KINGDOM OF CAMBODIA
Nation – Religion - King

Ministry of Health

Core Indicators and Targets for

Monitoring and Evaluation

of the Programme for HIV/AIDS and STD Prevention and Care in the Health Sector

November 2008

National Centre for HIV/AIDS, Dermatology and STDs

Acknowledgements

This list of Core Indicators and Targets has been developed by NCHADS, through the Technical Working Group (TWG) for Monitoring and Evaluation, which includes NCHADS Units, WHO, US-CDC, CENAT, NMCHC and partner NGOs (FHI, MSF, CARE, RHAC, and KHANA).

I appreciate the commitment of all our partners to improving Monitoring and Evaluation of the HIV/AIDS Programme and HIV/AIDS Care for PLHAs in Cambodia.

I would like to thank the M&E TWG and staff of NCHADS, especially Planning Monitoring and Reporting Unit for their valuable time and advice and identifying and defining the indicators for use to guide and monitor their work and for setting the targets they wish to achieve.

Phnom Penh, 15.11.2008

Dr Mean Chhi Vun
Director of NCHADS

Contents

Acronyms

1. Introduction 3
1.1 NCHADS Programme 3
1.2 Monitoring and Evaluation 3
1.3 Indicators and Targets 4
1.4 The data reporting system 4
1.5 Concensus on the indicators 5

2. Indicator Summary 6
2.1 Impact Indicators 6
2.2 Core Indicators measured at the national level 6
2.3 Core Indicators measured at the provincial and national level 8

3. Description of Indicators and their place in the programme 9
3.1 Summary of BCC Indicators and Targets 9
3.2 Summary of STI/RTI Indicators and Targets 9
3.3 Summary of CoC Indicators and Targets 10
3.4 Summary of VCCT Indicators and Targets 10
3.5 Summary of HFBC Indicators and Targets 10
3.6 Summary of HBC Indicators and Targets 12
3.7 Summary of Surveillance Indicators and Targets 12
3.8 Summary of Research Indicators and Targets 12
3.9 Summary of Planning, Monitoring and Reporting Indicators and Targets 13
3.10 Summary of Data Management Indicators and Targets 13
3.11 Summary of Logistic Management Indicators and Targets 13

4. Detailed description of Indicators 13

Acronyms

ANC	Antenatal Clinic
ART	Antiretroviral Therapy
ARV	Antiretroviral
BCC	Behaviour Communication Change
BSS	Behavioural Sentinel Surveillance
CENAT	National TB Programme
CHBC	Community Home-based Care
CoC	Continuum of Care
CoC-CC	Continuum of Care Coordinating Committee
CUCC	Condom-Use Coordinating Committee
CUP	Condom-Use Programme
CUWG	Condom-Use Working Group
DHS	Demographic and Health Survey
DSW	Direct Sex Worker
DTOP	District Team on Outreach & Peer education
HAART	Highly Active Antiretroviral Therapy
HC	Health Center
HFBC	Health Facility Based Care
HIV	Human Immunodeficiency Virus
HSS	HIV Sentinel Surveillance
IDSW	Indirect Sex Worker
IDU	Intravenous Drug User
IEC	Information, Education & Communication
IO	International Organisation
MCH	Maternal Child Health
MMM	Mondol Mith Chouy Mith
MSM	Men who have Sex with Men
MTCT	Mother-to-Child Transmission [of HIV]
NCHADS	National Centre for HIV/AIDS, Dermatology and STI
NGO	Non-Governmental Organization
NIPH	National Institute of Public Health
NMCHC	National Maternal Child Health Center
OD	Operational District
OI	Opportunistic Infection
PAO	Provincial AIDS Office
PEP	Post Exposure Prophylactic
PLHA	People Living with HIV/AIDS
PMR	Planning, Monitoring and Reporting
PMTCT	Prevention of Mother-to-Child Transmission [of HIV]
POT	Provincial Outreach Team
QC	Quality Control
RH	Referral Hospital
RPR	Rapid Plasma Reagin
SSS	STI Sentinel Surveillance
STI	Sexually Transmitted Infection
SW	Sex Worker
TB	Tuberculosis
UA	Universal Access
UNAIDS	United Nations Joint Programme on AIDS

VCCT	Voluntary Confidential Counseling and Testing
WHO	World Health Organization

1. Introduction

1.1 NCHADS Programme

To guide the programme for HIV/AIDS and sexually transmitted diseases (STDs) in the health sector in Cambodia, the National Center for HIV/AIDS, Dermatology and STD (NCHADS) has designed, and regularly updates, its Strategic Plan for HIV/AIDS and STI Prevention and Care. The current Plan, for the period 2008-2010, identifies the Objectives and Targets of the programme, and the core operational strategies by which these objectives will be met; and is structured around ten (10) programme elements under which activities are planned and budgeted in NCHADS and provinces. It is important to note that the 'Continuum of Care' is an over-arching framework, and the three primary elements (HFBC, CHBC, VCCT) are separate components.

- Behaviour Communication Change (BCC)
- STI Prevention and Care

The Continuum of Care Framework

- Health Facility Based Care (HFBC)
- Community Home-based Care (CHBC)
- Voluntary Confidential Counseling and Testing (VCCT)

- Surveillance
- Research
- Planning, Reporting and Monitoring
- Data Management
- Logistics

NCHADS also works closely with the National Maternal and Child Health Center (NMCHC) and the National Center for Tuberculosis (CENAT), under the Ministry of Health to respond to the evolving needs of the people living with HIV and AIDS in Cambodia.

1.2 Monitoring and Evaluation

Monitoring and evaluation (M&E) of the health sector response to the HIV/AIDS epidemic in Cambodia is an essential component of the HIV/AIDS programme. NCHADS has developed these Core Indicators and Targets to set goals for and measure progress towards, the achievement of the NCHADS Strategic Plan for HIV/AIDS and STI Prevention and Care 2008-2010.

Monitoring and evaluation are two complementary but separate functions. Monitoring is the routine ongoing assessment of activities applied to assess resources invested (inputs) in the programme, the process by which the programme is implemented, services delivered (outputs) by the programme, and outcomes that are related to the programme. Evaluation is non-routine assessment of the long-term impact of the programme on the health and lives of Cambodian people.

Effective monitoring and evaluation usually adopts a logical approach of input, process, output, outcome and impact indicators (Fig 1).

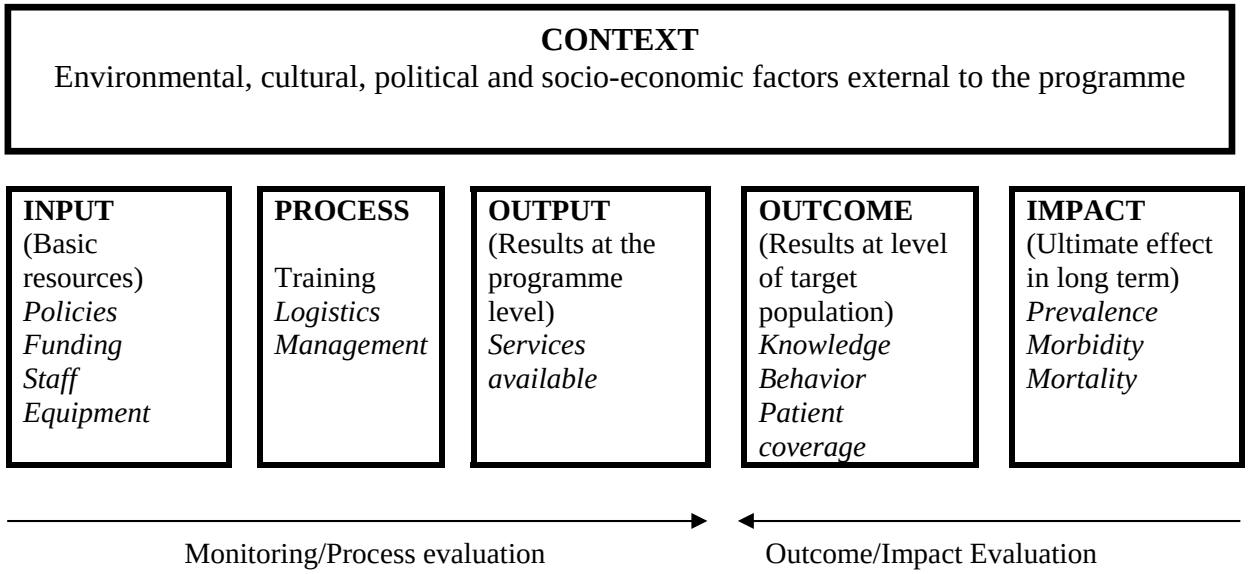

Figure 1: Monitoring and Evaluation Framework for HIV/AIDS and STI prevention and care

1.3 Indicators and Targets

The objective of the NCHADS Core Indicators and Targets is to specify what data are to be collected, how, why and when, in order to provide information that will be used to:

- Track progress on implementation of all components of the Strategic Plan for HIV/AIDS and STI Prevention and Care 2008-2010;
- Identify gaps and weaknesses in service provision;
- Support clinical management of patients;
- Plan, prioritize, allocate and manage resources;
- Monitor the impact of HIV and AIDS on health care systems and communities;
- And measure effectiveness of the programme.

A minimum core set of 48 indicators have been selected, that have been extracted from a wider set of programmatic indicators in the NAA M&E Guidelines, and that have been field-tested. These include key indicators drawn from the UNAIDS/WHO Framework for Monitoring the Health Sector Response towards Universal Access (UA). They focus on output, outcome and impact that are presented here with definitions, numerators, denominators, rationale, frequency, measurement tools, strength and limitations. Targets to be achieved have been defined until 2010.

NCHADS is moving towards disaggregating of data collected against indicators by urban-rural location, gender, and, in the long run, income. This will help to ensure greater equity in the provision of services.

1.4 The data reporting system

HIV/AIDS data sources include routine programme data and reports, and impact evaluation surveys. HIV/STI surveillance has been conducted in Cambodia since 1995 through regular HIV sentinel sero-surveys (HSS), Behavioral sentinel surveys (BSS) and STI sentinel surveys

(SSS). Routine programme data is collected on VCCT, STI, OI/ART and CHBC. Routine data paper-based and electronic data collection tools and quarterly reports have been updated and standardized in 2005. The upgrade of the data management system for HIV/AIDS is supplemented with the support of 11 provincial data management units to ensure completeness and accuracy of the data collected and timeliness of reporting. This also requires dedication and commitment of all partners to collect and use information.

The HIV/AIDS routine data flows from service point to provincial and national data management units on a quarterly basis (Figure 2).

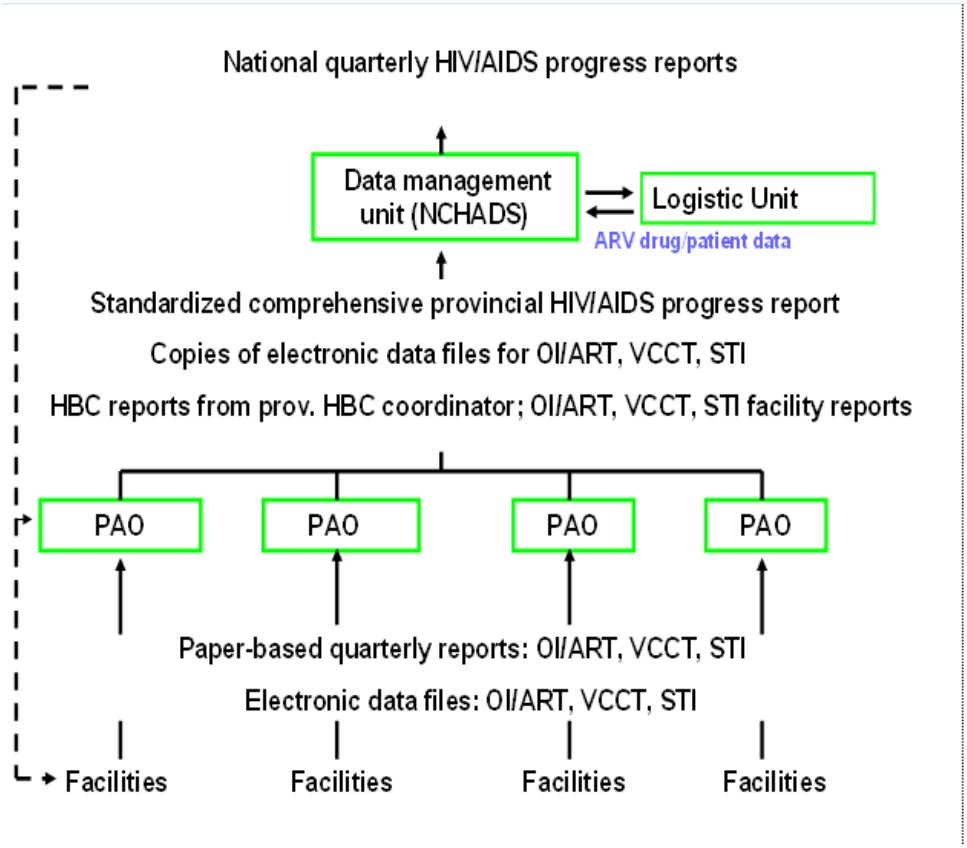

Figure 2: HIV/AIDS data flow from service point to provincial and national data management units

Individual service point data are tallied and aggregated at provincial and national level. Comprehensive HIV/AIDS reports are compiled every quarter by NCHADS data management unit and integrated into the NCHADS quarterly program reports disseminated by the PMR unit. The data management system for monitoring the health sector response to HIV/AIDS has become a powerful tool to document progress towards achieving national strategic targets.

1.5 Consensus on the indicators

Key stakeholders had an opportunity to contribute in the development of these Core Indicators and Targets through multiple TWG meetings. All these efforts will ensure that the best information is available for the benefit of the Cambodian people. As knowledge, experience and programmes evolve indicators and processes for Monitoring and Evaluation of HIV/AIDS prevention and care activities will also evolve.

2. Indicator Summary

2.1 Impact Indicators

Impact	Indicator	Type	Source	Frequency
BCC 1	HIV prevalence among ANC women aged 15-24 years	Impact	HSS	Every 2-3 years
STI 1	STI Prevalence (Gonorrhea and Chlamydia) among brothel based SWs	Impact	STI Sentinel Surveillance	Every 3-4 years
HFBC 1	Percentage of people on ART alive 12 months after initiation (UA 25)	Impact	Program data	Annual

2.2 Core indicators measured at the national level

National	Indicator	Type	Source	Frequency
BCC 2	Percentage of the general population that report correct knowledge of HIV transmission and prevention	Outcome	CDHS	Every 5 years
BCC 4	Percentage of brothel-based sex workers who reported consistent & correct condom use with clients	Outcome	BSS	Every 3-4 years
BCC 5	Percentage of non brothel-based sex workers who reported consistent & correct condom use with clients	Outcome	BSS	Every 3-4 years
BCC 6	Percentage of brothel-based sex workers who reported consistent & correct condom use with sweetheart	Outcome	BSS	Every 3-4 years
BCC 7	Percentage of non brothel-based sex workers who reported consistent & correct condom use with sweetheart	Outcome	BSS	Every 3-4 years
BCC 8	Percentage of brothel-based sex workers received HIV/AIDS & STI prevention messages	Output	BSS	Every 3-4 years
STI 3	Number of Specialty STI Clinics upgraded with laboratory support to perform RPR and basic microscopy (UA 34)	Output	Report	Quarterly
STI 5	Proportion of women accessing Antenatal Care (ANC) services who are tested for syphilis (UA 35)	Output	Report	Quarterly
STI 6	Percentage of Antenatal Care attendees with positive syphilis test (UA 36)	Outcome	Report	Quarterly
HFBC 2	Percentage of donated blood units screened for HIV in a quality assured manner (UA 15)	Output	Report	Quarterly
HFBC 3	Number of OD with at least one center that provides public ART services (UA 23)	Output	Report	Quarterly
HFBC 4	Percentage of Pediatric AIDS Care that use virological testing services (eg PCR) for infant diagnosis (UA 2).	Output	Report	Quarterly
HFBC 5	Percentage of health facilities with PEP services available (UA 17)	Output	Report	Quarterly
HFBC 6	Number and percentage of people with advanced HIV infection on HAART (UA 24)	Outcome	Report	Quarterly
HFBC 7	Number of OD with at least one center that provides public PMTCT services (UA 10)	Output	Report	Quarterly
HFBC 8	Number and percentage of pregnant women who were tested for HIV and received their test result (UA 6)	Outcome	Report	Quarterly
HFBC 9	Number of HIV-infected infants born to HIV-infected mothers (UA 14)	Outcome	Report	Annual

HFBC 10	Number and percentage of HIV-infected pregnant women who received a complete course of ARV (UA 11)	Outcome	Report	Quarterly
VCCT 2	Percentage of adults (aged 15-49) who received HIV counseling and testing (UA 3,4,5,9)	Outcome	Program data	Quarterly
SRV 1	Number of HSS conducted with result applied to program	Output	HSS	Every 2-3 yrs
SRV 2	Number of SSS conducted with result applied to program	Output	SSS	Every 2-3 yrs
SRV 3	Number of BSS conducted with result applied to program	Output	BSS	Every 3-4 yrs
RES	Number of research studies conducted	Output	Report	Annual
PMR 1	Percentage of major funding sources included in Annual Comprehensive Work Plan	Output	Report	Annual
PMR 2	Number of NGOs and partners with signed Letters of Agreement for annual work plans on HIV/AIDS & STI programme	Output	Report	Annual
PMR 3	Number of NCHADS quarterly program reports produced and disseminated	Output	PMR Unit	Annual
DTM 1	Number of provinces with data management units	Output	Report	Annual
DTM 2	Number of comprehensive HIV/AIDS reports compiled	Output	Report	Annual
LGM	Number and percent of OI ART sites with one or more stock-outs of essential ARVs (UA 37)	Outcome	Report	Quarterly

2.3 Core indicators measured at the provincial and national levels

National	and Provincial Indicators	Type	Source	Frequency
STI 2	Proportion of visiting female DSWs diagnosed with cervicitis during monthly STI specialty clinic follow-up consultations	Output	Program data	Quarterly
STI 4	Percentage of entertainment services workers identify by 100% CUWG who checked up at STI clinic every month	Outcome	Program data	Quarterly
CoC 1	Total number of Operational Districts with a Continuum of Care (UA 38)	Output	Report	Quarterly
CoC 2	Number of CoC sites with ARV services	Output	Report	Quarterly
HFBC 11	Number of clinicians, nurses and pharmacists trained to provide ART and related services (UA 39)	Output	Report	Quarterly
HFBC 12	Percentage of patients on ART lost to follow up at 12 months after initiation	Outcome	Program data	Annually
HFBC 13	Percentage of patients still on first line ARV regimen 12 months after initiation (UA 26)	Outcome	Program data	Annually
HFBC 14	Number and percentage of individuals newly enrolled in HIV care who were screened* for TB at the first visit	Output	Report	Quarterly
HFBC 15	Percentage of individuals enrolled in HIV care who were screened for TB at last visit (WHO UA Indicator)	Output	Report	Quarterly
HFBC 16	Percentage of estimated HIV-positive incident TB cases that received treatment for TB and HIV (WHO UA Indicator)	Output	Report	Quarterly
HBC 1	Total number of HBC teams actively providing home-based care and support services to PLHA	Output	Report	Quarterly
HBC 2	Number of PLHA supported by HBC teams	Output	Program data	Quarterly
HBC 3	Number and percent of health centers with HBC team support	Outcome	Report	Quarterly
VCCT 1	Number of licensed VCCT sites operating in the public and non-profit sectors (UA1)	Output	Report	Quarterly
VCCT 3	Percentage of people HIV tested who received their test result through post-test counseling (UA 9)	Output	Program data	Quarterly
VCCT 4	Number and percentage of HIV (+) Clients who were referred to OI/ART sites	Output	Report	Quarterly

3. Description of Indicators and their place in the Programme

3.1 Summary of BCC Indicators and Targets

	BCC Indicators	Type	Baseline	Targets		
				2008	2009	2010
1	HIV prevalence among ANC women aged 15-24 years	Impact	0.45% (HSS 2006)			0.3 %
2	Percentage of the general population that report correct knowledge of HIV transmission and prevention	Outcome	>80% (CDHS 2005)			95%
3	Percentage of brothel-based sex workers who reported consistent & correct condom use with clients	Outcome	94% (BSS 2007)			96%
4	Percentage of non brothel-based sex workers who reported consistent & correct condom use with clients	Outcome	Beer girls: 84% Karaoke : 56% (BSS 2007)			90%
5	Percentage of brothel-based sex workers who reported consistent & correct condom use with sweetheart	Outcome	52% (BSS 2007)			68%
6	Percentage of non brothel-based sex workers who reported consistent & correct condom use with sweetheart	Outcome	Beer girls: 61% Karaoke: 57% (BSS 2007)			65%
7	Percentage of brothel-based sex workers received HIV/AIDS & STI prevention messages	Output	93.8% (BSS 2007)			95%

3.2 Summary of STI Indicators and Targets

	STI Indicators	Type	Baseline	Targets		
				2008	2009	2010
1	STI Prevalence among brothel-based SWs (Gonorrhea and/or Chlamydia)	Impact	GC:13% Ct:14% (SSS 2005)	<14%		
2	Proportion of visiting brothel-based SWs diagnosed with cervicitis during monthly follow-up consultations at special STI clinic	Outcome	15.9 % (2007)	<15%	< 14%	<14%
3	Number of Special STI Clinics with laboratory support to perform RPR and basic microscopy (UA 34)	Output	22 (2007)	24	28	31
4	Percentage of entertainment services workers identify by 100% CUWG who received STI check up at STI clinic every month	Output	DSW: 85% IDSW: n/a (2007)	DSW: 95% IDSW: 50%	DSW: 95% IDSW: 50%	DSW: 95% IDSW: 50%

5	Proportion of women accessing Antenatal Care (ANC) services who are tested for syphilis (UA 35)	Output	11.2% (2007)	50%	60%	70%
6	Percentage of ANC attendees with positive syphilis test (UA 36)	Outcome	0.7 % (2001)	0.5 %	0.4 %	0.3 %

3.3 Summary of CoC Indicators and Targets

	CoC Indicators	**Type**	**Baseline**	**Targets**		
				2008	**2009**	**2010**
1	Total number of Operational Districts with a full Continuum of Care (UA 38)	Output	39 (2007)	40	43	45
2	Number of CoC sites with ARV services	Output	49 (2007)	50	53	55

3.4 Summary of Voluntary Confidential Counseling & Testing Indicators

	VCCT Indicators	**Type**	**Baseline**	**Targets**		
				2008	**2009**	**2010**
1	Number of licensed VCCT sites operating in the public and non-profit sectors	Output	197 (2007)	220	235	250
2	Number and percentage of adults (aged 15-49) who received HIV counseling and testing (UA 3,4,5,9)	Outcome	259,917 (3.4%) (2007)	320,000 (4.3%)	380,000 (5.0%)	400,000 (5.2%)
3	Percentage of people HIV tested who received their result through post-test counseling	Output	96% (2007)	98%	98%	98%
4	Number and percentage of HIV (+) Clients who were referred to OI/ART sites	Output	n/a	80%	90%	95%

3.5 Summary of HFBC Indicators and Targets

	HFBC Indicators	**Type**	**Baseline**	**Targets**		
				2008	**2009**	**2010**
1	Percentage of people on ART alive 12 months after initiation	Impact	87.6% (2007)	>85%	>85%	>85%
2	Percentage of donated blood units screened for HIV in a quality assured manner (UA 15)	Output	97.3% (2007)	100%	100%	100%

3	Number of targeted OD with at least one centre that provides public ART services	Output	38 A: 38 C:22 (2007)	38 A: 38 C:28	38 A: 38 C:29	40 A: 40 C:30
4	Percentage of Pediatric AIDS Care that use virological testing services (eg PCR) for infant diagnosis (UA 2).	Output	100%	100%	100%	100%
5	Percentage of health facilities with PEP services available (UA 17)	Output	100%	100%	100%	100%
6	Number and percentage of people with advanced HIV infection on HAART	Outcome	26,664 A=24,123 C= 2,541 (2007)	33,344 A=29,344 (96.2%) C= 4,000	35,644 A=31,344 (93.5%) C=4,300	39,044 A=34,244 (97%) C=4,800
7	Number and percentage of OD with at least one centre that provides PMTCT services (UA 10)	Output	58 (76%) (2007)	64 (85%)	68 (90%)	76 (100%)
8	Percentage of pregnant women who were tested for HIV and received their test result (UA 6)	Output	(16.4%) (72,455/ 442,000) (2007)	40%	50%	75%
9	Number of HIV-infected infants born to HIV-infected mothers (UA 14)	Outcome	1050 (27%) (2006)	700	500	250
10	Percentage of HIV-infected pregnant women who received a complete course of ARV (UA 11)	Outcome	11.2% (2007)	30%	40%	60%
11	a) Cumulative number clinicians trained to provide ARVs	Output	A: 181 C: 64 (2007)	A: 181 C: 80	A: 181 C: 80	A: 181 C: 80
	b) Cumulative number clinicians trained to provide counseling for ARVs	Output	A: 165 C: 84 (2007)	A: 165 C: 100	A: 165 C: 100	A: 165 C: 100
	c) Cumulative number pharmacists trained to manage ARVs	Output	149 (2007)	164	179	194
12	Percentage of patients on ART lost to follow-up at 12 months after initiation	Outcome	<10% (2006 at 7 sites)	<10%	<10%	<10%
13	Percentage of patients still on first line regimen 12 months after initiation	Outcome	82.9% (2007 at 6 sites)	>80%	>80%	>80%
14	Number and percentage of individuals newly enrolled in	Output	Not available	Not available	90%	95%

	HIV care who were screened* for TB at the first visit					
15	Percentage of individuals enrolled in HIV care who were screened for TB at last visit (WHO UA indicator)	Output	Not available	Not available	90%	95%
16	Percentage of estimated HIV-positive incident TB cases that received treatment for TB and HIV (WHO UA indicator)	Output	Not available	Not available	80%	90%

3.6 Summary of HBC Indicators and Targets

	HBC Indicators	**Type**	**Baseline**	**Targets**		
				2008	**2009**	**2010**
1	Total number of HBC teams actively providing home-based care and support services to PLHA	Output	253 (2007)	300	300	300
2	Number of PLHA supported by HBC teams	Output	25,395 (2007)	27,000	28,000	30,000
3	Number and percentage of health centers with HBC team support	Output	683 (72%) (2007)	720 (76%)	750 (80%)	780 (83%)

3.7 Summary of Surveillance Indicators and Targets

	Surveillance Indicators	**Type**	**Baseline**	**Targets**		
				2008	**2009**	**2010**
1	Number of HSS conducted with result applied to program	Output	9 (Since 1995 to 2006)	0	1	0
2	Number of SSS conducted with result applied to program	Output	3 (Since 1996 to 2005)	1	0	0
3	Number of BSS conducted with result applied to program	Output	7 (Since 1997 to 2007)	0	0	1

3.8 Summary of Research Indicators and Targets

	Research Indicators	**Type**	**Baseline**	**Targets**		
				2008	**2009**	**2010**
1	Number of research studies conducted	Output	6 (2006-2007)	2	2	2

3.9 Summary of Planning, Monitoring and Reporting Indicators and Targets

	Planning, Monitoring and Reporting Indicators	Type	Baseline	Targets		
				2008	2009	2010
1	Percentage of major funding sources included in the Annual Comprehensive Work Plan	Output	80% (2007)	>90%	>90%	>90%
2	No. of NGOs and partners with signed Letters of Agreement for annual work plans on HIV/AIDS & STI programme	Output	35 (2007)	40	45	50
3	Number of NCHADS quarterly and annual program reports produced and disseminated	Output	5 (2007)	5	5	5

3.10 Summary of Data Management Indicators and Targets

	Data Management Indicators	Type	Baseline	Targets		
				2008	2009	2010
1	Number of comprehensive HIV/AIDS data reports compiled	Output	5 (2007)	5	5	5
2	Number of provinces with data management units	Output	11 (2006)	11	20	20

3.11 Summary of Logistics Management Indicators and Targets

	Logistic Management Indicators	Type	Baseline	Targets		
				2008	2009	2010
1	Number and percent of ART sites with one or more stock-outs of essential ARVs (UA 37)	Outcome	0% (2007)	0%	0%	0%

4. Detailed description of Indicators

In the following pages each Indicator is described in detail, including:

- **Purpose:** why the programme has this indicator
- **Method of measurement**: how it is measured
- **Interpretation**: what it means for the programme
- **Targets**: what is to be achieved

BCC 1

HIV prevalence among ANC women aged 15-24 years

Purpose

To provide a proxi for HIV incidence among the general population. As more people benefit from Antiretroviral Therapy, it is likely that national HIV prevalence among adults aged 15-49 years will not decrease appreciably and may even increase. In the era of ART, HIV incidence is a more appropriate indicator to assess the impact of the national AIDS response.

Method of Measurement

From HIV Sentinel Surveillance (HSS): blood samples from ANC attendees are tested for HIV antibodies as part of HSS.

Numerator: Total number of ANC women aged 15-24 years testing positive for HIV

Denominator: Total number of ANC women aged 15-24 years tested for HIV

Interpretation

HIV prevalence among young persons (aged 15-24 years) reflects incidence (new infections). Prevalence among younger ANC women is expected to decrease with effective prevention programs

Targets

	Baseline	2008	2009	2010
Target				0.3%
Actual	0.45% (2006)			

BCC 2

Percentage of the general population that report correct knowledge of HIV transmission and prevention

Purpose

To assess how the awareness and IEC programme is achieving coverage by measuring knowledge of HIV transmission among youth and the general population of reproductive age, and changes over time

Method of Measurement

From CDHS: answers to questions about knowledge are asked and percent of general population (15-49) and sub-groups (for example youth aged 15-24, male and female) who **correctly answer all questions** are aggregated and reported as: 'Proportion who know that HIV can be avoided'.

Numerator: Number of general population (and select sub-groups) who correctly answer all survey questions

Denominator: Total number of general population (and selected sub-groups) surveyed.

Interpretation

Correct knowledge of true modes of transmission is necessary if prolonged prevention efforts are to be effective.

Targets

	Baseline	2008	2009	2010
Target				95%
Actual	>80% (2005)			

BCC 3

Percentage of brothel-based sex workers who reported consistent & correct condom use with clients

Purpose

To assess how well the prevention programme is working, by measuring the proportion of identified brothel-based sex workers who know that consistent and correct condom use protects them from HIV infection.

Method of Measurement

From BSS reports.

Numerator: Total number of brothel-based SWs (DSW) surveyed in the BSS who answer the questions about condom use correctly.

Denominator: Total number of brothel-based SWs (DSW) identified through mapping exercises conducted jointly by Provincial AIDS Office, the CUWG and the DTOP.

Interpretation

The answers by SWs do not necessarily represent actual condom use; rather they are self-reported use. But they do indicate whether SWs know that they *should* be using condoms. This indicator has exhibited good internal and external consistency with other indicators such as prevalence and incidence, however over the years, and so can be strongly suggestive of actual condom use.

Targets

	Baseline	2008	2009	2010
Target				96%
Actual	94% (2007)			

BCC 4

Percentage of non brothel-based sex workers who reported consistent & correct condom use with clients

Purpose To assess how well the prevention programme is working, by measuring the proportion of identified non-brothel-based sex workers who know that consistent and correct condom use protects them from HIV infection.

Method of Measurement From BSS reports.

Numerator: Total number of non-brothel-based SWs (IDSW) surveyed in the BSS who answer the questions about condom use correctly.

Denominator: Total number of non-brothel-based SWs (IDSW) identified through mapping exercises conducted jointly by Provincial AIDS Office, the CUWG and the DTOP.

Interpretation The answers by SWs do not necessarily represent actual condom use; rather they are self-reported use. But they do indicate whether SWs know that they *should* be using condoms. This indicator has exhibited good internal and external consistency with other indicators such as prevalence and incidence, however over the years, and so can be strongly suggestive of actual condom use.

Targets

	Baseline	2008	2009	2010
Target				90%
Actual	Beer girls: 84% Karaoke : 56% (2007)			

BCC 5

Percentage of brothel-based sex workers who reported consistent & correct condom use with sweetheart

Purpose To assess how well the prevention programme is working, by measuring the proportion of identified brothel-based sex workers who know that consistent and correct condom use protects them from HIV infection, and then use them in non-commercial settings.

Method of Measurement From BSS reports.

Numerator: Total number of brothel-based SWs (DSW) surveyed in the BSS who answer the questions about condom use correctly.

Denominator: Total number of brothel-based SWs (DSW) identified through mapping exercises conducted jointly by Provincial AIDS Office, the CUWG and the DTOP.

Interpretation The answers by SWs do not necessarily represent actual condom use; rather they are self-reported use. But they do indicate whether SWs know that they *should* be using condoms. This indicator has exhibited good internal and external consistency with other indicators such as prevalence and incidence, however over the years, and so can be strongly suggestive of actual condom use.

Targets

	Baseline	2008	2009	2010
Target				68%
Actual	52% (2007)			

BCC 6

Percentage of non brothel-based sex workers who reported consistent & correct condom use with sweetheart

Purpose To assess how well the prevention programme is working, by measuring the proportion of identified non brothel-based sex workers who know that consistent and correct condom use protects them from HIV infection, and then use them in non-commercial settings.

Method of Measurement From BSS reports.

Numerator: Total number of non brothel-based SWs (IDSW) surveyed in the BSS who answer the questions about condom use correctly.

Denominator: Total number of non brothel-based SWs (IDSW) identified through mapping exercises conducted jointly by Provincial AIDS Office, the CUWG and the DTOP.

Interpretation The answers by SWs do not necessarily represent actual condom use; rather they are self-reported use. But they do indicate whether SWs know that they *should* be using condoms. This indicator has exhibited good internal and external consistency with other indicators such as prevalence and incidence, however over the years, and so can be strongly suggestive of actual condom use.

Targets

	Baseline	2008	2009	2010
Target				65%
Actual	Beer girls: 61% Karaoke: 57% (2007)			

BCC 7

Percentage of brothel-based sex workers who received HIV/AIDS & STI prevention messages

Purpose To assess how well the prevention programme is working, by measuring the coverage of identified brothel-based sex workers who say that they have received some HIV/AIDS & STI prevention messages

Method of Measurement From BSS reports.

Numerator: Total number of brothel-based SWs (DSW) surveyed in the BSS who say they have received prevention messages.

Denominator: Total number of brothel-based SWs (DSW) identified through mapping exercises conducted jointly by Provincial AIDS Office, the CUWG and the DTOP.

Interpretation

Targets

	Baseline	2008	2009	2010
Target				95%
Actual	93.8% (2007)			

STI 1
STI (Gonorrhea, Chlamydia) prevalence among brothel-based sex workers

Purpose Reported from the STI Sentinel Survey conducted every 3 or 4 years, this indicator provides a national estimate of prevalence of Gonorrhea (Ng) and prevalence of Chlamydia (Ct) among brothel-based sex workers, and measures impact of interventions such as the 100% CUP (including STI management), aimed at reducing prevalence of STI among sex workers.

Method of Measurement Reported directly from the STI Sentinel Surveillance Survey (SSS)

Numerator: Number of brothel-based sex workers diagnosed with STI (Gonorrhea , Chlamydia) during the survey

Denominator: Total number of brothel-based sex workers surveyed

Interpretation This indicator indicates the success of interventions aimed at reducing STI among brothel-based sex workers in Cambodia, thus contributing to reduced transmission of HIV.

Targets

	Baseline	2008	2009	2010
Target		<14%		
Actual	GC:13% Ct:14% (2005)			

STI 2

Proportion of visiting female brothel-based sex workers diagnosed with cervicitis during monthly follow-up consultations at special STI clinics

Purpose

This indicator measures the proportion of brothel-based sex workers attending follow-up consultations who are diagnosed with cervicitis using the syndromic approach recommended by NCHADS.

Method of Measurement

From STI reports: For sex workers the diagnosis of cervicitis is based on a protocol combining a personal risk assessment and physical examination. "Follow-up" consultations are consultations with brothel-based sex workers who have visited the Special STI Clinic at least once previously. Each special STI Clinic reports number of brothel-based sex workers diagnosed with cervicitis or (vaginitis and cervicitis) during follow-up consultations. This indicator does not include diagnoses of cervicitis for bothel-based sex workers attending the first consultation at a special STI Clinic.

Numerator: Number of brothel-based sex workers diagnosed with cervicitis or (vaginitis and cervicitis) at monthly follow-up consultation

Denominator: Number of brothel-based sex workers presenting at clinics for monthly follow-up consultation

Interpretation

Diagnoses of cervicitis should be rare among brothel-based sex workers' follow-up consultations if the 100% condom use programme is being implemented, and previous STI treatment protocols are being followed. An increase in the proportion of brothel-based sex workers diagnosed with cervicitis could indicate a decline in the use of condoms during sex with clients or with boyfriends, or a failure of STI management. However, the diagnosis of cervicitis using syndromic approach over-estimates the real prevalence of infection with Gonorrhea (Ng) and Chlamydia (Ct). The real STI prevalence is estimated only by STI sentinel surveys.

Targets

	Baseline	2008	2009	2010
Target		<15 %	<14 %	<14 %
Actual	15.9% (2007)			

STI 3

Number of Specialty STI Clinics upgraded with laboratory support to perform RPR and basic microscopy (UA 34)

Purpose

To measure progress in upgrading all Special STI Clinics to provide basic laboratory diagnostics

Method of Measurement

From STI unit reports: data on the number of Special STI Clinics with staff capacity and equipment and reagents to perform basic diagnostic tests is maintained by the STI unit at NCHADS. STI clinic laboratories must be fully equipped according to NCHADS guidelines and have laboratory staff trained and able to perform, at a minimum, gram stains, wet mounts, KOH, Methylene blue and RPR tests.

Numerator: Total number of Special STI clinics with staff capacity and equipment/reagents , that actually perform laboratory tests mentioned above

Denominator: n/a

Interpretation

The laboratory support enables equipped special STI clinics to use the recommended refined algorithms for the syndromic management of STI in high-risk populations.

This indicator can be used to give values for the UA Indicator no. 34

Targets

	Baseline	2008	2009	2010
Target		24	28	31
Actual	22 (2007)			

STI 4

Percentage of entertainment services workers identify by 100% CUWG who received STI checked up at STI clinic every month

Purpose To assess how well the prevention programme is achieving coverage of sex workers (SW), by measuring the proportion of identified brothel-based and non brothel-based sex workers receiving monthly services at the STI Clinics

Method of Measurement **From STI quarterly reports.**

Numerator: Total number of brothel-based SWs (DSWs) and total number of non-brothel based sex workers (IDSW)consultations at Special STI Clinics

Denominator: Total number of brothel-based SWs (DSW) and total number of non-brothel based sex workers (IDSW) identified through mapping exercises conducted jointly by Provincial AIDS Office, the CUWG and the DTOP.

Interpretation One of the purposes of the Outreach/peer education and 100% Condom use programme is to reach all brothel-based SWs with advice, education and monthly STI check-up and treatment at the STI clinic. This indicator measures whether all sex workers are being reached with this package and effectively attend the STI clinics.

Non brothel based sex workers include beers girls and women working at Karaoke or massage parlors (Casino workers are not included).

The November 2006 census found a total of 3,000 DSW and 9,000 IDSW in Cambodia.

Targets

	Baseline	2008	2009	2010
Target		DSW: 95% IDSW: 50%	DSW: 95% IDSW: 50%	DSW: 95% IDSW: 50%
Actual	DSW: 85% IDSW: n/a (2007)			

STI 5

Proportion of women accessing Antenatal Care (ANC) services who are tested for syphilis

Purpose

To measure coverage in providing universal access to syphilis screening for women

Method of Measurement

From STI unit reports: Syphilis testing is already being conducted in a number of NGO-run clinics. As facilities and capacity for testing is extended to other antenatal sites testing will be recorded and submitted to the STI unit of NCHADS. National programme records will then be aggregated from health facility data.

Numerator: Number of women attending ANC services for at least one visit in the last 12 months and who were tested for syphilis

Denominator: Number of women attending ANC services for at least one visit in the last 12 months

Interpretation

Screening for syphilis is being introduced in antenatal services as part of the drive towards the elimination of congenital syphilis. Monitoring of the trends will help establish how far this is being achieved.

This indicator can be used to give values for the UA Indicator no. 35

Targets

	Baseline	2008	2009	2010
Target		50%	60%	70%
Actual	11.2% (2007)			

STI 6

Prevalence of syphilis among antenatal attendees

Purpose

To measure progress in achieving elimination of congenital syphilis.

Method of Measurement

From STI unit reports: Prevalence will be calculated from the results of data on testing and test results submitted to the STI Unit of NCHADS.

Numerator: Number of antenatal attendees aged 15 years and over who tested RPR positive for syphilis

Denominator: Number of antenatal attendees aged 15 and over who had an RPR syphilis test

Interpretation

Screening for syphilis is being introduced in antenatal services as part of the drive towards the elimination of congenital syphilis. Monitoring prevalence will establish how far this is being achieved.

This indicator can be used to give values for the UA Indicator no. 36.

Targets

	Baseline	**2008**	**2009**	**2010**
Target		0.5%	0.4%	0.3%
Actual	0.7% (2001)			

CoC 1
Total number of Operational Districts with full Continuum of Care

Purpose

To measure the number of operational districts with full Continuum of Care, including at least VCCT, OI/ART services, laboratory support, HBC and PLHA-SG, MMM and CoC coordinating committee

Method of Measurement

From NCHADS reports. The total number of *Operational Districts* with at least one *Continuum of Care* operating is counted.

Numerator: Total number of Operational Districts operating a Continuum of Care including at least VCCT, OI/ART services, laboratory support, HBC and PLHA-SG, MMM and CoC coordinating committee

Denominator: n/a

Interpretation

This indicator is used to show coverage of the full CoC framework for comprehensive care and support services available to PLHA throughout Cambodia.

Targets

	Baseline	**2008**	**2009**	**2010**
Target*		40	43	45
Actual	39 (2007)			

* *Targets do not include the 4 ODs located in Phnom Penh*

CoC 2
Number of Continuum of Care sites with ARV services

Purpose To measure the number Continuum of Care sites with ARV services,

Method of Measurement **From NCHADS reports**. The total number of CoC sites with at least one ARV service operating is counted.

Numerator: Total number of Continuum of Care sites with at least one ARV service operating.

Denominator: n/a

Interpretation This indicator is used to show coverage of ARV services for comprehensive care and treatment to PLHA throughout Cambodia.

Targets

	Baseline	2008	2009	2010
Target*		50	53	55
Actual	49 (2007)			

VCCT 1

Number of licensed VCCT sites operating in the public and non-profit sectors (UA 1)

Purpose

To measure total number of licensed VCCT sites available to the general population.

Method of Measurement

From NCHADS VCCT unit reports: All VCCT sites operated by MOH or non-profit agencies licensed with NCHADS are counted.

Numerator: Total number of operating licensed VCCT sites

Denominator: n/a

Interpretation

VCCT should be easily accessible by anyone interested in being tested for HIV. The total number of sites reported by this indicator helps NCHADS plan for appropriate expansion of VCCT services and mobilize resources.

Targets

	Baseline	2008	2009	2010
Target		220	235	250
Actual	197 (2007)			

VCCT 2

Number and percentage of adults (aged 15-49) who received HIV counseling and testing (UA 3,4,5,9)

Purpose To calculate the utilization of VCCT services by adults in reproductive age.

Method of Measurement **From VCCT quarterly reports:** Total number of people aged 15-49 years tested at VCCT sites is aggregated at national level and compared to the estimated national population of the same age

Numerator: Total number of people aged 15-49 years receiving test results through post-test counseling at a licensed VCCT sites

Denominator: Total population aged 15-49 years derived from the most recent population census results (National Institute of Statistics)

Interpretation This indicator provides the HIV testing coverage of people in reproductive age that the programme has achieved.

Targets

	Baseline	**2008**	**2009**	**2010**
Target		320,000 (4.3%)	380,000 (5.0%)	400,000 (5.2%)
Actual	259,917 (3.5%) (2007)			

NB: the estimated population aged 15-49 years is the following, assuming a 1.9% population growth each year:

	2003	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Population aged 15-49 years		*6,933,419*	7,059,140	*7,193,264*	*7,329,936*	*7,469.204*	7,611,119	7,755,731

VCCT 3

Percentage of people HIV tested who received their result through post-test counseling (UA 9)

Purpose

To measure the percent of people HIV tested who returned to receive their test result during post-test counseling as a measure of quality.

Method of Measurement

From VCCT reports: Total number of VCCT clients returning for post-test counseling and receiving test results is compared to the total number of VCCT clients tested during the same time period. The indicator is measured at VCCT site level, provincial and national level.

Numerator: Total number of VCCT clients who returned for post-test counseling and received their test results

Denominator: Total number of VCCT clients tested for HIV during the same period

Interpretation

The percentage of patients HIV tested who receive their test result through post-test counseling should be close to 100%. VCCT sites that have low return rates for post-test counseling will be investigated to find out the reasons and improve the services.

Targets

	Baseline	2008	2009	2010
Target		98%	98%	98%
Actual	96% (2007)			

VCCT 4

Number and percentage of HIV (+) Clients who were referred to OI/ART sites

Purpose

To measure the effectiveness of HIV (+) clients' referrals to OI/ART sites by counselors at VCCT sites

Method of Measurement

From VCCT reports: All HIV (+) clients should be referred to OI/ART sites nearby.

Numerator: Total number of HIV (+) clients referred to OI/ART sites

Denominator: Total number of HIV (+) clients

Interpretation

All HIV (+) clients have to be referred to OI/ART sites and other services through post-test counseling. VCCT sites that have low referral will be investigated to find out the reasons and improve the services.

Targets

	Baseline	2008	2009	2010
Target		80%	90%	95%
Actual	n/a			

HFBC 1
Percentage of people on ART alive 12 months after initiation

Purpose

To assess the effectiveness of ART being provided, by measuring the percentage of people (adults and children) on ART surviving 12 months or longer.

Method of Measurement

From ART electronic databases: **retrospective cohort analysis at individual site level.** In the future, all the OI/ART sites will be able to report ARV cohort data. Currently however, these data are available only in selected sites.

Numerator: Total number of patients (adults and children) on ART known to be still alive 12 months after initiation. Patients who were lost to follow up during the first 12 months after ART initiation are excluded from the nominator.

Denominator: Total number of patients started on ART on a specific year and who have not been transferred out.

Interpretation

Measurement of this indicator does not take into account baseline CD4 count and HIV-related illnesses at the time ART was initiated. This indicator will be measured for each specific year to allow trends in the survival rate at 12 months at the same site over time.

Low survival rates at 12 months at a specific site may be due to poor adherence to treatment, irregular drug pick up, high drop out (lost to follow up) rate. Sites with low survival rates at 12 months will be investigated to find out the reasons for this and to improve quality of services.

This indicator can be used to give values for the UA Indicator no. 25.

Targets

	Baseline	2008	2009	2010
Target		>85%	>85%	>85%
Actual	87.6% (2007)			

Note:

** According to survival data from cohort studies in other countries including developed countries, the one year survival reaches about 85% for adult and 90% for children. Therefore, we aim to maintain similar level of performance over time. The 2007 baseline was higher because it represents large cohorts at national sentinel ART sites with high standard quality of care.*

*** >70% is the WHO target for Early warning indicator for HIV drug resistance.*

**** for NCHADS planning purposes, the mortality rate on ART was estimated at 12% in the first year and 2% in subsequent years.*

HFBC 2

Percentage of donated blood units screened for HIV in a quality-assured manner (UA 15)

Purpose

To measure the effectiveness of blood screening services in ensuring a secure blood supply.

Method of Measurement

From National Blood Transfusion Centre (NBTC) Reports: reports on blood screening at all blood banks and referral hospitals are sent to NBTC regularly (monthly). NCHADS will obtain these reports to calculate values for this indicator quarterly.

Numerator: Number of donated blood units screened for HIV in blood centres/blood screening laboratories that have both (1) followed documented standard operating procedures, and (2) participated in an external quality assurance scheme.

Denominator: Total number of blood units donated

Interpretation

HIV and other diseases can be transmitted efficiently through donated blood transfusions. Ensuring that all donated blood is free from infections is a fundamental and relatively simple prevention measure against transmission of HIV. Policies and Guidelines for careful screening, with quality assured methods are in place in Cambodia. Measurement of this indicator is critical for assessing how far these are being observed, and how safe donated blood is.

This indicator can be used to give values for the UA Indicator no. 15.

Targets

	Baseline	2008	2009	2010
Target		100%	100%	100%
Actual	97.3% (2007)			

HFBC 3

Number and percentage of OD with at least one center that provides public ART services (UA 23)

Purpose

This indicator measures the expansion of ART services by OD.

Method of Measurement

From NCHADS reports: a national ART programme site is considered operational when patients are treated and monitored at the center, even if the full CoC is not in place.

Numerator: Total number of Operational Districts with at least one centre providing ART services

Denominator: Total number of Operational Districts where it has been planned to have at least one centre providing ART services

Interpretation

There are 76 ODs and 68 referral hospitals in Cambodia. The national program does not plan to expand ART services to all existing ODs. The national target is to have 46 ART services in 38 ODs to reach universal access by 2010.

Some ODs may have ART services without having the full CoC package.

Targets

	Baseline	2008	2009	2010
Target*		38 A: 38 C:28	38 A: 38 C:29	40 A: 40 C: 30
Actual	38 A: 38 C:22 (2007)			

- *Targets do include the 4 ODs located in Phnom Penh*

HFBC 4

Percentage of Pediatric AIDS Care that use virological testing (eg PCR) for infant diagnosis (UA 2)

Purpose

To measure how far infant diagnosis is based upon good data.

Method of Measurement

From AIDS Care Unit records: NCHADS policy and guidelines state that all sites providing paediatric AIDS care are to send blood sample for infants to one of the reference laboratories for virological testing. The AIDS Care Unit staff monitor to ensure that this is happening.

Numerator: Number of health facilities that collect dried blood spots on site and send them for virological testing for infant diagnosis.

Denominator: Targeted number of health facilities where paediatric care is being provided based on national programme plans

Interpretation

This indicator is used to monitor and assess the quality of paediatric care being provided.

This indicator can be used to give values for the UA Indicator no. 2.

Targets

	Baseline	2008	2009	2010
Target		100%	100%	100%
Actual	100%			

HFBC 5

Percentage of health facilities with PEP services available (UA 17)

Purpose

To coverage of PEP services available.

Method of Measurement

From AIDS Care Unit Records: Policies and Guidelines are in place to ensure that all ART sites can provide PEP where necessary. The AIDS Care Unit checks the availability of PEP services during regular monitoring and supervision of ART sites.

Numerator: Total number of sites with PEP services available.

Denominator: Total number of sites providing ART.

Interpretation

Measurement of this indicator shows coverage with PEP services to protect health care staff and others from needle-stick and other facility-based transmission.

This indicator can be used to give values for the UA Indicator no. 17.

Targets

	Baseline	2008	2009	2010
Target		100%	100%	100%
Actual	100%			

HFBC 6

Number and percentage of people (adults and children; male and female) with advanced HIV infection on HAART (UA 24)

Purpose

To measure the national ART coverage of people living with HIV/AIDS (PLHA) in need of treatment.

Method of Measurement

From ART facility reports and HSS results.

Numerator: The number of active patients on ART (disaggregated by age group and gender), calculated as:

(Number of patients ever started on ART)
MINUS
(Number of patients who died or were lost to follow up)

Denominator: Estimated total number of PLHA with advanced infections (developing AIDS) (30500 in 2008, 33500 in 2009 and 35100 in 2010). This estimate is calculated with mathematical models using HIV prevalence data from HSS and number of people on ART.

Interpretation

The number of adults with advanced HIV infection was estimated at 19,814 in 2003 and will be updated in 2007. It is estimated that about 10% of PLHA with advanced infection in need of ART are children.

ARV use in prophylactic treatment for PMTCT in pregnant women not eligible for ART is *not* included in this indicator.

This indicator can be used to give values for the UA Indicator no. 24.

Targets

	Baseline	2008	2009	2010
Target		33,344 A: 29,344 (96.2%) C:4,000	35,644 A: 31,344 (93.5%) C:4,300	39,044 A: 34,244 (97.5%) C:4,800
Actual	26,664 A: 24,123 C:2,541 (2007)			

HFBC 7

Number of OD with at least one center that provides public PMTCT services (UA 10)

Purpose

Measures the OD coverage of prevention of Mother-to-Child-Transmission (PMTCT) services.

Method of Measurement

From NMCHC reports: Physical count of ODs with at least one PMTCT site.

Numerator: Total number of Operational Districts with at least one center providing PMTCT services

Denominator: n/a

Interpretation

Although there are 76 ODs in Cambodia, the PMTCT services expansion will follow the expansion of OI/ART sites. There are 76 targeted ODs to provide PMTCT services by 2010.

One OD may have several PMTCT services. It is not expected that all ODs in Cambodia will have PMTCT services by 2010.

This indicator can be used to give values for the UA Indicator no. 10.

Targets

	Baseline	2008	2009	2010
Target		64 (85%)	68 (90%)	76 (100%)
Actual	58 (76%) (2007)			

HFBC 8

Percentage of pregnant women attending ANC who were tested for HIV and received their HIV test result (UA 6)

Purpose

To measure the HIV testing coverage of pregnant women

Method of Measurement

From NMCHC reports

Numerator: Number of pregnant women who received an HIV test result through post-test counseling in the preceding 12 months

Denominator: Estimated number of pregnant women giving birth in the last 12 months who attended at least one ANC visit

[The estimated number of pregnant women giving birth in the preceding 12 months who attended at least ANC 1= estimated number of births (461,000/year) x estimated proportion of pregnant women attending ANC1 (69%in CHDS) =318,090 in 2005]

Interpretation

It is important that the nominator is restrained to the pregnant women who actually received their HIV test result.

This indicator can be used to give values for the UA Indicator no. 6.

Targets

	Baseline	**2008**	**2009**	**2010**
Target		40%	50%	75%
Actual	16.4% 2007			

HFBC 9

Number of HIV-infected infants born from HIV-infected mothers (UA 14)

Purpose

To assess the effectiveness of the PMTCT programme being provided, by measuring the percentage of children born HIV-infected in spite of screening mothers for HIV and intervening with them with PMTCT measures.

Method of Measurement

This indicator is modeled based on prevalence data available.

Numerator: n/a

Denominator: n/a

Interpretation

This is an impact indicator which shows how effective the overall PMTCT programme is in reducing mother-to-child transmission.

This indicator can be used to give values for the UA Indicator no.14.

Targets

	Baseline	2008	2009	2010
Target		700	500	250
Actual	1050 (2006)			

HFBC 10

Percentage of pregnant women attending ANC who received a complete course of ARV prophylaxis to reduce the risk of mother-to-child transmission (UA 11)

Purpose

To measure the ARV prophylaxis coverage of HIV-infected pregnant women

Method of Measurement

From NMCHC reports

Numerator: Total number of HIV infected pregnant women having received a complete course of ARV prophylaxis to reduce mother to child transmission of HIV in accordance with nationally approved treatment protocols in the preceding 12 months.

Denominator: Estimated number of HIV-infected pregnant women giving birth in the preceding 12 months and who attended at least one ANC visit

[The estimated number of HIV-infected pregnant women= number of pregnant women giving birth in the preceding 12 months who attended at least ANC 1 (318,090) x estimated HIV prevalence among ANC attendees (2.1%)= 6,680 in 2005]

Interpretation

The increase in the proportion of pregnant women attending ANC who received a complete course of ARV should follow closely the increase in the proportion of those who received an HIV test result.

This indicator can be used to give values for the UA Indicator no. 11.

Targets

	Baseline	2008	2009	2010
Target		30%	40%	60%
Actual	11.2% (2007)			

HFBC 11

Number of clinicians, nurses and pharmacists trained to provide ART and related services

Purpose

To measure the number of staff trained and able to provide ARV and related services including adherence counseling, management of OIs, ART provision and logistical management of drug supplies.

Method of Measurement

From Training reports and records: Number of government staff who have successfully completed the NCHADS initial trainings for the OI/ART team. The OI/ART team is made of 2 clinicians, 2 nurses and 1 pharmacist. The initial trainings include:"Clinicians Training on Management of Opportunistic Infection and Antiretroviral Therapy for Adults", "OIs and ARV Counseling for Nurses" and "OIs and ARV Logistics Management for Pharmacists"

Numerator:

a) Cumulative number of clinicians/Pediatrician having attended and passed the final exam for NCHADS "Clinicians Training on Management of Opportunistic Infection and Antiretroviral Therapy for Adults"

b) Cumulative number of nurses having attended and passed the final exam for NCHADS "OIs and ARV Counseling for Nurses"

c) Cumulative number of pharmacists having attended and passed the final exam for NCHADS "OIs and ARV Logistics Management for Pharmacists"

Interpretation

This indicator provides a measure of the number of staff qualified to treat PLHA with ARVs per national guidelines. The number of trained clinicians and nurses should be at least twice the number of functioning OI/ART sites and the number of trained pharmacists should be at least equal to the number of functioning OI/ART sites.

Targets

	Baseline	**2008**	**2009**	**2010**
Target a)		A: 181 C: 80	A: 181 C: 80	A: 181 C: 80
Actual a)	A: 181 C: 64 (2007)			
Target b)		A: 165 C: 100	A: 165 C: 100	A: 165 C: 100
Actual b)	A: 165 C: 84 (2007)			
Target c)		164	179	194
Actual c)	149 (2007)			

HFBC 12

Percentage of patients on ART lost to follow-up at 12 months after initiation

Purpose

This indicator is used as an early warning indicator of ARV drug resistance.

Method of Measurement

From facility ART electronic databases. Retrospective analysis of patients started on ART 12 months after start. The indicator is measured and reported at individual ART site level.

Numerator: Total number of patients lost to follow up at 12 months after ART initiation

Denominator: Total number of patients started at selected year

The denominator does not include the patients who were transferred out during the first year of ART.

Interpretation

This indicator measures the drop out rate from ART program. If this rate is high or increase over time, this indicates that HIV drug resistance (DR) suppression may be too low.

Targets

	Baseline	**2008**	**2009**	**2010**
Target		<10%	<10%	<10%
Actual	<10% (2006 at 7 sites)			

HFBC 13

Percentage of patients still on first line regimen 12 months after initiation

Purpose

This indicator is used as an early warning indicator of ARV drug resistance

Method of Measurement

From facility ART electronic databases. Retrospective analysis of patients started on first line ARV regimen 12 months after start. The indicator is measured and reported at individual ART site level.

Numerator: Total number of patients on first line ARV regimen at 12 months after ART initiation

Denominator: Total number of patients started on first line regimen at selected year

The denominator includes the patients who were lost to follow up and died during the first year of ART but excludes those who were transferred out during this time.

Interpretation

This indicator measures the rate of switch from first line to second line regimen. If this rate is > 80%, this is an indication that HIV drug resistance (DR) suppression may be too low.

Targets

	Baseline	**2008**	**2009**	**2010**
Target		>80%	>80%	>80%
Actual	82.9% (2007 at 6 sites)			

NB: *The target > 80% over time is the WHO recommended target.*

HFBC 14

Number and Percentage of adults newly enrolled in HIV care who were screened* for TB at the first visit

Purpose

This indicator is used to measure the TB screening of adults newly enrolled in HIV care for the first visit

Method of Measurement

From OI/ART record (electronic database).

Numerator: Number of individuals newly enrolled in HIV care (new OI) who were recorded as screened* for TB at the first visit

* using 3 symptoms screen

Denominator: Total number of individuals newly enrolled in HIV care (new OI)

Interpretation

This indicator can be disaggregated by:

# of individuals with negative symptom screen recorded

# of individuals with positive symptom screen and further investigation conducted and recorded

-> the results of TB screening at first visit can be disaggregated as follow:

active TB cases diagnosed / # individuals with positive symptom screen

active TB ruled out /# individuals with negative symptom screen + # individuals with positive symptom screen and further investigation completed

This indicator will be measure at 4 sites in 2009 and 15 sites in 2010

Targets

	Baseline	**2008**	**2009**	**2010**
Target		Not available	90%	95%
Actual	Not available			

HFBC 15

Number and Percentage of adults enrolled in HIV care who were screened* for TB at last follow up visit (WHO UA indicator)

Purpose

This indicator is used to measure the TB screening of adults enrolled at HIV care at follow up visits

Method of Measurement

From OI/ART record (electronic database).

Numerator: Number of individuals enrolled in HIV care who had TB symptom screening* completed during their last visit

Denominator: Number of individual HIV care records examined *(or number of follow up visits)*

**3 symptoms screened*

Interpretation

-> the results of TB screening at last visit can be disaggregated as follow:
active TB cases diagnosed (at last follow up visit of the previous quarter[±]) and # started on TB treatment
active TB ruled out

[±] *the previous quarter has to be used because of the delay for TB diagnosis*

The denominator should be disaggregated by patients on OI care and patients on ART

This indicator can be used to give values for the WHO UA Indicator.

This indicator will be measure at 4 sites in 2009 and 15 sites in 2010

Targets

	Baseline	**2008**	**2009**	**2010**
Target		Not available	90%	95%
Actual	Not available			

HFBC 16

Percentage of estimated HIV-positive incident TB cases that received treatment for TB and HIV (WHO UA indicator)

Purpose

To measure the implementation of combination of both TB and HIV treatment for PLHA that get TB infection

Method of Measurement

From OI/ART record (electronic database).

Numerator: Number of adults who are currently receiving ART and who were started on TB treatment

The numerator can be calculated from the previous indicator

Denominator: Estimated number of incident tuberculosis cases in people living with HIV (derived from statistical modeling)

Interpretation

This indicator can be used to give values for the WHO UA Indicator.

This indicator will be measure at 4 sites in 2009 and 15 sites in 2010

Targets

	Baseline	2008	2009	2010
Target		Not available	80%	90%
Actual	Not available			

HBC 1

Total number of HBC teams actively providing home-based care and support services to PLHA

Purpose

According to NCHADS' Strategy, HBC is provided by NGOs, so this indicator counts the number of NGO home-based care teams active throughout the country, to help estimate coverage of HBC.

Method of Measurement

From PAO-HBC coordinator reports : HBC teams report to PAO, aggregated provincially and nationally

Numerator: Total number of HBC teams actively providing care and support services

Denominator: n/a

Interpretation

The total number of active HBC teams is helpful to NCHADS, to plan for coverage of this service in nationwide.

Targets

	Baseline	2008	2009	2010
Target		300	300	300
Actual	253 (2007)			

HBC 2
Number of PLHA supported by HBC teams

Purpose To help assess coverage of PLHA by HBC teams

Method of Measurement **From HBC reports**: HBC teams report the number of "PLHA remaining" to the provincial HBC coordinator.

Numerator: PLHA supported by HBC teams at the end of each quarter.

Denominator: n/a

Interpretation The number of PLHAs supported by each HBC team is updated every quarter. PLHAs who have died or moved away during the quarter are removed from the list and new PLHAs supported by the HBC team are added.

Targets

	Baseline	2008	2009	2010
Target		27,000	28,000	30,000
Actual	25,395 (2007)			

NB: *The expected number of PLHA supported by HBC teams roughly follows the trend in number of patients on ART.*

HBC 3
Number and percentage of health centers with HBC team support

Purpose

To assess HC coverage of HBC teams for PLHA

Method of Measurement

From HBC reports: The total number of health centers in each province with at least one active HBC team attached is measured.

Numerator: Total number of health centers that have at least one active HBC team attached.

Denominator: Total number of health centers

Interpretation

There are 942 health centers throughout Cambodia. As stated in the HBC SOPs 1 HBC team can cover > 1 HC. However, it is not expected to cover 100% of HCs in Cambodia with HBC.

Targets

	Baseline	2008	2009	2010
Target		720 (76%)	750 (80%)	780 (83%)
Actual	683 (72%) (2007)			

SRV 1
Number of HSS conducted with result applied to program

Purpose

The HIV Sentinel Surveillance (HSS) began in 1995 and is currently conducted every three years among most at-risk populations (brothel-based sex workers, non brothel-based sex workers, Police) and ANC attendees. Groups may vary slightly from survey to survey. Results of the HSS are used to monitor trends in HIV prevalence over time in specific population groups. HIV prevalence among ANC attendees is used as a basis for estimating the HIV prevalence among the general population of adults and for estimating the HIV incidence, the number of AIDS cases and number of people in need of ART. As of 2007, NCHADS has conducted 9 rounds of HSS.

Method of Measurement

From HSS protocols and reports: total number of national HSS surveys conducted is counted annually

Numerator: Number of HSS surveys conducted with results analyzed and disseminated in a public forum

Denominator: n/a

Interpretation

It is not expected any more to conduct HSS surveys every year but every 3 years.

HIV prevalence estimates from HSS will be triangulated and calibrated with population-based survey results such as CDHS.

Targets

	Baseline	2008	2009	2010
Target		0	1	0
Actual	9 (Since 1995 to 2006)			

SRV 2
Number of SSS conducted with result applied to program

Purpose

STI Sentinel Surveillance (SSS) survey is conducted every three years among most at-risk populations (brothel-based sex workers, police) and ANC attendees. Groups included in the survey may vary slightly from survey to survey (MSM were included in the 2005 SSS). Results are used to monitor prevalence of 3 sexually transmitted infections: Neisseria gonorrhoae, Chlamydia trachomatis and Treponema pallidum (syphilis). By the end of 2007, NCHADS will have conducted 3 rounds of SSS.

Method of Measurement

From SSS protocols and reports: total number of national SSS surveys conducted is counted annually

Numerator: Number of SSS surveys conducted with results analysed and disseminated in a public forum

Denominator: n/a

Interpretation

Low prevalence of STI among most at-risk populations can be attributed to the success of the 100% CUP and contributes to reduced HIV transmission.

Targets

	Baseline	2008	2009	2010
Target		1	0	0
Actual	3 (Since 1996 to 2005)			

SRV 3
Number of BSS conducted with result applied to program

Purpose

The Behavioural Surveillance Survey (BSS) is conducted every 3-4 years to understand trends in risk behaviors and practices among most at-risk populations, including brothel-based SW, non brothel-based SW and Police. Results are useful in profiling risk behaviour over time among the groups surveyed to aid in developing HIV prevention programmes. As of 2007, NCHADS has conducted 7 rounds of BSS.

Method of Measurement

From BSS protocols and reports: total number of national BSS surveys conducted is counted annually.

Numerator: Number of BSS surveys conducted with results analysed and disseminated in a public forum

Denominator: n/a

Interpretation

Decreasing trends in risk behaviour among groups surveyed indicates positive impact of prevention efforts.

Targets

	Baseline	**2008**	**2009**	**2010**
Target		0	0	1
Actual	7 (Since 1996 to 2007)			

RES
Number of research studies conducted

Purpose

To measure the number of research studies which have passed the appropriate approval processes, conducted by or in partnership with NCHADS

Method of Measurement

From Research study protocols and reports: study protocols and reports are counted

Numerator: Number of research studies conducted by or in partnership with NCHADS

Denominator: n/a

Interpretation

This indicator assesses whether HIV/AIDS and STI related operational research is being conducted to improve HIV/AIDS prevention and care interventions in Cambodia; and if collaboration with other institutions is taking place to strengthen the development of HIV/AIDS and STI related research .

Targets

	Baseline	2008	2009	2010
Target		2	2	2
Actual	6 (2007)			

PMR 1

Percentage of major funding sources included in Annual Comprehensive Work Plan

Purpose

To measure the number of major funding sources whose allocations are included in NCHADS annual plans

Method of Measurement

From NCHADS PMR Unit: Number of major funding sources included in provincial and national work plans are counted. The total number of HIV/AIDS funding sources available in the health sector is defined each year.

Numerator: Number of major funding sources included in the annual comprehensive work plan (in each province or nationally)

Denominator: Total number of HIV/AIDS major funding sources identified by NCHADS in the health sector

Interpretation

As NCHADS programmes are expanded throughout the country, the efficient and effective allocation of resources is critical. A high proportion of agencies planning jointly with NCHADS will help assure that resources are used and distributed according to need and priority.

Targets

	Baseline	2008	2009	2010
Target		>90%	>90%	>90%
Actual	80% (2007)			

PMR 2

Number of NGOs and partners with signed Letters of Agreement for annual work plans on HIV/AIDS & STI programme

Purpose

To measure the number of NCHADS major partners that have signed Letters of Agreement with NCHADS.

Method of Measurement

From NCHADS PMR Unit: count of signed Letters of Agreement

Numerator: Number of signed Letters of Agreement between NCHADS and major partners

Denominator: n/a

Interpretation

Letters of agreement between partners and NCHADS will help assure that partners will work closely with NCHADS, and agree to follow national strategies, guidelines and protocols - and set up a unified and acceptable health response to HIV/AIDS in Cambodia.

Targets

	Baseline	2008	2009	2010
Target		40	45	50
Actual	35			

PMR 3
Number of NCHADS quarterly program reports produced and disseminated

Purpose To measure performance of NCHADS PMR unit in reporting programme activities

Method of Measurement **From NCHADS PMR unit:** Provincial activity reports are aggregated into a quarterly program report that also includes the comprehensive HIV/AIDS report from the DTM unit. The NCHADS national quarterly program reports and the annual report are produced and disseminated.

Numerator: Number of quarterly and annual reports prepared and disseminated by the NCHADS PMR unit.

Denominator: n/a

Interpretation Activity reports are an important monitoring tool for NCHADS.

Targets

	Baseline	2008	2009	2010
Target		5	5	5
Actual	5 (2007)			

DTM 1

Number of provinces with data management units

Purpose

This indicator measures the expansion of data management units at provincial AIDS offices.

Method of Measurement

From NCHADS DTM Unit: A provincial data management unit is considered operational when the staff has been recruited and trained.

Numerator: Total number of provinces with data management units

Denominator: n/a

Interpretation

This indicator will help assess the development and strengthening of NCHADS Data Management system

Targets

	Baseline	2008	2009	2010
Target		11	20	20
Actual	11 (2006)			

DTM 2

Number of comprehensive HIV/AIDS reports compiled

Purpose

To compile and analyze routine data reported by STI, VCCT, OI/ART, HBC, PLHA SG, TB/HIV into a comprehensive HIV/AIDS report. This report is produced on a quarterly basis and provides information on services and patients coverage and outputs.

Method of Measurement

From VCCT, STI, OI, ART and HBC quarterly reports: Number of comprehensive HIV/AIDS reports compiled and disseminated is counted annually.

Numerator: Number of comprehensive HIV/AIDS reports compiled and given to the PMR unit to integrate into the NCHADS quarterly program reports

Denominator: n/a

Interpretation

The comprehensive HIV/AIDS reports document progress towards achieving national strategic targets, using the selected monitoring indicators from the M&E guidelines.

Targets

	Baseline	2008	2009	2010
Target		5	5	5
Actual	5 (2007)			

LGM 1

Number and percent of OI ART sites with one or more stock-outs of essential ARVs (UA 37)

Purpose

To measure dependability of pharmacy logistic systems related to provision of essential ARVs. ARV treatment gaps can be dangerous to patients on ART, resulting in resistance and limiting treatment options.

Method of Measurement

From Stock Reports: ART sites report stock-outs of essential ARVs to the PAO and NCHADS. A stock-out is when none of an essential ARV is available at an ART site.

Movement of essential ARVs between ARV clinics within a province or between provinces in order to prevent stock-outs in ART sites with low stock of essential ARVs is not considered a stock-out, as long as an uninterrupted supply of essential ARVs remains available to meet patient treatment regimen needs.

Essential ARVs are defined as Antiretroviral drugs required in any form to meet patient needs according to regimen at each national ARV program site. A stock-out occurs when none of these required ARVs are available from normal stock, emergency stock or elsewhere can be delivered to meet patient needs.

Numerator:

Number The number of times an essential ARV is reported out of stock at any ART site run by or in partnership with NCHADS.

Percent The number of ART sites run by or in partnership with NCHADS reporting one or more stock-outs of essential ARVs

Denominator: The total number of OI ART sites run by or in partnership with NCHADS.

Interpretation

Monitoring this indicator is important to ensure that the logistics system functions well. The ART stock out rate is used as an early warning indicator for drug resistance monitoring.

Targets

	Baseline	2008	2009	2010
Target		0%	0%	0%
Actual	0%			