



## Commentary

## Implementation of indicator condition guided HIV testing still lagging behind the evidence

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Bogers and colleagues report a disappointing but unsurprising low level of HIV testing in people presenting for care with HIV Indicator Conditions (IC) [1]. The authors highlight the ongoing challenges of high levels of undiagnosed HIV infection and late presentation with the attendant morbidity, mortality and transmission potential, and the effectiveness of an IC testing strategy to address these. Their paper presents a systematic review and meta-analysis of current implementation of IC-guided HIV testing. The analysis is based on 57 articles, including abstracts, short communications and correspondences, focusing on and reporting HIV testing rates and positivity for seven key conditions. The paper concludes that IC-guided HIV testing is insufficiently implemented with large variation in test ratios. Positive rates are reported as a secondary objective, underlining the effectiveness of the testing strategy in diagnosing HIV infection. The poor coverage observed represents significant levels of missed opportunities for diagnosis when IC-testing is not implemented as part of routine care in health care settings.

As highlighted in the paper and the cited papers, IC-guided HIV testing is feasible and effective and should be implemented more broadly, however implementation is still lagging behind the provided evidence for its effectiveness. The paper is an important addition to the evidence base for this strategy, and represents an important resource having the studies collated in one paper; it nicely highlights implementation gaps and underlines the effectiveness of the strategy.

The challenge remains to persuade healthcare professionals managing people presenting with indicator conditions to adopt this strategy. Many of these healthcare workers are not specialists in HIV or Infectious Diseases (ID) and may be unaware of the longstanding guidance for IC testing [2,3]. Furthermore as highlighted by Bogers et al., many national guidelines for the management of specific ICs do

not contain the recommendation to routinely test for HIV at presentation as part of the overall management, despite in many cases the IC HIV testing recommendation being included in national HIV testing guidelines [4]. This disparity needs to be systematically addressed and promoted. HIV and ID clinicians, only too aware of the multitude of missed opportunities, are, in many countries, championing an IC testing approach but are hampered by the lack of the recommendation's inclusion in specialty guidelines. They see the consequences of this omission many times in their practice when faced with the resultant avoidable morbidity and mortality in the individuals presenting late for treatment and care. We should also not overlook the associated higher healthcare costs and potential for continuing transmission resulting from these missed opportunities. The authors also highlight the effectiveness of an opt-out testing approach, to normalise HIV testing and avoid some of the barriers experienced by clinicians when considering offering an HIV test.

All together these structural and systemic factors present a significant obstacle to delivering universal IC-guided HIV testing. Raising awareness through education and training, inclusion of HIV testing recommendation in Specialty guidelines, simplifying the testing process (opt-out, inclusion of test in care bundles, patient information leaflets) and collaboration with local HIV and ID services to provide support for results governance and managing positive results would begin to address the current unacceptable situation.

Implementation research is another important lever, having the dual function of proving (again) local feasibility and effectiveness, as well as giving staff an opportunity to experience delivering IC-guided testing. Many staff report discovering, contrary to their initial opinion, implementation of routine HIV testing is neither too time-consuming nor unacceptable to patients with uptake rates close to 100% [5,6], thereby addressing some of the objections raised to its introduction or broader implementation. It is vital that the strategy becomes part of routine care and the impact of wider implementation should be reflected in surveillance data showing a shift in the site of diagnosis and decreasing numbers of people presenting late.

The findings of Bogers et al. are important as they demonstrate that despite being introduced over a decade ago this important testing strategy has been poorly or inconsistently implemented across healthcare settings in many countries. In order to improve adoption and spread, we need the strategy to be promoted by the relevant departmental clinical leaders (underpinned by inclusion in their

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specialty guidelines) with organisational support from hospital management teams, along with policy decision makers.

### Declaration of Competing Interest

The authors declare no conflicts of interest

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