

HIV testing in acute general medicine admissions must be universally offered to reduce undiagnosed HIV

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Background



- The recommendation is a routine offer of HIV testing in acute general medical (AGM) admissions in areas of high HIV prevalence (2/1000)
- SOPHID shows the prevalence of HIV in Brighton & Hove PCT is 7.38/1,000

Methods – Named Test

- Routine – opt out testing
- Aged 16 – 79
- Admitted via Acute General Medicine
- Capacity to consent
- Test requested by admitting clinical team

The image shows a medical form with the following sections:

- Acute Medical & Emergency Medicine**
- Demographics**: Includes fields for Name, Sex, Age, and Date of Birth.
- Investigations**: Includes fields for Urea, Creatinine, and Address.
- HIV Screening**: A section with a table for 'Patient's consent to screening' with columns for 'YES' and 'NO'. This section is circled in red.
- Other HIV Related/Consented work used**: Includes a field for 'Consent HIV serology sample'.




Methods – Anonymous Test

- Ethics Approval granted July 2009
- All acute admissions
 - General Medicine
 - Surgery
 - Orthopaedic
 - Obstetrics & gynaecology
- Aged 16 – 79
- Data collected
 - Gender
 - Age group
 - Speciality
 - Named test
- Residual sample used

The document is a pilot project to evaluate UK National HIV Testing Guidelines for HIV (2008). It includes the following information:

- Logos:** DH Department of Health, Brighton and Sussex University Hospitals, MASU.
- Title:** HIV Screening in acute admissions via A&E and MASU at Royal Sussex County Hospital site only.
- Objective:** A pilot project to evaluate UK National HIV Testing Guidelines for HIV (2008).
- Guidelines:** These guidelines are intended to facilitate an increase in HIV testing in all healthcare settings as recommended by the UK's Chief Medical Officers and Chief Nursing Officers in order to reduce the proportion of individuals with undiagnosed HIV infection, with the aim of benefiting both individual and public health.
- Scope:** All acute admissions aged 16-79 (not elderly care) have blood taken in A&E/MASU.
- Implementation:**
 - All acute medical admissions will be offered an HIV Test by Doctor on admission.
 - All acute admissions (including medical) will be entered into anonymous seroprevalence study (ethics approved July 2009).
- For further information:** Dr Steve Sanders, Consultant Emergency Physician and Clinical Lead for Acute Medicine; Dr Martin Patten, Consultant Physician HIV/AIDS; Lisa Hoyle, Project Manager on 01323 478496.
- References:**
 - UK National Guidelines for HIV testing 2008: www.hiv.org.uk/20081.asp
 - HIV in acute HIV seroprevalence: <http://www.medrxiv.org/lookup/suppl/doi:10.1101/2009.07.20.091444/p1>

Outcome Measures

- Feasibility 
 - Rate of HIV test offer
- Acceptability 
 - Rate of HIV test uptake
- Effectiveness 
 - Number and prevalence of newly diagnosed infections
 - Proportion of undiagnosed infections tested
- Comparison to other methods
- Cost-effectiveness
- Impact on late diagnosis
- Public health impact

Demographics – Named Test

	N	(%)		N	(%)
Total number of patients	3913	(100.0)	Clinical Indicators for HIV		
Sex			Present	735	(18.8)
Male	2106	(53.8)	Absent	3154	(80.6)
Female	1801	(46.0)	Not known	24	(0.6)
Not known	12	(0.2)	Country of Origin		
Age			UK	3120	(79.7)
16-19	87	(2.2)	Ireland	41	(1.0)
20-24	163	(4.2)	Africa	28	(0.7)
25-29	153	(3.9)	Asia	58	(1.5)
30-34	148	(3.8)	Not known	666	(17.0)
35-44	464	(11.9)	Sexuality		
45-54	595	(15.2)	Heterosexual	41	(1.0)
55-64	722	(18.5)	Homo/bisexual	18	(0.5)
65-74	1016	(26.0)	Not recorded	3854	(98.5)
75-79	547	(14.0)			
Less than 60	1942	(49.6)			
More than 60	1953	(49.9)			
Not known	18	(0.5)			

Overall Results – Named

	N	(%)
Offered test	1553	(39.7)
Reason not offered (% of not offered)		
Known HIV+	47	(2.0)
No capacity	129	(5.4)
Recent HIV test	4	(0.2)
<i>Not documented</i>	2180	(92.4)
Accepted test	1413	(91.0)
New diagnosis	2	

2 tested positive – Named Test

- | | |
|---------------------------------|-------------------------------|
| 1. Female (43yrs old) | 2. Male (40 yrs old) |
| • African origin | • African origin |
| • CD4 count 304 | • CD4 count 3 |
| • Viral load 98,443 | • Viral load 126,536 |
| • Presented with
? swine flu | • Presented with
? malaria |

Partner tested positive

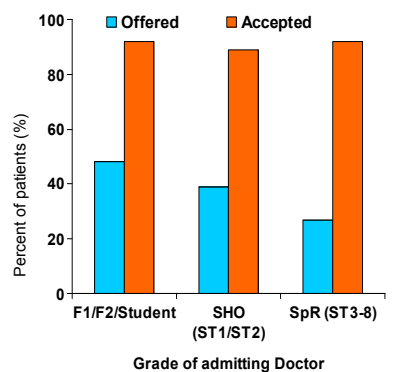
Partner tested negative

Factors Associated with Offer (multivariate OR) - Named Test

Factor	Test <i>offered</i>	Test <i>accepted</i>
Male	0.94 (0.83, 1.08)	1.42 (0.99, 2.03)
Age 60+	0.63 (0.55, 0.72)	1.35 (0.93, 1.95)
Clinical indicator present	1.90 (1.61, 2.24)	1.78 (1.11, 2.83)
Country of Origin (UK)*	1.0	1.0
Ireland	0.98 (0.51, 1.89)	0.40 (0.11, 1.46)
Africa	1.79 (0.82, 3.9)	1.54 (0.20, 11.92)
Asia	1.17 (0.68, 2.00)	0.86 (0.25, 2.94)
Not known	1.07 (0.90, 1.27)	1.21 (0.74, 1.97)

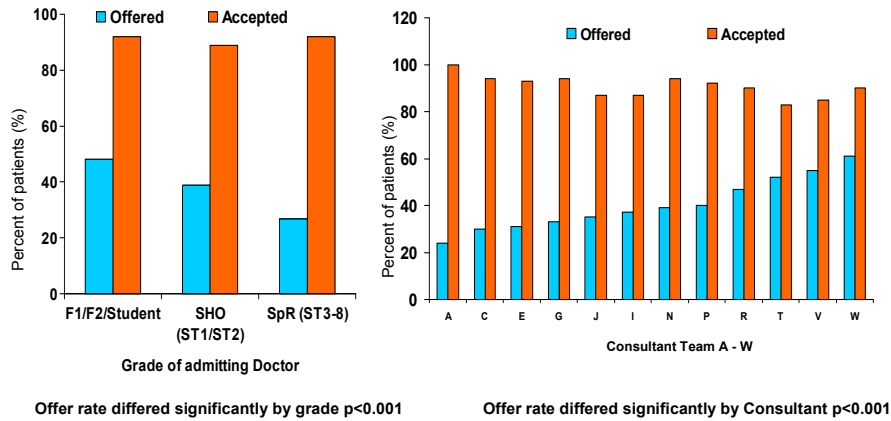
* Reference category

Offer and Acceptance by Admitting Doctor



Offer rate differed significantly by grade $p < 0.001$

Offer and Acceptance by Admitting Doctor



Demographics – Anonymous Test

	N	(%)		N	(%)
Total number of patients	6300	(100.0)	Sexuality		
Gender			Homo/bisexual	17	(0.3)
Male	3151	(50.0)	Heterosexual	63	(1.0)
Female	3134	(49.8)	Not recorded	6220	(98.7)
Not known	15	(0.2)	Country of Origin		
Age			White British	4536	(72.0)
16-19	160	(2.5)	UK	438	(7.0)
20-24	415	(6.6)	White other	197	(3.1)
25-29	347	(5.5)	White Irish	58	(0.9)
30-34	345	(5.5)	Black African	36	(0.6)
35-44	884	(14.0)	Black other	25	(0.4)
45-54	922	(14.6)	Asian	98	(1.6)
55-64	1064	(16.9)	Other	110	(1.7)
65-74	1322	(21.0)	Not known	802	(12.7)
75-79	832	(13.2)	Positive test	72	(1.1)
Less than 60	3556	(56.4)			
More than 60	2735	(43.4)			
Not known	9	(0.1)			

Test and results by speciality -Anonymous

Specialty	Number of samples	Number positive (rate/1000)	Number known positive	Number unknown positive (rate/1000)
AGM	3872			
Surgery	1564			
Ortho	542			
Obs & Gynae	310			
Not recorded	12			
Total	6300			

Test and results by speciality -Anonymous

Specialty	Number	Number positive (rate/1000)	Number known positive	Number unknown positive (rate/1000)
AGM	3872	52 (13/1000)		
Surgery	1564	12 (8/1000)		
Ortho	542	7 (13/1000)		
Obs & Gynae	310	0 (0/1000)		
Not recorded	12	1 (0/1000)		
Total	6300	72 (11/1000)		

Test and results by speciality -Anonymous

Specialty	Number	Number positive (rate/1000)	Number known positive	Number unknown positive (rate/1000)
AGM	3872	52 (13/1000)	46	
Surgery	1564	12 (8/1000)	8	
Ortho	542	7 (13/1000)	3	
Obs & Gynae	310	0 (0/1000)	0	
Not recorded	12	1 (0/1000)	0	
Total	6300	72 (11/1000)	57	

Test and results by speciality -Anonymous

Specialty	Number	Number positive (rate/1000)	Number known positive	Number unknown positive (rate/1000)
AGM	3872	52 (13/1000)	46	6 (1.5/1000)
Surgery	1564	12 (8/1000)	8	4 (2.6/1000)
Ortho	542	7 (13/1000)	3	4 (7.4/1000)
Obs & Gynae	310	0 (0/1000)	0	0 (0/1000)
Not recorded	12	1 (0/1000)	0	1 (0/1000)
Total	6300	72 (11/1000)	57	15 (2.4/1000)

Characteristics of 4 unknown positives in acute general medicine: All male, Age range 33-67, median 50.5, Country of origin, 3 White British, 1 unknown; Sexuality all unknown

Discussion

- In Acute General Medicine
 - Routine testing in Acute General Medicine is acceptable to patients
 - Although supposedly opt-out testing, targeting by clinicians is apparent
 - Junior grades of medic most likely to follow opt-out strategy
- In the Anonymous Seroprevalence Study
 - High rates of undiagnosed infection ($>1/1000$) in all hospital admissions, not only Acute General Medicine
 - Many “missed diagnoses” in Acute General Medicine were in non-targeted groups

Recommendations

- HIV testing guidelines need to be broadened to increase testing to all acute settings.
- Need to truly achieve routine opt-out testing.

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