Four decades of AIDS Pandemic

How Close are we to "Ending" it by 2030

Dr R M Chugh Oration
XXXII Annual conference
API Delhi State Chapter
17-18 December 2022

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World has committed to ending AIDS by 2030 at UN General Assembly Special session on AIDS in 2016 in line with SDG 3.3

Zero new infections
Zero AIDS related deaths
Zero Stigma and Discrimination

95-95-95 targets

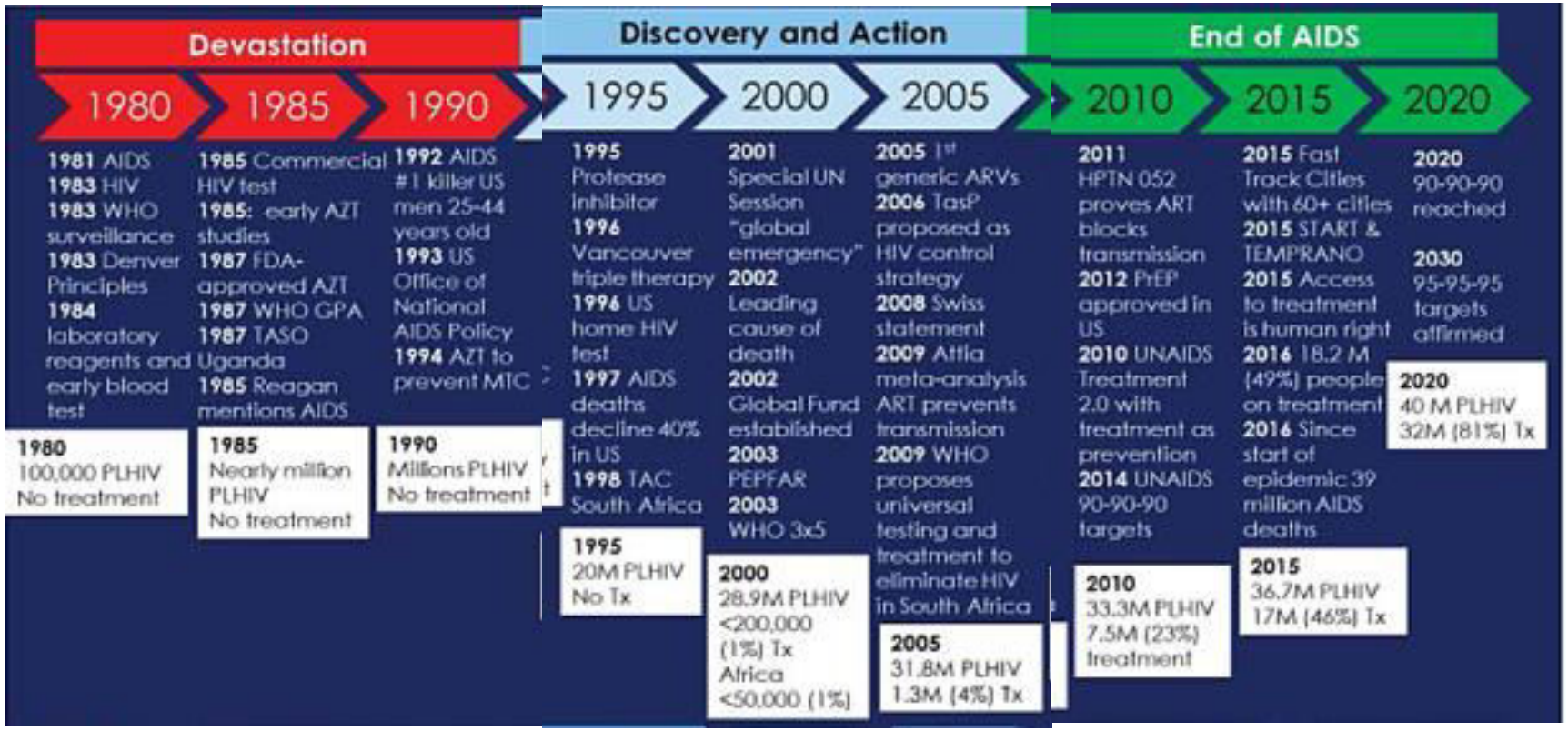
What do we mean by ending AIDS pandemic?

SDG Goal 3. Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

Category	Definition
End of AIDS (political)	Abstract political target of ending HIV as a major public health problem
End of AIDS (epidemiological)	Reduction of HIV incidence and AIDS to below one AIDS case per 1000 population [23]. The *90-90-90* and *95-95-95* targets are milestones on the way to the end of AIDS as they translate into 73% and 86% of people being virally suppressed, respectively [37]. The Global Plan calls for the elimination of maternal to child transmission to less than 5% transmission [35]
Epidemiologic Control	The point at which new HIV infections have decreased and fall below the number of AIDS-related deaths
HIV control	The reduction of HIV disease incidence, prevalence, morbidity, or morality to a locally acceptable level as the result of deliberate public health efforts; continued interventions will be needed to maintain the reduction and move towards elimination targets
HIV elimination	Reduction of HIV and AIDS in a defined geographical area to below one AIDS case per 10,000 population per year and a reduction of HIV incidence to 1 new case per 10,000 population [23]. HIV-associated TB 1-5 per 1000 PLHIV per year. Deaths 5 per 1000 people living with HIV per year. Continued intervention measures including treatment are required to maintain elimination.
HIV eradication	Permanent reduction to zero of the worldwide incidence of HIV because of deliberate efforts. Intervention measures are no longer needed
HIV extinction	The specific agent no longer exists in the laboratory or nature; interventions are no longer needed

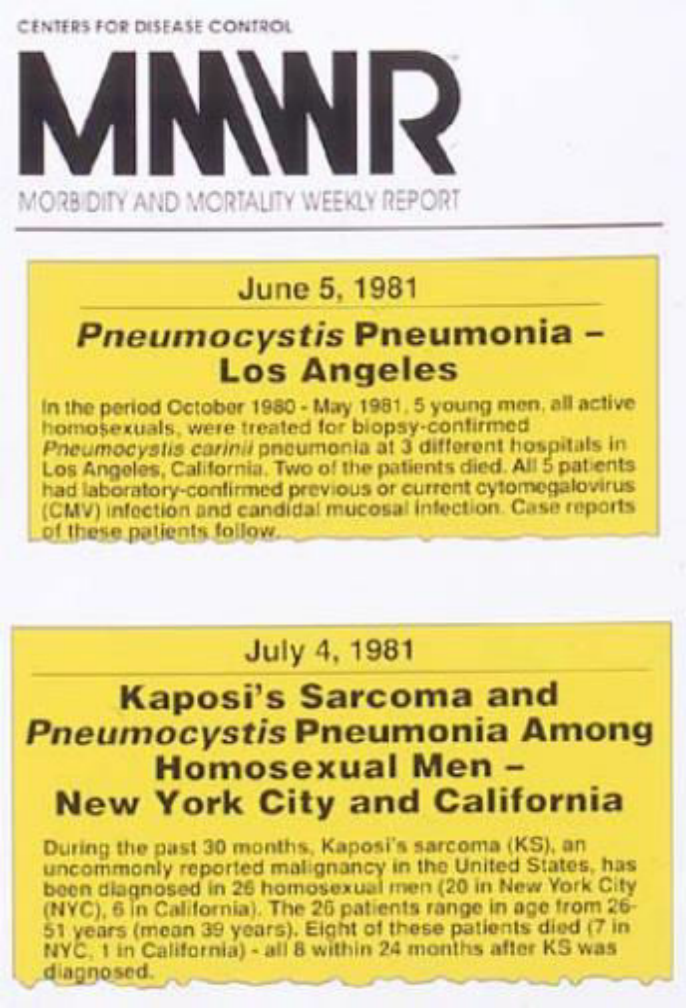
AIDS

The journey over last four decades



UNAIDS

A peep into history



CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

June 5, 1981

***Pneumocystis* Pneumonia – Los Angeles**

In the period October 1980 - May 1981, 5 young men, all active homosexuals, were treated for biopsy-confirmed *Pneumocystis carinii* pneumonia at 3 different hospitals in Los Angeles, California. Two of the patients died. All 5 patients had laboratory-confirmed previous or current cytomegalovirus (CMV) infection and candidal mucosal infection. Case reports of these patients follow.

July 4, 1981

Kaposi's Sarcoma and *Pneumocystis* Pneumonia Among Homosexual Men – New York City and California

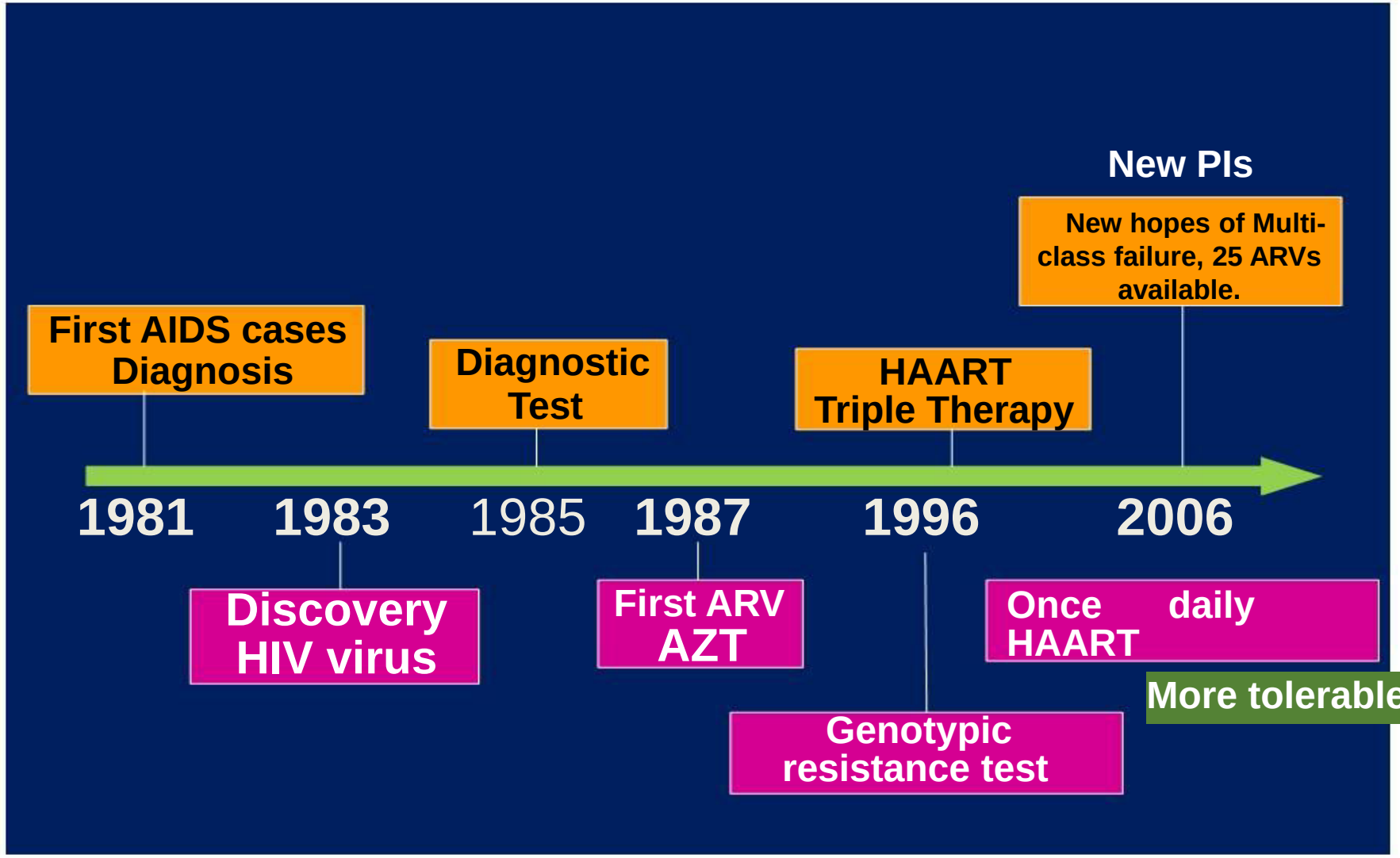
During the past 30 months, Kaposi's sarcoma (KS), an uncommonly reported malignancy in the United States, has been diagnosed in 26 homosexual men (20 in New York City (NYC), 6 in California). The 26 patients range in age from 26-51 years (mean 39 years). Eight of these patients died (7 in NYC, 1 in California) - all 8 within 24 months after KS was diagnosed.

Unprecedented

- Moving from an early sense of helplessness and frustration to discovery of virus in 1985 that has killed over 45 million people
- Moving to a commitment to end AIDS by 2030, within 35 years of discovery
- Prices of drugs fell from USD 15000 to USD 100 a year with in a decade
- Financing increased from 1 million to 16000 million in ten years

- Economic devastation capped to a large extent

Initial quick strides on HIV care



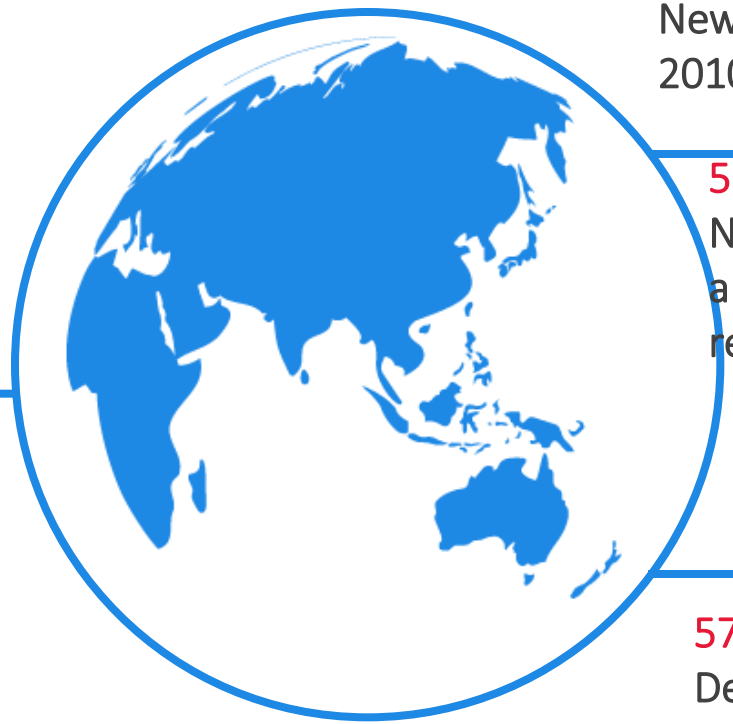
Unprecedented Gains globally

2021

Globally

38.4 million

People living with HIV



32% decline

New infections annually from 2010-2021

52% decline

New infections among children annually relative to 2010

52%

Deaths less annually relative to 2010

57% decline

Deaths among females annually relative to 2010

Source: UNAIDS/WHO estimates

Significant gains on reducing new infections and AIDS related deaths

- Incidence rate – steadily decline in world.
  - >17% over the past nine years.
  - >25% in 22 sub-saharan african countries.
  - Drastic reduction in women age group 15-24 in SA
  - Key factor are
    - –better awareness of the risks.
    - - Education on different mode of transmission.

Many barriers to access addressed

- Transgender people given separate identity in 7 countries – more than 25 countries legalized gay rights, India removed section 377
- Disease control theories changed from isolation and policing to rights – drug users and sex workers received full services in spite of being illegal in many countries
- Blood safety regulations became stricter

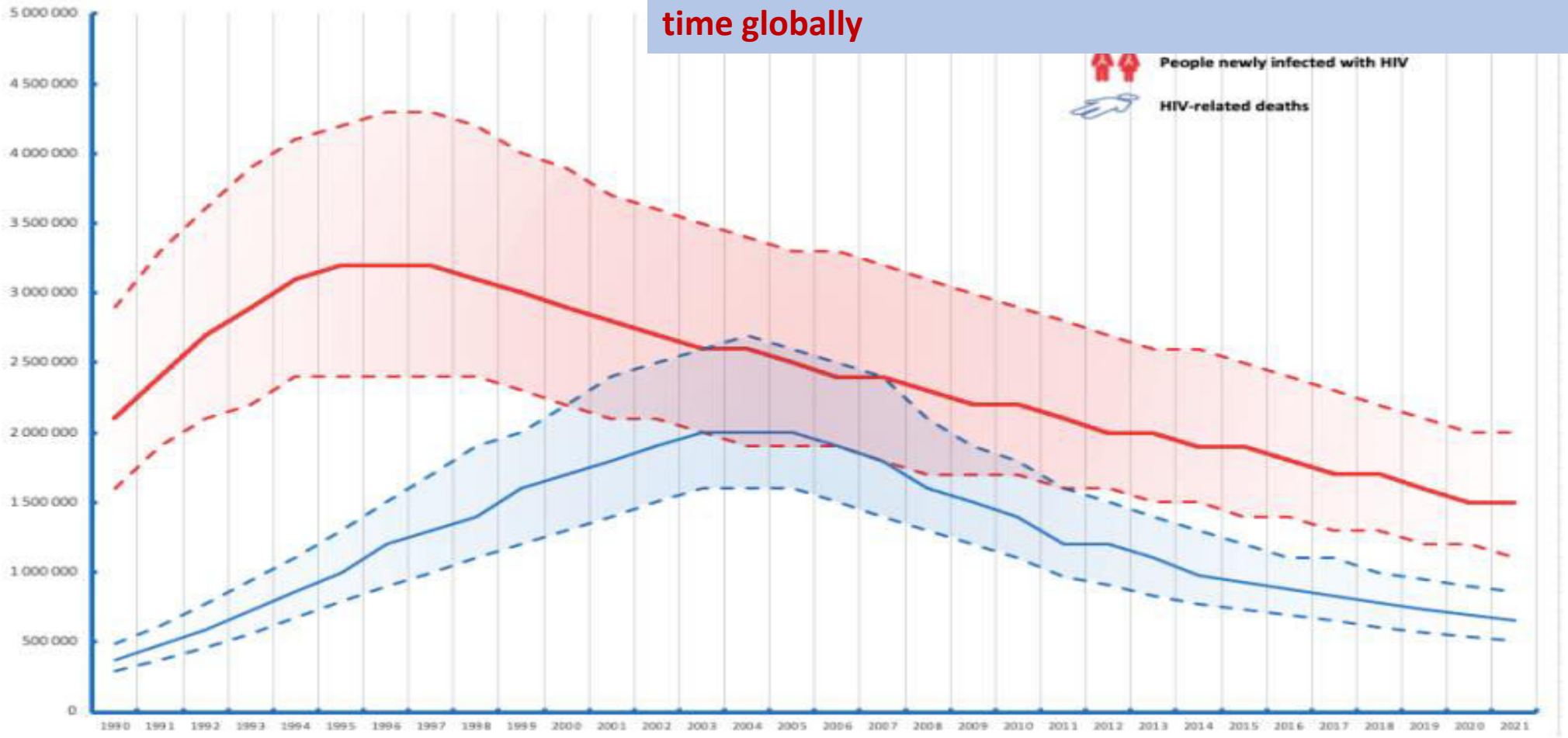
• Many such success stories

BUT

• Gains are wavering and can reverse with declining interest on HIV

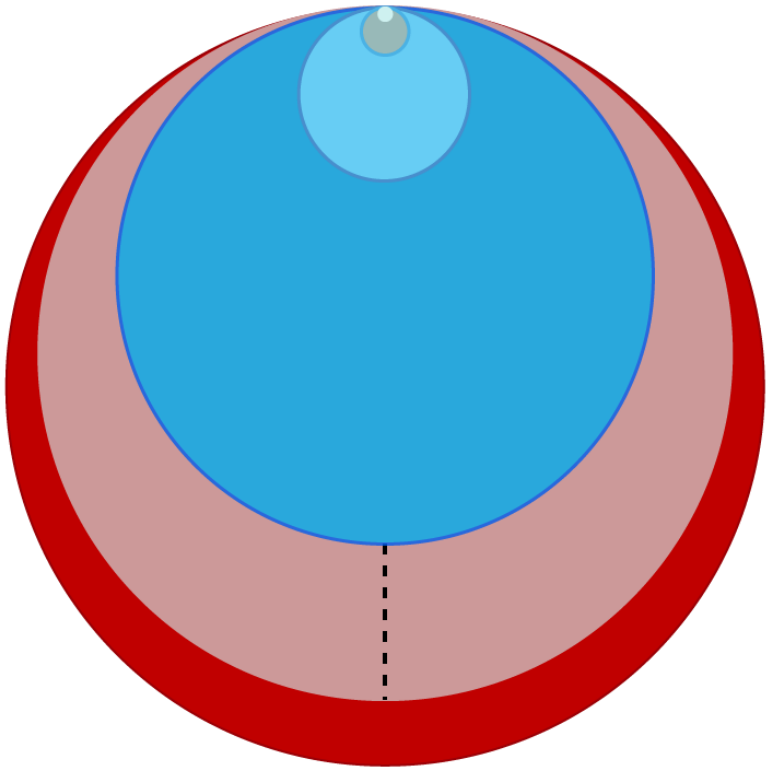
But are we on track ?

Decline in HIV incidence and mortality are plateauing over time globally



Source: UNAIDS/WHO estimates

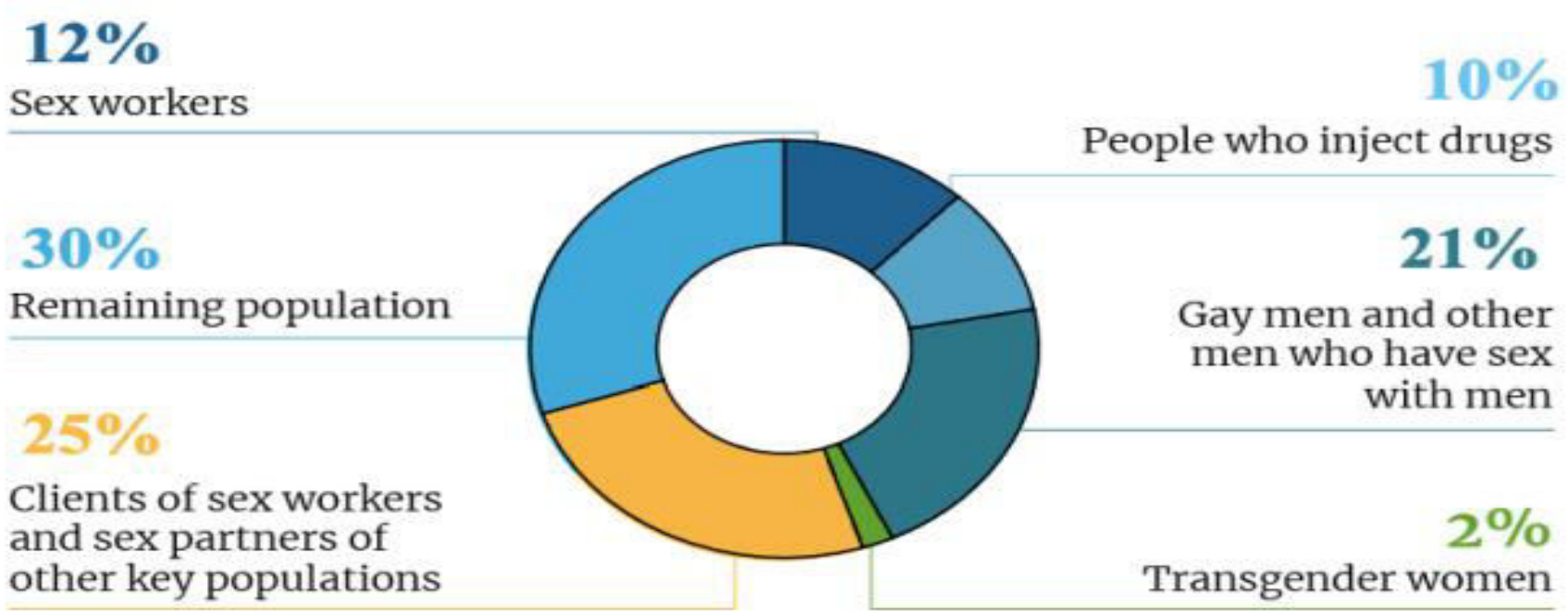
Global number of PLHIV on ART has increased significantly but **still 7 million do not have access to affordable life saving drugs**



2000 — 0.6 million
2005 — 2.0 million
2010 — 7.7 million
2018 — 23.3 million
2020 — 30 million
2030 — 33 million

Key populations and their sexual partners account for 70 % of new infections but their coverage remains low :

Distribution of acquisition of new HIV infections by population, global, 2021 - over 70% among KP and partners; 94% in Asia Pacific



Source: UNAIDS special analysis, 2022

World Health Organization

Journey in India

- **Early Nineties-** India was about to be branded as “AIDS Capital” of World by global health experts and an international intelligence agency even went on to say it poses a potential security threat-both internally and internationally
- Infections projected to reach 20m by 2010;
- Denial continued; stigma rampant, health care provider – no exception
- 1st round HSS 1999 - >1% prevalence in six States (generalised epidemic), 50% sex workers found +ve in Mumbai; 70% IDUs in Manipur;
- Nearly 3m people already infected and HIV spreading fast with no prevention programmes for high risk groups (except a few in Kolkata and Chennai).

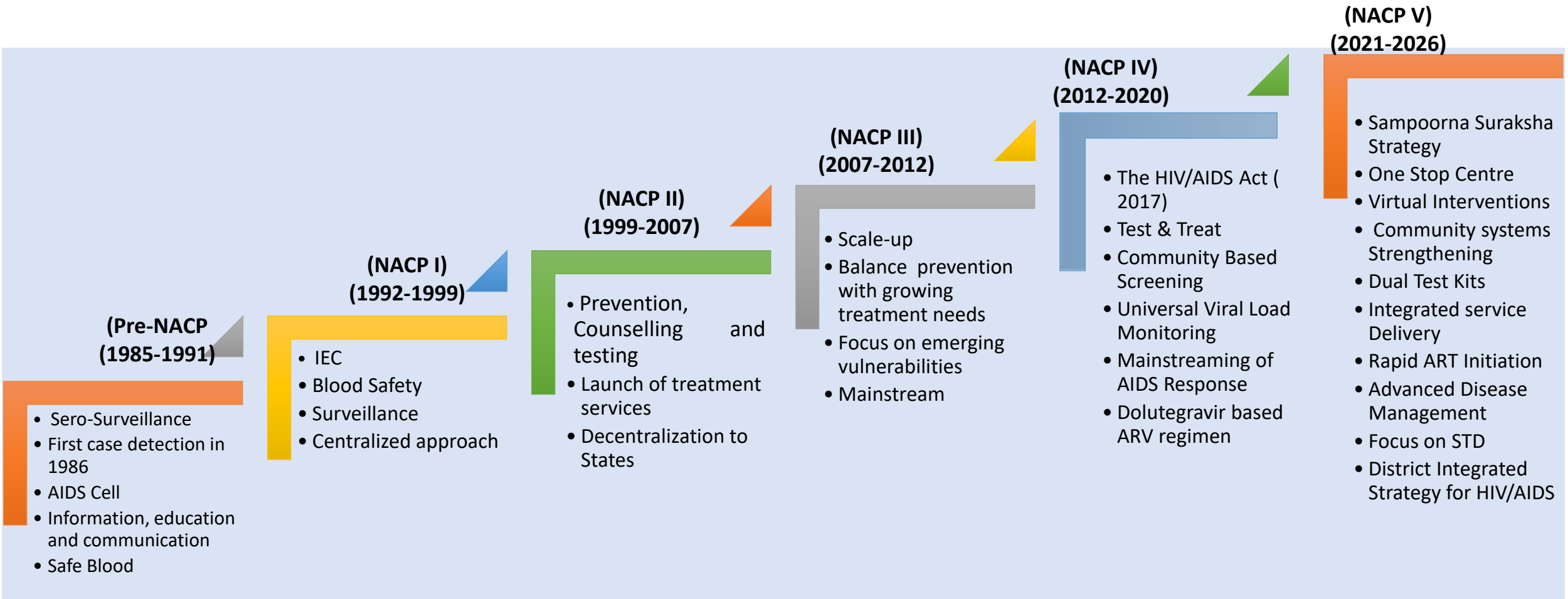
National response

- NACO established in 1992, headed by a Senior level leadership, adequate funding and sufficient autonomy;
- Not only an ‘implementing agency’, but also a top level ‘advocacy body’ for AIDS agenda in the country
- WHO Global Programme on AIDS provided technical support
- A major variance from traditional Government positions on delicate social issues;
  - Involvement of Civil Society organizations;
  - Focus on marginalized population and high risk groups;
  - Favorable judicial decisions – Blood Safety guidelines 1996, Sec. 377, Access to ART also contributed significantly.

Evolution of National AIDS Control Programme in India

NACP is the World's largest and most comprehensive HIV programme

Fully funded **"Central Sector Scheme"**



When we talked about ART in ‘90s-
---it was like daring to dream

Per capita health expenditure was only Rs 35

Very few health care providers were willing to see HIV patients , only OI drugs were available , few dedicated hospitals admitted patients for care

1998

32 tablet a day @ Rs 30,000 a month

As clinicians

Basic concern was lack of free treatment programme and drugs were largely unaffordable by most patients

"……There is no treatment available for AIDS patients in government hospitals, patients can not afford it, I feel frustrated that I can't help patients, no point in seeing HIV patient. Let me use my energy in treating other disease….."

-A doctor in Delhi in year 2000.

Patients had different challenges

"....In 1994 I had frequent episodes of loose motions, mouth ulcer, fever, weight loss (14-15 kg) & weakness. I look treatment at private hospital, doctor gave me antibiotics and multivitamin's but all treatment give me relief me for some time. Private Doctor did not suspect HIV at that time. When I tested positive, my CD4 count was 26. Doctor advised me to start the treatment. That time I purchase HIV medicine form private chemist shop Rs. 30,000 /- monthly. ***That time I will take medicine four to six times daily, break the pill into four pieces and dissolve into water. After every four hour I will do all that procedure. It was very difficult...."***

-a patient at RML, New Delhi, 2000.

Government response
can a national programme afford this cost

------we need to raise awareness, prevent new infections

----other health problems, diarrhea, malaria, priority??

Health care providers in 90s

- Little knowledge of common OIs like PCP, Crypto meningitis, Toxoplasmosis, Penicilliosis, only TB was detected in many of them.
- Simple Diagnosis of Cryptococcal Meningitis by “India-ink” were not available
- Some patients started taking Zidovudine 100 mg (Retrovir), 6 tablets a day which costed Rs 5000 per 100 tabs.
- But complication started due to side effects and many of them stopped Tt.
- Though HAART was discovered in 1996, it was beyond reach for common people.
- Many ventured into incomplete regimen leading to complications.
- Absolute lymphocyte count was used instead of CD4 count for ART initiation
- Stigma and discrimination very high.

Experience in 2000

- Identification of HIV among wives, partners, sex workers.
- Most of the women unaware about HIV status.
- Then spread from mother to child. – a serious issue.
- Co-infection of HCV with HIV become a reality among Injecting Drug users compounding the pandemic.
- Lack of health professional in spite of various training programme.
- Awareness of HIV/AIDS and its complication- very poor.

Our experience at RML HIV clinic

1999---2003
1200 patients, only 70 on ART

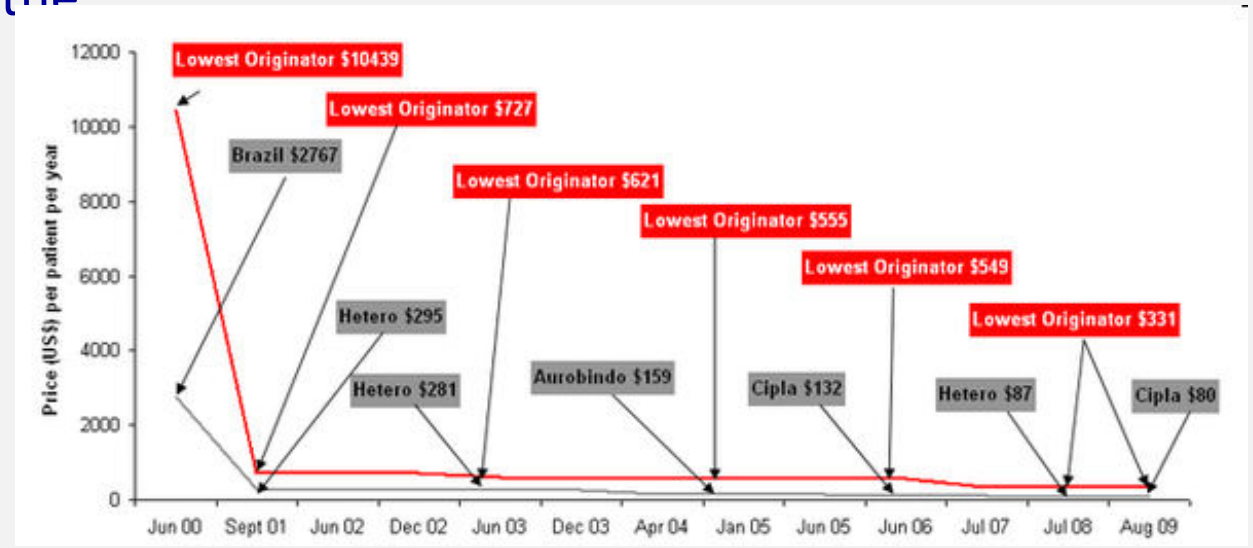
only 2 or 3 doctors seeing HIV patients

Patients coming from whole of northern India

Activism

Meanwhile ARV options increased, costs started coming down

- In 2000– discovery of Nevirapine simplified the therapy, the newer drug reduced side effects and FDC became available, **number of pills reduced from 32 to 1 per day**
- An Indian pharma company announced to make ARV fixed dose combinations in generic form @ **one USD/day**, FDC the



- WHO 3 by 5 intitaive for free ART in developing countries gave a big push to expansion of ART access
- ART reduced progression to AIDS, reduced OIs, reduced hospitalizations, reduced mortality and increased people returned to work

ART changed the outlook of HIV/AIDS from a ‘virtual death sentence’ to a ‘chronic manageable disease’

Some of the catalysts

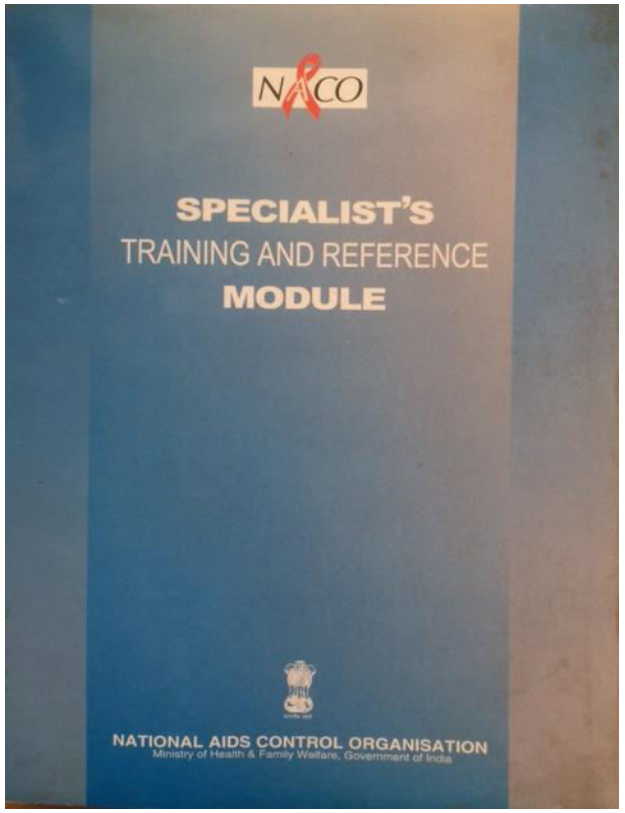
- **June 2001: UNGASS call to action**

  *HIV/AIDS is a **global emergency,** it undermines socio-economic development, and poses a challenge to full enjoyment of human rights*

September 2003: WHO/UNAIDS

- **Declares lack of access to ARV a "Global Health Emergency"**
  1st December 2003: WHO "3 by 5" Initiative launched
- **30th Nov. 2003, GOI announced free ART , 4 months preparatory work, to be launched from 1st April 2004**

Start from where?



No Guidelines , No cadre of trained health care providers, counsellors at that time

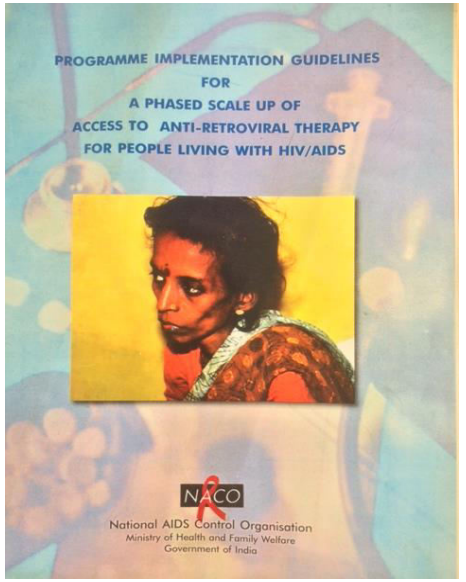
But there were people to help!!!

Clinton foundation provided CD4 machines

WHO supported guideline development, training of trainers and helped procure drugs

looked for support

1. Institutions with some expertise in ART
2. Private sector HIV experts
3. International experts consultation by WHO in Jan 2004 for guidelines etc.
4. A pilot roll out in one district in Karnataka
5. Learning from mistakes –Involved medical colleges right in the beginning



30th November 2003
Free ARV Announced – A New Hope

India to begin free HIV treatment programme, will treat 100,000 within a year at a cost of 2 billion rupees (US$40 million) : **30 November 2003**

The Indian government will provide free antiretroviral treatment through government hospitals starting from April 2004, Health Minister Sushma Swaraj announced today.

India's National AIDS Control Organisation estimated the country has between 3.8 and 4.2 million people living with HIV, but some epidemiologists estimate the country may have up to 10 million HIV-positive people.

ART Centre, Sir JJ Hospital

1st Centre in India launched on 1st Apr'04.

The Day finally arrived!!!

Launched at six ART centres in six high prevalence states and NCT of Delhi

Dr. Joshi (NACO) Inaugurates National ART Programme at Government Hospital of Thoracic Medicine (GHTM), Tambaram on the April 1st 2004, and distributes ARV drugs to First ever registered two children with HIV under National ART Programme

Quick scale up planned to increase access to ART

8 more in Sept 2004 and reached 25 in one year---

An ambitious plan designed for 100 Centres by Dec 2006

Not on Track

इलाज के लिए ढूंढ़े नहीं मिल रहे हैं एड्स रोगी

अमर उजाला ब्यूरो

नई दिल्ली। नए सर्वेक्षण में देश में एचआईवी/एड्स रोगियों की संख्या 52 लाख से घटकर 25 लाख रह गई है लेकिन कुछ ऐसे तथ्य हैं जिनसे लगता है कि यह आंकड़ा कहीं ज्यादा है। सबसे बड़ा सवाल एड्स के उपचार के लिए खुले 127 केंद्रों से पैदा होता है, जिनमें अभी तक सिर्फ 80 हजार रोगी ही इलाज के लिए पहुंचे। इन केंद्रों पर रोगियों की जांच, काउंसलिंग के साथ-साथ दवाएं भी मुफ्त दी जाती हैं, जबकि निजी चिकित्सकों से इलाज कराने पर कम से कम 12 हजार रुपये महीने का खर्च बैठता है। सवाल यह है कि रोगी मुफ्त इलाज के लिए इन केंद्रों पर क्यों नहीं पहुंच रहे। क्या इलाज में खामी है या रोगियों के आंकड़े बढ़ा-चढ़ा कर पेश किए जा रहे हैं?

राष्ट्रीय एड्स नियंत्रण संगठन (नाको)

अनसुलझे सवाल

25 लाख में से सिर्फ 80 हजार रोगी ही तीन साल में इलाज के लिए पहुंचे

127 सरकारी केंद्रों पर फ्री इलाज और मुफ्त दवाओं की सुविधा उपलब्ध

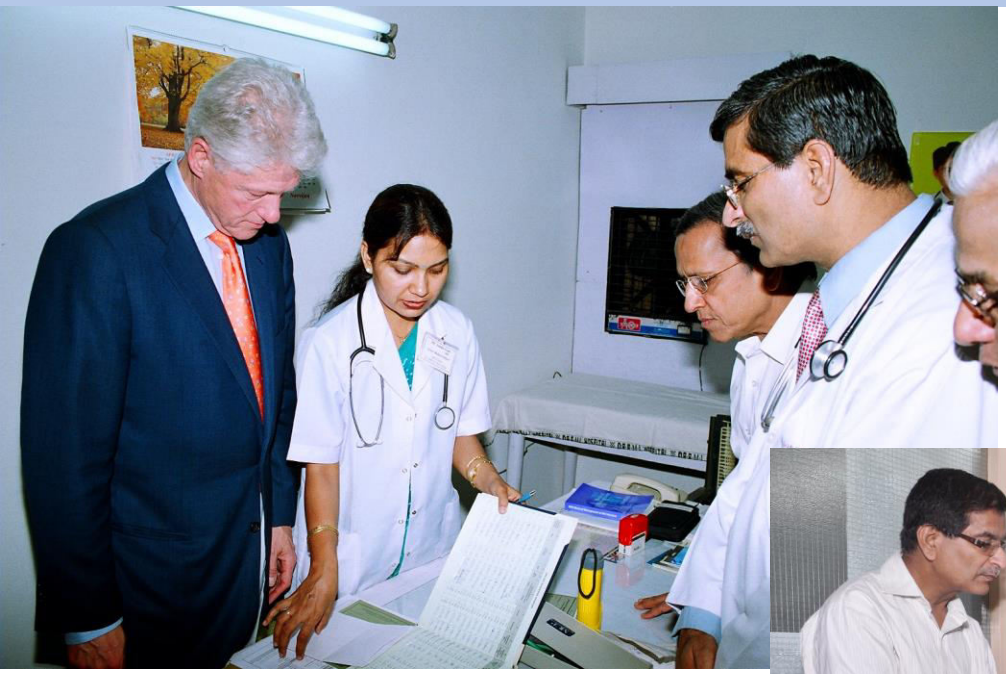
नए सर्वे में एड्स/एचआईवी रोगियों की संख्या पर उठने लगे हैं सवाल

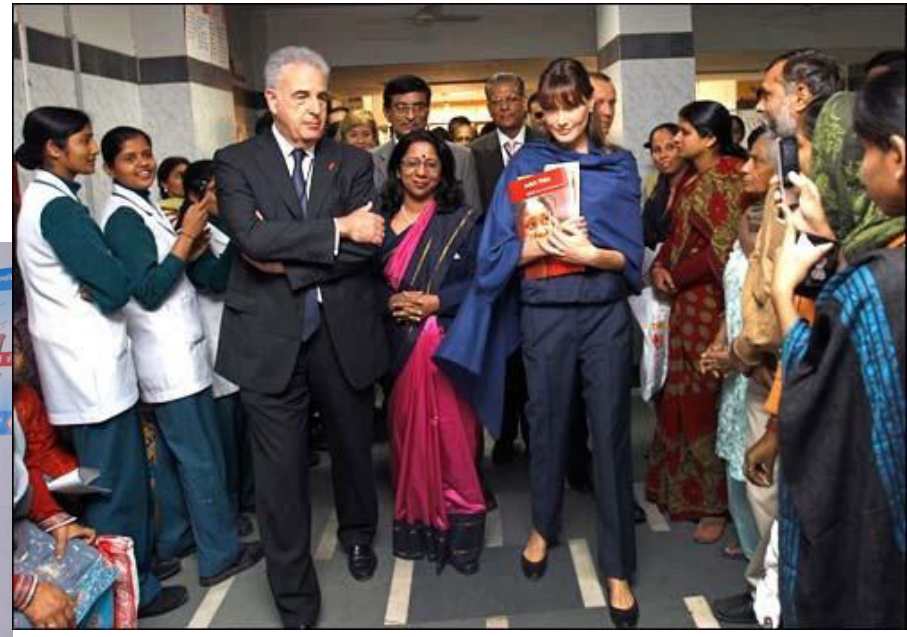
को एनजीओ से भी संबद्ध किया गया है। इन केंद्रों को खुले अब लगभग तीन साल पूरे

Major Thrust to ART came in NACP - III

Nearly million PLHIV on ART on completion of a decade

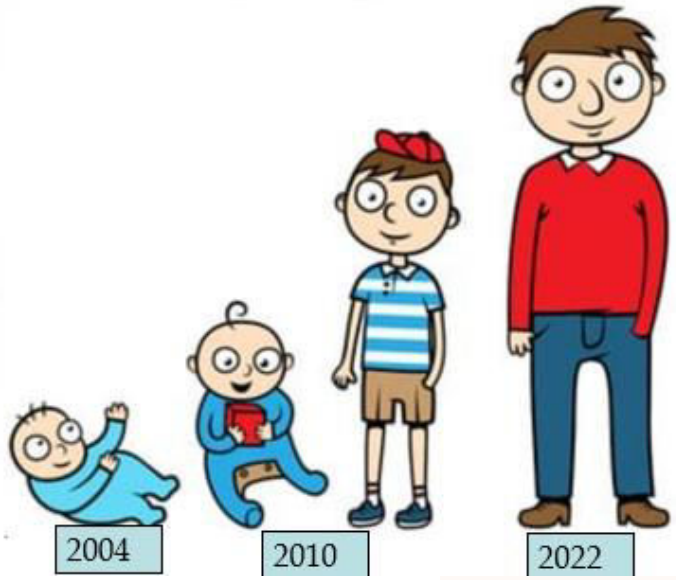
Global appreciations

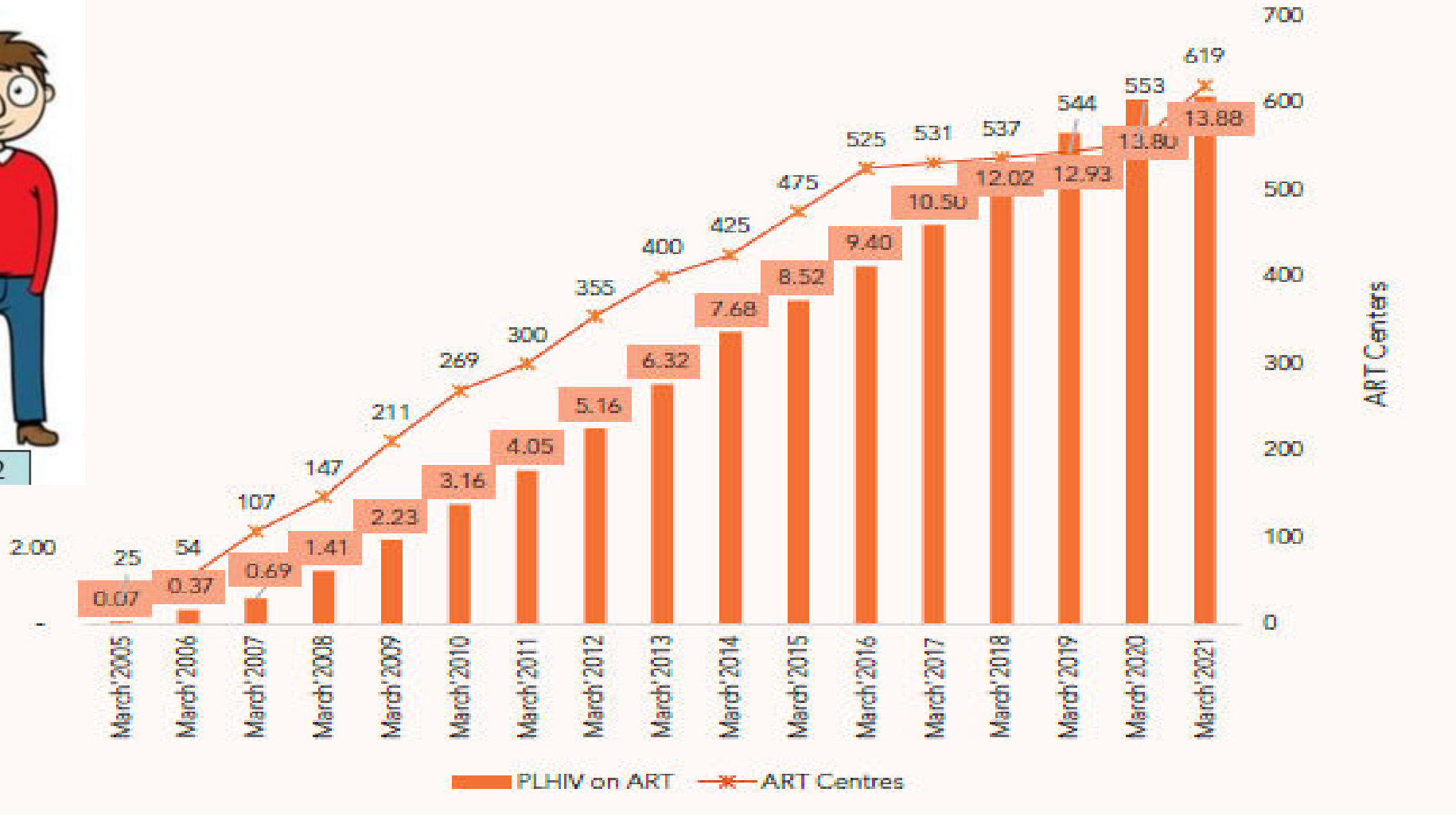




Wonderful job—1.5 million on ART at around 2000 facilities across country in early 2022 despite COVID related challenges

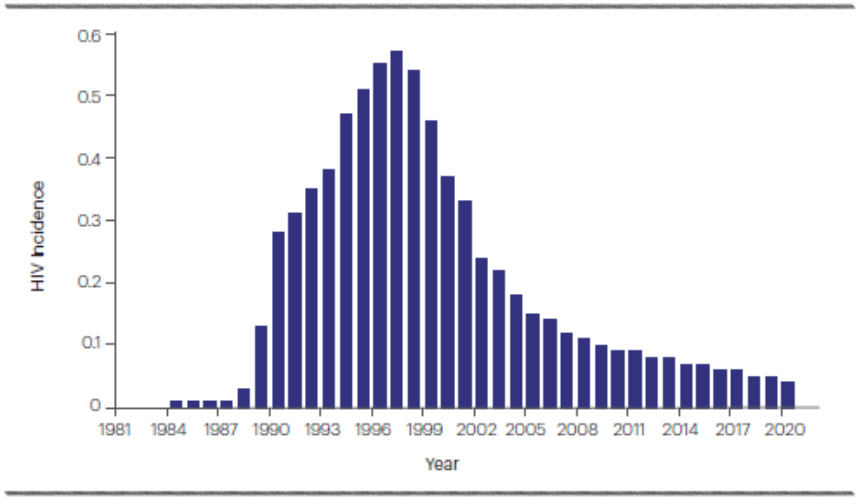
ART attains adulthood



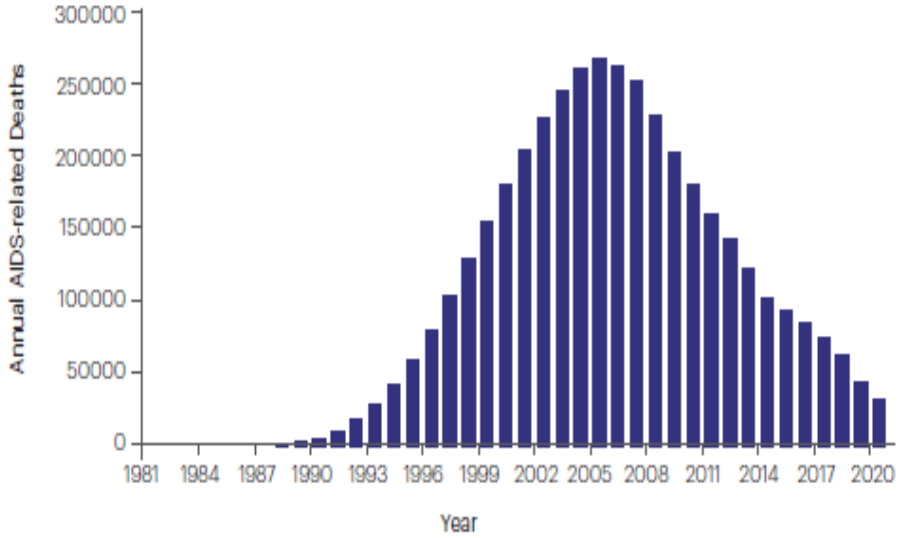


A success story – 82% decline in deaths and 48% in new infections

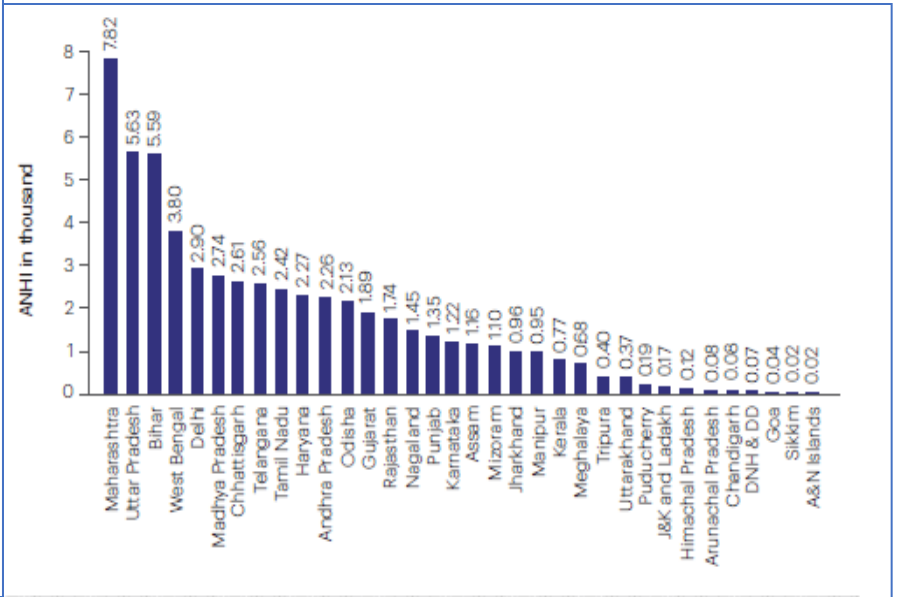
Decline in incidence from 0.57per 1000 uninfected population in 1997 to 0.04 in 2020



82% decline in AIDS related deaths since 2010



48% decline in new infections since 2010



But declines are plateauing

What needs to be done to cover the last mile of this journey towards end

- Sustain
- Accelerate
- Innovate

HIV and clinicians perspective

- Is availability of ART enough?

Are we reaping enough benefits of ART ?
What stage are patients coming to you?
Are we suspecting HIV early enough?

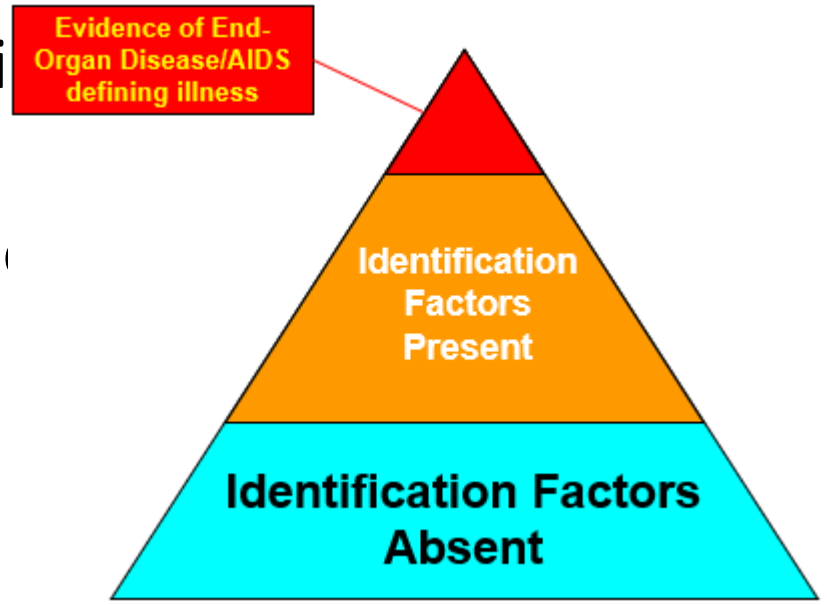
Is Internist concerned mainly with the treatment ?
Or survival ?
Or reduced morbidity ?
Can this be achieved with ART and OI treatment only?
What else needs to done?

Consider this

- An estimated 21 lakhs HIV infected persons in India.
- Nearly 16 lakhs identified so far.
- Over 51,000 new infections every year – long asymptomatic phase.
- Delayed diagnosis in 35 – 45 % cases
- Median CD4 at the time of diagnosis has increased from 119 cells to 250 but still, immune deficiency is significant

And this….

- Many patients diagnosed late have presented earlier to other health facilities in the past
- HIV diagnosis missed in many instances
- HIV diagnosis is not easy always – long asymptomati phase, vague or non specific symptoms
- Low index of suspicion, particularly in low prevalenc settings



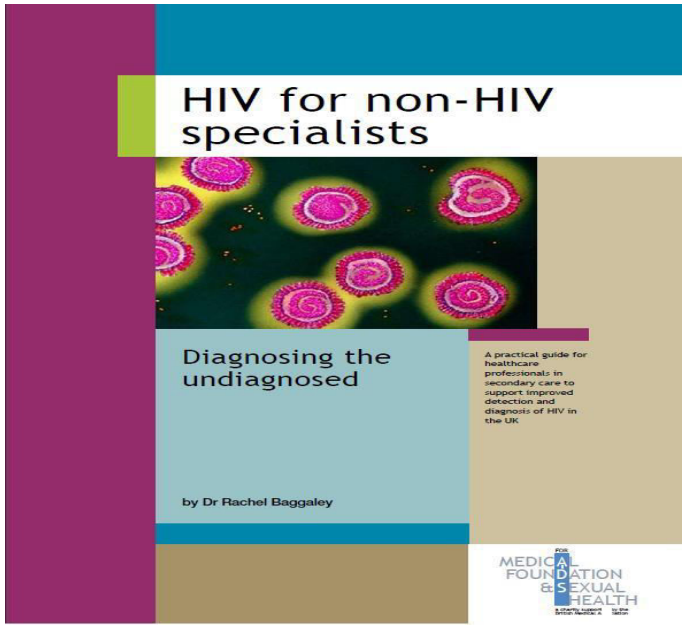
Early Diagnosis - Why

- 35 - 45% of people with HIV present at a late stage
- Consequences
  - Low CD4 count at presentation
  - More Severe OIs, poor quality of life.
  - Sub optimal response to ART
  - Poorer prognosis, increased mortality
  - Transmission to spouse/sexual partner /infant

Need too enhance the awareness about different clinical presentations, so that the possibility of HIV infection can be recognized and testing can be recommended where appropriate;

Early Diagnosis - How

- A high index of suspicion is required – “Eyes do not see what the mind does not know”
- An unusual presentation of a common illness
- Not responding to standard treatment protocol
- Certain specific situations – TB patients, STI patients, Antenatal women, High risk groups like IDU, FSW, MSM etc.



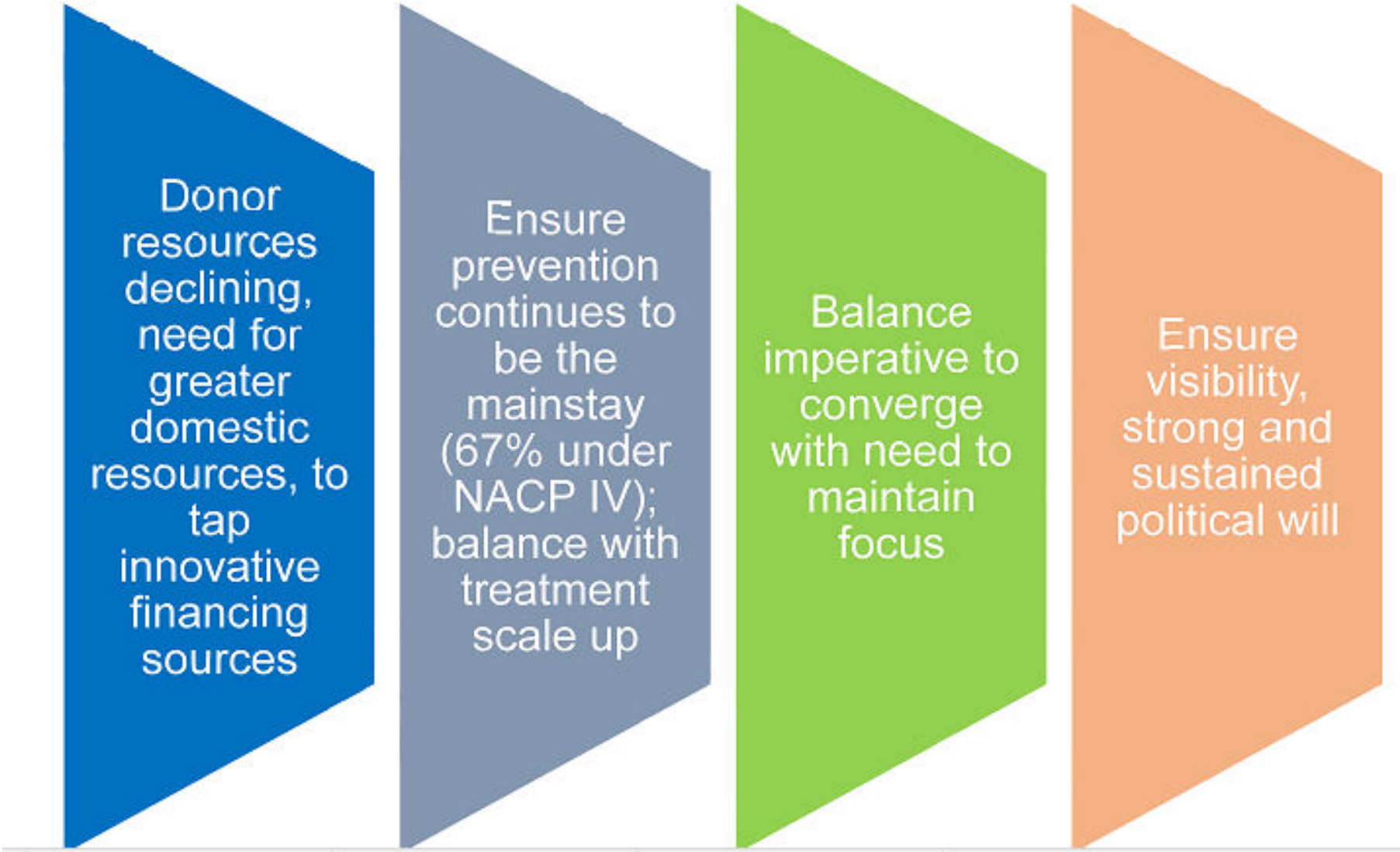
What else can clinicians contribute-----

- Suspect HIV early, ensure informed testing for people with TB, STIs, high risk groups, pregnant women
- Start ART timely
- Counsel well to ensure high levels of adherence
- Do ask patient for risk behaviours, partner testing
- Provide education to negatives
- Think of PrEP for discordant couples

Public health measures
Ending aids needs 5 key components

- Focus on data
- Do not forget KPs-KP centered prevention programmes to scale
- Move from “for us” to “by us”-community led and fully funded interventions
- Adopt new prevention and testing approaches
- Adopt newer , more robust ARV regimen
- Provide adequate resources, utilize efficiently-converge, decentralize, task shifting and sharing

Way forward


Donor resources declining, need for greater domestic resources, to tap innovative financing sources
Ensure prevention continues to be the mainstay (67% under NACP IV); balance with treatment scale up
Balance imperative to converge with need to maintain focus
Ensure visibility, strong and sustained political will

HIV Self-Testing (HIVST)

Individual collecting their specimen (oral or blood), performing a rapid test and interpreting their result often in private or with someone they trust

Collects Performs

Interprets

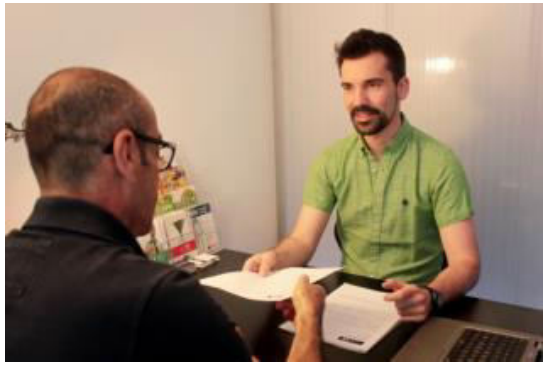
- **Key evidence showed HIVST is**
- **Safe and accurate**
- **Highly acceptable**
- **Increased access**
- **Increased uptake and frequency of HIV testing among those at high risk and who may note test otherwise**

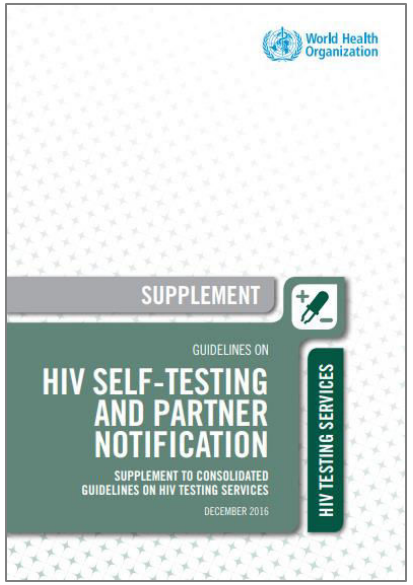
Reactive (+) results need confirmation by trained tester using a validated national algorithm

Reach out to unreached through Partner Notification, index testing and interventions among KPs in virtual space

Partner notification, or disclosure, or contact tracing, is a voluntary process where a trained provider asks people diagnosed with HIV about their sexual partners and/or drug injecting partners and then, if the HIV+ client agrees, offers partners HTS.

Index testing. Term used for offering testing to family members





- **Key evidence shows APN**

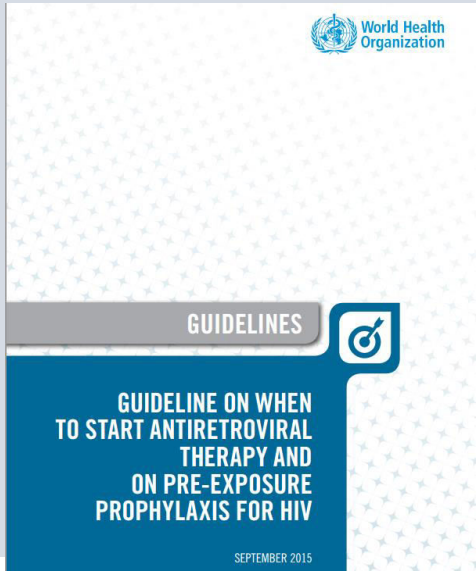
- **Safe and accurate**
- **Highly acceptable**
- **Increased access**
- **Increased uptake and frequency of HIV testing among those at high risk and who may note test otherwise**

Provide PrEP to people at risk

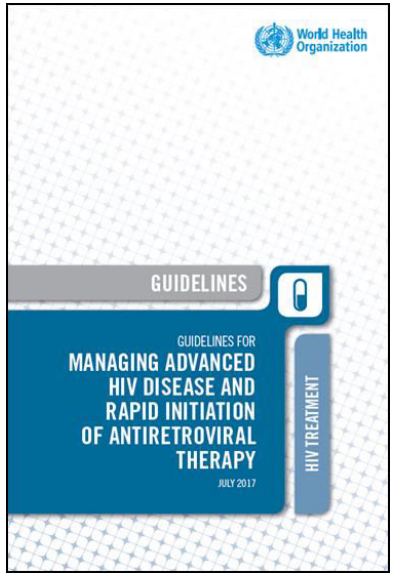
Oral pre-exposure prophylaxis of HIV infection – PrEP – is the use of antiretroviral (ARV) drugs by people who do not have HIV infection in order to prevent the acquisition of HIV

Oral PrEP (containing TDF) should be offered as an additional prevention choice for people at *substantial risk* of HIV infection as part of combination prevention approaches

- Provide PrEP within ***combination prevention***
  - Condoms and lube
  - Harm reduction
  - HIV testing and links to ART
- Provide PrEP with ***comprehensive support***
  - Adherence counselling
  - Legal and social support
  - Mental health and emotional support
  - Contraception and reproductive health services



Improve outcomes through Better treatment Strategies, especially for those with advance HIV disease



- Enhanced care of package for people with advanced disease (defined as CD4 count less than 200 or those with clinical stage III or IV)

Screen for severe opportunistic infections: screen people for symptoms of TB and for cryptococcal meningitis using CrAg LFA

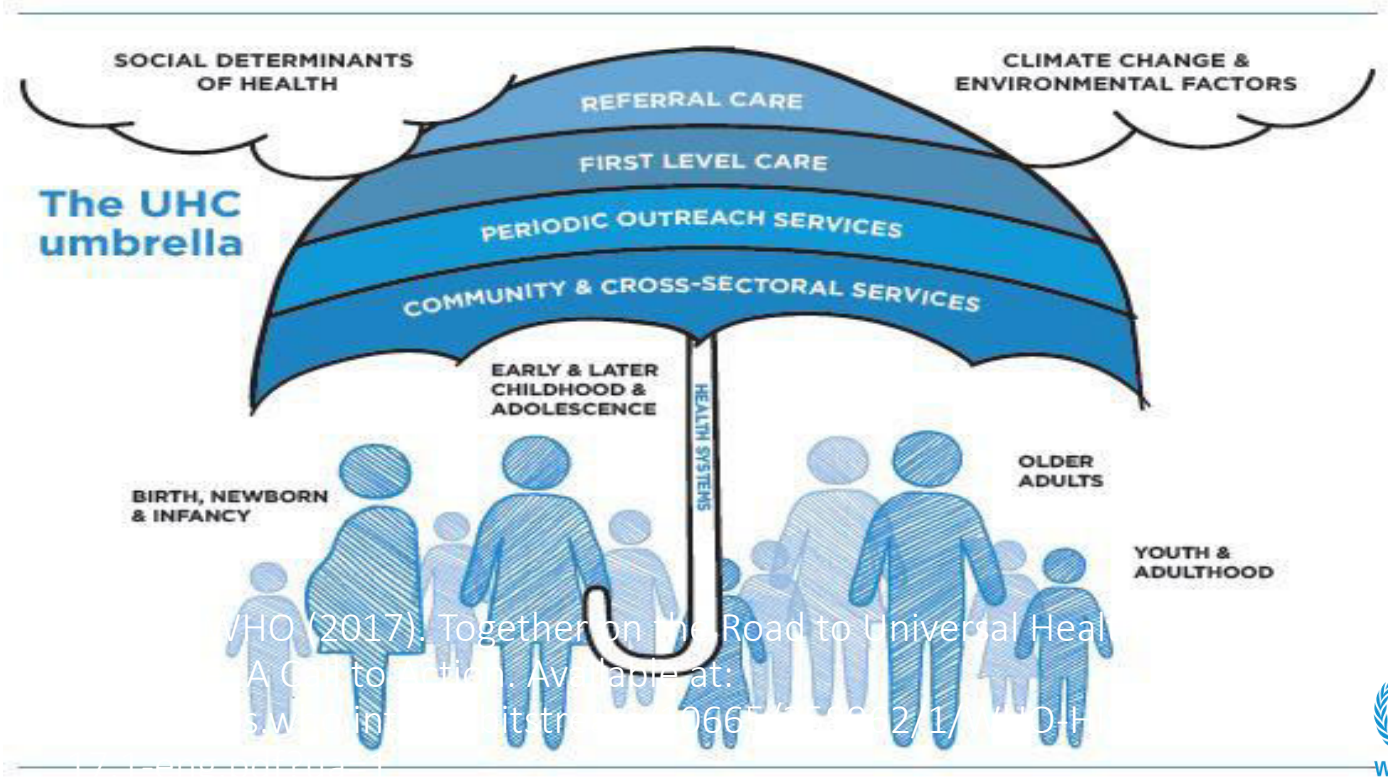
Give preventative therapy: TB preventative therapy, co-trimoxazole to prevent severe bacterial infections and PCP, and fluconazole to prevent the development of cryptococcal meningitis (if CrAg positive without meningitis)

Test those with symptoms of severe infections (or who are seriously ill) with the appropriate tests such as sputum MTB/RIF and Urine LAM for TB

Start ART as soon as possible

Give tailored counselling to people with advanced HIV disease to support their care

Reach out for and ensure UHC, a people-centred approach, reduce out of pocket expenses for patients



/HO (2017). Together on the Road to Universal Heal
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World Health Organization
Western Pacific Region


……Remember, we have miles to go before ……..
……Work together, move closer to ending AIDS……

ART will be a key factor in ending AIDS pandemic but we will need to focus on al six BIG components

AWARENESS: Increase awareness among public and health care providers

DIAGNOSIS: Expanding Testing for Early Diagnosis

TREATMENT: Treating for Rapid and Sustained Viral Suppression

PREVENT: Combination Prevention Strategies for At-Risk Individuals (Key Populations)

ENGAGE: community involvement is key

RESPOND: Response at political level to bring HIV back to focus

The Journey continues towards it goal

Thank You

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