

Strategies to improve HIV care outcomes for people with HIV who are out of care: the need for well designed health systems

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AIDS 2022, **36**:899–900

The most recent meta-analyses of outcomes for persons with HIV (PLH) in the United States who are out-of-care [1] indicate both the progress made and the challenges that remain in designing and broadly implementing interventions for PLH. In contrast to two earlier review articles on this topic [2,3], this meta-analysis found significant benefits of five different HIV-related interventions: patient navigation, appointment alerts; transportation and appointment coordination; social support, and data-to-care (i.e. using a surveillance system to inform providers when a PLH has dropped out-of-care). Reengagement and retention in care and, sometimes, viral suppression, typically doubled when PLH received an intervention.

Yet, the very need for this review is disappointing: 25 years after the first benefits of treatment as prevention were identified [4–6], about 61% of PLH are out-of-care [2], 70% are not virally suppressed [2], and 43% of new infections are transmitted by PLH who have dropped out-of-care [1]. These are dismal outcomes – especially when there are clear benefits to PLH who remain in care – a longer, high-quality, healthier life, as well as benefits to their sexual partners who do not become infected with HIV [4,5]. In addition, the CDC team's meta-analyses do not suggest intervention benefits on the magnitude of those needed to end the HIV epidemic.

Perhaps more disturbing is that the types of interventions being mounted and evaluated have been successfully used for many decades in private enterprise [6] and in large health systems in other high-income countries (e.g. total quality management at the National Health Services in

the UK [7]) as part of their basic operating principles. For example, if health systems and care providers do not realize a patient has dropped out-of-care, it is difficult to either recognize or solve a drop-out problem. If healthcare providers are not supportive in their communications, it is expected that patients may be alienated and less likely to return to care. Every hair salon and restaurant in the U.S. is likely to send an appointment reminder. Yet, such reminders in healthcare settings for PLH appear to be an innovative and novel intervention within HIV care settings. Even peer navigation emerges because of the huge fragmentation of the U.S. healthcare system [8] and may not be useful in less fragmented systems. The strategies being tested in the U.S. and those included in this meta-analysis are largely common-sense operating principles of good business.

It is comforting to recognize that many studies included in the meta-analyses utilized multiple strategies to improve PLHs' retention and reengagement in care. It is also a strength that the studies are focusing largely on structural interventions, the system that the patient is encountering is the target of almost all the interventions. Systematically increasing positive social interactions, appointment reminders, transportation, and giving providers information on dropouts is not aimed at only modifying the patients' behaviors, but at also shifting overall quality and efficiency of healthcare system.

Thus, the range of interventions being evaluated could have been conducted regarding almost any chronic condition, not only those focused on HIV-related

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Received: 28 January 2022; accepted: 7 February 2022.

DOI:10.1097/QAD.0000000000003189

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healthcare. Almost all are strategies demonstrated efficacious for health systems and advocated by policy makers for resilient health systems [9]. It is also regrettable that only two of the 42 studies in the meta-analyses were considered implemented with high-quality interventions. Given the relatively small number of randomized controlled trials (RCTs, $N=8$) in this meta-analysis, the CDC team did a review of trials listed on www.clinicaltrials.gov to identify intervention RCT that had been funded, but not yet published. There were an additional 10 funded studies that finished data collection between 2016 and 2020 to have yet publish their results. In 2011, it was found that the average lag time between a key research finding being identified and its implications being implemented is 17 years [10]. It is unclear whether the failure to publish reflects negative study results, the slow editorial review process so common in science, or other systematic challenges researchers face. Regardless of the source, timely publication of study results is key for society to reap their investments in science. Nor is there yet evidence that some of the most novel resources newly available (e.g. in electronic medical records, on social media) are being broadly utilized to jump-start novel intervention research. These gaps in our research portfolios indicate the long way researchers still need to go to end the HIV epidemic. Addressing these challenges will reflect a step toward revitalizing the U.S. research biomedical enterprise, countering current public perceptions regarding our suboptimal research culture [11].

Acknowledgements

Conflicts of interest

There are no conflicts of interest.

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