

Expert testimony to inform NICE guideline development

Section A: Developer to complete

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Contact information:	
Guideline title:	Increasing Uptake of HIV testing in populations at increased risk
Guideline Committee:	PHAC A
Subject of expert testimony:	Targeted testing based on indicator conditions
Evidence gaps or uncertainties:	[Research questions or evidence uncertainties that the testimony should address are summarised below]
	<ol style="list-style-type: none"> 1. is targeted testing based on indicator conditions effective for identifying who to offer HIV tests to and finding un-diagnosed HIV compared to other approaches and why? 2. are any indicator conditions more important to use than others when taking this targeted approach to offering HIV testing?

Section B: Expert to complete

Summary testimony: [Please use the space below to summarise your testimony in 250–1000 words. Continue over page if necessary]

Indicator condition (IC) targeted HIV testing is an effective strategy to identify patients with undiagnosed HIV. It is cost effective, as ICs are defined by their 0.1% HIV prevalence (the cost effective threshold), and likely to also be affordable as it is opportunistic; the majority of IC patients will be undergoing venepuncture for the IC management and the HIV test therefore can be fully integrated into the patient care pathway with few additional direct or opportunity costs. Furthermore it should facilitate the normalisation of HIV testing and reduction of HIV stigma by removing the need for risk assessment by the clinician.

The prospective HIDES studies (over 13,000 participants) have provided the evidence base for recommending HIV testing for a number of ICs and of the strategy itself with an overall HIV prevalence in HIDES II of 2.5% [95%CI 2.2-2.8]. It demonstrated feasibility and acceptability, and the audit sub-study in HIDES II demonstrated HIV test offer uptake approaching 100% (IQR 98-100%).

Factors likely to influence how strategies are ranked could be categorised as being based on effectiveness, feasibility, acceptability, safety and cost; hence determined by outcomes such as HIV prevalence, median CD4 cell count at diagnosis, acceptability (to patients and staff), effective linkage to care, whether opportunistic or requiring new services, robustness of results governance and target groups affected.

The only prospective study directly comparing IC testing to another strategy (routine offer) demonstrated superiority. This primary care based Spanish study demonstrated a greater offer rate and HIV prevalence and less costs compared to a strategy of routine universal offer.

Based on prevalence the strategy clearly superior to IC targeted testing is through HIV partner notification; which is only relevant to testing those in a sexual partnership (past or current) with those diagnosed (typically recently) with HIV.

In relation to ranking the indicator conditions, this depends on which aspect 'importance' refers to; HIV prevalence, how common the IC is or which IC to focus on in terms of greatest transmission risk, earlier diagnosis, morbidity and mortality risk and any potential effect of undiagnosed HIV on the management of the presenting IC. The HIDES II study demonstrated an increased adjusted odds ratio of testing HIV positive for mononucleosis-like illness and leuco/thrombocytopenia when compared to pneumonia. Infectious mononucleosis-like illness as an IC represents possible seroconversion; a time of maximum infectivity and earliest possible realistic opportunity for diagnosis. Coupled with its high HIV prevalence when implementing an IC testing strategy makes this IC the most significant and effective in a number of important areas.

Confidential data has been redacted

There is a small amount of additional supporting UK evidence on the likely effectiveness of IC targeted testing; most are audits and retrospective case note reviews. There is one case control study assessing the predictive value of HIV IC in general practice which reported increased odds ratios for 12 IC with the highest being for bacterial pneumonia and oral candidiasis and symptoms of LOW and PUO. The seven remaining papers highlighted the increased prevalence of HIV in those with an IC, the low offer rate based on this strategy in the UK and the high levels of

missed opportunities for making a more timely diagnosis. The most frequently cited IC (excluding STIs) were pneumonia, fever, chronic diarrhoea, LOW, blood dyscrasias, lymphadenopathy, Hepatitis B&C, MTB and lymphoma.

National (NICE and BHIVA/BASHH/BIS) and European guidelines all promote IC guided HIV testing. However more than 20 NICE guidelines and CKS for specific ICs neither mention nor recommend HIV testing; this needs addressing.

Indicator condition targeted HIV testing is clinically and cost effective and should be implemented in all healthcare settings especially (but not exclusively, particularly when there is inadequate implementation of testing guidelines) where other strategies either do not apply (areas of high diagnosed sero-prevalence) or are difficult to implement (risk based targeted testing). Of all IC infectious mononucleosis-like illness is the most important in terms of many of the key factors described above. Public awareness needs to be raised to encourage people to present for testing as well as that of clinicians so they offer tests appropriately. There is a need for implementation tools and guidance such as that which is being developed by the EU funded OptTEST programme.

References to other work or publications to support your testimony' (if applicable):

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Lord E, Stockdale AJ, Rae C, Sperle I *et al.*, Evaluation of HIV Testing Recommendations in Specialty Guidelines for the Management of HIV Indicator Conditions. *European AIDS Clinical Society Conf* Barcelona October 2015. PE15/22

Menacho I, Sequeira E, Muns M, Barba O *et al.*, Comparison of two HIV testing strategies in primary care centres: indicator-condition-guided testing vs. testing of those with non-indicator conditions. *HIV Med* 2013; 14 Suppl 3:33-7

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guidelines at a district general hospital in an area of high HIVseroprevalence. *J R Coll Physicians Edinb* 2011; 41(1):9-12

Peck L, Ferenczi E, Burns F, Cosgrove C, Brown M. Barriers to targeted HIV testing on an acute admissions unit: evaluation of the UK guideline. *QJM* 2010; 103(3):147-51

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Read P, Armstrong-James D, Tong CY, Fox J. Missed opportunities for HIV testing-- a costly oversight. *QJM* 2011; 104(5):421-4

Sullivan AK, Raben D, Reekie J, Rayment M *et al.*, Feasibility and effectiveness of indicator condition-guided testing for HIV: results from HIDES I (HIV indicator diseases across Europe study). *PLoS One* 2013;8(1):e52845

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