

Forty years of HIV

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The history of HIV infection started more than 40 years ago, as a newly characterized disease, with a lot of uncertainty and a major impact on global human health, a feeling not unlike the one linked to the emergence of SARS-CoV-2 leading to the COVID-19 pandemic in 2020.

HIV infection represented a turning point in infectious diseases and the start of a new era in medical care as well as infection control and prevention, with particular focus on safety, for medical personnel and patients alike.

During the past 40 years, new diagnostic tests have been introduced and new antivirals have been discovered and implemented into complex treatment regimens. We have gained knowledge regarding molecular genetics, which has redefined our understanding of molecular surveillance and resistance to antiretrovirals (ARV). We have defined key concepts such as effectiveness and tolerability of treatment, adherence to treatment, immunological testing, therapeutic drug monitoring, and last but not least safety, how to stay safe, to prevent infection, and protocols were developed to minimize the risks associated with invasive or non-invasive procedures.

Infection prevention and control guidelines have been created and updated to include important preventive measures such as switching from reusable needles to sterile single use ones, use of vacuum-assisted blood collection systems, non-breakable containers, as well as use of gloves as part of routine personal protective equipment for invasive maneuvers, to name only a few.

HIV infection has changed over these past 40 years from a death sentence¹ to a treatable chronic infection and now, after 4 decades of medical development, with efficient treatment options widely available, the main focus of medical care is on quality of life, long-term impact of ARVs, drug-drug interactions, as well as evaluation and management of comorbidities in a mature but aging population.²

While virological and immunological control of HIV infection have remained important targets of ARV treatment, the focus of medical care now also

goes beyond viral suppression, towards the overall wellbeing of the patient, through integrated management and person-centered HIV care.^{3,4}

Similar to how HIV infection represented a turning point in infectious diseases, SARS-CoV-2 infection has represented a turning point in 2020, and definitely a new era in infectious diseases has started, for which we are better prepared.

Learning points will still come over the next years from both pandemics HIV and SARS-CoV-2, as new developments in the medical fields are awaited, with fundamental and applied medical research reaching unprecedented breadth and depth and with healthcare systems prepared to adopt and implement novel diagnostics, novel treatment and prevention approaches, as well as novel technologies.

Conflicts of interest: None to declare.

Funding: None to declare.

References

1. Centers for Disease Control (CDC). Update on acquired immune deficiency syndrome (AIDS)-United States. *MMWR Morb Mortal Wkly Rep.* 1982;31:507-8, 513-4.
2. Streinu-Cercel A, Săndulescu O, Poiană C, et al. Consensus statement on the assessment of comorbidities in people living with HIV in Romania. *Germs.* 2019;9:198-210. <https://doi.org/10.18683/germs.2019.1178>
3. Kall M, Marcellin F, Harding R, Lazarus JV, Carrieri P. Patient-reported outcomes to enhance person-centred HIV care. *Lancet HIV.* 2020;7:e59-68. [https://doi.org/10.1016/S2352-3018\(19\)30345-5](https://doi.org/10.1016/S2352-3018(19)30345-5)
4. Safreed-Harmon K, Anderson J, Azzopardi-Muscat N, et al. Reorienting health systems to care for people with HIV beyond viral suppression. *Lancet HIV.* 2019;6:e869-77. [https://doi.org/10.1016/S2352-3018\(19\)30334-0](https://doi.org/10.1016/S2352-3018(19)30334-0)

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