HIV and AIDS in India



India (2017) 2.1m people living with HIV 0.2% adult HIV prevalence (ages 15-49) 88,000 new HIV infections 69,000 AIDS-related deaths 56% adults on antiretroviral treatment* n/a children on antiretroviral treatment* *All adults/children living with HIV Source: UNAIDS Data 2018

KEY POINTS

- India has the third largest HIV epidemic in the world, with 2.1 million people living with HIV.
- India's epidemic is concentrated among key affected populations including sex workers and men who have sex with men. The National AIDS Control Programme, however, has made particular efforts to reach these two high-risk groups with HIV interventions.
- Compared to neighbouring countries, India has made good progress in reducing new HIV infections by half since 2001.
- Despite free antiretroviral treatment being available, uptake remains low as many people face difficulty in accessing clinics.

Explore this page to read more about populations most affected by HIV in India, testing and counselling, prevention programmes, antiretroviral treatment availability, civil society's role, HIV and TB, barriers to the HIV response, funding and the future of HIV in India.

India has the third largest HIV epidemic in the world. In 2017, HIV prevalence among adults (aged 15-49) was an estimated 0.2%. This figure is small compared to most other middle-income countries but because of India's huge population (1.3 billion people) this equates to 2.1 million people living with HIV.1 2

Overall, India's HIV epidemic is slowing down. Between 2010 and 2017 new infections declined by 27% and AIDS-related deaths more than halved, falling by 56%. However, in 2017, new infections increased to 88,000 from 80,000 and AIDS-related deaths increased to 69,000 from 62,000.3 UNAIDS (2017) 'UNAIDS data 2017' [pdf]

In 2017, 79% of people living with HIV were aware of their status, of whom 56% were on antiretroviral

treatment (ART). The proportion of people on ART who are virally suppressed is not reported.4

The HIV epidemic in India is driven by sexual transmission, which accounted for 86% of new infections in 2017/2018.5 The three states with the highest HIV prevalence, Manipur, Mizoram and Nagaland are in the east of the country.

The epidemic is concentrated among key affected populations, however the vulnerabilities that drive the epidemic vary in different parts of the country. A key driver is unprotected sex among key populations and their clients, partners and spouses. However, injecting drug use in the north and northeast of the country is also pushing HIV prevalence up.6

Key population groups have been prioritised in the national AIDS response since its inception in 1992. Both the sex worker and men who have sex with men population groups have experienced a recent decline in HIV prevalence.7



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Key affected populations in India

Sex workers

In 2017, an estimated 1.6% of female sex workers in India were living with HIV, although this figure varies between states.8 For example, prevalence among female sex workers is estimated at 7.4% in Maharashtra and 6.3% in Andhra Pradesh.9

Although sex work is not illegal in India, associated activities such as running a brothel are. This means that police are often hostile towards sex workers at best and that authorities justify routine brothel raids. Stigma and discrimination against sex workers restrict their access to healthcare. A 2011 study in Andhra Pradesh indicated a significant association between police abuse and increased risk of HIV transmission and inconsistent condom use.10

Sex workers are one of the high-risk groups targeted by India's National AIDS Control Organisation (NACO) who programme successful peer-to-peer HIV interventions (when individuals from key affected populations provide services to their peers or link them to services within healthcare settings). In 2015, NACO reported reaching 77.4% of sex workers with HIV prevention activities.11

In 2017, around 67% of HIV positive sex workers were aware of their status and 91% of sex workers (HIV positive and negative) reported using condoms.12

Sex worker communities in India

Since 1992, SANGRAM has worked to unite sex workers and provide access to HIV treatment, prevention and education across six districts in Maharashtra and the border areas of north Karnataka. These are all places in which the rate of HIV infection is significantly higher than other areas of the country.

The organisation has achieved notable successes within these diverse communities. Peer educators deliver hundreds of thousands of condoms to women each month, and they report that in some areas 100% of sex workers have attended voluntary HIV testing.13

Male sex workers are particularly vulnerable to HIV. A study of men who have sex with men (sometimes referred to as MSM) who attended STI clinics at Mumbai and Hyderabad, found that 70% of them engaged in sex work. Of those who engaged in sex work, HIV prevalence was found to be 43.6%, compared to 18.1% among all men who have sex with men attending the clinics.14

Men who have sex with men (MSM)

Around 2.7% of men who have sex with men in India are living with HIV, of whom around 65% are aware of their status. 15

HIV prevalence varies between areas. For example, around 10% of men who have sex with men in Andhra Pradesh and 5% in Maharashtra are estimated to be living with HIV.16

A 2015 study of men who have sex with men, conducted across 12 Indian cities, found 7% tested positive for HIV. Just under a third (30%) of those who reported having anal or oral sex with a man in the past 12 months were married to a women and engaging in heterosexual sex.17 The study also found evidence of emerging epidemics among men who have sex with men in urban areas not previously recognised as having high HIV burdens.

In September 2018, India's Supreme Court decriminalised homosexuality between consenting adults. The ruling overturned Section 377, a British pre-colonial era law that banned 'carnal intercourse against the order of nature' and carried a maximum jail sentence of 10 years. To date this law meant that HIV services were out of reach for men who have sex with men. The decision overturned a ruling made by the Supreme Court in 2013 that reinstated Section 377, having previously suspended it in 2009.18

People who inject drugs (PWID)

In 2016, 1.7 million people in India were estimated to inject drugs.19

HIV prevalence among this group is high, with injecting drug use the major route of HIV transmission in India's north-eastern states. In 2017, 6.3% of people who inject drugs were thought to be living with HIV, of whom half (50%) were aware of their status.20

Prevalence varies between locations, standing at 12.1% in Manipur, 10% in Mizoram, and 3.2% in Nagaland.21

A 2018 study analysed unsafe injecting and sexual risk behaviours among around 20,000 Indian men who inject drugs. Results suggest that beginning drug use at age 25 or above, engagement in drug use for longer, injecting three times or more per day, sharing needles and syringes, and self-reported sexually transmitted diseases were all linked to an increased likelihood of HIV infection.22

HIV prevention efforts in the northeast of the country have been effective in reducing the number of new infections. However, there is evidence that the number of people who inject drugs is growing. In addition, evidence of higher HIV prevalence among sub-populations of people who inject drugs is also emerging. For instance, a 2015 study found prevalence to be more than three times higher among women who inject drugs than men.23

Hijras/transgender people

HIV prevalence among transgender people in India was estimated to be 3.1% in 2017, the second highest prevalence among all key populations in the country. Around 68% of HIV positive transgender people are aware of their status.24

In India, being a hijra (also known as 'aravani', 'aruvani' or 'jagappa' in other areas) is an identity associated with being a transgender woman, intersex or a eunuch. However, not all transgender women in India belong to a hijra community. The traditional background of hijras is linked to high-risk behaviours such as alcohol and substance abuse, and low literacy rates.25

In April 2014, the Indian Supreme Court recognised transgender people as a distinct gender.26 Since then, health and welfare programmes to meet this group's specific needs have been set up.27 Evidence of improved access to HIV services is emerging, with NACO reporting 240,000 hijras reached with HIV prevention and treatment services in 2015, compared to 180,000 the previous year.28

In 2017, NACO reported around 45% of transgender people and hijras were receiving targeted interventions.29

Migrant workers

Research worldwide has linked migration to increases in HIV transmission. There are an estimated 7.2 million migrant workers in India, of whom 0.2% are living with HIV.30

NACO categorises groups of migrants as 'bridge populations', as they form links between urban and rural areas, and between groups that are at high- and low-risk of HIV transmission.31 HIV testing among these groups remains low, standing at 11.32% in 2016.32

Despite being an important driver of the HIV epidemic in India, data on migrant sexual behaviour is limited. In 2014, UNAIDS reported that 75% of women testing positive in India have a husband who is a migrant labourer.[fn]NACO (2017) Annual Report 2016-17 [pdf] A 2017 study found HIV prevalence among the wives of migrant workers in rural northern India was higher than among women in the general population at 0.59%. Only 15.5% of those questioned had heard of HIV.33

A 2011 study on migrants and HIV by UNDP, NACO and the Population Council also found higher levels of HIV among migrants than the general population in certain areas. For example, in northern Bihar migrant men were eight times more likely to be living with HIV than non-migrant men. It also found male and female migrants to be engaged in high levels of extra-marital sex and low condom use.34

Truck drivers

A number of studies have reported high vulnerability of truckers to HIV transmission in India. NACO estimated that 0.2% of truck drivers were living with HIV in 2017/18.35 NACO also categorises truck drivers as a bridge population because they often have unprotected sex with high-risk groups such as female sex workers as well as their regular sexual partners, which increases the risk of transmitting HIV into the general population.

A 2015 study found 49% of truckers in central India reported paying for sex, of whom 21.5% had a sexually transmitted infection.36 HIV testing among truck drivers remains low, standing at 21.74% in 2016.37

HIV testing and counselling (HTC) in India

In 2017, 79% of people living with HIV in India were aware of their status. HIV positive women are significantly more likely to be diagnosed, compared to HIV positive men (87% vs. 68%).38 This is due to the number of women testing for HIV through preventing mother to child transmission (PMTCT) services.

In 1997, there were just 67 HIV testing and counselling (HTC) sites in India. By 2017, around 23,400 facilities were offering HIV testing and counselling. Between April 2016 and April 2017, 18.6 million general users accessed these services, surpassing India's annual testing target of 14 million.39

Testing is offered in a variety of settings including standalone clinics, health facilities and through public/private partnerships. Mobile testing units also offer community-based testing, aimed at improving early diagnosis, reaching first-time testers and people who seldom use clinical services.40 Community-based testing is particularly important, as the stigma of HIV and the criminalisation of populations at high risk of HIV discourages many people from attending clinics and health facilities.

HIV self-testing is not publically available. However, after the World Health Organization (WHO) recommended HIV self-testing in 2016, India's Ministry of Health indicated it would investigate the feasibility of self-testing kits, initially among high-risk populations.41

HIV prevention programmes in India

In 2017, 88,000 people in India were newly infected with HIV. The majority were men, who accounted for 50,000 new infections. There were 34,000 new infections among women and around 3,700 among children (aged 0-14 years).42 NACO is the body responsible for formulating policy and implementing

programmes for the prevention and control of the HIV epidemic in India.

The most recent programme, NACP-IV (2012-2017, extended to 2018), aims to reduce annual new HIV infections by 50% through the provision of comprehensive HIV treatment, education, care and support for the general population and build on targeted interventions for key affected groups and those at high risk of HIV transmission.43

A key component of the NACP-IV is the prevention of new HIV infections by reaching 80% of key affected populations with targeted interventions.44 Targeted interventions are implemented on the premise that prevention of HIV transmission among key affected populations will also lower HIV transmission among the general population. For example, targeting interventions towards female sex workers and their male clients will help reduce the risk of clients transmitting HIV to their regular sexual partners.

INDIA Estimated new HIV infections in adults and children between 1998-2015 300,000



Condom availability and use

Significant efforts have been made by NACO to increase the awareness and use of condoms to prevent the transmission of HIV. India's Condom Social Marketing Programme promotes safer sex. A key focus of the programme is making condoms available in rural and remote areas and in high-risk places such as truck stops. In 2014, NACO launched a new condom promotion campaign on Doordarshan (India's public broadcasting service), leading cable and satellite channels, All India Radio and private radio, in Hindi and other regional languages. By 2018, digital cinema, social media and outdoor media had been added as campaign platforms. The programme encourages people to use condoms every time they have sex.45

Although condom use among high-risk populations is relatively high, it is lower among the general population. In 2016, only 41% of adult men reported using a condom at last higher-risk sex (with a non-marital, non-cohabiting partner).46

HIV education and approach to sex education

Increasing awareness among the general population and key affected populations about HIV prevention is a central focus of NACP IV. However, as of 2017, only 22% of young women (aged 15-24) and 32% of young men knew how to prevent HIV.47 This is reflected in the wider population, as only one fifth of women and one third of men (aged 15-49) had comprehensive knowledge of HIV and AIDS.48

A number of innovative programmes are being implemented to increase awareness of HIV testing, prevention and treatment. These include the use of folk media to reach people in remote and rural locations, particularly those that are 'media dark' (places where there is very limited or no electricity source and therefore no television). This involves folk troupes being selected and trained on standardised scripts who then give performances in villages.

The Adolescence Education Programme (AEP) was operating in 55,000 schools in 2017/18. The programme helps adolescents cope with negative peer pressure and improve awareness on sexual health and HIV. Around 12,000 Red Ribbon Clubs also operate in India. These are linked to schools and universities and are driven by young ambassadors and peer educators who help other young people access HIV information and also serve to reduce HIV-related stigma.49

Preventing mother-to-child transmission (PMTCT)

The Indian government is committed to eliminating new HIV infections among children. The country's Prevention of Parent to Child Transmission of HIV/AIDS (PPTCT) programme started in 2002. As of 2017 there were more than 23,400 sites offering PPTCT services.50 Based on 2013 WHO Guidelines, the programme initiates antiretroviral treatment for all pregnant and breastfeeding women living with HIV regardless of CD4 count or stage of HIV infection.51 In 2017, 60% of pregnant women living with HIV received PPTCT services, a 20% increase on 2016 levels.52 53

During 2016/17, out of 10,715 babies exposed to HIV, 89% were initiated on antiretroviral (ARV) prophylaxis to prevent transmission.54 In addition, only 20% of HIV positive mothers are thought to breastfeed exclusively in the first six months of their baby's life, despite this being likely to decrease the risk of HIV transmission by between three- and four-fold.55

Harm reduction

HIV prevention activities for people who inject drugs in India include needle and syringe exchanges (NSPs) and opioid substitution therapy (OST), with the former intervention more common. Harm Reduction International has praised the country for developing community-based alternatives to Compulsory Centres for Drug Users, which are common in the region. These alternatives offer harm reduction interventions along with psychosocial support and are critical to delivering effective services that meet the needs of people who inject drugs.56

As of 2016, 277 NSPs were operating in India.57 India distributed 424 needles and syringes per person who injects drugs per year in 2017, the highest distribution level of any country in the region. As a result, more than three quarters (86%) of people who inject drugs are estimated to use sterile injecting equipment.58

Opioid substitution therapy was incorporated into India's harm reduction programme in 2008. However, plans to increase the number of OST centres has been slow and coverage remains low at 19%.59 As of 2017/18, there were 215 OST centres supporting around 24,600 people who inject drugs.60

Pre-exposure prophylaxis (PrEP)

Pre-exposure prophylaxis (PrEP), a daily course of ARVs taken by HIV-negative people to protect themselves from infection, is not widely available in India. As of 2018, a demonstration project and feasibility study was being conducted with female and transgender sex workers. Up to 700 people are accessing PrEP through this project, which should reach up to 1,500 people by the time the project ends in 2018.61

Antiretroviral treatment (ART) availability in India

In 2017, 56% of people living with HIV were on treatment a significant rise from 2013, when coverage stood at just 36%.62 More women than men are on treatment (63% vs. 50%). The proportion of children (aged 0-14) receiving ART in 2017 has not been reported.63

In 2017, India adopted 'test and treat', following WHO guidance, which means anyone testing positive for HIV is now eligible for treatment, regardless of their CD4 count.64

Despite the rise in treatment coverage, many people living with HIV still have difficulty accessing the clinics, emphasising the importance of initiatives such as the Link Workers Scheme (LWS). LWS – a NACO programme - works across 18 states, training people from at-risk populations to link communities with HIV information, commodities and services. In 2015, the scheme reached 1.06 million migrants and 972,000 people from other vulnerable groups.48 As of 2017/18, more than 80% of people testing HIV positive from at risk groups were linked to ART centres.65

Unfortunately, the proportion of people on treatment who are virally suppressed, meaning they will be in relatively good health and unable to transmit HIV to others, is not currently reported. Although offered viral load testing is included in NACO's treatment strategy, in reality viral load testing is scarce and tends only to be offered to people whose treatment is failing.66

Adherence levels 12 months after initiating treatment stood at 71% among adults and 77% among children, as of 2017. In the same year, 69,000 people died of AIDS-related illness.67 Around 360 Care and Support Centres (CSCs) exist in India to improve the number of people adhering to treatment. These centres provide essential services such as CD4 counts, along with psychosocial support, referrals to social benefit schemes, and stigma reduction workshops. More than 60% of CSCs are implemented by people living with HIV networks, making it the biggest community-led care and support intervention programme in the country.

As in many other countries, lack of adherence to treatment among young people is an issue. Various reasons exist for this including the fear of disclosure and social stigma, low social support, inadequate communication and education, and depression related to living with HIV.68

A 2018 evidence review assessed the burden of HIV drug resistance mutations in India. Although resistance studies were limited to larger cities, the review found the overall burden of resistance against first-line ART remained steady over a decade. However, as treatment expands, monitoring drug-resistant HIV is becoming increasingly important.69

Civil society's role and HIV in India

India is often described as the world's largest democracy. It boasts an active and vibrant civil society, with over three million civil society organisations (CSOs) and social movements.70 This is typified by the involvement of CSOs in India's HIV response, including a strong presence of networks and organisations led by at-risk communities. The decriminalisation of homosexuality in 2018, following a prolonged campaign from LGBTI, HIV and human rights activists and CSOs, shows the collective strength of these groups.

Today we no longer have Section 377, instead we have the freedom of the queer movement and a new pathway for LGBTI people to seek their rights, protect their dignity and access healthcare. We are thankful to India's Supreme Court but we must not forget the sacrifices of millions of LGBTI leaders who fought shoulder-toshoulder over the years and made this dream come true. We are queer and we are free.

- Abhina Aher, India HIV/AIDS Alliance.71

That said, civic space has shrunk since Prime Minister Narendra Damodardas Modi came to power in 2014. The government is now using tactics such as restrictive legislation to deny CSOs their right to register, and in some cases suspending or withdrawing CSO permits to operate. Resourcing of CSOs is also under threat: some CSOs have been prevented from receiving funding from external sources, and others have had their bank accounts suspended, stopping them from accessing the funds they need to operate. It is also common for human rights defenders to be threatened and attacked, with the aim of silencing them and intimidating others.72

HIV and tuberculosis (TB) in India

Globally, 10 million people are estimated to have developed tuberculosis (TB) in 2017, 27% of whom lived in India. For this reason, India is one of the WHO's 30 high TB burden countries.73

Multi drug-resistant TB (MDR-TB) continues to be a public health issue. Of the three countries accounting for almost half of the world's MDR/RR-TB cases in 2017, India has the highest proportion at 24%, followed by China at 13% and Russia at 10%.74

In 2016, 12% of people newly enrolled in HIV care in India had active TB. Of the 410,000 people who died of TB in 2017, 11,000 were HIV positive.75

In 2017, 58% of people with HIV-associated TB were not reported to have reached TB care. Reasons for missing people with TB include poor integration of services, lack of access to services, weaknesses in service delivery, gaps in recording and reporting, and limited engagement of the private sector.76

To strengthen integration, the government has been rolling out TB service delivery from all HIV clinics since December 2016.77 Although reporting of HIV case-based data for the TB case-finding cascade has not yet been possible, NACO have been able to report data based on clinic visits. People living with HIV made almost 11 million visits to ART centres in 2017. In 83% of these visits, clinic attendees received an evaluation for TB. Of those who were evaluated, 6% had TB symptoms.78

In March 2017, the government announced a new plan to end TB in the country by 2025. It increased domestic funding dramatically, from US \$47 million for 2011–2012 to US \$149 million for 2017–2018.79

Barriers to the HIV response in India

Stigma and discrimination

India's NACP-IV has made the elimination of stigma and discrimination a major focus.80 In 2018, implementation on the HIV AIDS (prevention and control) Act 2014 began. The law criminalises discrimination against people with HIV and AIDS, including within employment, healthcare, education, public facilities and public office, as well as protecting property and insurance rights.81

Despite this, people living with HIV continue to experience high levels of discrimination. In 2016, 27% of adults demonstrated a discriminatory attitude towards people living with HIV, a slight improvement on the 2006 level of 35%.82

Stigma and discrimination are very common within the healthcare sector. A 2013 study of doctors, nurses and ward staff in government and non-government clinics in Mumbai and Bengaluru found discriminatory attitudes were common. This included a willingness to prohibit women living with HIV from having children (55 to 80%), endorsement of mandatory testing for female sex workers (94 to 97%) and surgery patients (90 to 99%), and stating that people who acquired HIV through sex or drugs 'got what they deserved' (50 to 83%).83

The study recommended further intervention programmes targeting healthcare providers to address fear of transmission, improve universal precaution skills, and involve people living with HIV at all stages of the intervention to reduce symbolic stigma and ensure that relevant patient interaction skills are taught.

Gender inequality is also an issue. Women, particularly in rural areas, have little control or decisionmaking powers over important aspects of their lives. This means they are often unable to negotiate protection from risk of infection. This is an issue for the female partners of men from key populations particularly, given the concentrated nature of the epidemic. Women living with HIV are reluctant to access health care for fear of discrimination and marginalisation, leading to a disproportionate death rate in HIV women.84

India is also home to arguably the largest number of orphans of the HIV epidemic. These children endure stigma and face an impenetrable barrier in many Indian societies. This situation encourages children and their guardians to hide HIV and discourages access to essential treatment services (if available).85

Data issues

There is a need for greater access, analysis and applied use of data within the national HIV response. This is due to a lack of integrated quality data systems, which limit availability and use plus a lack of structure for case-based reporting, a lack of district HIV and key population size estimates, and inadequately trained staff to monitor the epidemic.

There are also challenges associated with tracking people through the continuum of HIV diagnosis to care and treatment due to a lack of unique patient identifier records and different monitoring and reporting systems used within facilities.86

Strutural and resource barriers

In recent years, there have been shortfalls in the procurement, management and distribution of ARVs, HIV testing kits and other HIV commodities, mainly due to supply chain bottlenecks.87

India is large and the status of infrastructure varies widely across the country... The operation of the [drug procurement] system, particularly in remote locations, needs to be strengthened. For example, slow internet speeds can really disrupt the system. Late payments to drug companies has also led to delays in the delivery of medicines.

- Ashok Kumar Agarwal at Public Health Foundation of India88

Funding for HIV in India

Before 2012, efforts to tackle the HIV epidemic in India relied heavily on international funding.89 However, in 2012 India committed to financing 90% of its HIV and AIDS programmes.

In 2017/18 the main source of financing for NACP IV came from domestic resources (63%), a major increase from earlier years when international donors supported 75% of overall costs. The allocation of annual resources in the NACP IV budget was 63% of funding for prevention, 30% for care, support and treatment services, 4% for institutional strengthening and 3% for strategic information management systems.90 Unlike other countries in the region, domestic resources are the primary source of funding for key population programmes.91

The 2017/18 annual NACO budget was increased by approximately 26% from the 2015/16 budget, mainly reflecting the need to fund the expansion of treatment due to the adoption of test and treat.92

Domestic funding for HIV has gone up from US \$670 million a year between 2015/16 to 2017/18, to US \$1.32 billion a year for 2018/19 to 2020/21, an increase of 97.6%. This means domestic funding

will account for more than 90% of available funding in the next implementation period of India's TB and HIV grants. This move is particularly important for India's HIV response, given the increasing withdrawal of international funding. For example, although the Global Fund is currently one of the country's largest external funders, support is due to 'transition out' over a nine-year period from 2018 to 2026.93

The future of HIV in India

Over the past decade, India has made significant progress in tackling its HIV epidemic, especially in comparison with other countries in the region. A major reason for the country's success is the sustained commitment of the Indian Government through its National AIDS Control Programme, which has been particularly effective at targeting high-risk groups such as men who have sex with men, sex workers and people who inject drugs.

While ART is free and uptake is rising, helped by the adoption of 'test and treat', many people living with HIV still have difficulty accessing services, meaning the rapid pace at which coverage is being scaled up must continue. However, stigma and discrimination remain significant barriers preventing key affected populations and those at high risk of HIV transmission from accessing treatment and vital healthcare services. A continued focus on these and other barriers is needed to halt the worrying rise in new infections and AIDS-related deaths seen in 2017 (as compared with 2016 levels).

Lowering infections among high-risk groups is one of NACO's biggest success stories, although continued effective prevention programmes must remain in place, particularly for people who inject drugs and transgender people, the two at-risk groups with the highest HIV prevalence of all key populations.

New pockets of infection have emerged in areas including Gujarat, Bihar, Delhi, Chhattisgarh, Rajasthan, Odisha, and Jharkhand that need close monitoring and tailored prevention and treatment programmes.94 Equally important is to better understand the transmission dynamics between states caused by migration, which is increasingly being recognised as a key driver of new HIV infections in India.

Improving data collection and analysis is crucial to identifying these pockets of new infections and understanding patterns of vulnerability, making this field crucial to the success of India's HIV response.95

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