A major concern is that singularly advocating for nontargeted screening while knowing that the goal of universal testing is largely unattainable will dissuade administrators and clinicians from championing programs to test anyone, thus limiting dissemination of any form of HIV testing into clinical practice. Embracing less-than-ideal but possibly more feasible approaches may ultimately lead to more actual testing.

There are a few limitations of the DHRS. We acknowledged in our article (2) and confirm here that the populations used in its development were indeed selected; the DHRS therefore may not be sufficiently generalizable. We know of no other accessible resource that included nearly 100,000 patients over 13 years, over 500 of whom were newly diagnosed with HIV infection (confirmed new through linkage to our statewide HIV registry), and had nearly 50 candidate predictor variables that would have allowed for as robust of an evaluation as was performed. Future work will certainly require additional testing and possible refinement of the tool (7–9), and although our research team has reported preliminary favorable effectiveness results between DHRS-targeted screening and nontargeted screening (10), we expect more substantial evaluation using rigorous comparative methods and translational sciences to best inform its clinical utility (9). Finally, logistic regression is one form of generalized linear modeling (11), and translation of logistic regression coefficients to a composite risk score is a well-described, methodologically sound approach to the development of a clinical prediction instrument (12, 13).

In the end, critical barriers to progress in this field remain, especially when public health policy and the results of translational research do not intersect (14). HIV-testing recommendations must be rooted in rigorous, large-scale effectiveness and implementation research. Until such comparative implementation studies are undertaken, it remains unknown whether nontargeted HIV screening is the optimal method of identifying patients with HIV infection in health care settings or whether other approaches are more effective. We believe the DHRS will serve as an important line of these future investigations.

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THE AUTHORS REPLY

We appreciate the interest that Rosenberg et al. (1) expressed in the development of the Denver HIV Risk Score (DHRS) (2). This tool was not developed to supplant nontargeted human immunodeficiency virus (HIV) screening as recommended by the Centers for Disease Control and Prevention (3), but rather to provide a means of identifying patients at risk for HIV infection and to therefore inform testing when resources or practical constraints prevent adoption of current recommendations. We strongly believe that everyone should know their HIV serostatus, and national initiatives have proven vital in the effort to attain this goal (3, 4).

Identification of every HIV infection is a critically important public health ideal; however, we posit that many health care settings are unable to adopt a comprehensive nontargeted strategy. Because of this, we must consider alternative approaches that maximize efficiency when resources are limited. Our contention is that by embracing alternative approaches, more testing will occur as sites transition from providing no testing to providing at least some testing. The DHRS was not developed to identify all patients with HIV infection, and if this is the goal, it will fall short. If, on the other hand, the goal is to provide an empiric means to identify patients most at risk for HIV infection, then the DHRS may indeed be very useful.

Implementation of large-scale preventive interventions, like nontargeted HIV screening, in busy clinical environments has proven difficult, with success limited to a relatively small number of dedicated institutions (5). Since 2006, there have been 11 studies in which nontargeted HIV screening in emergency departments has been evaluated, and although all studies demonstrated that nontargeted screening had the ability to identify HIV-infected patients, the effectiveness of this approach can only be judged as modest (5, 6). Of over 330,000 eligible patients included in these studies, only approximately 20% were tested. We believe not testing 80% of eligible patients is a major limitation when patient identification is largely unselected.


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