

Shortfalls in laboratory services may limit attainment of worldwide targets for HIV

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The Joint United Nations Programme on HIV and AIDS (UNAIDS) 90-90-90 targets call for 90% of all people living with HIV to know their HIV status, 90% of all people diagnosed with HIV infection to receive antiretroviral therapy (ART), and 90% of those receiving ART to achieve durable viral suppression by the year 2020. In a study appearing in *PLOS Medicine*, Vincent Habiyaambere of the World Health Organization (WHO) and colleagues find that insufficient capacity to perform laboratory tests used in monitoring HIV infection, and underutilization of existing testing capacity, are limiting the ability to meet these goals.

The researchers analyzed responses to annual surveys sent to WHO offices from 127 countries between 2012 and 2014. Respondents each reported on the capacity and usage of CD4 testing, HIV viral load (VL) testing, and early infant diagnosis in their country. The researchers found that the capacity of available CD4 instruments was sufficient to meet the demand of all people living with HIV/AIDS (PLWHA), irrespective of treatment status, but VL capacity was inadequate to cover needs in most reporting countries. Even when capacity was sufficient, machines were being underutilized; only 13.7% of existing CD4 capacity and only 36.5% of existing VL capacity were utilized across reporting countries in 2013.

Habiyaambere and colleagues note that the responses were limited to national programs and did not include testing capacity in the private sector, and that incomplete responses or non-response to surveys limit

the comprehensiveness of the survey data. However, they note that these findings identify shortfalls in VL testing capacity and underutilization of CD4 and VL technologies that will need to be addressed to reach the UNAIDS targets. They say: "With laboratory systems in reporting countries expanding, a national laboratory strategic plan to strengthen services must be developed, implemented, and monitored by governments and their national and international partners. The focus of international community, to ensure optimal use of laboratory technologies, should be on those countries where interventions for scaling up access to HIV diagnostic technologies are most needed."

In an accompanying Perspective, Peter Kilmarx and Ravia Simbi discuss the practical challenges of achieving high [capacity](#) and efficiency in all stages of HIV care and note that moving forward, "strong leadership, resources, planning, and management are needed to scale up laboratory services. Continuing monitoring efforts, like those of Habiyaambere and colleagues, are essential."

More information: Habiyaambere V, Ford N, Low-Beer D, Nkengasong J, Sands A, Pérez González M, et al. (2016) Availability and Use of HIV Monitoring and Early Infant Diagnosis Technologies in WHO Member States in 2011-2013: Analysis of Annual Surveys at the Facility Level. *PLoS Med* 13(8): e1002088. [DOI: 10.1371/journal.pmed.1002088](#)

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