

Implementation of an HIV assessment tool leads to significant improvements in outpatient care

TO THE EDITOR: Adherence to clinical guidelines for HIV-specific management in Australia is relatively good in international terms, but the screening for and management of comorbid conditions and risk factors is far less comprehensive.¹⁻³

We assessed the utility of an HIV annual checklist (HAC; see Appendix; online at mja.com.au) for improving clinical management of outpatient HIV-positive patients at a sexual health and HIV clinic in Queensland. Our study used an uncontrolled pre-post design, with auditing of all 180 patients who attended the clinic in 2009 and, after introduction of the HAC in 2010, all 193 patients who attended in 2011. Changes in proportion, confidence intervals and *P* values were calculated using MedCalc for Windows, version 9.5.0.0 (MedCalc Software). The Prince Charles Hospital Human Research

Ethics Committee provided ethics approval.

We observed significant improvements in the proportion of patients receiving appropriate intervention or screening across both HIV-specific and non-HIV-specific care domains following the introduction of the HAC (Box). Further, the proportion of patients who achieved Australian guideline-concordant treatment targets in the treatment of hypertension improved significantly. Unexpectedly, we found that the proportion of patients receiving an annual fasting blood sugar level test decreased. In 2010, blood sugar level testing was no longer routinely performed on all electrolyte requests; clinicians were not aware of this change. A detectable HIV viral load was observed at any time of the year in 32% of patients receiving antiretroviral therapy in 2009 compared with 27% in 2011. This included patients who were initiating antiretroviral therapy and would be expected to have a detectable viral load; therefore, in

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most cases, it does not represent failure to achieve viral suppression.

Our study was limited by the uncontrolled pre-post design, which may have overestimated intervention effects.⁴ However, the overwhelmingly positive change in evaluation, screening and management practices observed over the study period merits further evaluation of the HAC in other clinical settings, with a more robust study design. Demonstration of a sustained improvement in clinical practice is also important.

HIV medicine is an area that combines complex drug regimens and comorbidities with a rapidly changing body of evidence around the management of HIV and associated health risks. Synthesising information into practical, clinically relevant assessment tools takes a significant amount of time and skill, and may be difficult for an individual clinician to achieve. Clinical assessment tools can provide a vehicle through which evidence can be systematically applied to care.⁵ The HAC has broad applicability to HIV clinics throughout Australia and internationally, and has now been distributed to all public HIV clinics in Queensland.

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Audit results in 2009 and in 2011, after introduction of the HIV annual checklist

Variable	2009*	2011*	Change (95% CI)	P
Demographics				
Total no. of patients	180	193		
Mean age, years	50	50		
Men	160 (89%)	168 (87%)		
Mean no. of CD4+ T cells × 10 ⁶ /L	520	580		
HIV-specific care domain				
Receiving ART	158 (88%)	182 (94%)	6.5% (0.7%, 12.3%)	0.03
Detectable viral load at any time in the year on ART	50 (32% [†])	49 (27% [†])	- 4.7% (- 14.9%, 5.3%)	0.33
Side effects of ART documented	70 (44% [†])	156 (86% [†])	41.4% (32.1%, 50.1%)	< 0.0001
Latent tuberculosis investigation (ever performed)	25 (14%)	161 (83%)	69.5% (62.2%, 76.8%)	< 0.0001
Annual sexual health screen	43 (24%)	112 (58%)	34.1% (24.8%, 43.5%)	< 0.0001
Annual influenza vaccination	21 (12%)	92 (48%)	36.0% (27.5%, 44.5%)	< 0.0001
Non-HIV-specific care domain				
Non-HIV medication recorded	77 (43%)	128 (66%)	23.5% (13.7%, 33.3%)	< 0.0001
CVD risk factor screen				
Blood pressure documented	116 (64%)	160 (83%)	18.5% (9.7%, 27.2%)	0.0001
Cigarette smoking documented	143 (79%)	193 (100%)	20.6% (14.7%, 26.5%)	0.0012
Lipids	125 (69%)	152 (79%)	9.3% (0.4%, 18.2%)	0.04
CVD risk calculated	2 (1%)	75 (39%)	37.8% (30.7%, 44.8%)	< 0.0001
CVD risk factor treatment target reached				
Blood pressure	2 (25% [‡])	15 (83% [‡])	58.3% (23.7%, 92.9%)	0.008
Lipids	4 (44% [§])	12 (80% ^{**})	35.6% (- 2.7%, 73.8%)	0.08
Fasting blood sugar level test	177 (98%)	163 (84%)	- 13.9% (- 19.3%, - 8.4%)	0.0001
Renal screen	96 (53%)	131 (68%)	14.6% (5.0%, 24.1%)	0.004

ART = antiretroviral therapy. CVD = cardiovascular disease. * Number and proportion of patients unless otherwise specified.

[†] Of the patients who received ART. [‡] Of 8 patients with hypertension. [§] Of 18 patients with hypertension. [¶] Of 9 patients with dyslipidaemia. ^{**} Of 15 patients with dyslipidaemia.

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