HIV testing in clinical indicator diseases in outpatient settings: offer and uptake rates and impact of educational and active interventions

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Background

Over 50% of patients with late HIV diagnosis have accessed healthcare in the prior 2-3 years[1].

HIV associated clinical indicator diseases (CID) seen in outpatient clinics (OPD) are proposed as an opportunity for earlier diagnosis in multiple testing guidelines[2].

Expanded testing pilots show that whilst testing is acceptable to patients, offer rate by clinicians is low[3].

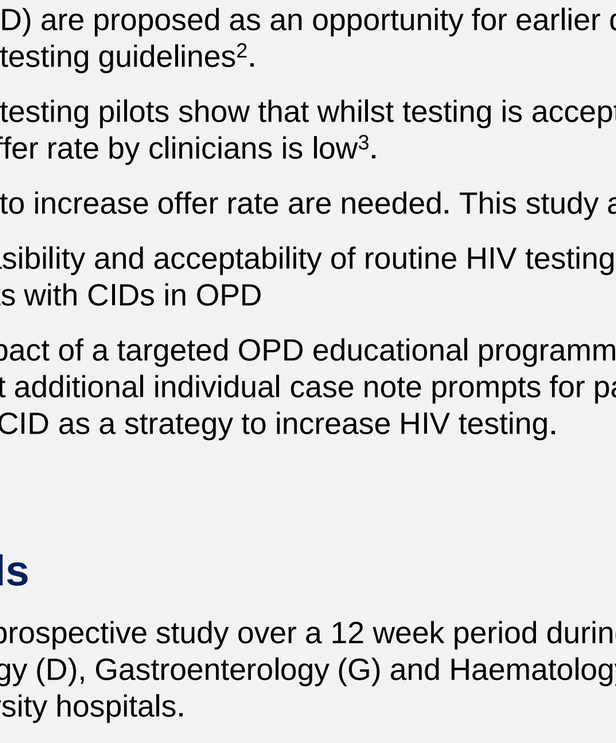
Strategies to increase offer rate are needed. This study assessed :

1. the feasibility and acceptability of routine HIV testing of patients with CIDs in OPD
2. the impact of a targeted OPD educational programme with and without additional individual case note prompts for patients with a CID as a strategy to increase HIV testing.

Methods

A 2 stage prospective study over a 12 week period during 2012 in Dermatology (D), Gastroenterology (G) and Haematology (H) OPD at 2 University hospitals.

Clinicians received an education programme about significance of late HIV diagnosis, highlighting CID relevant to their field (as per national testing guidelines).



UK National Guidelines for HIV Testing 2008

Table 1: Clinical indicator diseases for adult HIV infection

	AIDS-defining conditions	Other conditions where HIV testing should be offered
Respiratory	Tuberculosis	Bacterial pneumonia
	Pneumocystis	Aspergillosis
Neurology	Cerebral toxoplasmosis	Aseptic meningitis/encephalitis
	Primary cerebral lymphoma	Cerebral abscess
	Cryptococcal meningitis	Space occupying lesion of unknown cause
	Progressive multifocal leucoencephalopathy	Guillain–Barré syndrome
		Transverse myelitis
		Peripheral neuropathy
		Dementia
		Leucoencephalopathy
Dermatology	Kaposi's sarcoma	Severe or recalcitrant seborrhoeic dermatitis
		Severe or recalcitrant psoriasis
		Multidermatomal or recurrent herpes zoster
Gastroenterology	Persistent cryptosporidiosis	Oral candidiasis
		Oral hairy leukoplakia
		Chronic diarrhoea of unknown cause
		Weight loss of unknown cause
		Salmonella, shigella or campylobacter
		Hepatitis B infection
		Hepatitis C infection
Oncology	Non-Hodgkin's lymphoma	Anal cancer or anal intraepithelial dysplasia
		Lung cancer
		Seminoma
		Head and neck cancer
		Hodgkin's lymphoma
		Castleman's disease
Gynaecology	Cervical cancer	Vaginal intraepithelial neoplasia
		Cervical intraepithelial neoplasia Grade 2 or above
Haematology		Any unexplained blood dyscrasia including: • thrombocytopenia • neutropenia • lymphopenia

For D OPD, stage 1 (6 weeks) consisted of pre-identification of CID and insertion of a prompt to offer HIV testing. Stage 2 (6 weeks) relied on clinician identification of a CID only (no prompt). For G and H OPD, stages were reversed.

HIV TESTING IN OUTPATIENTS

HIV CLINICAL INDICATOR DISEASE PRESENT

IT IS RECOMMENDED THAT YOU **OFFER** THIS PATIENT AN **HIV TEST**

TO BE COMPLETED BY CONSULTING CLINCIAN (CIRCLE)

HIV TEST OFFERED: YES NO

HIV TEST PERFORMED: YES NO

IF NO, REASON FOR NOT TESTING:

- ☐ DID NOT WANT TO TEST FOR HIV
- ☐ DID NOT WANT TO GIVE BLOOD SAMPLE
- ☐ DID NOT WANT TO GIVE SALIVA SWAB
- ☐ KNOWN HIV POSITIVE
- ☐ RECENT HIV TEST
- ☐ NO CAPACITY
- ☐ OTHER (STATE):…… ….

Example of case note prompt

Clinic specialty	Educational program	1st 6 week stage	2nd 6 week stage
Gastroenterology	Yes	No prompt	CID prompt
Haematology	Yes	No prompt	CID prompt
Dermatology	Yes	CID prompt	No prompt

The option of testing using serum or oral sampling was given.

A parallel seroprevalence study of unlinked residual serum samples from the 3 OPD was performed.

Test offer and uptake rate was compared with/without prompts and across age, gender and ethnic groups. Associations were tested using Chi square or Fisher's exact tests.

Results

4191 patients were eligible

OPD clinic		Dermatology	Gastroenterology	Haematology	Total
Total	N	2132	1108	951	4191
HIV CID present	N	189	203	216	608
	%	8.9	18.3	22.7	**14.5**

Diagnosed HIV prevalence in eligible patients with CIDs: 4.1% (25 patients)
- 107 did not attend appointment
- 8 incomplete data

These patients were excluded from the final analysis

Overall Prevalence of HIV CID: 14.5%

HIV CIDs were more prevalent in haematology than dermatology or gastroenterology p<0.001

468 subjects analysed

Demographics

	Total	468	
Gender	Male	245	52.4%
	Female	221	47.2%
	Unknown	2	0.4%
Ethnicity	White British/Irish	299	63.9%
	Black African	5	1.1%
	Asian	11	2.4%
	Other	51	10.9%
	Not stated	102	21.8%

Median age was 51 years (IQR 38-66)

Anonymous seroprevalence study

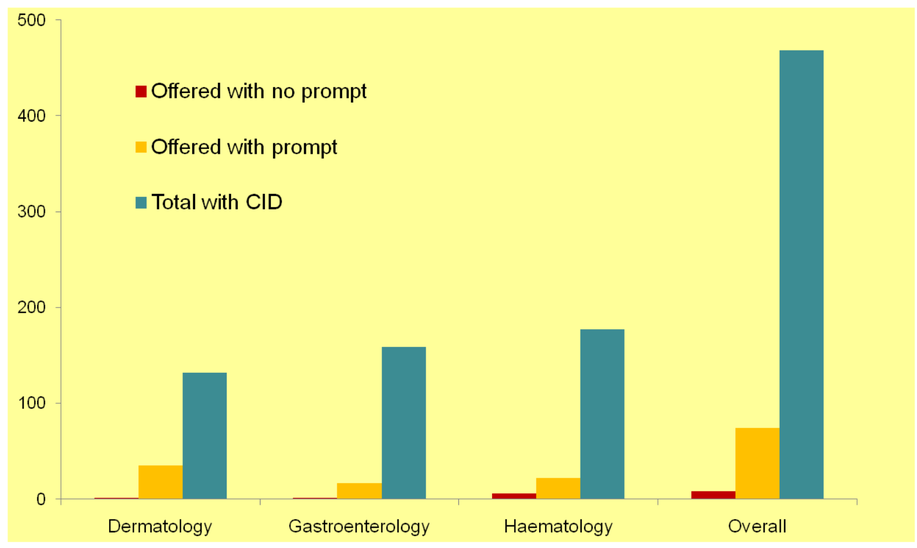
No new cases of HIV infection were identified

	N %
Total number of patients	378
OPD clinic Dermatology Gastroenterology Haematology	 32 8.2% 199 52.6% 148 39.2%
CID present	66 17.5%
Gender Male Female Unknown	 182 48.1% 195 51% 1 0.3%
Ethnicity White British/Irish Black African Asian Other Not stated	 254 67.2% 3 0.8% 6 1.6% 24 6.3% 91 24.1%
Age <60 years ≥60 years Unknown	 219 57.9% 156 41.3% 2 0.5%

HIV test offer rate

		Offered N %	P-value
Gender	Male	44 18%	0.888
	Female	38 17%	
Ethnicity	White British	50 17%	0.506
	Black African	0 0%	
	Others	30 19%	
Age	<60yrs	59 19%	0.189
	60+	23 14%	
OPD	Derm	36 27%	0.001
	Gastro	18 11%	
	Haem	28 16%	

There was no difference in offer rate by age, gender or ethnic group.



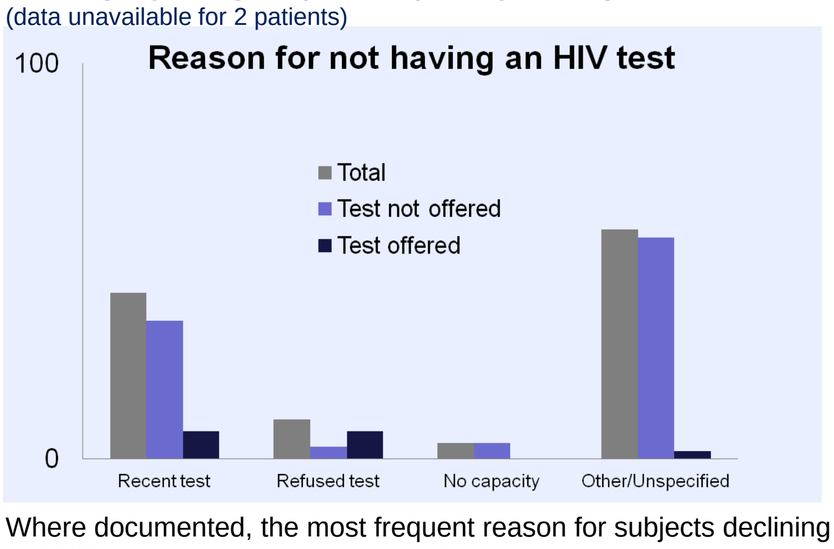
Test offer rate was significantly higher during the prompt stage (74/216, 34%) vs education alone (8/252, 3.1%); p<0.001 for total population and for each of D, G and H.

Overall test offer rate: 17.5% (82/468)

Test uptake

Uptake was 61/80 (76.3%) and similar across OPD, demographic group, and prompt usage

(data unavailable for 2 patients)



Where documented, the most frequent reason for subjects declining an HIV test, and for clinicians not offering the test was that a recent test had been carried out. Other clinician reasons stated included 'not indicated' or 'inappropriate' for testing.

Method of HIV testing

	Derm	Gastro	Haem	Total %
Saliva	24	0	4	28 46%
Serum	5	10	18	33 54%
Total	29	10	22	61 100%

Only the dermatology OPD opted to routinely offer saliva testing. This was due to infrequent blood tests and distance to phlebotomy (different site) in their cohort.

Gastroenterology and Haematology OPD routinely offered serum testing.

Discussion

Test offer rates by OPD clinicians is low despite the high rate of HIV infection in OPD attendees with CID, national recommendation for testing in this setting and targeted educational intervention.

Novel strategies to prevent missed diagnosis are urgently needed.

Individual case note prompts significantly increase test offer rates, and this effect is lost if the strategy is withdrawn.

References
1. Roberts J, Ottewill M, Alifrangis C, Cressey A, Churchill D, Fisher M Diagnosing HIV: Better late than never…but better never late. HIV Med 2006; 7(Sup.1):18 (abstract P30)
2. British HIV Association, British Association for Sexual Health and HIV, British Infection Society. UK National Guidelines for HIV Testing. 2008.
3. Time to Test for HIV: Expanding HIV testing in healthcare and community settings in England, Health Protection Agency, 2011.

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