

“TREAT ALL” - A Necessary Boon to Indian ART (HIV) Program

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ABSTRACT

HIV prevalence in India is on declining trend with less than 1% of new infections among total ANCs and Srikakulam has recorded an incidence of 0.63% of new infections among total ANCs attending hospitals in Srikakulam district, Andhra Pradesh and is at par with national statistics. This decline is due to nation's effort to control new infections by a more decentralized effort through FICTC testing at PHC level and scaling up of ART services. The country's measures to combat HIV infection were taken to next level after introduction of “TREAT ALL” in Dec 2017. This was a cross sectional study to assess implementation and success of new concept by comparing year of implementation with the previous year. The reports of financial year 2016-17 and 2017-18 were assessed by comparing cumulative registrations, initiations on HAART, and total retained in care after one year at ARTC, RIMS, Srikakulam, AP, India. The number of total registered PLHIV in 2017-18 has come down to 738 from 823 in 2016-17 and points to success of continued efforts to reduce new infections, and, at the same period of study, there was a phenomenal increase in retained in care (alive and on treatment) after one year from 71.32%(587) to 87.94%(649) at ARTC. In spite of PLHIV lost to death remain almost same, the number of PLHIV Lost to Follow up (LFU) has reduced by almost half indicating better adherence at early initiation of drugs. Overall, a phenomenal increase in number of PLHIV who are retained in care and reductions in LFU after introduction of “TREAT ALL”, is a necessary boost to national program to combat the infection at much faster pace to eliminate the unnecessary evil from country as per SDGs.

Key words:- Treat all, SDGs, HIV elimination, HAART, AIDS.

INTRODUCTION

By the end of 2017, there were an estimated 21.40 [15.90 - 28.39] lakh people living with HIV (PLHIV) in India. There was an adult (15-49 years) HIV prevalence of 0.22%. Slightly more than two fifths (42%) of the total estimated PLHIV were females. Around 87.58 [36.45-172.90] thousand new HIV infections and 69.11 [29.94-140.84] thousand AIDS-related deaths occurred in 2017. ^[1] Despite scaling up ART in low- and middle-income countries, an estimated 41% of PLHIV are in need of ART. Universal access to

treatment (defined as 80% or greater coverage) is thus still to be achieved in almost all parts of the world. ^[2] In December 2013, the UNAIDS Programme Coordinating Board called on UNAIDS to support country- and region-led efforts to establish new targets for HIV treatment scale-up beyond 2015. In response, stakeholder Consultations, new targets have been held in all regions of the world and Powerful momentum is now building towards a new narrative on HIV treatment and a new, final, ambitious, but achievable target of 90-90-90, i.e., by 2020, 90% of all

people living with HIV will know their HIV status, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy, 90% of all people receiving antiretroviral therapy will have viral suppression. [3] In recent years, the country has put considerable efforts in expanding HIV-testing sites to detect new infections at the earliest. The HIV prevalence observed among ANC clinic attendees is considered as a proxy for HIV prevalence in the general population, and an estimated 22,677 [10,927-40,605] pregnant women needed ART to prevent mother-to-child transmission of HIV. [4]

Through rigorous efforts by NACO to reduce HIV infections, prevalence rate in general population has come down from 0.33% in 2007 to 0.22% in 2017 [4] but still there are an emerging pockets of infections in the low prevalence states [5] contributing to disease burden in the country. In the State of Andhra Pradesh in south India, 2.70 lakh cases were registered at prevalence of 0.63%, 0.47-0.85, [4] HIV Prevalence higher than the national average was recorded in the state of Andhra Pradesh (0.63%), against 0.22% of national average. [4] The ANC attendees considered as proxy to prevalence, has recorded at 0.26% against nations average of 0.35 %, [4] which indicates a reliable declining trend of infection in AP in spite of increase of prevalence in general population. Along with other districts, there are emerging pockets of infections in the Srikakulam contributing to disease burden in the state. In the Srikakulam District of AP, we thus determined to have a look at the pattern of distribution of HIV infection in the district, along with identification of pockets that are causing new infection every year and to co- relate to the data with that of the nation and to identify any decline in trend as per nations efforts under Treat- all programme.

MATERIALS AND METHODS

Study design: This was a Retrospective Cohort study involving a review of records routinely maintained under the National

AIDS Control Programme (NACP) and standard monthly reports submitted by ARTC with cumulative registrations in a financial year.

Study setting, sites and study population: Srikakulam district with a population of 3.21 million is one of the smallest districts in state of Andhra Pradesh of India and is considered to have a relatively advanced HIV epidemic. [5] In 2009, the district had an HIV prevalence of <0.50%. [6] There are 17 public HIV-testing sites (16 are standalone, while 1 mobile testing centre) and 1 ART centre with 3 Link ARTC+ and 6 LACs. All HIV-positive persons diagnosed at the HIV testing sites are referred to the nearest ART centre for further management and are expected to reach these ART centres on their own. ART centre, located at tertiary care medical college of the district, Rajiv Gandhi Institute of medical sciences, far from the point of HIV diagnosis; distances are in the range of 5-120 km, and they are often not well connected by public transport. Patients most often have to spend a whole day for each visit to the ART centre.

This study was conducted at ARTC, RIMS, Srikakulam from April 2016-March 2018, across the district on PLHIV who are registered for care at ARTC. The registered PLHIV represents the actual disease burden of the district, and Srikakulam district has overall successful referral rate at 97 % from ICTC following successful testing as per national standards. The study was done considering the address of the registered PLHIV between April 2016 to March 2018, i.e., two financial years , before and after introduction of Test and Treat policy by NACO. [5] The revenue village codes issued in 2011 was used to analyze the distribution of PLHIV in the district and to identify the new pockets villages being infected in the district.

Data and statistical analysis:

The sources of data were HIV-testing records and ART centre records (pre-ART registers, ART enrolment registers and patient treatment cards). The total registered

patient's records were reviewed for the correctness of address by checking with available ID proofs at ARTC.

RESULTS

A total of 1623 PLHIV were registered from April 2016 to March 2018 at ARTC, RIMS, Srikakulam, of which 1561 PLHIV are from Srikakulam district of AP (total of 1814 revenue villages and towns covering total of 4013 habitations) and other 62 PLHIV are from other districts and rest of India who were transferred in for treatment and were not considered part of the study.

Of all PLHIV registered in the district- 1561, a total of 823 PLHIV registered in financial year 2016-17 and 738 PLHIV registered in financial year 2017-18, and registered a decline in 10.32% in new infections in 2017-18 when compared to 2016-17. When comparing year with treat all in 2017-18 to 2016-17, has showed a tremendous gap in various parameters in the retention cascade for PLHIV. In 2017-18, there is increase in eligible patients for HAART initiations to 100% (729) against 90.50%(745) in previous year and again there in dramatic rise in initiations on HIV treatment from 83.75%(689) to 98.51%(727) and this improvement in new early HAART treatment has showed fruits in terms of rise in alive on HAART from 71.32%(587) to 87.94%(649) in 2017-18 thereby giving a survival chance for most of the PLHIV. This early initiation of treatment has shown its value in terms of retaining in care by reducing LFU from 5.22% (43) in 2017-18 to 2.85% (21) in 2016-17. Overall, Treat all, gives a increased chances of PLHIV survival when compared to previous treatment policies based on CD4 levels.

Table 1:- Cumulative Retained In Care (2017 Vs 2018)

Parameters	2017	2018
Registrations	823	738
eligible for cd4	813	738
eligible for HAART	745	729
HAART Initiated	689	727
Alive	587	649
LFU	43	21
Death	41	44

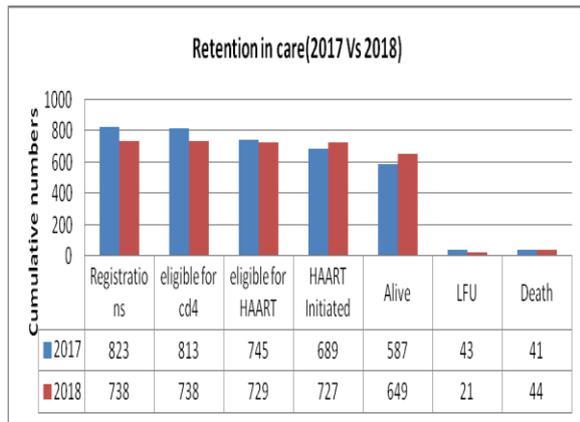
DISCUSSION

This is one of the studies in India that assessed the cause and frequency of new cases distribution of HIV at district level. This study started with linking data from registered PLHIV at ARTC, RIMS, Srikakulam at par with census data and assigning census codes issued by Govt. of India to villages and towns in Srikakulam [5] and then consolidated for the period of study, i.e., April 2016 to March 2018 for 2 years, to assess success of Treat all strategy among previous policies based on CD4 values. In the study, it showed there is decline in new cases in 2017-18 when compared to 2016-17 and it sustained reduction of new registrations in previous years as well.

A key finding of this study is that, in a district with declining new registrations at par with national standards showed a tremendous improvement in retention of care, reduction in LFUs, sustained in alive in HAART, during new policy implementation year. The most important finding in the study was, the actual intention of govt. to provide free HIV treatment has borne its fruits with dramatic improvement in total PLHIV who gained access to lifelong HAART treatment along with great reduction in LFU below nations level of 5%, is definitely a point of success. A recent study estimated a relatively high rate of patients in virological failures, while among them has an important proportion harboured with wild-type viruses and this highlights a real need to reinforce treatment adherence [7] as PLHIV who are regular on HAART has reduced chances of transmitting virus to general population [8] and this early initiations on HAART in asymptomatic stage has lead to improvement in treatment adherence which can potentially reduce wild strains in virus in future.

Firstly, an encouraging finding of the study is, there is consistently decline in new infections every year and this perfectly correlated with national statistics, [4] as per table 1, there were 17.44% of cases registered in 2008 and this declined to

10.95% in 2014. The decline in HIV cases registrations was correlated with increase in eligibility criteria for initiation on HAART [9] and regular on treatment patients has low risk of transmitting the virus. [8] Considering the success from the decline in the infection, it is better to reinforce the need for policy to treat all PLHIV irrespective of CD4 count and was implemented in 2017-18 financial year.



Second, the point that readily been noticed following analysis in total retained in care and total started on HAART in the new policy- TREAT ALL. Out of 738 PLHIV registered in 2017-18, we have successfully started treatment in 727 PLHIV at 98.51% which is best when we checked with the history of ARTC for past 10 years of starting this facility and of which, 649 PLHIV were retained at 87.94% against previous year, 2016-17, where 823 PLHIV were registered and only 745 were eligible for HAART at 90.52%, where we lost 10% of PLHIV without HAART and potentially a source of infection in the community. Out of 745 PLHIV eligible for HAART, 689 were traced successfully and initiated on treatment at 83.72% and at the end of the year, we have retained only 587 PLHIV at 71.32%. Taking into account of low registrations in 2017-18, the total retained in care at the end was too high at 649 against 587 in the previous year. A total of 236 were lost in 2016-17 against 89 PLHIV in 2017-18, and excess of potentially 147 infection source are wandering in the community, possibly harbouring wild

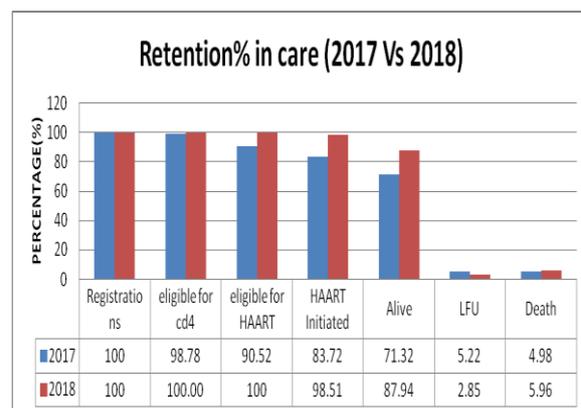
strains can cause a death blow to the ongoing health program.

Table 3:- Percentage Retained in care(2017 Vs 2018)

Parameters	2017	2018
Registrations	100	100
eligible for cd4	98.78	100
eligible for HAART	90.52	100
HAART Initiated	83.72	98.51
Alive	71.32	87.94
LFU	5.22	2.85
Death	4.98	5.96

Third, Srikakulam, being remote and hilly area where majority of people survive by fishing and migration to other cities as construction labour, a leading cause of LFUs in the region. We have considered analysing the impact of TREAT ALL on LFUs at the end of the first year. TREAT ALL, not just increased total started on HAART, and retention in care but also lead to improvement in total PLHIV adherent to medication. We lost only 21 PLHIV at 2.85% against 43 PLHIV at 5.22%. The treatment being accepted by all PLHIV when started early helped us to get good adherence in this financial year.

The strengths of this study was the availability of drugs, good monitoring, and follow ups by our district NGO network, which helped to identify early and start HAART early. This confirms that the new treatment policy of TREAT ALL has potential to stop and reverse the epidemic in INDIA if used and monitored effectively pan INDIA. We also adhered to the guidelines for reporting of observational studies [10] and ethics. [11] Limitations include the fact that roughly 1.56% of patients who were registered are not from the district.



CONCLUSION

In Srikakulam, a small district of Andhra Pradesh, state of India, wherein a reduction of 10.32% in new cases for recorded in financial year 2017-18 at par with national standards and continuing previous years trend of decreasing spread of the infection in the district. One health policy in respect of treatment modalities that has changed the face of ART in the district is TREAT ALL. A treatment strategy that revamped the face of HIV treatment in district with tremendous progress in every department starting from retention in care with 9.48% increase in eligibility for HAART treatment, improvement in 14.79% in HAART initiations, and very good alive on ART by 16.62% greater than previous year (based on CD4 value) with overall improvement in adherence, good pill pick up and dramatic reduction in LFU is an uninvited guest to stress on the success of "TREAT ALL". A major boon brought by TREAT ALL to health program is also a major challenge in coming year to sustain the success which needs to be addressed with utmost care to achieve our accelerated progress towards achieving Ending of AIDS by 2030.

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