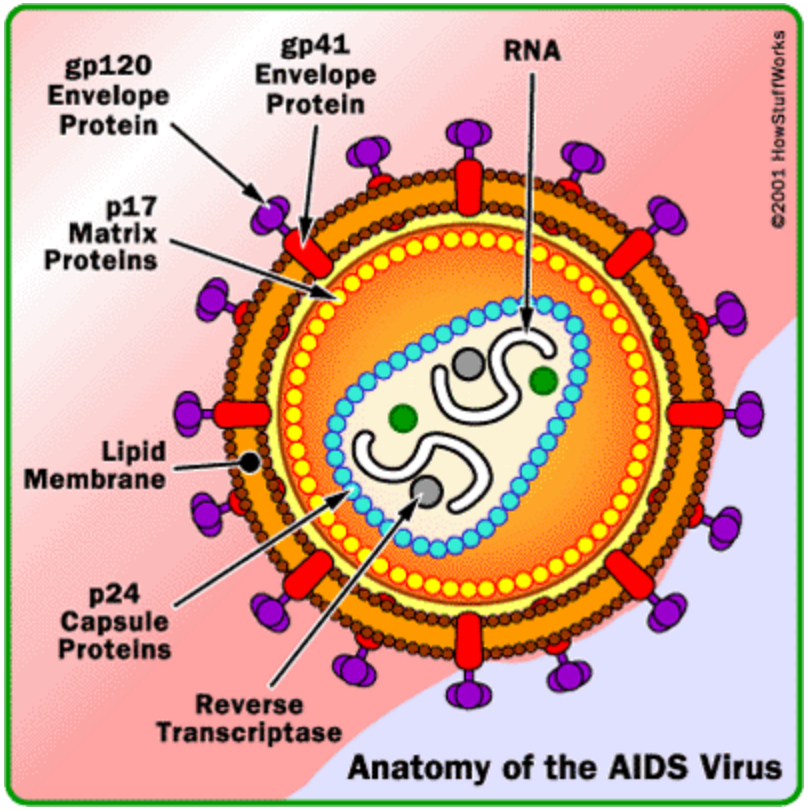
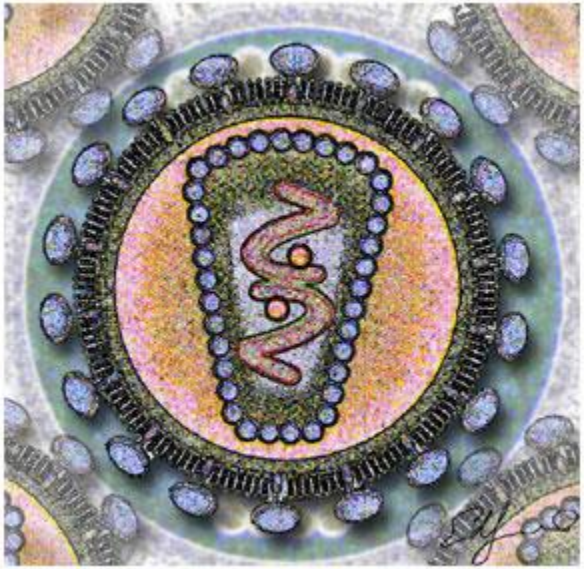
”The road to health”
versus
”The road to death”

HIV/AIDS

- The human immunodeficiency virus (HIV) is a retrovirus that infects cells of the immune system, destroying or impairing their function. As the infection progresses, the immune system becomes weaker, and the person becomes more susceptible to infections.
- The most advanced stage of HIV infection is acquired immunodeficiency syndrome (AIDS). It can take 2-15 years for an HIV-infected person to develop AIDS; antiretroviral drugs can slow down the process even further.
- HIV is transmitted through unprotected sexual intercourse (anal or vaginal), transfusion of contaminated blood, sharing of contaminated needles, and between a mother and her infant during pregnancy, childbirth and breastfeeding.

Human Immune Deficiency Virus





HIV/AIDS

- The Human Immunodeficiency Virus (HIV) targets the immune system and weakens people's defense systems against infections and some types of cancer. As the virus destroys and impairs the function of immune cells, infected individuals gradually become immunodeficient.
- Immune function is typically measured by CD4 cell count. Immunodeficiency results in increased susceptibility to a wide range of infections and diseases that people with healthy immune systems can fight off.
- The most advanced stage of HIV infection is Acquired Immunodeficiency Syndrome (AIDS), which can take from 2 to 15 years to develop depending on the individual.
- AIDS has severe clinical manifestations.

TYPES OF HIV

- HIV – 1 -It is the most common
- HIV-2 -It is not common
- Both have the same routes of transmission and are associated with similar opportunistic infections and AIDS

AIDS
Acquried Immuno Deficiency Syndrome

- AIDS when the virus has attacked and destroyed so many helper T-cells (CD4) in humans as the body can not stop the virus from replicating.

- Diversity of symptoms and infections and death.

2017 global HIV statistics

- HIV continues to be a major global public health issue.
- In 2017 an estimated 36.9 million people were living with HIV (including 1.8 million children) – with a global HIV prevalence of 0.8% among adults.
- Around 25% of these same people do not know that they have the virus.

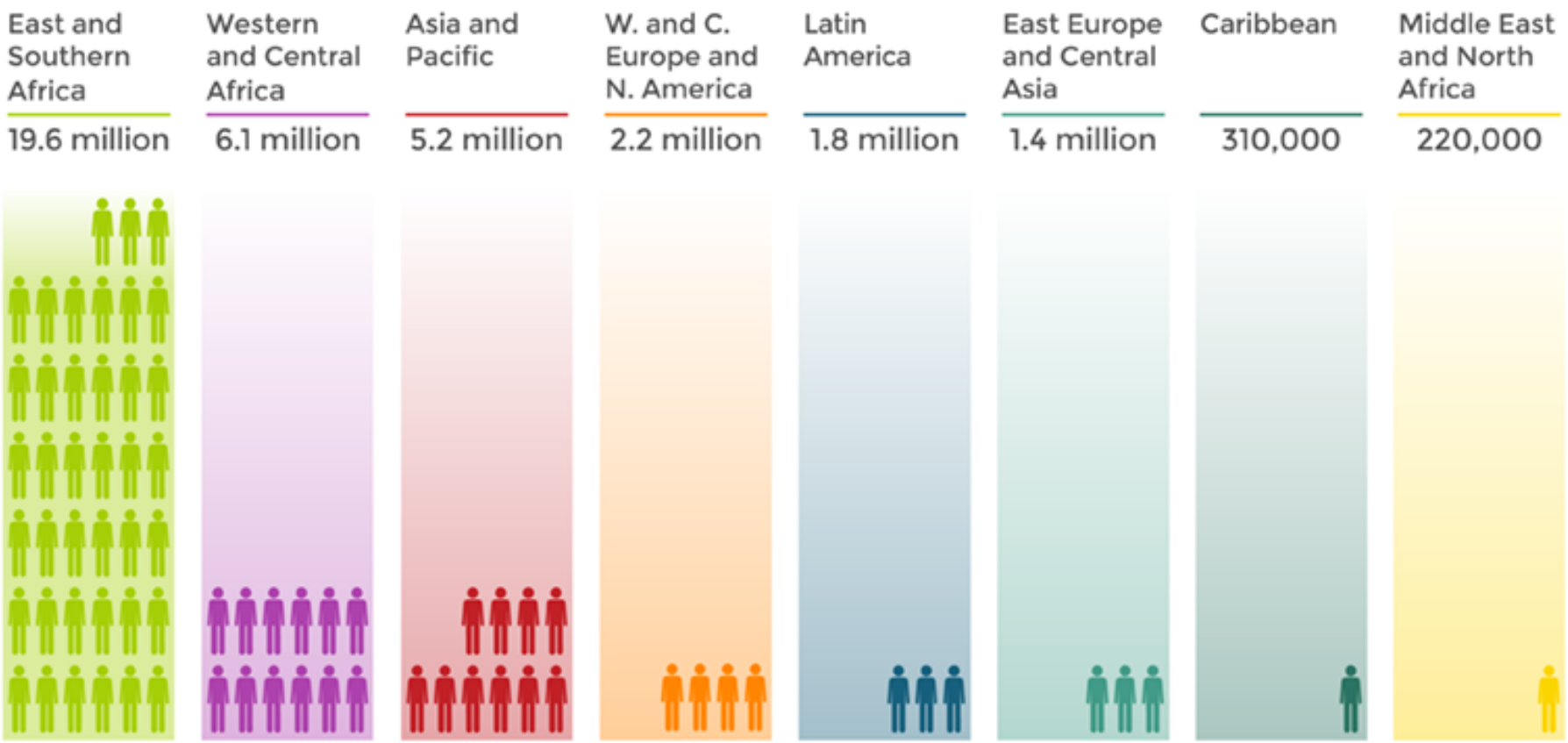
HIV/AIDS


36.9 million people are living with HIV globally
25% don't know their status
Avert
www.avert.org
Source: UNAIDS Data 2018

2017 global HIV statistics

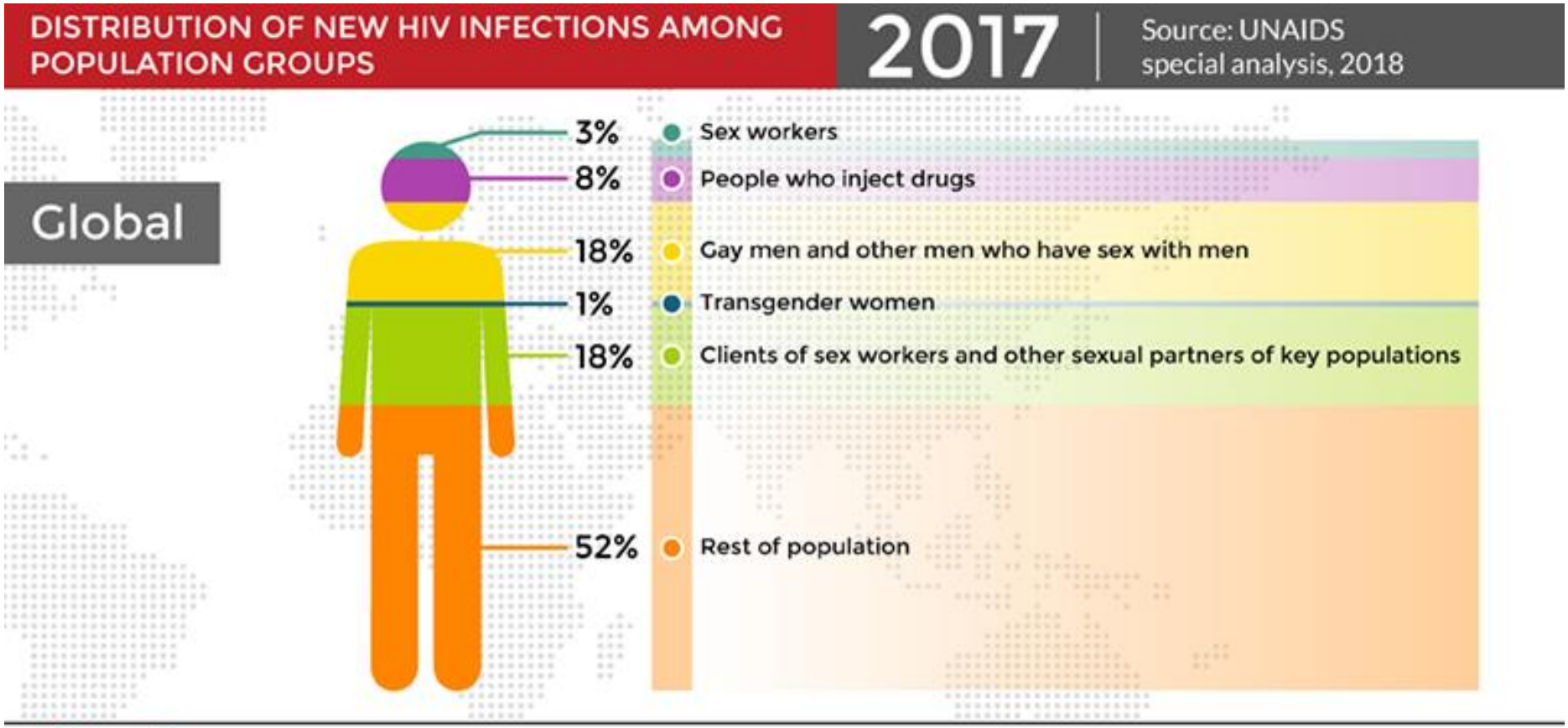
- Since the start of the epidemic, an estimated 77.3 million people have become infected with HIV and 35.4 million people have died of AIDS-related illnesses.
- In 2017, 940,000 people died of AIDS-related illnesses. This number has reduced by more than 51% (1.9 million) since the peak in 2004 and 1.4 million in 2010.
- The vast majority of people living with HIV are located in low- and middle- income countries, with an estimated 66% living in sub-Saharan Africa.
- Among this group 19.6 million are living in East and Southern Africa which saw 800,000 new HIV infections in 2017.

Number of people living with HIV in 2017



Source: UNAIDS Data 2018

New HIV infections



New HIV infections

- Young women are especially at risk, with around 7,000 new infections each week among young people aged 15-24 occurring among this group.
- In sub-Saharan Africa, three in four new infections are among girls aged 15–19 years and young women aged 15–24 years are twice as likely to be living with HIV than men.
- More than one third (35%) of women around the world have experienced physical and/or sexual violence at some time in their lives. In some regions, women who experience violence are one and a half times more likely to become infected with HIV.
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New HIV infections

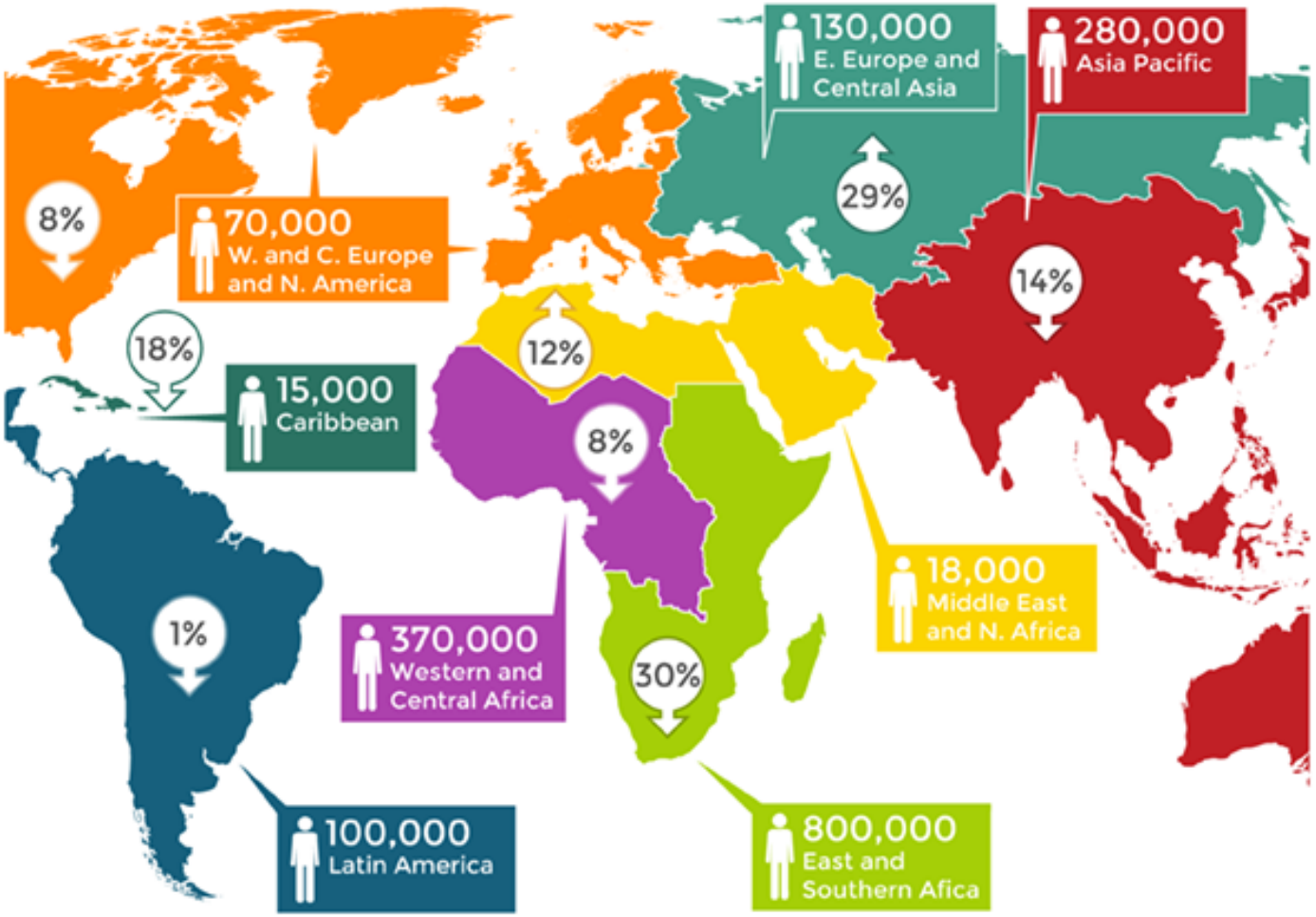
- The reduction in new HIV infections has been strongest in the region most affected by HIV, East and Southern Africa, where new HIV infections have been reduced by 30% since 2010.
- New HIV infections are rising in around 50 countries. In Eastern Europe and Central Asia the annual number of new HIV infections has doubled.
- New HIV infections have increased by more than a quarter in the Middle East and North Africa over the past 20 years.
- Despite the progress made across the 69 countries which have witnessed a decline in new infections, progress in combating viral transmission is still not happening fast enough to meet global targets.

Number of new HIV infections in 2017 and change since 2010

1.8 million people newly infected in 2017 globally

Decrease in number of new infections across the global population each year since 2010

18%



Source: UNAIDS Data 2018

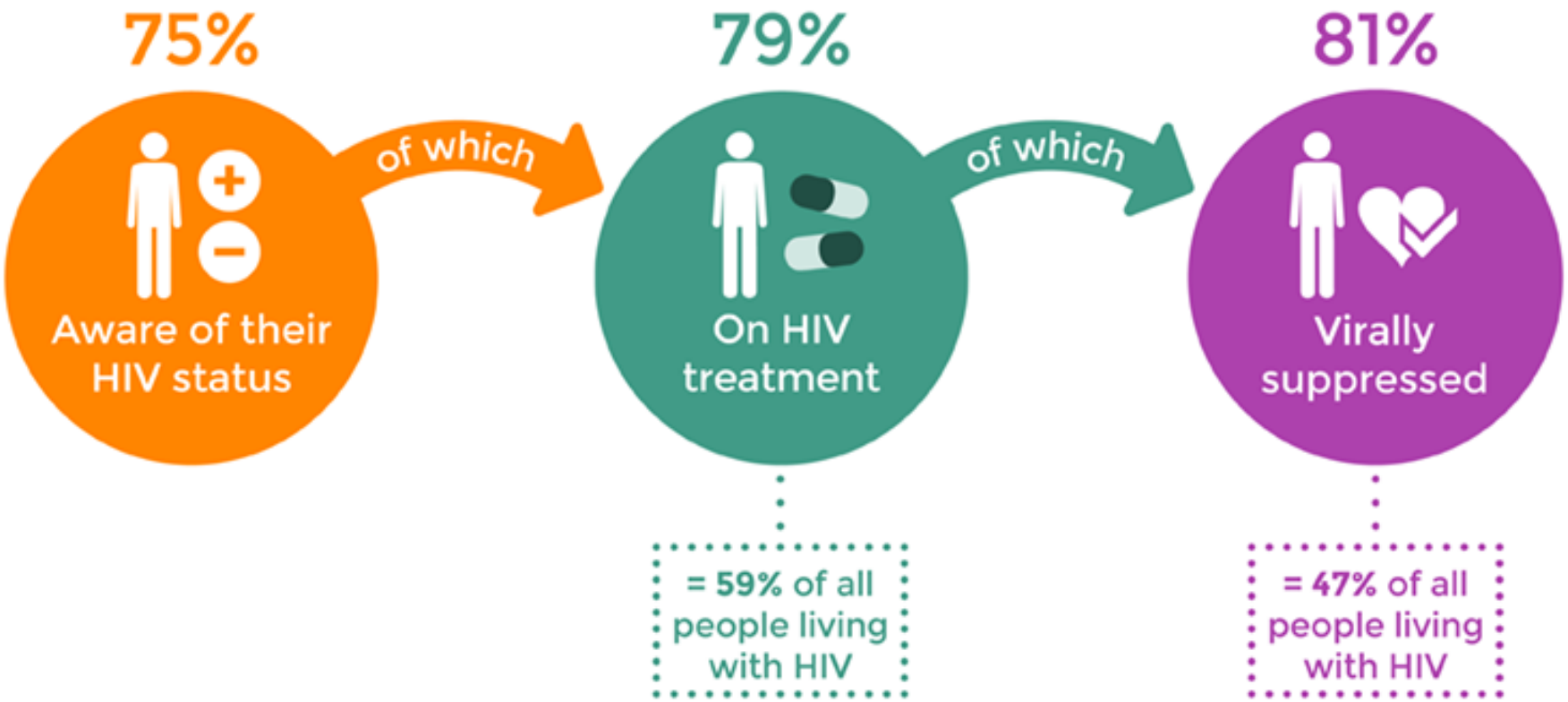
The **Sustainable Development Goals (SDGs).**

- Adopted in 2015, the SDGs aim to end the AIDS epidemic by 2030 under SDG Goal 3, which is to "ensure healthy lives and promote well-being for all at all ages."
- The SDGs are the successor to the Millennium Development Goals (MDGs), which included an HIV target under MDG 6: to halt and begin to reverse the spread of HIV/AIDS by 2015 and achieve universal access to treatment for HIV/AIDS by 2010. As of 2015, the AIDS-related targets of MDGs were met.

UNAID's "90-90-90" targets.

- On World AIDS Day 2014, UNAIDS set the "90-90-90" targets for 2020 aimed at ending the epidemic by 2030. The targets include achieving "90% of people living with HIV knowing their HIV status; 90% of people who know their HIV-positive status on treatment; and 90% of people on treatment with suppressed viral loads."
- These goals and targets were reiterated in the UNAIDS 2016-2021 Strategy, which also aligns with the SDGs.
- As of 2017, 75% of people living with HIV knew their status; among those who knew their status, 79% were accessing treatment; among those accessing treatment, 81% were virally

Global progress towards the 90 90 90 targets 2017 (all ages)



Source: UNAIDS Data 2018

Signs and symptoms

- The symptoms of HIV vary depending on the stage of infection. Though people living with HIV tend to be most infectious in the first few months, many are unaware of their status until later stages.
- The first few weeks after initial infection, individuals may experience no symptoms or an influenza-like illness including fever, headache, rash or sore throat.
- As the infection progressively weakens the immune system, an individual can develop other signs and symptoms, such as swollen lymph nodes, weight loss, fever, diarrhea and cough.
- Without treatment, they could also develop severe illnesses such as tuberculosis, cryptococcal meningitis, and cancers such as lymphomas and Kaposi's sarcoma, among others.

Transmission

- HIV can be transmitted via the exchange of a variety of body fluids from infected individuals, such as blood, breast milk, semen and vaginal secretions. Individuals cannot become infected through ordinary day-to-day contact such as kissing, hugging, shaking hands, or sharing personal objects, food or water.

MODE OF TRANSMISSION CONT…

- Studies show that the risk of HIV transmission from a single needle stick or other injuries that break the skin from an HIV infected person is approx. o.3%.
- The risk is approx. 0.09% with mucous membranes exposure and even lower with non intact skin (abrasion, wound, dermatitis) exposure.
- The risk after exposure to body fluids or tissue other than blood is thought to be considerably lower than with blood.

Risk factors

- Behaviors and conditions that put individuals at greater risk of contracting HIV include:
- having unprotected anal or vaginal sex;
- having another sexually transmitted infection such as syphilis, herpes, chlamydia, gonorrhoea, and bacterial vaginosis;
- sharing contaminated needles, syringes and other injecting equipment and drug solutions when injecting drugs;
- receiving unsafe injections, blood transfusions, medical procedures that involve unsterile cutting or piercing; and
- experiencing accidental needle stick injuries, including among health workers.

Diagnosis

- Serological tests, such as RDTs or enzyme immunoassays (EIAs), detect the presence or absence of antibodies to HIV-1/2 and/or HIV p24 antigen. When such tests are used within a testing strategy according to a validated testing algorithm, HIV infection can be detected with great accuracy.

- It is important to note that serological tests detect antibodies produced by an individual as part of their immune system to fight off foreign pathogens, rather than direct detection of HIV itself.

- Most individuals develop antibodies to HIV-1/2 within 28 days and therefore antibodies may not be detectable early after infection, the so-called window period. This early period of infection represents the time of greatest infectivity; however HIV transmission can occur during all stages of the infection.

- It is best practice to also retest all people initially diagnosed as HIV-positive before they enrol in care and/or treatment to rule out any potential testing or reporting error.

HIV testing services

- HIV testing should be voluntary and the right to decline testing should be recognized. Mandatory or coerced testing by a health-care provider, authority or by a partner or family member is not acceptable as it undermines good public health practice and infringes on human rights.

- Some countries have introduced, or are considering, self-testing as an additional option. HIV self-testing is a process whereby a person who wants to know his or her HIV status collects a specimen, performs a test and interprets the test results in private. HIV self-testing does not provide a definitive diagnosis; instead, it is an initial test which requires further testing by a health worker using a national validated testing algorithm.

- All HIV testing services must include the 5 C's recommended by WHO: informed Consent, Confidentiality, Counselling, Correct test results and Connection (linkage to care, treatment and other services).

Prevention

- Individuals can reduce the risk of HIV infection by limiting exposure to risk factors. Key approaches for HIV prevention, which are often used in combination, include:

1. Male and female condom use

- Correct and consistent use of male and female condoms use can protect against the spread of sexually transmitted infections, including HIV.
- Evidence shows that male latex condoms have an 85% or greater protective effect against HIV and other sexually transmitted infections (STIs).

Prevention

2. Testing and counseling for HIV and STIs

- Testing for HIV and other STIs is strongly advised for all people exposed to any of the risk factors. This way people learn of their own infection status and access necessary prevention and treatment services without delay.
- WHO also recommends offering testing for partners or couples.
- Tuberculosis (TB) is the most common presenting illness among people with HIV. It is fatal if undetected or untreated and is the leading cause of death among people with HIV- responsible for 1 of every 3 HIV-associated deaths.
- Early detection of TB and prompt linkage to TB treatment and ART can prevent these deaths. It is strongly advised that HIV testing services integrate screening for TB and that all individuals diagnosed with HIV and active TB urgently use ART.

Prevention

3. Voluntary medical male circumcision

- Medical male circumcision, when safely provided by well-trained health professionals, reduces the risk of heterosexually acquired HIV infection in men by approximately 60%.
- This is a key intervention in generalized epidemic settings with high HIV prevalence and low male circumcision rates.

Prevention

4. Antiretroviral (ART) use for prevention

- **4.1 ART as prevention**
- A 2011 trial has confirmed if an HIV-positive person adheres to an effective ART regimen, the risk of transmitting the virus to their uninfected sexual partner can be reduced by 96%.
- The WHO recommendation to initiate ART in all people living with HIV will contribute significantly to reducing HIV transmission.

Prevention

4.2 Pre-exposure prophylaxis (PrEP) for HIV-negative partner

- Oral PrEP of HIV is the daily use of ARV drugs by HIV-uninfected people to block the acquisition of HIV.
- More than 10 randomized controlled studies have demonstrated the effectiveness of PrEP in reducing HIV transmission among a range of populations including heterosexual couples (where one partner is infected and the other is not), men who have sex with men, transgender women, high-risk heterosexual couples, and people who inject drugs.
- In September 2015, WHO published the “Guidelines on when to start antiretroviral therapy and on pre-exposure prophylaxis for HIV”, that recommends PrEP as a prevention choice for people at substantial risk of HIV infection as part of combination prevention approaches.

Prevention

- **4.3 Post-exposure prophylaxis for HIV (PEP)**
- Post-exposure prophylaxis (PEP) is the use of ARV drugs within 72 hours of exposure to HIV in order to prevent infection.
- PEP includes counseling, first aid care, HIV testing, and administering of a 28-day course of ARV drugs with follow-up care.

- The WHO guidelines recommend PEP use for both occupational and non-occupational exposures and for adults and children.
- The new recommendations provide simpler regimens using ARVs already being used in treatment. The implementation of the new guidelines will enable easier prescribing, better adherence and increased completion rates of PEP to prevent HIV in people who have been accidentally exposed to HIV such as health workers or through unprotected sexual exposures or sexual assault.

Prevention

5. Harm reduction for injecting drug users

- People who inject drugs can take precautions against becoming infected with HIV by using sterile injecting equipment, including needles and syringes, for each injection.
- A comprehensive package of interventions for HIV prevention and treatment in drug uses includes:

- Needle and syringe programmes;
- Opioid substitution therapy for people dependent on opioid and other evidence based drug dependence treatment;
- HIV testing and counseling;
- HIV treatment and care;
- access to condoms; and
- management of STIs, tuberculosis and viral hepatitis.

Prevention

6. Elimination of mother-to-child transmission of HIV (EMTCT)

- The transmission of HIV from an HIV-positive mother to her child during pregnancy, labour, delivery or breastfeeding is called vertical or mother-to-child transmission (MTCT).
- In the absence of any interventions during these stages, rates of HIV transmission from mother-to-child can be between 15-45%. MTCT can be nearly fully prevented if both the mother and the child are provided with ARV drugs throughout the stages when infection could occur.

- WHO recommends options for prevention of MTCT (PMTCT), which includes providing ARVs to mothers and infants during pregnancy, labour and the post-natal period, and offering life-long treatment to HIV-positive pregnant women regardless of their CD4 count.

Treatment

- HIV can be suppressed by combination ART consisting of 3 or more ARV drugs. ART does not cure HIV infection but controls viral replication within a person's body and allows an individual's immune system to strengthen and regain the capacity to fight off infections.

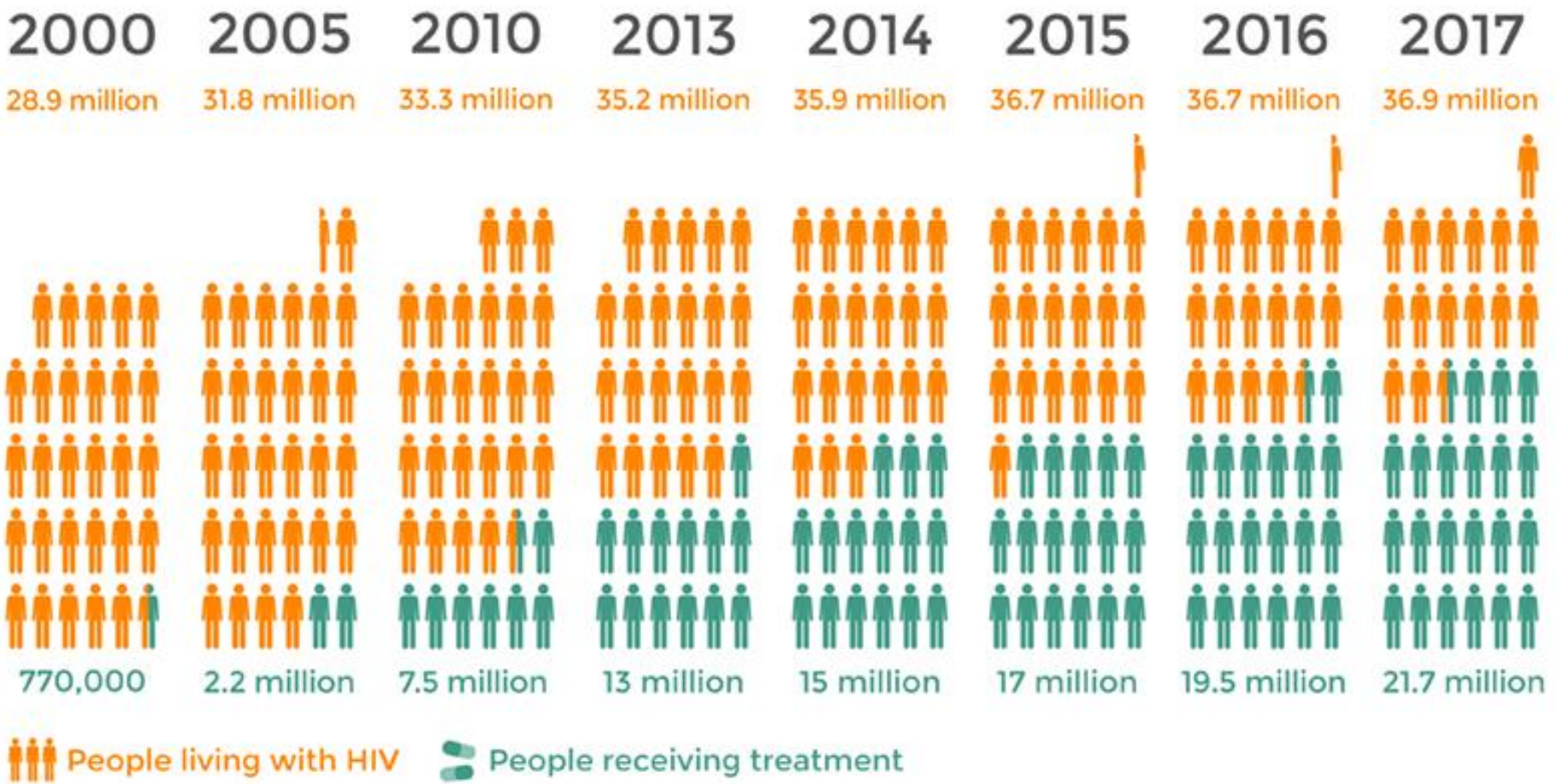
Treatment

- The WHO recommendations to treat all people living with HIV and offer antiretrovirals as an additional prevention choice for people at "substantial" risk.
- Expanding access to treatment is at the heart of a new set of targets for 2020 which aim to end the AIDS epidemic by 2030.

HIV/AIDS **Treatment**

- In 2017, 59% of all people living with HIV were accessing treatment. Of those, 47% were virally suppressed.
- In 2017, 21.7 million people living with HIV were receiving antiretroviral treatment (ART) – an increase of 2.3 million since 2016 and up from 8 million in 2010. However, this level of treatment scale up is still not enough for the world to meet its global target of 30 million people on treatment by 2020.
- Significant progress has been made in the prevention of mother-to-child transmission of HIV (PMTCT). In 2017, 80% of all pregnant women living with HIV had access to treatment to prevent HIV transmission to their babies – this is up from 47% in 2010.

Number of people living with HIV and accessing treatment globally



Source: UNAIDS Data 2018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