but not achieving the original target. The original indicator targeted eligible population from the three departments that were part of the *Previniendo* Pilot Program under Phase 1, while the revised indicator referred to those covered by the NHIS nationwide under Phase 2. In spite of the low pilot performance under Phase 1, the NCDs risk factor prevention model was implemented in the three participating departments. All the public and primary health care providers signed Annual Performance Agreements[18] with DHIEs, their staff was trained on NCDs and risk factor prevention and they provided services included in the package of preventive interventions, though at a lower level than required to meet the targets.

58. The introduction of the second health goal on NCD screening under the NHI following the *Previniendo* experience explains the achievement of this indicator under the Phase 2. The change meant the establishment of a result-based financing mechanism that rewarded the same indicator through different financing sources. In the case of the insured population served through private and public providers, the achievement of the goal was funded by the NHI; while in the case of the uninsured exclusively covered by the public sector was funded by the Project. The fact that the revised indicator was achieved reflected the Project's success in increasing the provision of specialized medical service for NCDs risk factor prevention. However, differences in system wide versus *Previniendo* indicator performance (IO indicators #13 and 14) reveal that while NCD screening was successful in the insurance sector working with private providers, mostly, ASSE implementation lagged.

59. **Ratings.** PDO #2 Modest because the NCDs risk factor prevention model supported by the *Previniendo* pilot was implemented during Phase 1 in the three participating departments in spite of the low performance of related indicators. During Phase 2, the only outcome indicator related to this PDO surpassed its target, showing an overall increase in the provision of specialized medical care related NCD risk factors prevention. This was also supported by the substantial progress of Project interventions, except for the low performance of *Previniendo* in terms of the population covered exclusively by ASSE. Overall, the achievement of this objective can be considered **Substantial** (the rating of Modest does not reflect Project's effort and contribution to support a shift toward prevention in the health care model of attention while a rating of

[18] These agreements included annual targets for the *Previniendo* Program, work programs and resource requirements for Project implementation, as well as the agreed prices for the services included in the package of preventive interventions.

High does not capture the differences in access to this type of services between the population covered by the NHI and ASSE).

3.3 Efficiency

60. **At appraisal, the positive efficiency impact was due to the cost effectiveness of the Project supported interventions**: the cost of preventing NCDs and complications among patients that already have NCDs is much lower than their treatment (See Annex 3). Thus, the Project focus on health promotion and NCDs prevention allowed for a more efficient resource allocation within the health sector. The fact that the Project broadly achieved the PDOs reflected the Project's success in contributing to shift in the health care model towards NCDs and risk factor prevention.

61. **Given that the changes promoted by the Project involved behavioral changes that take time to show results, it is not possible to observe them during the Project life.** However, the quantification of the reduction of deaths from diseases of the circulatory system provides some short run effects linked to improved control and treatment of high-risk patients. These effects were assessed through a cost effectiveness analysis that showed that interventions supported by the Project were cost effective in the Uruguayan context as the cost per DALY averted weighs between 5 to 33 percent of the average income. The number of estimated DALYs averted varied between 3,377 and 33,539, while the cost per DALYs averted varied between US$334 and US$2,371, depending on the discount rate and percentage of Project' attribution considered. Following the World Health Organization recommendation to assess the relevance of this impact (WHO 2001), cost per DALY was benchmarked against national per capita GDP to assess whether the intervention was cost-effective in the in the Uruguayan context. (See Annex 3 for further details).

62. **Efficiency of implementation:** The length of the Project period (with two extensions of the original Closing Date) was affected by start-up delays, lengthy procurement and hiring processes and frequent administration changes and staff turnover, leading to a slow implementation, especially during Phase 1. Although the Project did not fully disburse mainly due to insufficient external financing budget allocation, a number of the Project activities were financed with local resources supporting PDO achievement. By Project completion the Project had disbursed 76 percent of the initial loan amount or US$19.2 million of the US$25.3 million originally committed. Some of the activities originally planned to be Project funded, ended up financed with government funding as the Project advanced towards its institutionalization, mainly during Phase 2. In addition, by Project completion the GOU took over some activities that were still underway, such as the consolidation of the integrated health information system, ensuring the completion of Project-supported-activities in the short term.

63. **In light of the above, in particular the slow implementation, Project efficiency is rated Modest under Phase 1. Efficiency under Phase 2 is rated Substantial** based on the cost-effectiveness of Project interventions and the fact that in spite of partial

disbursement, the GOU financed and took over a number of activities under Project implementation, ensuring their sustainability and supporting PDO achievement.

3.4 Justification of Overall Outcome Rating

Rating: Moderately Satisfactory

64. The Project has had a positive and notable impact on Uruguay's health sector, contributing to raising the NCD prevention relevance and agenda priority and strengthening Uruguay's reform process. Given that the 2012 Project restructuring changed PDO indicator targets, Overall Outcome is evaluated using the split rating methodology.[19] Given the above analysis, the Overall Outcome for Phase 1 is Moderately Unsatisfactory and Satisfactory during Phase 2, leading to a **Moderately Satisfactory** rating after considering relevance, efficacy, and efficiency ratings and loan disbursements before and after the restructuring. Given that disbursement at the moment of the 2012 Project restructuring was 58 percent, Project performance at that point weights more heavily on the rating than the improved performance at Project completion. In this regard, the delay in Project restructuring diminished the Overall Outcome rating, which does not reflect 100 percent the substantial improvement of Project performance as measured by the revised RF.

Table No. 4: Overall Outcome rating

	Phase 1	**Phase 2**	**Total**
Relevance	**High**	**High**	
Objectives	High	High	
Design	High	High	
Implementation	Substantial	Substantial	
Efficacy	**Modest**	**Substantial**	
PDO #1	Modest	Substantial	
PDO #2	Modest	Substantial	
Efficiency	**Modest**	**Substantial**	
Overall outcome	**MU**	**S**	
Rating Value	3	5	
% of Loan disbursed	57%	43%	100%
Total	**1.71**	**2.15**	**3.86=MS**

Rating Value scale: HU=1; U=2; MU=3; MS=4; S=5 and HS=6

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

[19] World Bank Implementation Completion and Results Report's Guidelines (2006) established that disbursement-weighted split rating' has to be applied even if the objectives have not changed but the key associated outcome targets have changed (page 59).

65. **The Project's focus on NCD preventive measures had a social impact through the improvement of prevention and treatment of NCDs at the primary care level**. NCD incidence disproportionately impacts those in the lower income deciles and other vulnerable groups who have a higher prevalence of NCD risk factors and less information and possibility to access health services.

(b) Institutional Change/Strengthening
(particularly with reference to impacts on longer-term capacity and institutional development)

66. **Implementing the Project from within broke the paradigm of previous project structures, while strengthening the institutional development and capacity of both the MSP and ASSE.** This was the first WB supported Project to be directly implemented by MSP and ASSE's line staff in Uruguay, which slowed execution but was very valuable because all the knowledge remained within the institution and/or country. Especially relevant are the acquired capability of the epidemiological surveillance system, the strengthening of the Health Information System with the implementation of EMR, the adoption of the National strategy for health promotion and prevention of NCD and the improved the regulatory capability.

(c) Other Unintended Outcomes and Impacts (positive or negative)

67. The purchase of new modern equipment for NCDs early detection under Component 2 contributed to efficiency gains by reducing costs. The purchase of 140 digital visualizers and a picture archiving communication system, led to a reduction in the cost of printing of x-rays by 80 percent, from $1.22 to .43 cents per slide and in related waste, while supporting the development of a national digital imaging network

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops
Not applicable

4. Assessment of Risk to Development Outcome
Rating: Moderate

68. **The Project supported a number of initiatives, which form part of the MSP's health sector priorities and which have been advanced and institutionalized**. The MSP's NCD focus continues to be a priority due to the country's aging and high NCD incidence and the impact this has on the health sector. The emphasis on NCD risk factor prevention is gradually being mainstreamed while the health information system strengthened, both through data system improvements and the implementation of surveys and studies, providing valuable information regarding the country's health profile. The creation of a EMR is also a big accomplishment.

69. **A number of Project design aspects and supported measures mitigate the risk to the development outcome.** The implementation of the Project through the line staff succeeded in emphasizing the importance of NCD prevention and screening for health

sector staff. Furthermore, a number of measures were institutionalized suggesting their continuity within the Uruguayan health sector. For example, the NHI's adoption of the NCD's second health goal, the integration of the information systems and other measures have already moved beyond the Project and will remain central to the health sector. Though the emphasis on NCDs will likely remain a focal point in the MSP's priorities, the financing assigned for prevention activities and other related measures could decrease thereby impacting their impact potential.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: Moderately Unsatisfactory

70. **Project preparation was informed by lessons learned from previous operations in Uruguay and elsewhere, and a detailed sector assessment and technical analysis.** Project design was aligned with the GOU and WB strategies and introduced several innovative approaches. The WB team included experts with international health reform and RBF experience and deep knowledge of the Uruguayan health system. As this was the first WB supported project exclusively focused on NCDs worldwide, technical questions were informed by the latest NCDs and risk factor prevention knowledge available.

71. **In spite of the sound technical design, the design suffered from significant shortcomings that adversely affected the Project quality at entry.** Project design weaknesses included a complex and ambitious design, an unclear PDO formulation and an inadequate RF, as discussed in previous sections, which contributed to the need to restructure the Project. The WB team overestimated the capacity of the implementing agencies, especially regarding the procurement processes and did not anticipate the impact of insufficient budget allocation and lengthy and overlapping state procedures into Project execution. Mitigation measures were insufficient to address procurement obstacles and overall institutional capacity gaps in a timely manner, resulting in lengthy procurement and contracting processes and adversely affecting implementation. In view of these issues, the rating for ensuring quality at entry is Moderately Unsatisfactory.

(b) Quality of Supervision

Rating: Moderately Satisfactory

72. **Strong Project supervision was carried out by technical experts, especially during the first years of Project implementation**, including at least two supervision missions and more than three annual technical visits. The Project Mid-term Review was conducted as originally scheduled. The WB team maintained a high level of engagement with the client instilling ownership in spite of the high turnover of authorities within PGAs.

73. **The WB team was proactive in proposing solutions to overcome implementation obstacles**, including the development of an innovative and highly valuable approach (the mechanism to fund staff with WB loan proceeds) that can be applied

to other WB-supported Projects implemented through the government's administrative structure. Likewise, the team promoted measures to streamline lengthy state procedures[20] and adjustments to implementation arrangements to accelerate execution. The WB team identified the need to restructure the Project after the Mid-term review assessment (early 2011). At the time the team discussed the issue with the MSP's authorities and then with the authorities that took office in the second semester 2011, as reflected in the Aide Memories between 2011 and 2012. However the final GOU request was only submitted to the Bank three months prior to the original Project Closing Date (December 2012). The WB team included information regarding the progress on the restructuring process in the ISRs, though the delay in receiving the request was not raised as an issue.

74. **Aide Memoires provided a thorough and candid account of implementation progress and challenges**. Implementation Status and Results Reports (ISRs) were clear regarding implementation issues and fiduciary weaknesses. Problems in Project management issues were flagged early, especially regarding procurement and budgeting obstacles. However, ISR ratings between 2008 and 2012 did not reflect difficulties towards PDO achievement and implementation progress (mostly MS and S ratings and only one MU). On the basis of some of these weaknesses, the rating for Bank at Supervision is downgraded to Moderately Satisfactory.

(c) Justification of Rating for Overall Bank Performance
Rating: Moderately Satisfactory

75. The overall Bank performance is rated Moderately Satisfactory given the Moderately Satisfactory rating for Project Outcome.

5.2 Borrower Performance
(a) Government Performance
Rating: Moderately Unsatisfactory

76. **The GOU provided a supportive policy environment toward the achievement of Project PDOs.** The decision to extend NCD and risks factor screening to the entire population through the introduction of the second health goal on NCDs under the NHI as well as the enactment of several laws promoting healthy habits, helped keep the NCD prevention agenda as a top priority. However, micro level regulations (budgeting, personnel contracting rules, duplicated process for procurement of goods and services) in addition to frequent government staff turnover weakened Project performance. Project financing remained an issue as reflected by the delayed and insufficient budgetary allocation. The MEF's decision to assign less resources than projected and required for the Project by the MSP due to existing fiscal constraints, the Project's slow implementation

[20] For instance, maintaining valid a list of preferred candidates of a previous hiring processes for a new one as long as the required profile was the same or establishing a roster of people available for the hiring evaluation tribunal, among others.

and budget under execution during the previous years, significantly affecting implementation and loan disbursement.

(b) Implementing Agency or Agencies Performance
Rating: Moderately Satisfactory

77. **MSP, through DIGESA DIGESE and DIGESNIS, and ASSE are rated as Moderately Satisfactory.** Qualified and committed staff were appointed and contracted to implement Project subcomponents, however these processes took longer than expected adversely affecting implementation. At the beginning the PGA lacked sufficient capacity to provide adequate administrative support to implement Project activities, especially regarding procurement activities. This was resolved by increasing staff and time dedicated to Project activities, as well as through related training. The only area that continued showing difficulties was procurement under the MSP, which was taken over by the PSCU. Delays in making strategic decisions to improve performance, including significant delays in restructuring the Project, affected Project implementation. As a result, delays in appointing key staff, strategic decision-making, and procurement deficiencies are the basis for the Moderately Satisfactory rating.

78. **The performance of the PSCU is rated as Moderately Satisfactory.** The PSCU was staffed with a collaborative multidisciplinary team. Though initially Project implementation suffered from weaknesses related to WB procedure capacity, especially regarding procurement, intense training, full time key members' dedication and the incorporation of additional staff strengthened the PSCU and therefore Project management capacity. Frequent PSCU staff turnover at the beginning of Project life, affected the continuity of PSCU activities, in particular related to the PGA decision follow-up. PSCU's commitment was instrumental in encouraging PGAs to remain engaged after MSP administration changes. However, procurement deficiencies and the PSCU's difficulty in getting the PGAs to resolve implementation obstacles are the basis for the Moderately Satisfactory rating.

(c) Justification of Rating for Overall Borrower Performance
79. The overall Borrower performance is rated Moderately Satisfactory given the Moderately Satisfactory rating for Project Outcome.

6. Lessons Learned
80. **Project preparation should focus on ensuring good quality at entry, which is key to implement the Project adequately:**

- **The formulation of Project objectives should be clear and concise,** identifying overall and Project-specific objectives and the causal relation between them. The RF should include a limited number of key relevant, well-defined and measurable indicators that reflect all PDO dimensions. Reliable baseline data is important to set realistic targets. A sound RF design supports the adequate tracking of Project

performance, which in turn leads to an improved and timely response to issues, while maximizing Project results.

- **A comprehensive institutional capacity assessment, especially regarding procurement rules should be carried out prior to Project implementation.** In particular, for Projects implemented through their own internal administrative structure, that may lack sufficient knowledge or experience with WB operations. In addition, when staff retain their internal positions, the assessment should include a calculation of the additional work-load required and identify the mechanism to finance additional staff time using WB loan proceeds.
- **The risk assessment should take into account the impact of: (i) insufficient budget allocation and (ii) country regulations regarding hiring and procurement.** Insufficient budget allocation can significantly affect Project implementation, especially in countries with five-year budget cycles where the reallocation of funds from one year to another is complex and the impact of a budget cut are difficult to reverse. The assessment should make a greater effort to realistically assess the time procurement and human resources hiring take with World Bank and national regulations. This is key to inform the design of Project implementation arrangements and identify mitigation measures that ensure the timely execution of such processes.

81. **Though Project implementation via an implementing agency's internal administrative structure facilitates the institutionalization of activities, it may imply a longer execution period**. Staff continuity boosts the likelihood of implemented activity sustainability. Nevertheless, the fact that strategic decisions tied to each component are often taken by authorities not exclusively dedicated to the Project can contribute to delays.

82. **The inclusion of a Coordinating Unit, in the context of internally administrated Projects, with sufficient political strength is necessary to keep the Project in the decision maker's agenda** and to ensure the implementation of key measures needed for Project execution. With this in mind, it is fundamental that the Coordinating Unit include sufficient personal with exclusive dedication and an adequate technical and management profile.

83. **The design of RBF pilots benefit from the incorporation of instruments that set flexible targets depending on stakeholder capacity.** In the case of Uruguay, the private rather than the public DHIE's revealed a greater capacity for pilot incentive response. At the same time, the continuity of payments tied to the achievement of targets is fundamental to maintain interest in pilot participation.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners
(a) Borrower/implementing agencies

84. Annex 7 includes the MSP's Project implementation assessment. In addition, the MSP and MEF's specific comments regarding the ICR are the following:

85. The original note issued by the MEF formally requesting a Project extension was submitted to the Bank in November 2011, thirteen months before the original Project Closing Date. The request was sent after reaching an agreement regarding a restructuring with the Bank. From then on and in particular during the supervision missions of December 2011, April 2012 and August 2012, the Bank and the MSP worked together on the restructuring proposal, as detailed in the mission work agendas and aide memoires. Thus, the restructuring process was conducted in coordination with the Bank.

86. Implementation was also affected by the lack of flexibility in the interpretation and difficulty in implementing some WB regulation in a market the size of Uruguay's. These issues adversely affected the viability of some of the Project supported work lines. The MSP believes, in line with comments raised in the different Portfolio Reviews and the MSP Project implementation assessment, that the change in the approach developed by the Bank was key to Project performance improvements in the second phase.

(b) Cofinanciers
Not applicable

(c) Other partners and stakeholders
Not applicable

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in USD Million equivalent)

Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
1. - Strengthening of the MSP's Capacity to Address the Country's Changing Epidemiological Profile.	6.10	3.16	52%
2. - Improve Accessibility to Quality Care Services for Prevalent NCD in Public Primary Care Facilities	15.80	14.12	89%
3- Implementation of the "PREVINIENDO" Pilot program	3.80	1.18	31%
4. - Project Management	2.10	3.25	155%
5 - Unallocated	0.90		
Total Baseline Cost	28.80	21.71	75%
Physical Contingencies	0.00	0.00	0.00
Price Contingencies	0.00	0.00	0.00
Total Project Costs	0.00	0.00	
Front-end fee PPF	0.00	0.00	.00
Front-end fee IBRD	0.00	0.06	.00
Total Financing Required	28.80	21.77	76%

(b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Borrower		0.00	2.60	Not applicable
Financing Gap[21]	Joint	3.50	0.00	0%
International Bank for Reconstruction and Development	Joint	25.30	19.16	76%

[21] At the time of Project Appraisal, a financing gap to reach estimated total Project cost was included as a source of financing in the PAD. This was because the Project was not included in the 2005-2010 budget as it was envisioned after the budget cycle preparation. Therefore, it was not possible to allocate this financing gap to the borrower.

Annex 2. Outputs by Component

1. **The project had four main components linked to 16 IO indicators** that formed part of the RF agreed upon during the 2012 Project restructuring. Before the restructuring there were 29 different IO indicators. By Project completion, 11 indicators were surpassed or substantially achieved, three partially achieved and two not achieved.

Table No. 1 - Summary of IO Indicators target achievement

Level of Achievement	Phase 1	Phase 2
Surpassed (HS)	9	7
Achieved (S)	4	4
Partially achieved (MS)	2	3
Not achieved (MU, U, HU)	9	2
Data not available	5	0
Total indicators with data available	**24**	**16**
% surpassed, achieved or partially achieved	**63%**	**88%**
Rating	MU	S

Rating scale of target achievement HU/U (0-40%); MU (41-65%); MS (66-85%); S (86-95%); H

2. The detailed results for each component are included below.

Component 1 – Strengthening of the Ministry of Health (MSP)'s Capacity to Address the Country's Changing Epidemiological Profile

3. **Component 1 aimed to strengthen essential public health functions of the MSP related to non-communicable diseases (NCDs)**. The Component sought to do this by improving the MSP's surveillance and intelligence functions, supporting health promotion and NCD prevention programs and building up the country's regulatory capacity related to NCDs. These functions were key to provide the MSP with the necessary tools to align the health care model of attention with the country epidemiological profile. The Component supported improvements in all of these functions and therefore allowing for the expansion of access and quality of primary health care services for early detection and medical care of selected NCDs (PDO #1) and the provision of specialized medical services to avoid and reduce exposure to selected NCD risk factors (PDO #2). The component was subdivided into three subcomponents that were evaluated via 9 indicators after de 2012 Project Restructuring.

4. The specific activities accomplished by the three sub-components include the following:

(a) Subcomponent 1.1 (*Strengthening of Health Intelligence Functions*): development of a National Epidemiology Network and a National Surveillance System on Non

Communicable Diseases (SISVENT), guides on reportable diseases and health events, an information system on regarding hospital discharges implemented in the public and private provider network, implementation of a second National Risk Factor Survey, a Burden of Disease study, a Health and Expenditure National Survey and the first ever survey of injuries from external causes.

(b) Subcomponent 1.2 (*Health Promotion and NCDs Prevention Programs*): implementation of a National Health Promotion Strategy at the departmental level, a healthy schools and municipality strategy and the completion of thirty-six Health Promotion Projects (FUSI) at the community level.

(c) Subcomponent 1.3 (*Regulatory capacity building in relation to NCDs*): review and update of the regulatory framework affecting NCDs and their main risks factors, in particular regarding regulation on tobacco, trans fat and dietary carbohydrate loads, approval of a law on healthy food in schools, development of guidelines on breast and cervical cancer, update of the National Food Regulation and the development and implementation of the NCDs quality standards for the accreditation of primary health care facilities.

5. **The Sub-component 1.1 (Strengthening of Health Intelligence Functions) contributed to improve the Uruguay's health intelligence network** and allowed for informed decision-making regarding NCD and risk factor prevention and control priorities which were key to reorient the model of attention in line with the epidemiological profile of the country. The Subcomponent was divided into three areas: (a) establishing the foundation for an Integrated Health Information System, (b) modernizing and consolidating the public health surveillance system (*Sistema de Vigilancia Epidemiológica - SEVES*), and (c) strengthening the response capacity of the Directorate General of Health (DIGESA – *Dirección General de Salud*) and its departmental units. Of the four indicators under this subcomponent, two were surpassed or substantially achieved and two were partially achieved.

6. **The Project contributed to setting the foundations for an Integrated Health Information system** by defining data sources, codifying and improving data quality, and initiating the integration of key databases (life events, reportable diseases and health events, hospital infections and discharges, and national risks factors). An information system on hospital discharges was developed and implemented in the public and private provider network, increasing the coverage and quality of the data, and allowing for the analysis of NCD discharges, thereby strengthening health monitoring and the authorities health related decision-making.[22]The indicator regarding the National Health Information System (IO indicator #1) was partially achieved as some of the key databases were integrated while others are still in the process of integration. The Information System Directorate of the

[22] Before 2010 the public sector faced a number of obstacles in the codification of hospital discharges.

MSP, in coordination with AGESIC, Uruguay's government agency in charge of developing the e-government strategy, took over this task ensuring its sustainability.

7. **The modernization and consolidation of the public health surveillance system was promoted through the development of the 18 Epidemiology department units and their unification into a virtual network.** Seventy-two percent of Epidemiological Surveillance Units are now in compliance with the information requirements of the health surveillance system (IO indicator #2), partially achieving its target. Epidemiologist referents in charge of this units were included in the MSP own budget ensuring the continuation of this line of action after Project closing. Another major success of the subcomponent was the development of a National Surveillance System on Non Communicable Diseases (SISVENT), supporting the inclusion of NCDs within the general health surveillance system. Date collected from the NCD surveillance system was used regularly to provide information for the Health Promotion and Prevention Strategy plans, as well as to define the focus of the communication strategy.

Box No. 1
Second National Risk Factors for NCDs Survey

The completion of the second national risk factor survey financed through the Project supported NCD data collection. The survey tracked the evolution and provided a comparison of risk factor developments with the first survey (2006), provided for the evaluation of implemented health sector policies and served as a tool in health policy formulation. The information collected, as well as other data sources, form the basis for the study of NCDs in Uruguay.

The survey identified a number of risk factors such as: tobacco consumption, unhealthy alcohol consumption, low levels of physical exercise, high blood pressure, overweight/obesity, and elevated glycaemia and cholesterol levels that are associated with NCDs. Currently 43 percent of the Uruguayan 25-64 year old population exhibits at least three of the above risk factors. Compared with the first survey, there was a decrease in daily consumption of tobacco, an improvement in physical activity and a decrease in elevated cholesterol levels. However, consumption of at least 5 fruits or vegetables daily fell, while the percent of overweight/obese people and high blood pressure increased.

High Risk Factors* according to age and sex

Sex	15 to 24	25 to 64	15 to 64
	% (IC)	% (IC)	% (IC)
Men	12.60%	47.20%	38.60%
	(6.7-18.4)	(43.1-51.3)	(34.9-42.3)
Women	17.50%	39.90%	34.70%
	(12.1-22.8)	(37.1-42.8)	(32.2-37.3)
Both	15%	43.40%	36.60%
	(11.2-18.9)	(40.8-46.0)	(34.3-38.9)

*Presenting 3 or more risk factors/Source: 2nd Uruguay MSP, 2014

8. In addition, guides on reportable diseases and health events were developed and updated. The Project also financed the development of an information system based on the nominal registry of NCDs of the *Previniendo* population, a registry of congenital defects, and a data warehousing of epidemiological information. In particular the Second National Risk Factor Survey allowed for a comparison over a specified time frame in which NCDs

began to be prioritized by the health sector.

9. **One hundred and ten DIGESA key personnel were trained in SEVES, outbreak investigation and data for decision-making** (IO indicator #3), thereby surpassing the indicator's target. The training of health personnel was key to adequately take advantage of the strengthened surveillance system and build local capability in health intelligence functions. As a result, 99.7 percent of the communicable disease outbreaks reported by surveillance system were managed at local level according to norms (IO indicator #4).

10. **Sub-component 1.2 (Health Promotion and NCDs Prevention Programs) successfully implemented a National Health Promotion Strategy**. Though many of the promotion activities were spearheaded by the government, support from the Project provided further reinforcement and resulted in the establishment of a Strategic Plan for Health Promotion and the development of a Health Promotion Network conformed by inter-sectorial health promotion groups at national and departmental level. Most of the activities in this subcomponent specifically supported the mitigation of selected NCD risk factors and raised awareness regarding the importance of NCDs early detection. This in turn, increased the demand for this types of services while reducing NCDs risk factors prevalence (PDO #1 and #2. Two out of three indicators under this Subcomponent were surpassed or achieve, while the remaining was partially achieved.

11. **The Project supported the elaboration of a Strategic Plan for Health Promotion, prevention and Control of NCDs.** This document was the precursor to the Plan for the Prevention and Control of NCDs 2015-2025. The Project also worked on the National Strategy for the Promotion of Health, which prioritized healthy municipalities, communities and schools. Over 63 commitments were signed between localities and the MSP promoting healthy municipalities and 36 Health Promotion Projects (FUSI) at the community level were completed and evaluated in 17 out the 19 departments. As a result, sixteen departments carried out a "healthy municipality strategy" including (a) health promotion subprojects related to NCDs and (b) development of healthy spaces, surpassing the IO indicator #5's target. To foster these activities, the Project supported the development of a promotion network that included 7 health referents, which also helped train local actors of the 19 departments, the procurement and installation of 38 open-air gyms and a project of community bikes in the city of Canelones.

12. **Healthy school campaigns succeeded in fostering healthy habits in Uruguayan schools prioritizing better nutrition and physical activity**. IO indicator #6 evaluating public schools implementing 'healthy school' strategies was partially achieved with 16.2 percent of them actively participating (379) though a number of others followed the guidelines but were not part of the program (23). The Project also supported the establishment of regulations regarding healthy snacks for schools and a decrease in the amount of salt used, included amounts for bread.

13. **In coordination with the Government, the Project supported a number of measures aimed at reducing tobacco consumption, positively impacting the health of**

the population. Between 2006 and 2011 the government produced six national stop smoking campaigns plus six national pictograph campaigns,[23]and succeeded in prohibiting the promotion, publicity and advertising of tobacco products and in improving air quality by 90 percent through the implementation of smoke free areas. These measures led to a reduction in the prevalence of daily smokers from 32.7 percent in 2006 to 28.8 percent in 2013, and a decrease in the prevalence of tobacco consumption by 10 percentage points for the population in general and 20 percentage points in the 12-17 year population group over the past 10 years. The data also indicates a 22 percent reduction in the number of hospital admissions for myocardia heart attacks between 2006 and 2013.

14. **Finally, the Project supported the establishment of an inter-sectorial (drug commission, cardiovascular groups, road safety, etc.) health promotion group.** Despite the establishment of the group, the fact that it has not been included as a formal area within the MSP organizational structure resulted in a substantially achieved rating for the National Promotion Group indicator (IO indicator #7).

15. **Sub-component 1.3 (*Regulatory capacity building in relation to NCDs* contributed to advance the definition of the country's regulatory framework on NCDs and the formulation of a regulation framework promoting healthy habits** as shown by the achievement of the two indicators included in this subcomponent. Beginning in 2012 the regulatory framework affecting NCDs and main risks factors was reviewed (IO indicator #8) and updated. Specifically, the component supported the review of NCDs and risk factors regulations at the primary health care level, tobacco, trans fat and dietary carbohydrate load, the approval of a law on healthy food in schools, the development of guides on breast and cervical cancer and the update of the National Food Regulation, all very relevant to the reduction of NCD risk factors.

16. **NCDs quality standards for the accreditation of primary health care facilities were developed and implemented**. This activity focused on assessing the quality of the primary health care services while fostering a process of permanent improvement. The evaluation process embarked upon by many of the health institutions involved an assessment of the application of the standards at each health facility by the relevant authorities, training on auto-evaluation and a constant back and forth of information regarding possible improvements on the standards applied. The target for IO indicator #9, the number of primary health care establishments that are certified and quality accredited on NCDs medical care ambulatory procedures was surpassed. As a result, quality standards were applied in 122 public and private health facilities, reflecting the increased regulatory and enforcement capacity of the MSP. This process was key in improving the quality of health care services delivered by the primary health facilities (second part of PDO #1). However, since the evaluation function was not included within the regular activities of the MSP Regulation Unit following Project closing, the sustainability of this line of action is not ensured.

[23] Uruguay MSP, First and Second National NCD Risk Factor Survey (2006 and 2014, respectively).

Component 2: Improve accessibility to quality care services for prevalent NCDs in public primary care facilities.

17. **The training of health personnel, the development of modern management tools and purchase of equipment under Component 2 allowed for increased access and quality of health services in the public sector**, supporting PDO #1, and increased provision of specialized medical service to reduce exposure to those most at risk for NCDs (PDO #2).To this aim, the component was divided into three subcomponents that sought to enhance the technological infrastructure of the public primary health care network (Sub-component 2.1), develop modern health management tools (Sub-component 2.2) and build capacity (Subcomponent 2.3). The Component was successful to accomplish these objectives as reflected by the achievement of the three indicators' targets under this section.

18. **The Project supported the purchase of approximately USD$10 million in medical equipment, strengthening the capacity of primary health care facilities to better provide health care services related to selected NCDs early detection and medical care.** To strengthen the health sector's diagnostic capabilities, the Project supported the purchase of 21 urology equipment and a laparoscopy tower, 50 radiology equipment, 140 digital visualizers and an established network for digital imaging, including mammography and a picture archiving communication system. As a result of the purchased radiology equipment the printing of x-rays decreased by 80 percent reducing costs and related waste.[24] Thirty-eight vehicles equipped with medical equipment were procured to improve NCD heath care capability and increase access in rural isolated communities.

19. **In terms of modern management tools, the Project succeeded in developing a strategic framework for the establishment of an ASSE information system, including the introduction of EMR** for the first level of attention known as SIEMBRA (*Sistema Informático de Escritorio Médico Basado en la Red Asistencial*) financing infrastructure (information equipment) and technical assistance. It also supported the development of an integral RRHH system, allowing for improved RRHH management, in particular related to the first level of attention.

20. **The component supported the reorganization of ASSE after its decentralization** [25] by contributing to the consolidation of the Information System Directorate unit and the design and establishment of a central processing unit and a data communication network. The purchase of 430 personal computers, 100 laser printers, 50 multifunctional printers, 95 notebooks, storage area network, backup system, 2 central servers, operating and system licenses and corporate anti-virus contributed to the establishment of the information system. In addition, the information requirements

[24] According to ASSE costs per slide fell from $1.22 to 0.43 cents.
[25] ASSE was decentralized in August 2007

resulting from the *Previniendo* Pilot helped ASSE create a roster of beneficiaries and include NCD data within the SIEMBRA.

21. **As of November 2015, 95 percent of ASSE beneficiaries had an EMR[26] (IO indicator #12) while 83 percent of medical personnel had registered a user with an EMR**. The system is currently being improved but should form the base for the shift toward the move toward universal EMR. This will not only ease the communication and flow of information related to individual patients but also help build a health information database than can be used to analyze the health profile of the population and ultimately reorient the model of attention in line with the epidemiological profile of the country. This activity will be carried out by the Information System Directorate of ASSE, in coordination with AGESIC under the Salud.uy initiative.

22. **Over 2500 primary health care team members were trained in NCD prevention and care (IO indicator #10), surpassing the indicator's target.** This training strengthens the health sectors capacity to address NCDs by supporting the expansion of accessibility and quality of primary health care services related to NCD early detection and medical care (PDO #1). Likewise, the development of a National Life Long Training Network in ASSE for primary healthcare workers (IO indicator #11) was achieved with the establishment of an IT platform, a technical team supporting the training process and four annual training courses. Training has now been incorporated into ASSE's human resources division. The Project also succeeded in equipping and operating 64 training rooms that that are part of the Network.

Component 3 – Implementation of the Previniendo Pilot Program

23. **The *Previniendo* Pilot was an innovative results-based payment program that linked financing to outcomes from prevention activities for selected NCDs risk factors**. The Pilot program was implemented between 2010 and 2012 by public and private health suppliers in the departments of Treinta y Tres, Tacuarembo and Rio Negro. The program successfully introduced NCD prevention to the first level of attention, highlighting result focus in the health sector and a reference for MSP NCD related sanitary policies. In addition, the *Previniendo* Pilot helped ASSE reorganize the model of attention towards NCDs after its decentralization. In this regard, information requirements to report results led to the improvement of the roster of ASSE's beneficiaries and the development of an information system on NCDs (the *Previniendo* Information System). Likewise, the *Previniendo* Pilot also strengthened the oversight capacity of the MSP by developing a verification mechanism to assess results on the field.

24. **However, design and implementation issues adversely affected the Pilot's performance.** Though there were positive advances in the component, the indicators included largely failed to reach the proposed targets. Only one of the component's five indicators achieved its target. Two were dropped following the restructuring and two failed

[26] The operational definition of this indicator established that ASSE's beneficiaries refer to those that have selected a referring physician (*medico de referencia*)

to achieve the target. The indicators measuring the percentage of the population of the pilot departments screened for NCD factors and percentage of cases diagnosed under follow-up primary care terms for three common NCD both (IO indicators #13 and 14) failed to achieve their targets due to a combination of factors. Difficulties in conforming the team in charge of implementing the component led to delayed start, while long and bureaucratic procedures to hire staff hampered adequate support during implementation. In addition, overoptimistic targets that were systematically not achieved and protracted payments to Departmental Health Insurance Entities (DHIE) reduced stakeholders incentives to participate in the pilot. These factors were highly relevant considering that 100 percent of the capitation payment was linked to the achievement of results. In this regard, financial incentives did not sufficiently leverage the Project. The only indicator (indicator #15) to achieve its target was the one measuring primary care providers under Annual performance Agreements with the DHIE

25. **In 2013 the *Previniendo* Pilot was extended nationwide in response to the GOU's decision to extend screening for NCD risk to the entire population.** To this aim, in July 2010 the NHI included the second NCD related health goal following the *Previniendo* pilot experience. To enhance the synergy between these strategies, the eligible population of the *Previniendo* was adjusted to include all ASSE's beneficiaries between 45 and 64 years old; those with the highest prevalence of NCDs. The introduction of the second health goal on NCDs under the NHI meant the establishment of a result based financing mechanism that rewarded the same indicator through different financing sources. In the case of the insured population served through private and public providers, the goal was funded by the NHI; while the Project funded the uninsured exclusively covered by the public sector. While NCD screening was successful in the private sector, the implementation in the public sector was slower than expected. As a result, the related outcome indicator was modified to capture information from the entire health system nationwide, while the ones related to Component 3 were adjusted to capture information only from the public sector.

26. **In this second phase *Previniendo* supported the improvement of ASSE's institutional capacity**. Lessons learned from the pilot experience revealed a weaker performance by the public providers compared to the private ones. In addition to focusing on public providers, lower and increasing- in- time targets were set in the second phase. Implementation was adversely affected by a delayed start [27] and by the strategy's operationalization. The strategy established the use of the EMR to report *Previniendo* targets and foster this key initiative. However, this requirement although necessary for the extension of project's scope, became a bottleneck as health staff had to be trained and authorized on the use of the EMR. The training was delayed due to difficulties in contracting staff in a timely manner, reducing the possibility of using the EMR to report Program performance. In addition, organizational, technical and cultural factors also affected the EMR utilization. Although an Action Plan was developed to overcome these issues there was not enough time remaining of Project life to successfully accomplish the

[27] Although, the program started in December 2013, full participation from the 19 departments was achieved by June 2014

component's objectives. Therefore, the implementation of this Component was moderately unsatisfactory as shown by the achievement of only one out of three IO indicators. In spite of this situation, the PDO indicator #6 referred to screening for NCD risk factors in the entire health system was achieved reflecting the Project's success in supporting a shift toward prevention in the health care model of attention. However, the difference between the indicators from the entire system versus *Previniendo's* ones reveals that NCD screening was successful in the private sector, while public sector implementation was slower than expected.

Component 4 – Project Management

27. **The final component included one IO indicator (#16) linked to the activities related to support of the Health Insurance Reform Design Process, which achieved its target** of developing and applying a methodology to assess the financial impact on public finances and household budgets of alternative health care reform strategies. The two alternatives examined and affecting the public finances were the creation of the NHI which required the evaluation of alternative strategies for the progressive incorporation of different insurance mechanisms according to the fiscal space available and the budgetary strengthening of the main public provider, ASSE which strove to reduce the spending gap between private and public sector users.

28. Component 4 also supported the design of the NHIS and NHI, financed a book on the reform process and supported the 2014 National Health Survey, which provided information regarding health, use, access and health spending of the population. The Component also financed the purchase of health software and invested in health human resources capacity building

Table No. 2 – PDO indicators 'matrix

Outcome Indicators	Baseline 2006 - PAD	Baseline 2006 - Project Restructuring 2012	Original Target - PAD	Revised Target - Project Restructuring 2012	Actual 2015
PDO #1: Expansion of the access and quality of primary health care services related to NCD early detection.					
1. Percentage of hypertension cases diagnosed and under follow-up by primary care teams.	49.10%	54.70%	60%	NA	62.60%
% of target met			*149%*		

2. Percentage of diabetes cases diagnosed and under follow-up by primary care teams.	73%	63.90%	83%	73%	77.60%
% of target met			*72%*	*151%*	
3. Percentage of obesity/overweight cases diagnosed and under follow-up by primary care teams.	0%	13%	50%	20%	34.30%
% of target met			*58%*	*304%*	
4. Percentage of women 50-69 covered by the public provider (ASSE), who has had a mammogram in any given year.	25%	9.90%	45%	20%	11.63%
% of target met			*5%*	*17%*	
5. New -Crude mortality rate from Diseases of the Circulatory System (I00-I99) in the population under 70 years		75.18%		67.50%	60.30%
% of target met				*194%*	
7. Percentage of newborns with disabilities being monitored by Early Detection and Treatment Units	0%		60%	dropped	75.60%
% of target met			*126%*		
PDO #2: Provision of specialized medical care to avoid or reduce exposure to NCD risk factors and their health effects.					
6. Percentage of population 45-64 years of age covered by the NIHS and screened for NCD risk factors.	0%		65%	30%	36.70%
% of target met			*56%*	*122%*	

Table No. 3 – Project IO Indicators 'matrix

No.	Component	IO Indicators	Baseline value 2006 - PAD	Baseline value 2006 - 2012 Project Restructuring	Original Target - PAD	Revised Target - 2012 Project Restructuring	Actual 2015
1	1.1	BPS, RUCAF, ASSE and FNR beneficiary databases and internal MSP databases are integrated into the National Health Information System	0	BPS, RUCAF, ASSE beneficiary and FNR beneficiary database are not integrated into the National Health Information System	BPS, RUCAF, ASSE and FNR beneficiary databases and internal MSP databases are integrated into the National Health Information System		The main databases are partially integrated
		% of target met			Partially achieved		
2	1.1	Proportion of Epidemiologic Surveillance Units (ESUs) in compliance with information reporting requirements of the health surveillance system	10%		85%		72%
		% of target met			*83%*		
3	1.1	Number of DIGESA key personnel trained in SEVES, outbreak investigation and data for decision making	0		20	50	110
		% of target met			*550%*	*220%*	
4	1.1	Proportion of communicable disease outbreaks reported by surveillance system that are managed at local level according to norms	10%		90%		100%
		% of target met			*112%*		

No.	Component	IO Indicators	Baseline value 2006 - PAD	Baseline value 2006 - 2012 Project Restructuring	Original Target - PAD	Revised Target - 2012 Project Restructuring	Actual 2015
5	1.2	Number of Health Departments that carry out "healthy municipality strategy", including (a) health promotion subprojects related to NCDs and (b) development of healthy spaces		0	15		16
		% of target met			*106%*		
6	1.2	Proportion of public schools implementing 'healthy school' strategies.	0%		20%		16%
		% of target met			*81%*		
7	1.2	A National Promotion Advocacy group is conformed.	The National Promotion Advocacy group does not exist.		A National Promotion Advocacy group is conformed		A National Promotion Advocacy is conformed and there are 60 additional working groups in health Promotion, articulated by the MOH.
		% of target met			*Achieved*		
8	1.3	Regulatory framework affecting essential NCDs and risk factors is reviewed to assess its effectiveness	Never been reviewed		Reviewed		Reviewed
		% of target met			*Achieved*		
9	1.3	Number of primary health care establishments that are certified and quality accredited on NCDs medical care ambulatory procedures	0		200	100	122
		% of target met			*61%*	*122%*	

No.	Component	IO Indicators	Baseline value 2006 - PAD	Baseline value 2006 - 2012 Project Restructuring	Original Target - PAD	Revised Target - 2012 Project Restructuring	Actual 2015
10	2	Number of primary health care team members trained in NCD prevention and care	100		4000	2000	2579
		% of target met			*64%*	*130%*	
11	2	Development of a National Training Network in ASSE for primary healthcare workers	Technical Team and training contents have not been developed and central training room has not been equipped and is not functioning.			Technical Team and training contents developed and 60 training rooms equipped and functioning.	Technical Team and contents for 5 annual training courses. There are 64 training rooms equipped and operating
		% of target met				*Achieved*	
12	2	Percentage of ASSE beneficiaries registered in electronic medical records	0		30%		95%
		% of target met			*317%*		
13	3	Percentage of population between 45 to 64 years with ASSE coverage screened for NCDs risk factor	0%			22%	1.3%
		% of target met			*Not achieved*	*6%*	
14	3	Percentage of ASSE beneficiaries with risks for NCDs detected that is receiving follow up under Previniendo guideline	a. Hypertension: 49.1% b. Diabetes: 73% c. Obesity/overweight: 0%	0	a. Hypertension: 85% b. Diabetes: 93% c. Obesity/overweight: 65%	10%	0.8%
		% of target met			*Not achieved*	*8%*	
15	3	Primary care providers under Annual Performance Agreements with DHIE	0		85%		100%
		% of target met			*118%*		

No.	Component	IO Indicators	Baseline value 2006 - PAD	Baseline value 2006 - 2012 Project Restructuring	Original Target - PAD	Revised Target - 2012 Project Restructuring	Actual 2015
16	4	To develop and apply a methodology to assess the financial impact on public finances and household budgets of alternative health care reform strategies			Methodology has been developed in conjunction with the Ministry of Finance and is being implemented in any given year		Methodology has been developed
		% of target met			*Achieved*		
17	1.1	Regularly report of consolidated data on number of patients diagnosed with specific NCDs and currently under treatment	0		Report regularly available in 9 departments	dropped	Report regularly available in 3 departments
		% of target met			*33%*		
18	1.1	Primary health facilities uses regularly the diagnosis and monitoring system	11		205	dropped	Not available
		% of target met			*Not achieved*		
19	1.1	Data definitions and coding standards for pathologies issued	24		34	dropped	35
		% of target met			*110%*		
20	1.1	Public Health Bulletins and Surveillance Bulletins published according to norms in any given year	0		2	dropped	5
		% of target met			*250%*		
21	1.1	Additional DIGESA staff trained in "Data for Decision-Making"	5		20	dropped	6
		% of target met			*7%*		
22	1.1	10 key staff trained in laboratory safety	0		10	dropped	0
		% of target met			*0%*		

No.	Component	IO Indicators	Baseline value 2006 - PAD	Baseline value 2006 - 2012 Project Restructuring	Original Target - PAD	Revised Target - 2012 Project Restructuring	Actual 2015
23	1.1	DIGESA additional key staff members trained in outbreak investigation	10		20	dropped	36
		% of target met			*260%*		
24	1.2	Municipalities carry out 'healthy spaces campaigns	0		50%	dropped	53%
		% of target met			*105%*		
25	1.2	Health promotion subprojects related to NCDs are implemented in participating healthy spaces and are evaluated.	0		95%	dropped	100%
		% of target met			*105%*		
26	1.2	Disability, early detection and treatment units are developed	0		5	dropped	9
		% of target met			180%		
27	1.2	Personnel in health promotion unit are trained	0		100%	dropped	100%
		% of target met			*100%*		
28	1.2	Annual Tobacco media campaign is developed in any given year	0		1 each year	dropped	6 national stop smoking campaigns, plus six national pictograph campaigns, totaling 12 media campaigns. (2006-2011)
		% of target met			*Achieved*		
29	2	Percentage of reduction in hospital admissions for treatments more appropriately provided at lower levels: a. Hypertension crisis b. Stroke c. Ketoacidosis diabetic	To be completed in year 1		a. Hypertension crisis: 30% b. Stroke: 30% c. Ketoacidosis diabetic: 50%	dropped	Not available
		% of target met			*Not achieved*		

No.	Component	IO Indicators	Baseline value 2006 - PAD	Baseline value 2006 - 2012 Project Restructuring	Original Target - PAD	Revised Target - 2012 Project Restructuring	Actual 2015
30	2	Percentage reduction in the number of advanced-stage cases for specific NCDs assisted under the FNR relative to all cases in the same NCDs category: Cardiovascular disease by hypertension and Chronic Kidney failure by hypertension	To be completed in year 1		5%	dropped	Not available
		% of target met			*Not achieved*		
31	3	Percentage reduction in hospital admission for treatments more appropriately provided at lower levels: a. Hypertension crisis b. Stroke c. Ketoacidosis diabetic	To be determined in year 1		a. Hypertension crisis: 70% b. Stroke: 70% c. Ketoacidosis diabetic: 70%	dropped	Not available
		% of target met			*Not achieved*		
32	3	Percentage of reduction in the number of advanced-stage cases for cardiovascular disease and chronic kidney failure by hypertension assisted under the FNR relative to all cases in the same category.	To be determined in year 1		10%		Not available
		% of target met			*Not achieved*	dropped	

Annex 3. Economic and Financial Analysis

29. **This annex presents the results of the economic and financial analysis for the Uruguay Non-Communicable Diseases Prevention Project.** At appraisal, the Project's contribution to efficiency gains was assessed as positive. The health promotion and NCD prevention activities supported by the Project were identified as cost effective when compared to treatment costs, allowing for a more efficient allocation of health care resources. The rise in NCD incidence in line with the countries changing epidemiological profile within a health system lacking an adequate promotion and prevention program underlined the importance of supporting a shift in the existing health care model.

30. **The Project supported a set of interventions and prevention/promotion programs aimed at reducing the burden of morbidity associated with NCDs and selected risks factors.** The measures implemented followed recommendations made by a cost effectiveness study carried out in Uruguay (Uruguay MSP, 1997). The study recommended primary prevention measures aimed at reducing the impact of cancer risk factors, including nicotine poisoning, alcohol consumption, obesity, inappropriate exposure to the sun and workplace risk factors. Regarding secondary prevention measures, the study recommended breast cancer screening for women aged between 50 and 64. The study also identified detection and treatment of arterial hypertension and prevention and early detection and treatment of diabetes as cost-effective interventions. The prenatal diagnosis of congenital anomalies was also identified as a cost effective priority regarding congenital diseases in the maternal-child population.

31. **The PAD's economic analysis revealed that health promotion and NCD preventive measures were more cost effective than treatment options** (See Table No. 1). For example, preventive strategies targeted at individuals with a high risk of suffering from cardiovascular diseases[28] were identified as cost effective especially when applied together with population based interventions.[29] Likewise, cancer prevention was identified as much more cost-effective than cancer treatment. The cost of health promotion and early detection strategies fluctuates between US$20 and US$100 per DALY in the case of easier to treat cancers (cervical, breast, colon and rectal cancers), while treatment varies between US$ 300 and 5,000 per DALY.

[28] Measured by below-optimum values for arterial pressure and serum cholesterol, lifestyle and genetic risk factors.

[29] Population-based interventions are community level interventions that affect the determinants of disease within an entire community rather than simply those of a single, high-risk individual. Some examples include salt reduction strategies, replacing trans-fat, nutrition labeling, social media campaigns, school and community based programs, and fiscal measures banning smoking in public places. (Bonilla-Chacin, 2014)

Table No. 1 - Cost-Effectiveness of Public Health Interventions presented in the PAD: Promotion and Prevention versus Clinical Interventions

Problem	Public Health Strategy		Clinical Strategy	
	Intervention	Cost by DALYS	Intervention	Cost by DALYS
Diarrheas	Vaccination against rotavirus (80% effect.) Vaccination against cholera (70% effect.) Vaccination against measles (85% effect.) Change in behavior in order to improve personal and domestic hygiene Promotion of breastfeeding Education for weaning	10 75 10 170 30 30	Education and therapy for oral rehydration	35-350
Malaria	Vector control (according to incidence, type of mosquito and geographical area)	5-520	Treatment passively in moderate to high endemic zones and vector control	200-500
IRA	Sifting and derivation according to mortality Promotion of breastfeeding Protein-calorie supplements Pneumonia vaccination (18 months)	20-50 50 65 70	Antibiotic treatment of pneumonia in children	20-50
STD	Education for reduction of the number of sexual partners and to increase the use of the condom	1-50	Antibiotic treatment of STD	1-55
Polio	Triple vaccination (according to incidence and mortality)	20-40		
Measles	Vaccination (according to incidence, age at vaccination, dosis and antigen)	2-30		
TBC	BCG administered with Triple Virus	7	Chemotherapy with hospitalization	3
Diabetes	Primary prevention through DNID education Sifting of glucose intolerance and education	Not known Not known	Metabolic control with oral hypoglycemics and DMID education Insuline injection and education	25 240
Cancer	Early detection of cervical cancer (PAP smear test) Annual clinical breast examination Education for giving up nicotine	100 50 20	Surgery, chemotherapy and support for cervical cancer Breast cancer Colon and rectum	2,600 300 5,000
Cardiovascular	Behavioral change as well as sifting of high risk	150	Clinical handling of hypertension Clinical handling of hypercholesterolemia Care of stable angina Care of unstable angina or myocardial infection Angioplasty or bypass	2,000 4,000 100-200 30,000 5,000

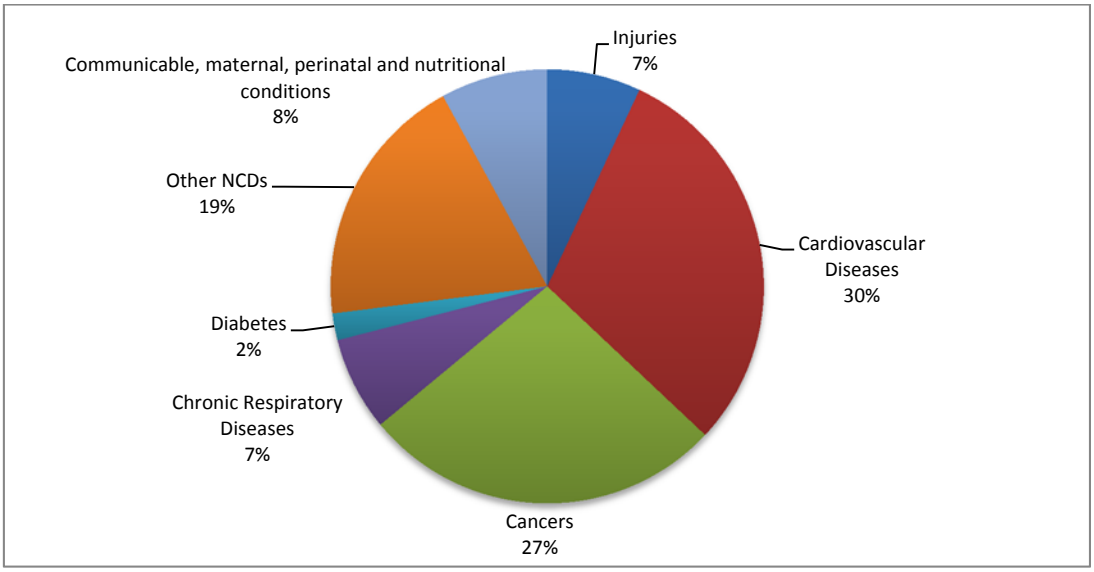
Data source: Escobar et al (2000)

32. **Despite the absence of a cost benefit analysis in the PAD, the benefits of project interventions likely far outweigh the costs over the long term.** Bloom et al (2011) provide evidence indicating that NCDs currently impose a substantial economic burden that will only escalate over the next two decades if there is no change in health sector policy. Project supported activities targeted and contributed to the reduction of selected NCDs

risks factors, thereby contributing to a decrease in NCD incidence. In turn, productivity losses and health care costs associated with these health conditions will fall due to the prevention of premature deaths and disabilities. A reduction in disability and deaths for the Uruguayan population will generate savings for the health system and the economy as a whole. Nevertheless, given that many of the behavioral changes promoted by the Project take time to demonstrate results, it is difficult to evaluate them during the Project life, however it is possible to estimate some short run effects linked to improved control and treatment of high-risk patients.

33. **In Uruguay, not only are non-communicable diseases the main cause of death (85 percent of the total – See Figure No. 1), but they are also the main cause of Disability Adjusted Life Years**[30] (78 percent of the total – (Uruguay MSP, 2015a), generating a significant burden of disease and entailing a major use of health resources.

Figure No. 1 - Percentage of total deaths by type of disease
All ages, both sexes



Data Source: WHO, 2014.

34. **Cardiovascular diseases are the main cause of mortality in Uruguay.** These diseases account for 30 percent of all deaths, while acute cardiovascular and chronic ischemic diseases and vascular accidents are the top two causes of premature years of life lost, with 23 percent of these causing 17 percent of the years lived with disability. The main risk factors associated with cardiovascular diseases are arterial hypertension, high

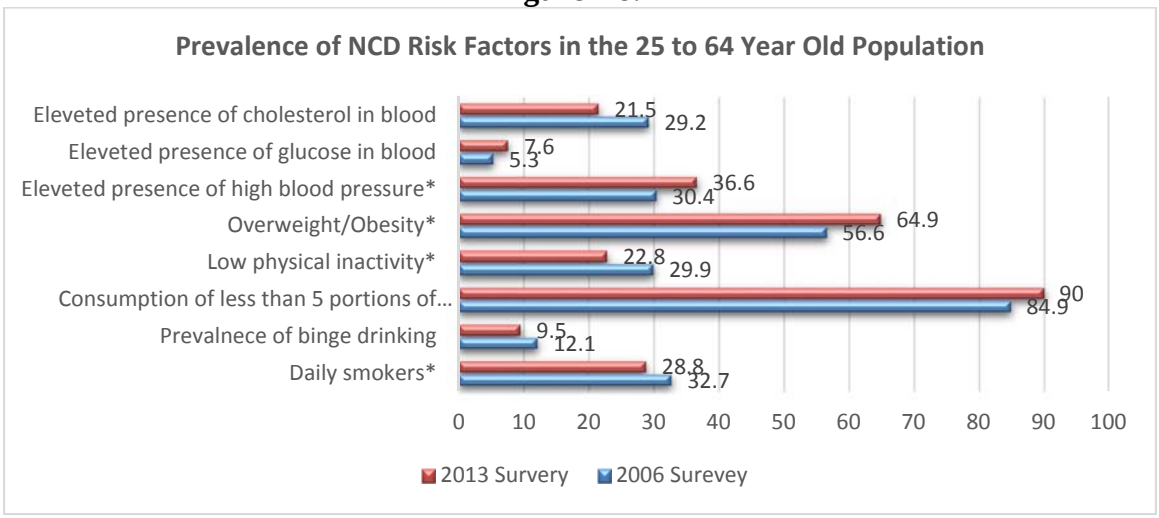
[30] Disability Adjusted Life Years are the sum of years of potential life lost due to premature mortality and the years of productive life lost due to disability.

cholesterol levels, overweight and obesity, limited fruit and vegetable consumption, physical inactivity, and smoking.

35. **Cancer is the second cause of death, accounting for 27 percent of all deaths and 17 percent of premature years of life lost.** The incidence and mortality of each type of cancer varies by gender. In the case of women, breast cancer has the highest incidence (73.1 percent) and mortality (21.09 percent), followed by colorectal with an incidence rate of 27.28 percent and a mortality rate of 12.73 percent. While cervical cancer is the third cancer in terms of incidence (15.69 percent), lung cancer is the third in terms of mortality (9.04 percent). In the case of men, prostate, lung and colon cancer have the highest incidence with 61.68, 47.93 and 38.01 percent, respectively, while lung cancer jumps to the first place when measuring mortality (HCLCC, 2014). The cancer risk factors that can be modified include tobacco consumption, overweight and obesity, poor diet, physical inactivity, alcohol abuse and sexually transmitted human papilloma virus (HPV). The weight of the various risk factors varies according to the type of cancer and development level of the country in question. For low- and middle-income countries, the most common cancer risk factors include tobacco consumption, poor diet (particularly low fruit and vegetable consumption), a sedentary lifestyle, and chronic hepatitis B, hepatitis C, and HPV infections.

36. **Between 2006 and 2013, the prevalence of some risks factors related to NCDs improved when measured by the First and Second National Risk Factor Survey.** Compared with the first survey, there was a decrease in daily tobacco consumption, an improvement in physical activity and a decrease in elevated cholesterol levels. However, consumption of at least 5 fruits or vegetables daily fell, while the percent of overweight/obese individuals and high blood pressure increased. Although it is not possible to attribute these results to the Project, it is likely that promotion activities supported by the Project will contribute to a trend reversal of the NCD risk factors that deteriorated between both surveys, while maintaining the improvements achieved in risk factor reduction.

Figure No. 2



*Differences are statistically significant.

37. Mortality due to circulatory diseases in the under 70 population steadily decreased (see graph below).[31] PDO indicator 5, included during the 2012 Project restructuring, is a good proxy for measuring NCD prevention and control progress in Uruguay. While it is not possible to attribute this decrease exclusively to the Project, it is possible to capture the short-term effects stemming from regularly controlling high-risk patients as reflected by PDO indicators 1 and 3. The annual decrease in the number of deaths due to cardiovascular disease in those in the higher NCD age risk age risk bracket (45-64 years old) doubled during the Project life reaching 2.68 percent from 1.41 percent between 2000 and 2007. This difference allowed for simulation scenarios between areas where the Project was implemented and where it was not, resulting in the estimation of 1344 averted deaths.

38. **In order to calculate the number of deaths avoided, we measured the variation in the number of deaths from circulatory diseases for the 45-64 year old age group between two time periods.[32]** The results revealed an annual fall in deaths from circulatory diseases of 2.68 percent between 2008 and 2015 (Project years) compared to a fall of 1.41 percent between 2000 and 2007. With this data we simulated two scenarios: Scenario A "No Project" for which we applied the fall in deaths obtained for the 2000-2007 period to the actual deaths in 2007; and Scenario B "With Project" for which we considered the actual number of deaths between 2008 – 2015. The difference in the number of deaths between the scenarios measures the Project impact, assuming 100 percent attribution. However, since it is difficult to attribute the reduction solely to the Project due to the contribution of general nationally promoted NCD policies, the analysis assumes a 30 percent attribution.

39. **In order to evaluate the relevance of the reduction, as is conventional in public health literature, the estimates of program impact were converted into disability-adjusted life years (DALYs) averted** (Jamison, 1993; Murray, C. J. L. 1994) and then cost-effectiveness was calculated by dividing the present value of DALYs averted due to the Project by the present value of incremental costs. As recommended by the World Health Organization based on the report of the Commission on Macroeconomics and Health (WHO, 2001), cost per DALY was benchmarked against national per capita GDP to assess whether the intervention was cost-effective in the Uruguayan context.

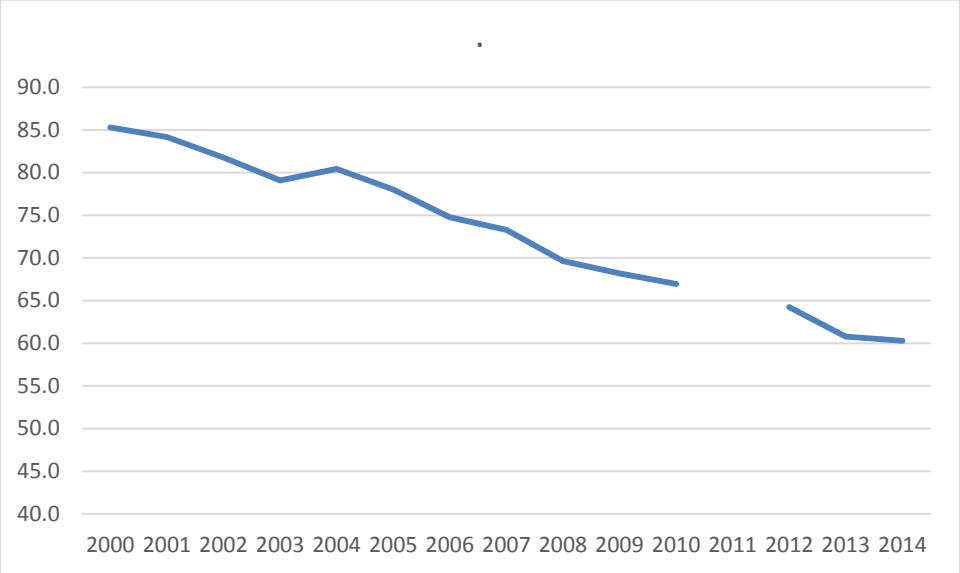
40. DALYs are the sum of future years of lifetime (YLL) lost through premature mortality, and future years of lifetime living with a disability (YLD) caused by disease or injury (in this case circulatory diseases) adjusted for the average severity of the disability. The YLLs are calculated comparing the age at which deaths occur with the life expectancy at that age33 . The YLD is estimated based on the YLD for the population between 20-64 years of age suffering from chronic ischemic heart disease from the Global Burden of

[31] Includes cardiovascular and cerebrovascular diseases.

[32] The 45-64 year old age group is most likely to suffer from a NCD.

Disease Study in Uruguay (Uruguay MSP, 2015a), which represented 56 percent of the YLL for this condition. Therefore, YLD is assumed to be 56 percent of the YLL.

Figure No. 3 -Crude mortality rate from Diseases of the Circulatory System (I00-I99) in the population under 70



Data source: MSP Vital Statistic

41. In order to calculate the present value of the DALYs to 2008, two alternative discount rates were considered: a) a discount rate of 3 percent following Jamison et all (1993) which is commonly used to assess health Projects, and b) a discount rate of 12 percent estimated by Oddone (2011) for the case of Uruguay. In addition, different Project's attribution percentages were calculated: one assuming 100 percent attribution and a more conservative 30 percent attribution for deaths averted. As a result, the number of estimated DALYs averted varies between 3,377 and 33,539 depending on the discount rate and percentage of Project' attribution considered.

Table No. 2 - Total number of death, YLLs, YLDs and DALYs averted

Discount Rate	*% of Project Attribution*	*Death*	*YLL*	*YLD*	*DALYS*
3 percent	100%	1,344	21,500	12,040	33,539
	30%	403	6,450	3,612	10,062
12 percent	100%	1,344	7,215	4,040	11,255
	30%	403	2,165	1,212	3,377

42. **Total Project costs (US $21.8 million), including Bank and local funding, were considered for the analysis since it is very difficult to separate circulatory disease prevention and control costs from total Project costs.** Total Project costs were converted to constant prices using a GDP deflator[34] and discounted to 2008 to obtain the net present value. Table No. 3 shows the cost effectiveness ratio for the different scenarios:

Table No. 3 - Cost per DALY averted

Discount Rate	*% of Project Attribution*	*Cost per DALY averted*
3 percent	100%	334
	30%	1,113
12 percent	100%	711
	30%	2,371

In US$, 2005 constant prices.

43. **As a result, the estimated cost of a DALY averted due to the Project varied between US$ 334 and US$ 2,371.** In order to assess the program's effectiveness, the analysis followed the World Health Organization recommendation based on the Commission of Macroeconomics and health: investing in health for economic development (2001). The results are cost-effective when compared to average GDP per capita in Uruguay over this period. The cost per DALY saved varies between 5 and 33 percent of average income. In addition, it is important to take into account that while these calculations include total project costs, only circulatory diseases are considered for the benefit calculation, therefore underestimating the Project's actual benefits.

Table No. 4 - Project Cost-Effectiveness 2008–15

Discount Rate	*3 percent*		*12 percent*	
% of Project Attribution	*100*	*30*	*100*	*30*
Death Averted	1,344	403	1,344	403
DALYs Averted	33,539	10,062	11,255	3,377
Cost per DALY averted	334	1,113	711	2,371
Average GDP per capita 2008-15	7,257	7,257	7,257	7,257
% Cost/GDP per capita	5%	15%	10%	33%

In US$, 2005 constant prices

[34] The World Bank. 2016. "World Development Indicators

44. **The fiscal impact of the Project was marginal limiting any sustainability concerns**. As identified during Project preparation and as revealed in Table No. 5 project implementation did not have a major impact on the MSP and ASSE budget, as it weighed an average of 0.3 percent throughout the period analyzed.

Table No. 5 - Project Financial and Sustainability Analysis

	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
MSP/ASSE budget, in US$ million	498.4	681.4	734.1	811.5	849.6	798.3	749.7	na
NCD Prevention Project, in US$ million	0.1	0.1	0.4	8.2	2.7	2.1	3.0	1.3
% of Project financing with respect to MSP/ASSE budget	0.01%	0.02%	0.05%	1.01%	0.32%	0.27%	0.40%	na

Data from the National General Accountancy Office, at 2010 constant price

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Luis Orlando Pérez	Sr. Public Health Specialist	GHN04	TTL
Cristian Baeza	Director	HNP	Public Health
Gaston Mariano Blanco	Sr. Social Protection Specialist	GSP04	Operations
Isabella Anna Danel	Sr. Public Health Specialist	SASHD	Public Health
Jose Pablo Gomez-Meza	Sr. Economist	LCSHH	Health
Ricardo Eduardo Lugea	Senior Procurement Specialist	GGO04	Procurement
Alejandro Roger Solanot	Sr Financial Management Specialist	GGO22	Fin. Management
Mariana Montiel	Senior Counsel	LEGLA	Legal
Santiago Scialabba	Program Assistant	LCC7F	Adm. Support
Febe Susana Libert	Program Assistant	LCC7F	Adm. Support
Marcelo Daniel Barg	Consultant	LCC6C	Inst. Development
Juan Sanguinetti	Consultant	HLNP	Economic and Fin. Analysis
Jorge Gosis	Consultant	GHN04	Public Health
Analia Stasi	Consultant	GHN04	Public Health
Supervision/ICR			
Luis Orlando Pérez	Sr. Public Health Specialist	GHN04	TTL
Ricardo Eduardo Lugea	Senior Procurement Specialist	GGODR	Procurement
Armando Sanjines	Senior Procurement Specialist	GGO04	Procurement
Alejandro Roger Solanot	Sr Financial Management Specialist	GGO22	Fin. Management
Mariana Montiel	Senior Counsel	LEGLA	Legal
Diego Ambasz	Senior Operations Officer	GED04	Operations
Daniela Romero	Operations Officer	GHN04	Operations
Marcelo Morandi	Consultant	GENDR	Environmental Specialist
Febe Susana Libert	Consultant	GEEDR	Adm. Support
Mariela Alvarez	Program Assistant	LCC7	Adm. Support
Silvestre Rios Centeno	Program Assistant	LCC7	Adm. Support
Marcelo Daniel Barg	Consultant	LCC6C	Inst. Development
Analia Stasi	Consultant	GHN04	Public Health
Jorge Gosis	Consultant	GHN04	Public Health
Alfredo Perazzo	Consultant	GHN04	Health Economist
Mario Virgolini	Consultant	GHN04	Health Promotion
Osvaldo Rico	Consultant	GHN04	Epidemiologist
Natasha Zamecnik	Consultant	GHN04	Economist

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY99	0.00	1,314.00
FY00	0.20	516.87
FY01	0.00	0.00
FY02	0.00	0.00
FY03	0.00	0.00
FY04	3.57	20,370.06
FY05	4.31	28,054.90
FY06	30.24	123,290.70
FY07	32.53	121,082.71
FY08	10.21	26,637.15
Total:	81.06	321,266.39
Supervision/ICR		
FY08	11.24	47,943.23
FY09	29.78	102,076.90
FY10	22.91	96,672.45
FY11	18.97	92,377.52
FY12	8.76	97,556.27
FY13	11.28	97,049.90
FY14	12.99	115,040.59
FY15	17.92	69,477.62
FY16	14.84	74,085.18
Total:	148.69	792,279.66

Annex 5. Beneficiary Survey Results
(if any)

Annex 6. Stakeholder Workshop Report and Results
(if any)

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

URUGUAY MINISTRY OF PUBLIC HEALTH
Non-Communicable Diseases Prevention Project (NCDPP)
Project No. 7486-UY Closing Report, April 2016[35]

INTRODUCTION: Description of the Project

The Non-Communicable Diseases Prevention Project (NCDPP) was carried out by the Ministry of Public Health (MSP) with technical and financial support from the International Bank for Reconstruction and Development (IBRD) from 2008 to 2015 and was intended to offer significant contributions to the implementation of policies defined by health authorities under the new Integrated National Health System.

The project was implemented within the context of a major health care system reform put in place by the national government in 2006. This happened during a deep financial crisis in health institutions, coupled with significant changes in the epidemiological profile of the Uruguayan population in recent decades, where non-communicable diseases (NCDs) consolidated as the leading cause of death and disease burden in the country.

In this way, the NCDPP became one of the pillars of the new system, where the strategy to prevent NCDs has focused on providing inputs that improve regulation and management of health promotion policies and achieve effective preventive measures.

In this scenario, the NCDPP was set up as a support and in response to the definitions of the new health policy, and was mainly intended to support the policies addressed by the MSP in view of the epidemiological challenges of the Health Reform, thus placing NCDs at the center of the public health agenda, through a comprehensive strategy with a strong emphasis on health promotion and the prevention of risk factors in the population.

The Project included four implementation aspects: i) Strengthening of MSP capacities; ii) Improving the capacities of public primary care services; iii) Implementation of the *Previniendo* Pilot Program for detecting and monitoring a group of NCDs selected for their high prevalence in the country; iv) Conducting technical studies on the health reform.

In turn, the Project was aligned with the challenges defined by the MSP for this Second Phase of the Health Reform, particularly with: i) Strengthening the Government´s capacity to manage and regulate Health Care; ii) Promoting decentralization, to ensure that the policies reach the whole national territory.

[35] Authors: Martín Sacchi (Coordinator), Cecilia Reolón y Soledad Bonapelch

GOALS AND MAIN EXPECTED RESULTS

In view of the above, the General Objective of the Project was to "strengthen public health services and the Ministry's policy framework for health promotion and prevention of chronic non-communicable diseases (NCD) risk factors."

The following specific objectives were proposed: i) Expansion of the access to and quality of primary health care related to NCD early detection; ii) - Achievement of a systematic reduction in the exposure of the population to risk factors associated with these diseases; iii) Control of their harmful effects on health.

The developments to be sought were: i) a decrease in diagnosed cases of diabetes, hypertension and overweight or obese population monitored by primary health care teams; ii) a higher percentage of women from 50 to 69 years of age having a mammogram at the public health care provider ASSE (Health Administration Services) in any given year; iii) a decrease in mortality cases caused by disorders in the circulatory system; iv) a higher percentage of the population from 45 to 64 years of age included in the NCD risk factors screening by the Integrated National Health System.

ORGANIZATIONAL DESIGN OF THE NCDPP

An innovative model was adopted for implementing the NCDPP, which involved a strong commitment in two directions.

On the one hand, the aim was to generate institutional capacities at both Infrastructure and Human Resources levels and, on the other hand, the intention was to achieve sustainability of the actions and lines of work upon completion of the financial support of the Project.

An important objective was to preserve management capabilities and to capitalize on the experience and lessons learned from the performance of a project with external financing. There was also an effort to avoid creating new structures overlapping with already existing capabilities and that at the end of the project would be dismantled with the resulting loss of the lessons learned.

Organizational design of the NCDPP: Prioritized objectives
Institutional capacity building
Alignment of implementation and results with institutional guidelines and goals
Institutionalization and sustainability of the implementation lines
Optimization of resources, avoiding duplication of structures
Maximum transparency of procurement and contracting, providing opportunities to all officials to be involved in the implementation of Project

In consideration of these Objectives and having made a critical diagnosis of the operation and the results of previous projects implemented at the MSP with external financing, a model was established in which the technical and administrative activities were carried out with the current procedures by the existing structures of each implementing agency and applying the provisions of the Loan Agreement.

In this sense, the Project defined two implementing units, MSP and ASSE, in which technical execution was in charge of the relevant work teams of the Directorate General of Health (DIGESA), the General Board of the National Integrated Health System (DIGESNIS) and the Directorate General of Secretariat (DIGESE) and ASSE; being the General Directors of the former and the Board of Directors of ASSE, responsible for overall coordination.

Implementing units of the NCDPP

MSP	***ASSE***
Coordination: General Directorate of Health 2. Subcomponent 1.1 - Epidemiology Division 3. Subcomponent 1.2 – Promotion Unit of the Programming Department 4. Subcomponent 1.3 - Health Standards Division 5. Component 3 - *Previniendo* Program	General Coordination: Institutional Development Management 6. Subcomponent 2.1 – Specialists Office 7. Subcomponent 2.2 – Information System Office 8. Subcomponent 2.3 – Training Office
Coordination: General Directorate of the Integrated National Health System: 9. Subcomponent 4.2 - Health Economics Division	
Coordination: Directorate General of Secretariat: 10. Subcomponent 4.1 - Coordination Unit and Project Management	

The logistics of implementation were carried out by the respective administrative Directorates and Divisions of the institutions involved, following the mechanisms and controls of the Central Administration coupled with those derived from the provisions of the Agreement.

General evaluation of implementation

In the last years, execution of the Project reached very high levels, mainly as a result of the capacities acquired by work teams that made it possible to overcome the high initial costs of innovation and achieve the main goals that had been defined, while securing institutionalization and sustainability.

An evaluation of the results obtained in view of the wide areas of coverage and the heterogeneity of the design and formulation of the Project and of its ambitious original objectives, is highly positive, and we have found great consistency in the decisions made along its definition and execution.

A substantive aspect to be emphasized throughout implementation of the Project was compliance with the Principle of Transparency in all the activities and in particular as regards procurement and contracting procedures. The Principle of Transparency was defined as an essential requirement at the time of planning the Project and taken as a guiding principle in all instances of execution. During the project there were twenty (20) Public Tenders (9 international and 11 national) and 27 price comparisons, which allowed the acquisition of more than 3100 goods with a total investment of US$ 11 million and

without receiving any observation from the Supreme Audit Institution of Uruguay (TCR) regarding these procedures.

Concomitantly with this general assessment, there were some difficulties during implementation which affected the pace of execution, and prevented full implementation.

These may be grouped under the following specific areas:

Model innovation costs and duration of administrative procedures: Implementation of the Project generated high initial costs which required IBRD's consent for the development of specific rules, which were finally achieved through discussion and exchange but which delayed the commencement of the activities that had been planned.

Implementation costs were particularly high in the more innovative lines of work, either by reason of their characteristics, or of their particular format, as was the case of the payment-by-results *Previniendo* Program and the Fund for Health Promotion FUSI; both with an important under-expenditure in relation to the amounts originally earmarked. Regarding the specific case of *Previniendo*, which has been one of the lines that has impacted to a greater extent on the amount under-expended by the Project, it is considered that the limited experience existing in the administration as regards the execution of projects with this format played a role together with the far-reaching organizational and cultural transformations demanded by its optimal implementation.

Other elements hindering progress of the Project were related to the complex dynamics of decision-making at MSP and ASSE, coupled with the numerous external and internal administrative procedures, particularly those related to procurement. All these severely impacted the formation of work teams and the preparation of bidding processes. Also there were serious difficulties in achieving the involvement in the Project of middle management and part of the structure of both institutions, a highly necessary requirement in a format as the one defined for an efficient implementation of the Project.

Structural difficulties related to specialized human resources: There were significant difficulties in finding specialized resources, particularly in health and information systems, reflecting some structural problems in Uruguay's job market. To remedy this situation, it was necessary for MSP and IBRD to loosen up some initial requirements, which were adjusted in the revised structure agreed upon in 2012. Among the most relevant adjustments introduced, the possibility of entering into cooperation agreements with other institutions accelerated significantly the HR recruitment process.

Budget difficulties: Low levels of initial execution led to a budgetary allocation for the remaining period significantly below the initial plans, causing recurrent deferrals and/or cancellations of procedures and activities, because their financing was compromised.

EVALUATION OF PROJECT OBJECTIVES

In order to meet the objectives defined during project design, priority was given to a number of specific targets that were pursued through action lines which converged into them and transversed the Components structure.

I – Promotion of MSP's health intelligence and strengthening its capacity as health authority. A monitoring system with special emphasis on non-communicable diseases and their risk factors was consolidated, which was the basis for the formulation of health policies related to NCDs and became the main input for making informed decisions. The results obtained are a great opportunity for realizing a qualitative leap in the health surveillance field and in the recognition of the regulatory and leading role of MSP in health matters.

To achieve such goal four lines of implementation were developed: i) National Studies and Surveys; ii) Formulation of plans and reference tools; iii) Strengthening of detection, research and response capacities at local level; iv) Strengthening of Health Information systems.

i) With respect to the first line of work, it is unavoidable to highlight two achievements of particular relevance: the performance of the Second National Survey on Risk Factors (II ENFR) and the First Study of Global Burden of Disease of Uruguay, with their different byproducts. All these were high quality products allowing to know the health status of the Uruguayan population and that will be a reference in the coming years.

ii) Regarding the second line of work, we should mention the significant progress made towards the development of a NCD monitoring strategy; creation of a network with different institutions producing information; updating of the Notifiable Diseases and Health Events Guide; and the design of a Status Report regarding the National Laboratories Network.

iii) The third line of action focused on strengthening local response capacity through implementation of the national network of epidemiological surveillance, which allowed to identify and offer a timely response to health events anywhere in the country. In a major investment, the NCDPP equipped and financed the operation of Epidemiology Departmental Units (UDE), which became the local reference of epidemiological surveillance.

iv) Strengthening of information systems, is the line that made more limited contributions towards the expected results, because it was not possible to develop an integrated health information system; and although there are individual/partial systems in place, their interconnection did not materialize. However, it is essential to recognize the progress made in the period as a result of the work carried out by different stakeholders and institutions. The steps taken in this regard have allowed this objective to become part of the current MSP Strategic Plan. In summary, the goal was considered too ambitious considering the condition of the health information systems at the beginning of the Project and the complex

cultural and infrastructure changes required for its fulfillment; but certainly, it was an incentive of relevance to include it as a priority on the current agenda.

With respect to the specific contributions made by the NCDPP, we should particularly value those involving the ASSES Hospital Discharge Register, which prompted a substantial improvement in the coverage and quality of the National Hospital Discharge Register, a source of critical information for the evaluation of population morbidity. In addition, it was possible to develop and/or acquire tools providing an improvement for processing and analyzing epidemiological information, with a significant investment in computer and communication equipment.

2 – Promoting changes in the healthcare model, the core of the new health system. Within this line of work, in the first place we should remark the impact produced by the *Previniendo* Program. While the performance and financial disbursement indicators were modest compared to the goals and the program showed significant under expenditure, it is essential to consider the significant institutional changes it stimulated over the years, both in ASSE, and in private health care providers in which it was implemented. Equally significant is that the Chronic Care Model promoted by the Program has been an essential reference for health policies on chronic diseases that are being designed by the MSP. This can be seen both in the health goals of NHI regarding adult population, and in different programs seeking reorientation of services related to these pathologies. For that reason and even recognizing the design and management problems that have affected its performance, it is considered that the *Previniendo* Program showed highly satisfactory results, focusing on strategic policies developed regarding NCDs and the health care model.

Another line of work designed to fulfill this Objective of the Project was the creation of different instruments, among which we should particularly mention self-assessment tools, a Quality Standard Guide for Primary Health Care Centers and its application in 122 Centers in public and private sectors across the country. These actions were accompanied by a third strategy characterized by a significant investment in the improvement of ASSE's primary network, both through the purchase of equipment and software infrastructure; financing developers and specialists for the implementation of Plan SIEMBRA and the Electronic Clinical Desk project; and the creation and operation of the National Primary Health Care Training Network.

3 - Health promotion and prevention of NCD risk factors was another line of work during implementation. The selected approach placed special emphasis on citizen education, activities aimed at promoting healthy lifestyles, and addressing the social determinants of health, which were pursued through different strategies:

i) The first strategy was to formulate conceptual documents and work plans. Within this framework the National Health Promotion Strategy (ENPS) was developed as a reference document, from which a Healthy Municipality, Locality and Community Guide was developed and a first proposal of the National Plan for Health Promotion, Prevention and Control of NCDs was coordinated.

ii) Secondly, emphasis was placed on the implementation of Health Promotion Local Networks; for which an Institutional Regional Health Promotion Network was formed and financed throughout the project, which sought to replicate at territorial level ministerial promotion and prevention policies; focusing on the work through Healthy Schools and Healthy Municipalities and Communities. In this framework 62 commitment letters were entered between MSP and City Halls/Municipalities/Local Councils to move towards Healthy Municipality (*Municipio Saludable*).

iii) Creation of the Fund for a Healthy and Inclusive Uruguay, under which 38 promotion community projects were executed throughout the country.

iv) Investment in equipment to support the promotion of physical exercise, including the installation of 38 active places with physical activity stations, selected after a call for public biddings and the purchase of 60 bicycles for the Community Byke project (*Bicicletas Comunitarias*) implemented in the city of Canelones.

4 - Improvement of the public health care service has been a main objective pursued when formulating the NCDPP and as such it was one of the cornerstones of project implementation. The starting point was the ASSE Component of the Project and its implementation was a major investment by the NCDPP close to US$ 10,200,000. This investment allowed to improve the biomedical infrastructure of the institution, and obtain an appropriate response from the Health Care Services to the population. In this sense such investment allowed to deploy leading-edge equipment for the work carried out by Health Teams in relation to early detection, monitoring and treatment of chronic diseases prevalent in the population using ASSE, improving the infrastructure existing in Primary Health Care facilities and Secondary Care Referral Centers. In particular these purchases prioritized the creation of a Digital Imaging Network and urology treatment equipment. The investment seeks to adopt new technology, aiming at x-rays “zero prints”, remote diagnosis through the transfer, centralization and storage of images of more than 30 Centers across the country where about 500,000 studies per year are conducted. In a preliminary assessment ASSE estimates that as a result of this process printing radiology images has decreased in more than 80%.

5 - Strengthening of the Integrated National Health System. Among other lines of work, the First National Health Survey was implemented in pursuit of this objective, and surveyed individuals and households in order to obtain population data associated to the use, cost and need for medical care and medical service variables with their possible determinants. Until then this information was partially obtained through specific surveys, without any possibility of making a comprehensive approach. The implementation of different lines of institutional strengthening of Health Economics and Health Human Resources teams was supported along the same lines, including the publication of a “First Analytical Study on Balance and Challenges of the Health Care Reform” in which were involved consultants from different disciplines such as social policies, financing, payment of services, ASSE, National Board of Health (JUNASA), social participation and regulatory aspects of the Integrated National Health System. The publication has been a reference document in the open discussion when making a first assessment of the results achieved by the health care reform. Similarly, the financing of several Consultancies made

it possible, among other purposes, to formulate a National Hospital Waste Plan, to develop the National Survey of Technology and to update the benefits of the Integral Health Care Plan (PIAS) of the National Health Care System (NHIS). Similarly, in order to improve the consistency of health coverage throughout the national territory, the Project supported the Rural Health Care Program providing significant financial support for the implementation of the Preventative Rural Round Project (*Proyecto de Rondas Preventivas Rurales*), by purchasing 38 vehicles with health care equipment.

6 – Support to Institutional Strengthening. While the NCDPP showed significant contributions to the strategies of Promotion of Health and Prevention it has mainly been an institutional strengthening project intended to support the development of the new SNIS by improving health management, regulating Government capacities and providing support to the decentralization of health policy strategies. In this regard, we should remark the strong support given to different institutional areas, particularly to: i) the health communication area, which has facilitated its empowering by preparing reference documents and creating institutional image banks; as well as through the acquisition of equipment for intercommunicating all director offices of the country and ii) the development of modern management tools which involved financing in ASSE of a HR comprehensive and Payroll system.

PROJECT MONITORING AND EVALUATION STRATEGIES: Development and Monitoring Indicators

The results impacted on the performance indicators proposed to evaluate the Project. The Program Monitoring and Assessment Strategy was governed by midterm and end of term result targets. This methodology involved the development of planning, monitoring and assessment tools, as well as the development of improvement plans by systematization of activities leading to target achievement.

The monitoring and evaluation strategies used during the course of the Project were diverse in terms of the methodologies applied. By way of example several reports were prepared applying quantitative and qualitative methodologies to assess: - the evolution of the percentage of ASSE users SE with a current mammography indicator; - the impact on the territory of the Fund for Healthy and Inclusive Uruguay policy; - the evolution of the *Previniendo*; - the impact of the Community Bikes Project in Canelones; - the evolution of the Non-Communicable Diseases policies in Uruguay, among others.

It is emphasized that three of the four result indicators selected for assessing the Project, not only reached Project targets, but exceeded them.

The “Percentage of diagnosed and monitored cases by primary health care teams” indicator for the following NCDs: a. Hypertension; b. Diabetes; c. Obesity/Overweight” exceeded their targets by 2.6 percentage points (pp.), 4.6 pp. and 14.3 pp., respectively. Progress in controlling obesity is really outstanding, since it is one of the most difficult to achieve. The measurement of progress in the control of these three diseases reflects the country's effort towards improving health controls for Non-Communicable Diseases, while showing the

advance in awareness of important sectors of the population of the importance of health care.

As regards the "Crude mortality rate of circulatory system diseases" indicator, data reported as of December 2014 is 60.3 per 100,000. This value indicates that mortality associated with these diseases continues to fall down, consolidating the trend seen throughout the Project. In this case also, current performance exceeds the ultimate target of the Project's 67.5 per 100,000 in 7.2 x 100,000. The results for 2015 are not yet available, but as the information shows a clear downward trend, a similar result is expected.

PDO (Project Development Objectives): To expand the access and quality of primary health care services for early detection and medical care of selected NCDs			
Result indicators	**Baseline 2006**	**Results achieved**	**Target**
1. Percentage of diagnosed and monitored cases by primary health care teams of: a. Hypertension; b. Diabetes; c. Obesity/Overweight.	a. Hypertension: 54.7% b. Diabetes: 63.9% c. Obesity / overweight: 13%	a. Hypertension: 62.6% b. Diabetes: 77.6% c. Obesity / overweight: 34.3% (II ENFR 2013)	a. hypertension: 60% b. Diabetes: 73% c. Obesity / overweight: 20%
2. Percentage of 50-69 year-old female users of the public health provider (ASSE) who had a mammogram in any given year	13.4	11.63 (2015)	20%
3. Crude mortality rate of circulatory system diseases (I00-I99) in the population under 70 years Of age. Per hundred thousand.	75.18 x 100,000	60.3 x 100,000 (2014)	67.5 x 100,000
4. Percentage of the 45-64 year-old population covered by SNIS subject to screening of NCDs risk factors.	0%	36.70% (2015)	36.70%

In the case of the "Percentage of the 45-64 year-old population covered by SNIS subject to screening for NCDs risk factors," whose performance was 36.70%, it exceeded the ultimate target (30%) by 6.7 pp., reflecting a remarkable progress in early detection of non-communicable diseases. This indicator was a primary goal of the project where different objectives of the Project were expressed and summarized, as it expressed a progress in both the population at risk that is supposed to see a doctor and the provider system which is supposed to provide a non-traditional NCD screening service. In turn, it reflected the impact of the screening strategy of the Project through *Previniendo*. It should be noted that the target of the PDO indicator is related to NHIS population (NHI + ASSE), but that it is achieved mainly by reason of the high performance of private providers in the NHI population, marking an equity gradient in the consumption of services which remains as a liability for the future.

The only PDO indicator whose goal was not achieved was the percentage of female ASSE users (50-69 years of age) who had a mammogram. The end result is below the target expected to be reached (8.37 pp.) by the end of the Project. This indicator was readjusted

in the 2012 restructured text of the project, focusing it on the public provider ASSE, given its importance for the high incidence of breast cancer in the Uruguayan population and the downward trend shown by the records and with the purpose to evaluate the impact of the investment on mammography devices made by the NCDPP in the institution.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Goal
2. Percentage of female ASSE users of 50-69 years of age having a mammogram in any given year	13.4	15.38	13.78	12.07	11.13	12.59	12.03	11.96	12.22	11.63	20%

As seen in the figures shown above, it was not possible to influence in the short term the existing downward trend, despite several actions taken by the institution and by the NCDPP particularly in the last three years, intended to learn more about the problems, improve procedures and the internal record system and the creation of incentives for local institutional actors through the *Previniendo* Program.

The assessments made by the Assessment and Monitoring team of the Project raised some hypotheses in relation the factors contributing to this situation, among which the following are worth mentioning: (I) poor initial condition of the equipment (mammography devices) of the service provider network shared between the Commission Against Cancer (CLCC) and ASSE and the slow incorporation of the equipment acquired through the NCDPP; (Ii) difficulties in the reorganization of the network provider shared between ASSE and CLCC in its transition to an ASSE network, with problems in the consolidation of data flows on the number of mammograms performed, which could generate under-reports; (Iii) shortage of specialized technical resources, which may have caused changes in the requirements for the staff authorized to operate the equipment, which was restricted to radiologic technologists. This situation led to a limited availability and quality of services and , and (iv) the public debate on the relevance of performing breast screening of the target population and the delay caused by the discussion of a rule that was finally agreed upon by the relevant stakeholders and issued in 2015.

Notwithstanding the above said, it is important to note that the work done in recent years helped to visualize the existing situation and include the relevant issues on the agenda of institutional work. In turn, the digital mammography network eventually became fully operative at ASSE and most of the problems identified are in the process of solution; so when making a balance we must consider that the health care system in Uruguay and ASSE in particular has a good capacity available and is capable of significantly improving early detection of breast cancer in its population.

Regarding Intermediate Result Indicators (IRI), when the Project was completed 12 of 16 indicators had reached the final targets of the Project.

Intermediate Result Indicators (IRI)	
Indicators that reached end of project targets	12
Indicators that did not reach their target	4

Among those that did not reach a goal, are the previously discussed indicators related to the implementation of an integrated health information system and the *Previniendo* Program for detection and monitoring of chronic patients. It is considered that in these cases, although the goals were markedly ambitious in relation to the structural changes required for their fulfillment, substantive results were obtained with significant improvement of the conditions in the areas involved.

LESSONS LEARNED

I Validation of the model adopted

The main lesson learned in assessing Project performance is a positive evaluation of the adopted implementation model. The results obtained were in line with the country's institutional guidelines and health goals, which provided the lines of action with a high level of institutionalization and sustainability. This was despite the costs involved in implementation and the obvious impact on visibility of its actions, which were not clearly differentiated from the permanent structures and actions.

Concerns about the sustainability and institutionalization of actions and results achieved was a central guiding principle throughout the entire project, both at human resources and infrastructure level. With this in mind, Project activities were always carried out in collaboration with the authorities and teams from the different departments of MSP and ASSE involved in the implementation work. Training of institutional human resources and capacity building itself was an essential implementation line, which is evident in the creation of an extensive training network implemented in ASSE, the variety of courses provided and the number of staff members who have attended such courses. In MSP there has also been a permanent training of its resources, mainly in the Epidemiology and Health Promotion areas.

In turn, the structures implemented under the Project, as the Epidemiology Departmental Network and the Regional Health Promotion Network showed high levels of institutionalization. The facilities and the logistics acquired for them in the Departmental Health Directorates itself are an evidence of this. The same strategy guided the various lines of technical studies. Both the Survey on Risk Factors, and the National Health Survey and the Study of Burden of Disease are intended to become regular and permanent as a substantial part of the health care information system. To this end, they were implemented by establishing institutional monitoring groups, seeking to train internal resources and leaving installed capacities which will allow their replication when financing is over. Along the same line, all the equipment acquired has been in operation under the investment lines defined by the administrations of both implementing agencies.

The adjustments introduced in the 2012 project restructuring, such as loosening up of some of the provisions of the original design, in particular the increasing role assumed in implementation by the Project Coordination Unit and the adjustments in the human resources management process, was an essential learning to improve the pace of implementation.

Finally, it is important to emphasize the need to promote communication strategies in projects of this nature, given the limited visibility of their actions and impacts in the context of the overall legitimacy of the project

II - Lessons learned from the relationship with the IBRD

First it is important to highlight the high value of the technical advisory functions deployed for the Project by Project Management. The contribution of international experience in several fields of public health policy has allowed to enrich the technical discussion on several options for the advancement of health policies. This role is, from MSP vision, one of the main assets of the IBRD. This advisory role and technical discussion should be maintained and enhanced, with appropriate contributions from other UN agencies, such as PAHO-WHO, ECLAC, IDB, to mention the most important.

Second, the centralized assessment and technical monitoring processes of IBRD projects within a wide portfolio of projects has favored development and articulation of essential aspects of the national development policy. Stringency of technical design, permanent E&M instances, with centralized areas of supervision, in which there is an active participation of key offices such as the Planning and Budget Office (OPP) and the Ministry of Economy and Finance (MEF), allow to establish coordination and adjustment capacities for various policies that the Uruguayan Government is conducting in several areas. The role of the World Bank experts has been very positive in noting the multiple areas of collaboration and synergies among the various sectoral initiatives the Uruguayan government has with the Bank. This role was even seen in those areas where the projects are not strictly financed by the Bank (for example IDB, AGESIC-Salud UY, etc).

Finally, we should mention the need to consider, for future IBRD interventions, the difficulties for adapting some of its requirements to the size and characteristics of the Uruguayan market. The flexibility and technical support to the project´s specialists provided by the procurement team in the second stage of the NCDPP was essential for its efficient implementation.

Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders

Annex 9. List of Supporting Documents

Bonilla-Chacin, M., ed. (2014). Promoting Health Living in Latin America and the Caribbean: Governance of Multisectoral Activities to Prevent Risk Factors for *Noncommunicable Diseases* Directions in Development, Washington DC: World Bank.

Bloom, D.E., Cafiero, E.T., Jané-Llopis, E., Abrahams-Gessel, S., Bloom, L.R., Fathima, S., Feigl, A.B., Gaziano, T., Mowafi, M., Pandya, A., Prettner, K., Rosenberg, L., Seligman, B., Stein, A.Z., & Weinstein, C. (2011). The Global Economic Burden of Noncommunicable Diseases. Geneva: World Economic Forum.

Escobar M, Petrhsovits A., Peruga A,, Silva N., Vives M., Robles S. (2000). Mitos sobre la prevenci6n y el control de las enfermedades no transmisibles en America Latina. Salud publica de Mexico / Vo1.42, no. 1, enero-febrero de 2000.

Gertler P., Giovagnoli P., & Martinez S. (2014). "Rewarding Provider Performance to Enable a Healthy Start to Life: Evidence from Argentina's Plan Nacer". World Bank Policy Research Working Paper 6884.

HCLCC (2014). IV Atlas de Incidencia del Cáncer en el Uruguay 2007-2011. Registro Nacional de Cancer. Uruguay.

Jamison, D. T., W. H. Mosley, A. R. Measham, and J. L. Bobadilla, eds. (1993). Disease Control Priorities in Developing Countries. New York: Oxford University Press

Murray, C. J. L. (1994). "Quantifying the Burden of Disease: The Technical Basis for Disability-Adjusted Life Years." Bulletin of the World Health Organization 72: 429–45.

Oddone (2011). Componente: Precios de Cuenta. Sub-componente: Tasa Social de Descuento.Fortalecimiento del Sistema Nacional de Inversión Pública. Convenio Oficina de Planeamiento y Presupuesto (OPP) y Facultad de Ciencias Económicas y de Administración (UdelaR).

United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Prospects: The 2015 Revision, DVD Edition.

Uruguay. Ministry of Public Health (MSP). First Health Development Project (FISS I). (1997). Usos Alternativos de Financiamiento en Salud. Estudio sobre Puntos Criticos para su Reasignación en Base a1 Criterio de Coste Efectividad. Segunda Parte. Intervenciones Costes Efectivas para las Condiciones Médicas con Mayor Carga de Morbilidad (AVISA).

----------. (2000-2015). Vital Statistics. Uruguay. URL http://www.msp.gub.uy/publicaciones/direcci%C3%B3n-general-de-la-salud/divisi%C3%B3n-epidemiolog%C3%ADa/estad%C3%ADsticas-vitales

----------. (2006). First National NCDs Risk Factory Survey.

----------. (2014). Second National NCDs Risk Factor Survey.

----------. (2015a). Estudio de Carga Global de Enfermedad: Primer Estudio de Carga Global de Enfermedad de Uruguay para el Año 2010.

----------. (2015b). Objetivos Nacionales Sanitarios 2020.

World Bank. (2005a). Country Assistance Strategy for the Oriental Republic of Uruguay for the period FY2005-10; Report No. 31804-UY; Washington DC.

----------. (2005b). Uruguay Health Sector review. An Analysis of the Health Sector: Groundwork for an Evidence-Based Reform; Report No. 33710-UY; Washington DC.

----------. (2005-2015).Documents in Project's electronic file, including Loan Agreement, Loan Amendments, Aide Memoirs, Back to Office Reports, Project Implementation Status Reports, Project Management Reports, Project Financial Assessments, and Project Procurement Assessments; WBDOCS; Washington DC.

----------. (2006). Implementation Completion and Results Report Guidelines. OPCS. August 2006. Washington DC.

----------. (2007a). Healthy Development: the World Bank strategy for health, nutrition, & population results; Washington DC. URL http://documents.worldbank.org/curated/en/2007/01/8348853/healthy-development-world-bank-strategy-health-nutrition-population-results

----------. (2007b). Oriental Republic of Uruguay - Non Communicable Disease Prevention Project; Project Appraisal Document; Report No. 40382-UY; Washington DC.

----------. (2010). Country Partnership Strategy for the Oriental Republic of Uruguay for the period FY2010-15; Report No. 55863-UY; Washington DC.

----------. (2010-2016). "World Development Indicators." URL http://data.worldbank.org/country/uruguay

----------. (2012a). Republic of Uruguay. Integrated National Health System. Analysis of the Governability of the SNIS Benefit Plan (PIAS)s; Report No. 80084-UY Washington DC.

----------. (2012b). Restructuring Paper on a Proposed Project Restructuring of Non Communicable Disease Prevention Project; Report No. 73229-UY; Washington DC.

----------. (2013). Uruguay - Public expenditure review: mitigating fiscal risks. Public Expenditure Review (PER); Report No. 68770 –UY. World Bank Group Latin America and Caribbean region Poverty reduction and economic management. Washington DC.

----------. (2014). Restructuring Paper on a Proposed Project Restructuring of Non Communicable Disease Prevention Project; Report No. RES10149; Washington DC.

----------. (2015). Country Partnership Framework for the Oriental Republic of Uruguay for the period FY2016-20; Report No. 97063-UY; Washington DC.

World Health Organization. (2001). Macroeconomics and health: investing in health for economic development. Geneva.

----------. (2014). Non communicable Diseases (NCD) Country Profiles.

----------. (2015). Congenital Anomalies. Fact Sheet No. 370. Updated April 2015. URL: http://www.who.int/mediacentre/factsheets/fs370/en/

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URURUGUAY
SELECTED CITIES AND TOWNS
DEPARTMENT CAPITALS
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
DEPARTMENT BOUNDARIES
INTERNATIONAL BOUNDARIES
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BRAZIL
ARGENTINA
ATLANTIC OCEAN
Río de la Plata
URUGUAY
ARTIGAS
SALTO
PAYSANDU
RIO NEGRO
RIVERA
TACUAREMBO
DURAZNO
FLORIDA
FLORES
SORIANO
COLONIA
SAN JOSE
CANELONES
MONTEVIDEO
LAVALLEJA
MALDONADO
ROCHA
CERRO LARGO
TREINTA Y TRES
Bella Unión
Artigas
Javier de Viana
Baltasar Brum
Belén
Constitución
Salto
Biassini
Chapicuy
Quebracho
El Eucalipto
Paysandú
Guichon
Tres Arboles
San Javier
Young
Fray Bentos
Mercedes
Dolores
José E. Rodó
Cardona
Carmelo
Colonia del Sacramento
Rosario
Juan L. Lacaze
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Ciudad de la Costa
Atlantida
Canelones
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Trinidad
Durazno
Pueblo del Carmen
Sarandí del Yí
Cerro Colorado
Paso de los Toros
Blanquillo
Tambores
Piedra Sola
Tacuarembó
Ansina
Tranqueras
Masoller
Rivera
Minas de Corrales
Vichadero
Aceguá
Melo
Kilómetro 329
Santa Clara de Olimar
Tupambae
Treinta y Tres
Vergara
Cebollatí
José Pedro Varela
Pirarajá
Lazcano
Chuy
Mariscala
Velazquez
Castillos
La Coronilla
Aiguá
Cerro Catedral (514 m)
Minas
Fray Marcos
Rocha
La Paloma
San Carlos
Maldonado
Punta del Este
MONTEVIDEO
Lago Artificial de Rincón del Bonete
Laguna Merin
Laguna Negra
Laguna de Castillos
Lagoa Mirim
Lagoa Mangueira
Río Negro
Río Uruguay
Río Cuareim
Río Tacuarembó Grande
Río Yaguarón
Río Chuy
Río Chuchilla de Haedo
Río Chuchilla
To Uruguaiana
To Curuzú Cuatiá
To Alegrete
To Rosário do Sul
To Federal
To Villaguay
To Gualeguaychú
To Bagé
To Pelotas
To Rio Grande
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