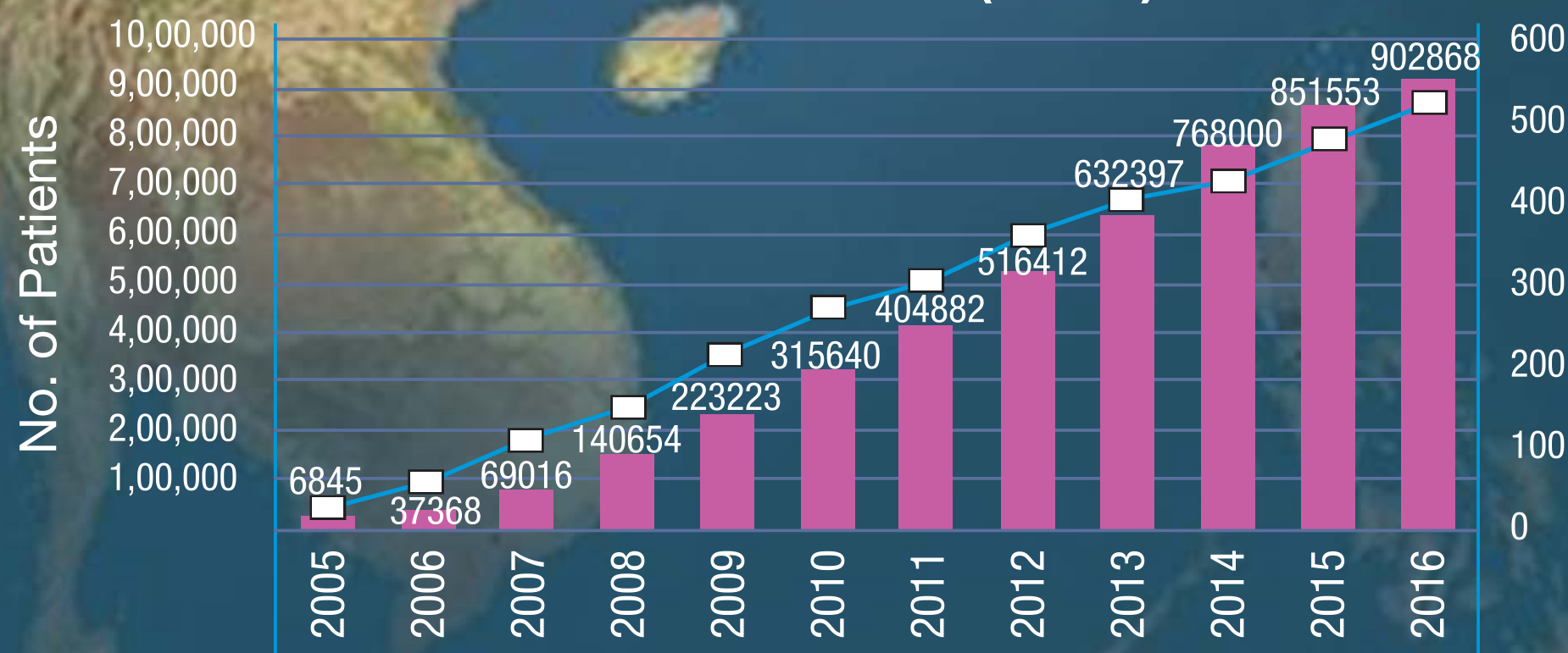


HIV/AIDS situation in India

Dr Chinmay Saraf M.D.
Dr Nivedita Pawar M.B.B.S.

Scale up of antiretroviral therapy in India

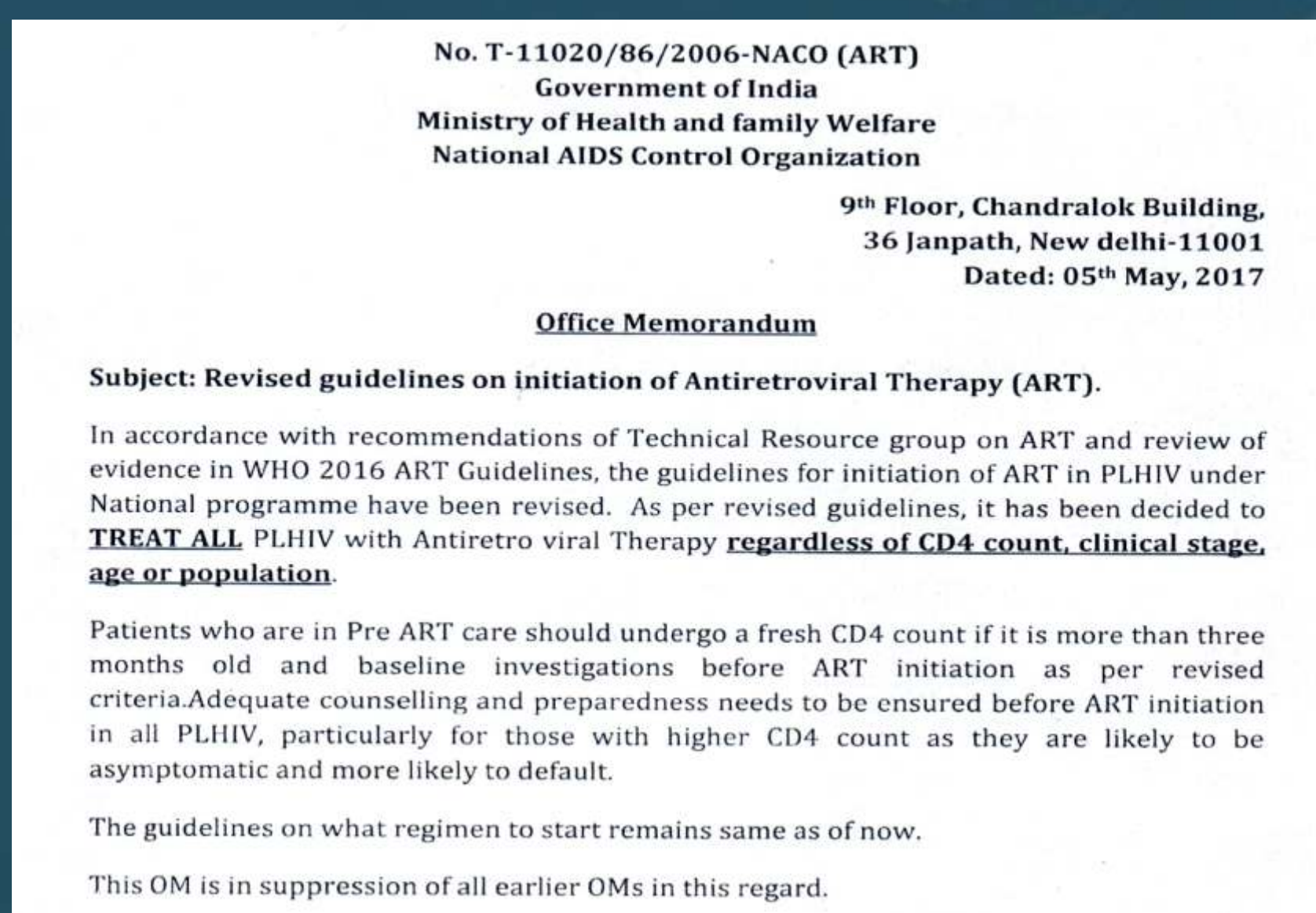
ART Scale up for PLHIV in India 2005 - 2015 (Till September, 2015)
ART SCALE UP IN INDIA (PLHIV)



Beneficiaries of Care, Support & Treatment as on September, 2016

Services / Beneficiaries	Achievements as on September, 2016
Adults in active care at ART Centers	11,41,531
Adults alive and on ART	9,42,263
Children in active at ART Centers	80,643
Children alive on ART	55,606
Persons alive and on 2nd line ART	15,500

When to start ART in India ?



Anti-Retrovirals approved for use

NRTI	NNRTI	PI	Newer drugs
Zidovudine (AZT)	Nevirapine (NVP)	Nelfinavir	CCR5 inhibitors : Maraviroc
Stavudine (d4T)	Efavirenz (EFV)	Indinavir	Integrase inhibitors : Raltegravir, Elvitegravir/cobicistat, Dolutegravir
Lamivudine (3TC)	Etravirine	Saquinavir	Fusion inhibitors : enfuvirtide
Didanosine (ddI)		Ritonavir	
Abacavir (ABC)		Atazanavir/Ritonavir	
Tenofovir (TDF)		Lopinavir/Ritonavir	
Emtricitabine (FTC)		Darunavir	
		Tipranavir	
		Fosamprenavir	

NACO Guidelines 2014 (First line ART)

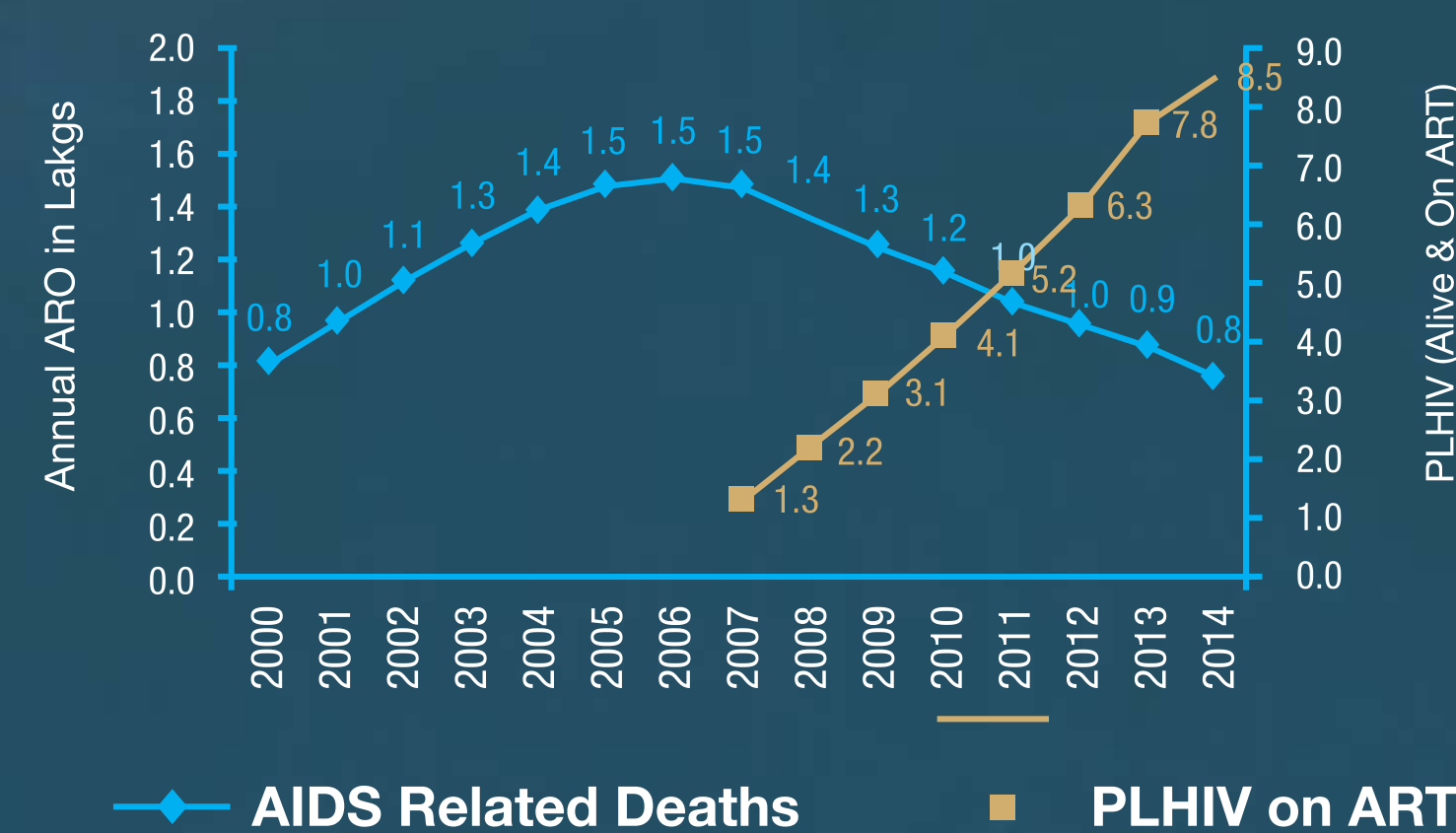
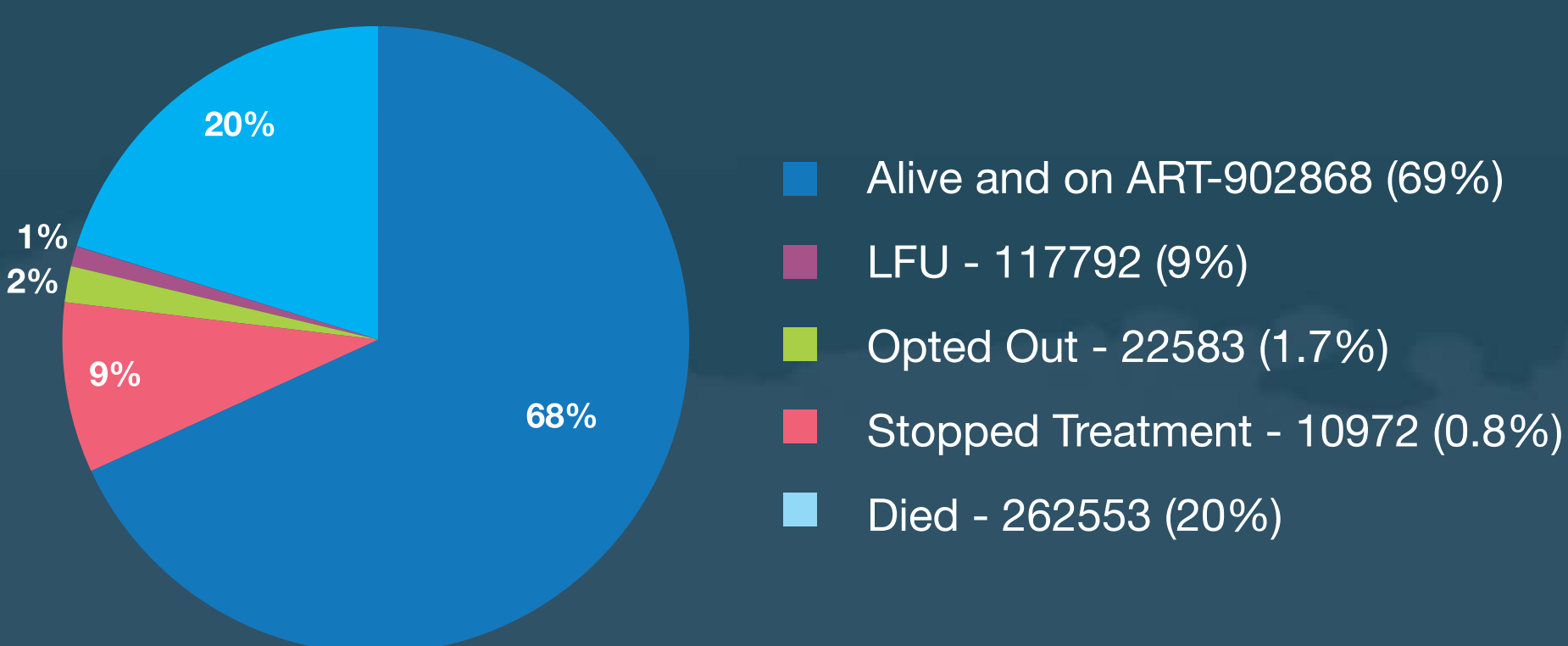
- Preferred regimen (2NRTI's + 1 NNRTI)
 - TDF + 3TC + EFV (Tenofovir + Lamivudine + Efavirenz)
 - AZT + 3TC + NVP (Zidovudine + Lamivudine + Nevirapine)
- Alternative regimen (2NRTI's + 1 NNRTI)
 - AZT + 3TC + EFV (Zidovudine + Lamivudine + Efavirenz)
 - ABC + 3TC + EFV (Abacavir + Lamivudine + Efavirenz)
- Other options
 - Pi's are not recommended for first line therapy

NACO Guidelines : Preferred 2nd Line Regimens

SECOND LINE ART	PREFERRED REGIMENS	ALTERNATIVE REGIMENS
Adults and adolescents (>10yrs) including pregnant and breast feeding women (if Tenofovir used in first line)	Zidovudine + 3TC + Lopinavir/r Zidovudine + 3TC + Atazanavir/r	Tenofovir + 3TC(FTC) + Atazanavir/r Tenofovir + 3TC(FTC) + Lopinavir/r
Adults and adolescents (>10yrs) including pregnant and breast feeding women (if Zidovudine or Stavudine used in first line)	Tenofovir + 3TC(FTC) + Atazanavir/r Tenofovir + 3TC(FTC) + Lopinavir/r	Zidovudine + 3TC + Lopinavir/r Zidovudine + 3TC + Atazanavir/r

Outcomes on ART in India

Outcome of PLHIV ever initiated on ART till September 2015 (cross sectional data at one point of time)



ART program : Successes

- Almost 1.1 million people on ART as of 2017
- Almost 19000 Integrated counseling and testing centers all over India providing free HIV counseling and testing.
- Free universal access to ART.
- Indian pharmaceutical companies have been able to manufacture low cost, WHO and US FDA approved fixed dose combinations of ART regimens leading to decreased pill burden and improve adherence.
- 57% decline in new HIV infections (86,000 in 2015) since 2001, and 54% decline in AIDS-related deaths between 2007 and 2015.
- Triple drug ART regimen is provided to all pregnant HIV infected mothers lifelong, irrespective of CD4 count in addition to standard antenatal care. (WHO Option B+)
- 6 Referral laboratories for Early infant diagnosis by HIV proviral DNA of Dried blood spots(DBS) - 14350 tests done in 2016.

ART program : Pitfalls and challenges

- ART coverage low at 50% of those who need it.
- 90-90-90 strategy of UNAIDS for halting AIDS epidemic - Efforts are on to identify 90% of total HIV infected patients.
- Patients from rural areas have to travel long distances for procuring second line ART and expert physician opinion.
- 20% patients presenting to ART centers with advanced HIV disease (CD4 < 50 cells/mm3).
- Zidovudine is still being used as 1st Line ART Drug in India.
- Efavirenz used as first line NNRTI backbone. No transition to Dolutegravir in near future.
- Atazanavir/r and Lopinavir/r are used as second line PI backbone.
- Darunavir/r is reserved for third line ART.
- Annual HIV viral load testing for all patients on ART - still in pipeline.
- Co-morbidities arising in patients on long term ART like diabetes, dyslipidemia, nephrotoxicity, osteopenia, neurocognitive decline and cancer are well documented through multiple cohort studies but poorly monitored in real world.
- Efavirenz being used as a part of PEP regimen - Raltegravir or Dolutegravir for PEP not popular.

HIV/TB program - Salient features

- Intensified case finding, Isoniazid preventive therapy and Infection control (3 'I' s) for HIV/TB
- Cartridge based nucleic acid amplification test (CB NAAT) for all HIV/TB patients with WHO defined symptoms, is available
- Daily Anti-Tubercular Therapy in FDC
- Isoniazid Preventive Therapy

Pitfalls and challenges

- Linkage of TB and HIV program still slow
- Poor sensitivity of CB NAAT testing in Extra-Pulmonary samples leading to under identification of TB epidemic
- Very few centers for diagnosis and treatment of MDR, Pre XDR and XDR TB.
- Monitoring of side-effects of ATT in PLHIV is still poor.

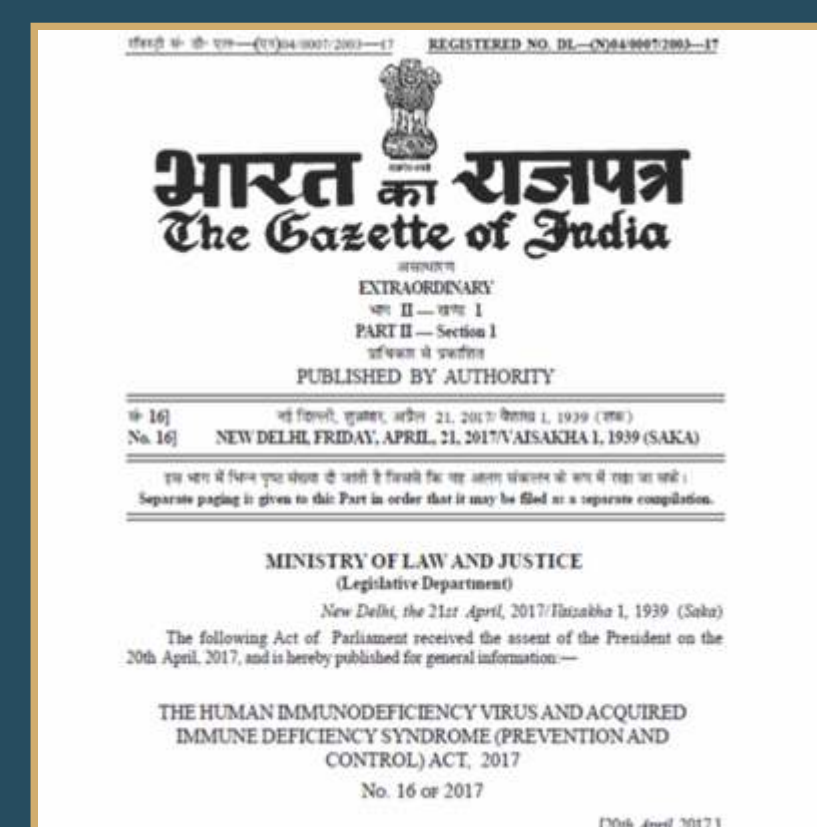
World TB Day - 24th March 2017

- Expanding TB Diagnostics : 500 Cartridge based Nucleic acid amplification equipments installed all over India
- Bedaquiline was introduced for treatment of drug resistant TB amongst HIV/TB co-infected patients
- Third line ART - Darunavir/r plus Raltegravir was launched through the free ART program

Miscellaneous issues while tackling the HIV epidemic in India

- Universal testing of all pregnant women for HIV and STI is to be done. 30% pregnant mothers deliver at home.
- 10.9 million units of NACO certified safe blood is provided against a national requirement of 12.8 million annually.
- Bill decriminalizing homosexuality is still in limbo.
- No Government or Private Insurer based life or health insurance coverage for PLHIV is available.
- Artificial Reproduction Techniques for HIV Sero-Discordant couples wishing for pregnancy are not very popular.
- PREP education and dissemination of information still in its infancy.
- Organ Transplantation amongst PLHIV is almost Non-existent.

HIV/AIDS bill 2017



CHAPTER VI
Anti-retroviral and opportunistic infection management for people Living with HIV...

13. The Central Government and every State Government, as the case may be, shall take all such measures as it deems necessary and expedient for the prevention of spread of HIV or AIDS, in accordance with the guidelines.

14. (1) The measures to be taken by the Central Government or the State Government under section 13 shall include the measures for providing, as far as possible, diagnostic facilities relating to HIV or AIDS, Anti-retroviral Therapy and Opportunistic Infection Management to people living with HIV or AIDS.

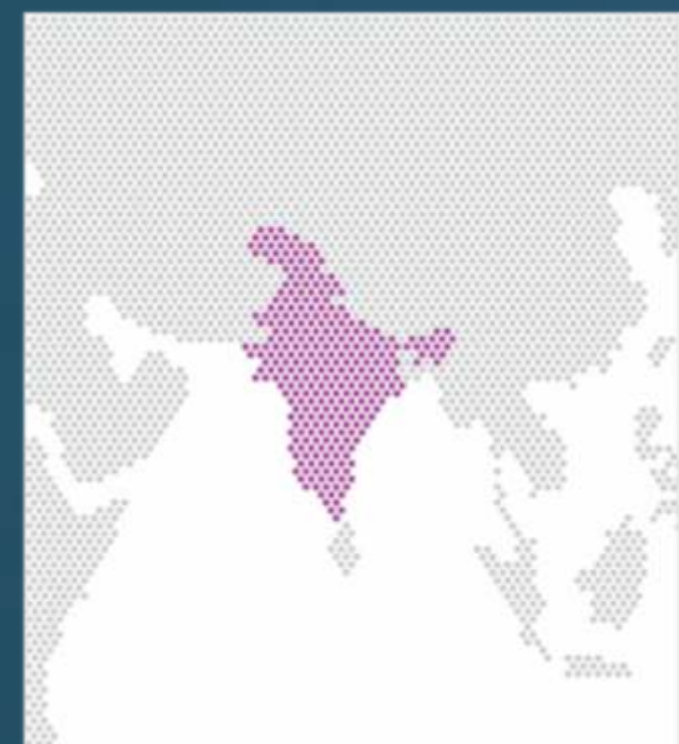
(2) The Central Government shall issue necessary guidelines in respects of protocols for HIV and AIDS relating to diagnostic facilities, Anti-retroviral Therapy and Opportunistic Infection Management which shall be applicable to all persons and shall ensure their wide dissemination.

References :

- NACO Guidelines 2016.
- NACO Annual Reports 2015-16, 2016-17
- HIV/AIDS bill 2017

HIV/AIDS statistics in India

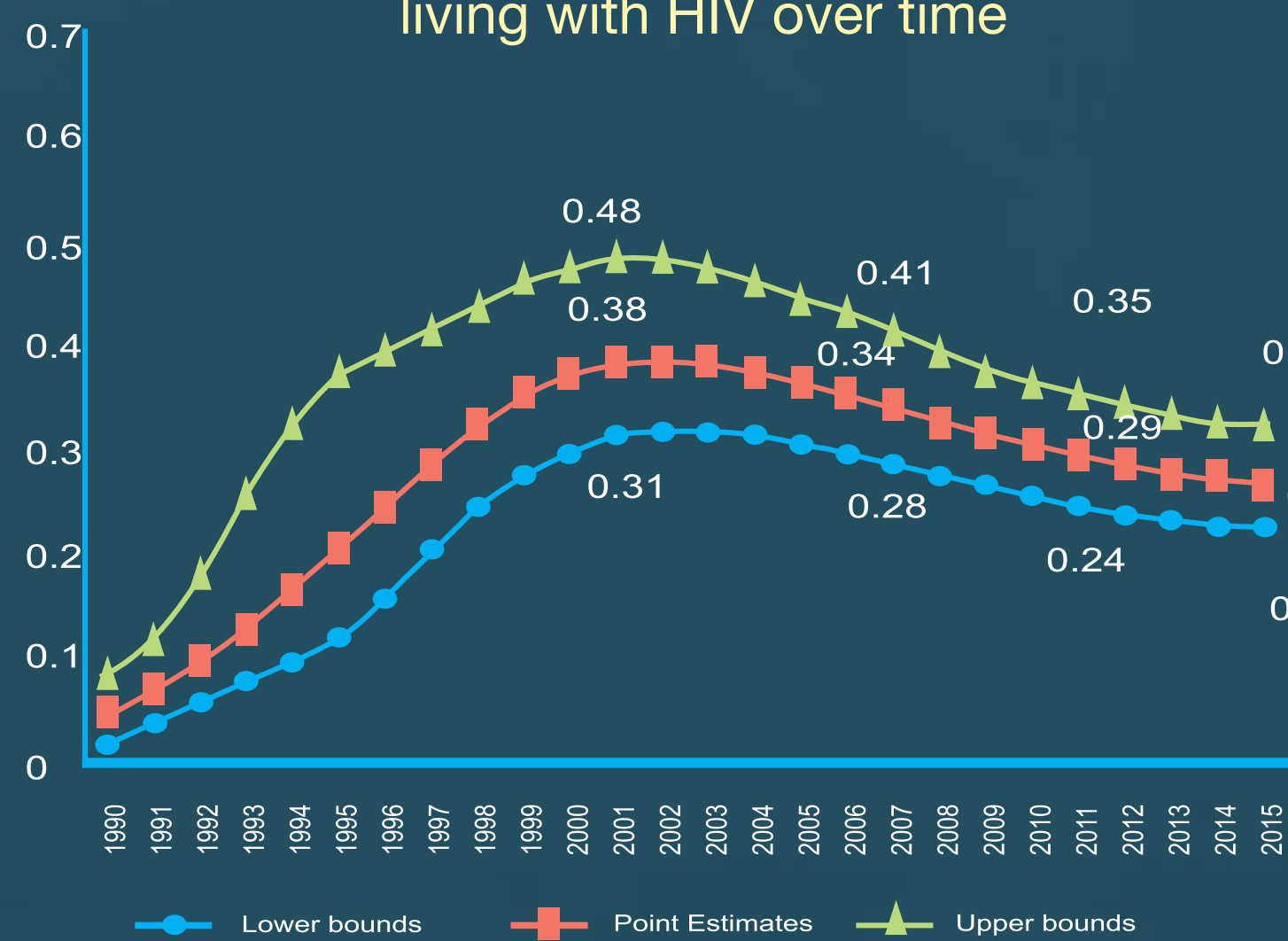
HIV/AIDS in India : India 2015



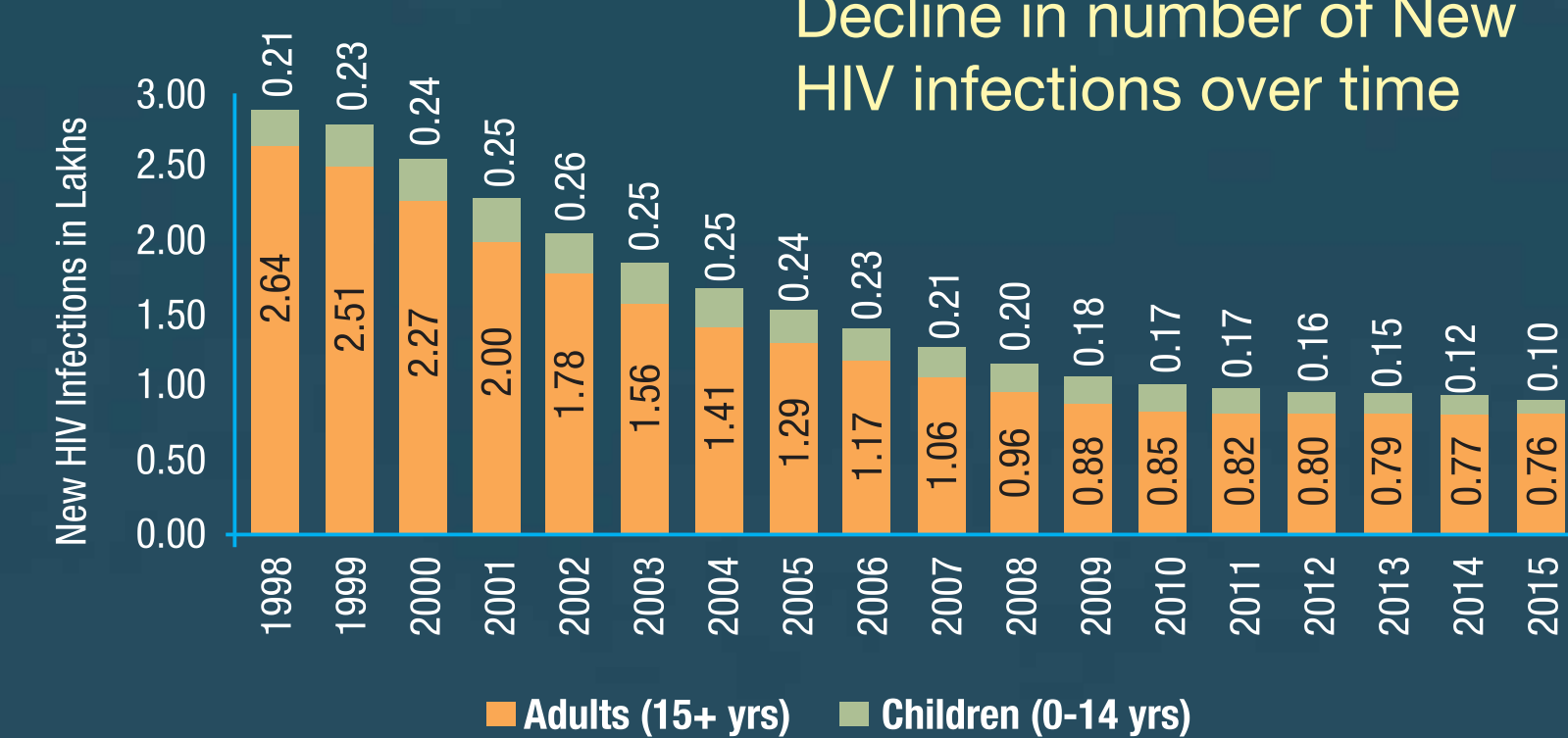
2.1 Million people living with HIV
0.3% Adult HIV prevalence
86,000 New HIV infections
68,000 AIDS-related deaths
43% Adults on antiretroviral treatment

Source : UNAIDS Gap Report 2016

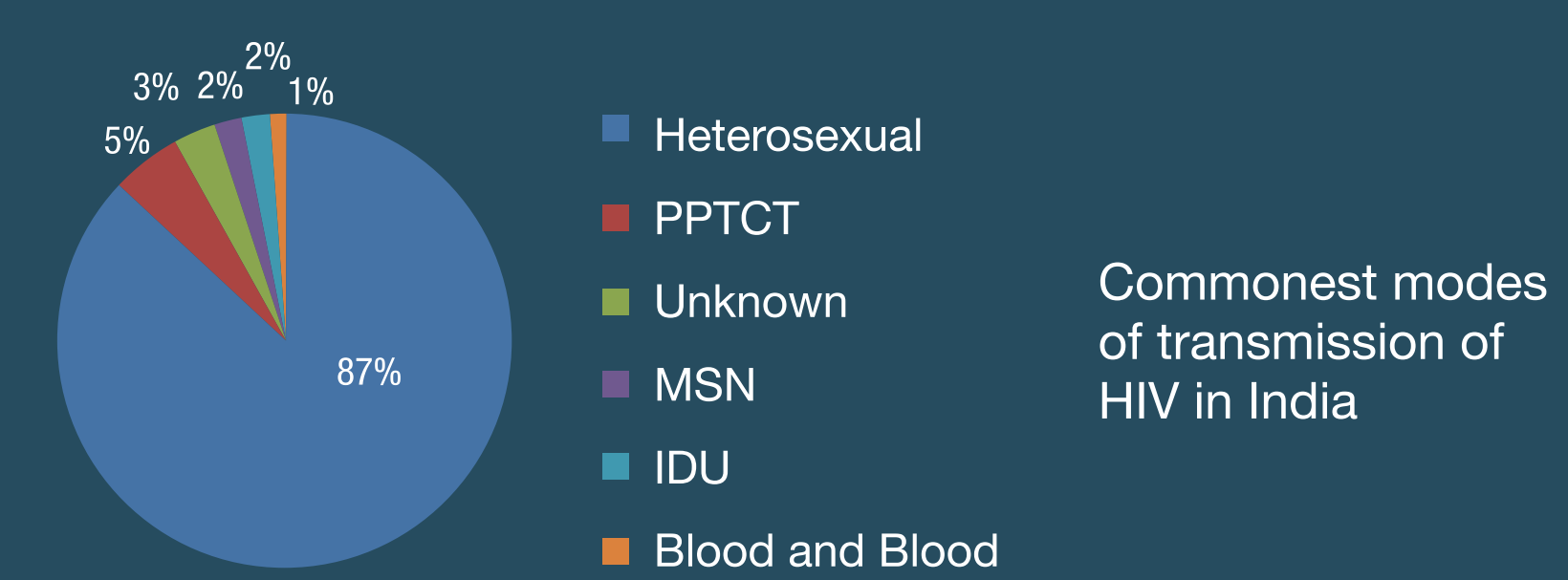
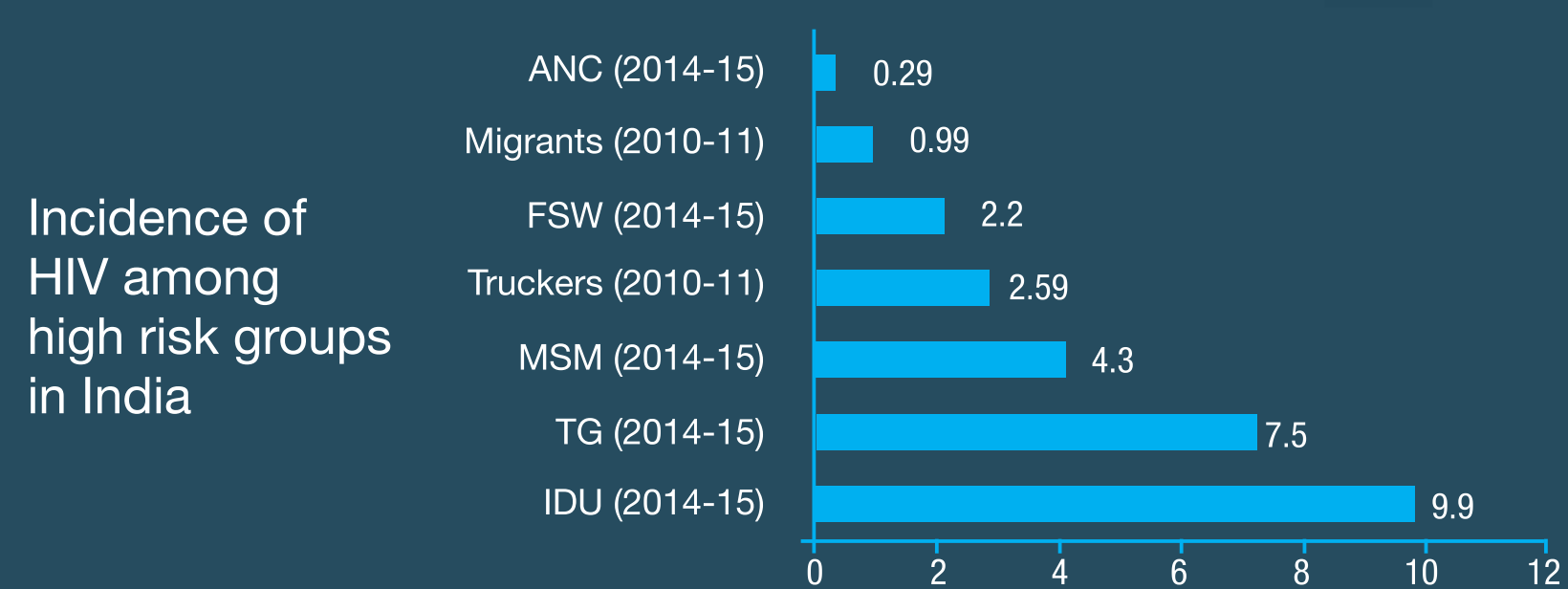
Decline in total number of people living with HIV over time



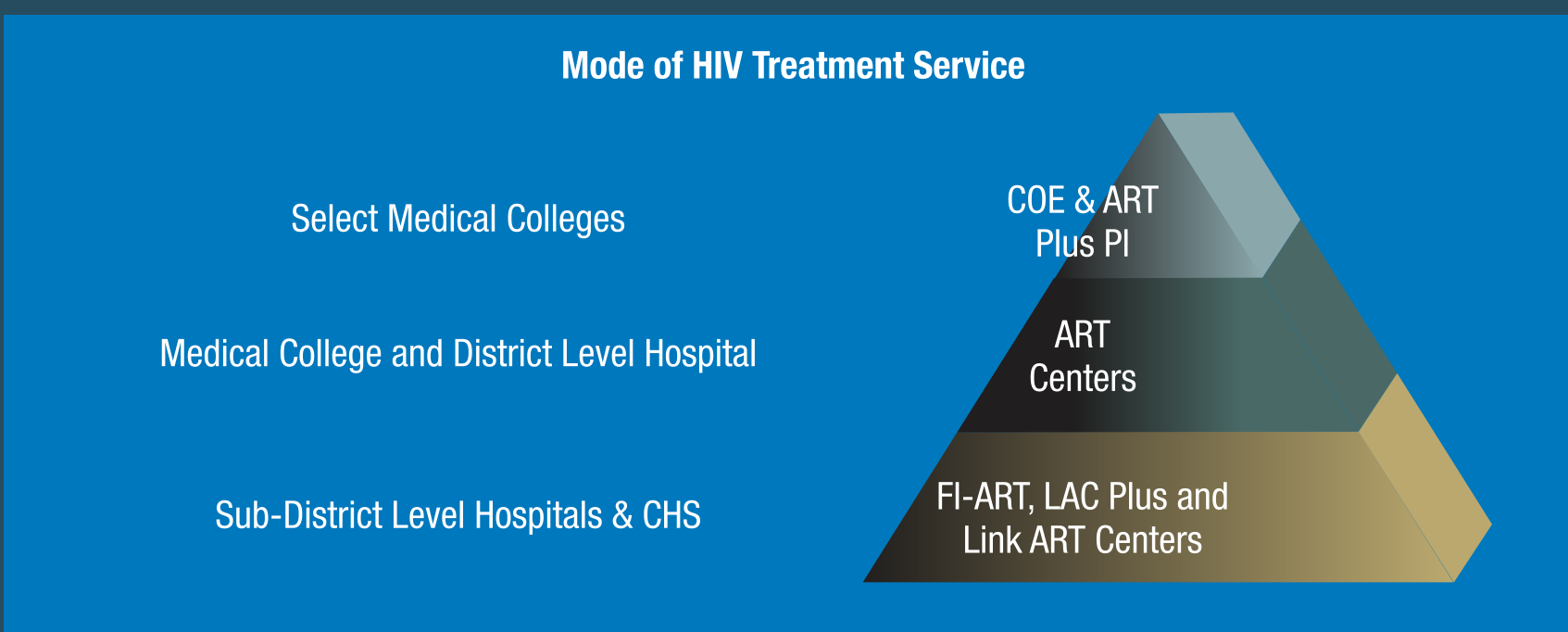
Decline in number of New HIV infections over time



HIV/AIDS statistics in India



Scale up of infrastructure for providing care and support to PLHIV



Facility for CST	Baseline (Dec. 2012)	As on March, 2016	As on Sept, 2016
ART Centers	355	525	528
Link ART Centers	685	1090	1108
Centers of Excellence	10	10	10
Paediatric Centers of Excellence	7	7	7
ART Plus Centers	24	37	88
Care & Support Centers	253 (CCC)	350	361

Note : Early in 2012, the Care & Support Centers were referred as Community Care Center.