

13<sup>th</sup> Annual Conference of the  
National HIV Nurses Association (NHVNA)

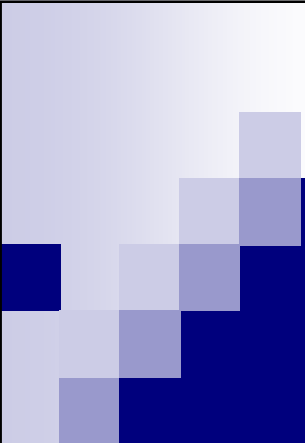


National HIV Nurses Association

**Dr Michael Rayment**  
Chelsea and Westminster Hospital, London

**&**  
**Susan Ogden**  
Chelsea and Westminster Hospital, London

*16-17 June 2011, Arena and Convention Centre, Liverpool*



**HIV Testing in Non-traditional  
Settings:  
*Current Evidence***

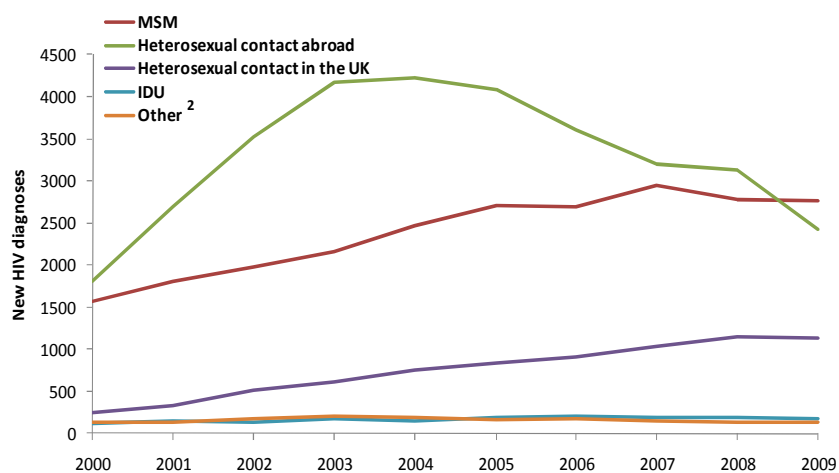
Michael Rayment, SpR HIV/GUM  
& Susan Ogden, Nurse Colposcopist  
Chelsea and Westminster Hospital

13<sup>th</sup> Annual Conference of NHVNA  
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## Current HIV Epidemiology in the UK

- 86 500 adults living with HIV in UK to end of 2009 (65 319 accessing care)
- 6630 new diagnoses in 2009
- UK-wide *diagnosed* prevalence 0.13% (SOPHID)
- London *diagnosed* prevalence 0.47%
  
- **26% individuals unaware of their HIV serostatus**
  
- 35% diagnosed “late” (CD4<200) – 60% if consider “late” CD4<350
- 17% had accessed healthcare with symptoms in year preceding diagnosis (BHIVA “New HIV Diagnoses Audit” 2005)
- 62% of new AIDS diagnoses had accessed secondary care in year preceding AIDS diagnosis in Brighton study (2006)
- 76.4% had seen GP in year prior to diagnosis in Black African cohort study in London (SONHIA 2008)

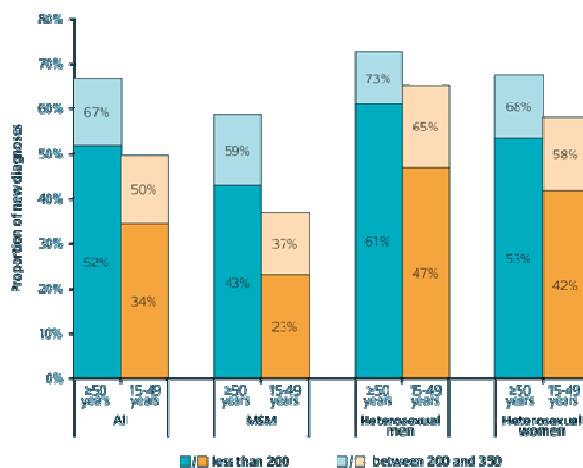
## Adjusted number of new HIV diagnoses by prevention group, UK, 2000 - 2009



<sup>1</sup> Data are adjusted for missing route of infection

<sup>2</sup> Includes Mother to child transmission and blood product recipient

### Estimated late<sup>1</sup> and very late<sup>2</sup> diagnosis of HIV infection by prevention group, UK: 2009



<sup>1</sup> Diagnosed with a CD4 cell count <350 per mm<sup>3</sup> (within 91 days of diagnosis)  
<sup>2</sup> Diagnosed with a CD4 cell count <200 per mm<sup>3</sup> (within 91 days of diagnosis)

### Why diagnose the undiagnosed?

- Higher rates of transmission
  - In US the 25% undiagnosed fraction cause >50% incident infections
- Increased complications
  - Mortality/morbidity and AIDS-defining illnesses relating to CD4 at diagnosis
  - Late diagnosis accounts for 35% HIV-related deaths ("BHIVA Mortality Audit" 2005)
- Increased cost to health service
  - 2 x increase direct costs in first year

## CDC US Recommendations - 2006



Revised Recommendations for HIV Testing  
of Adults, Adolescents, and Pregnant Women  
in Health-Care Settings

INSIDE: Continuing Education Examination

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION

### Recommendations:

To offer HIV testing to all patients attending for care aged 13-65 years in a broad range of health care settings (ED, primary care, drug rehabilitation)

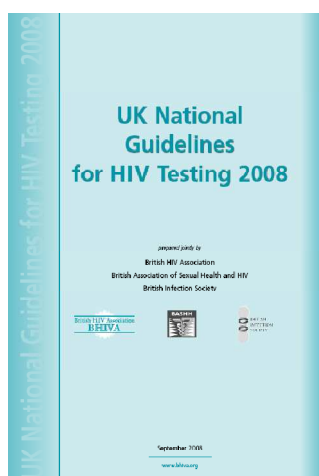
Annual tests offered to those at incident risk

No need for formal counselling unless requested by patient

Individual States have implemented the Guidelines to varying degrees

CDC reports increased number of new diagnoses, and mean CD4 at diagnosis in some US States has risen

## BHIVA/BASHH/BIS UK National Guidelines for HIV Testing, September 2008

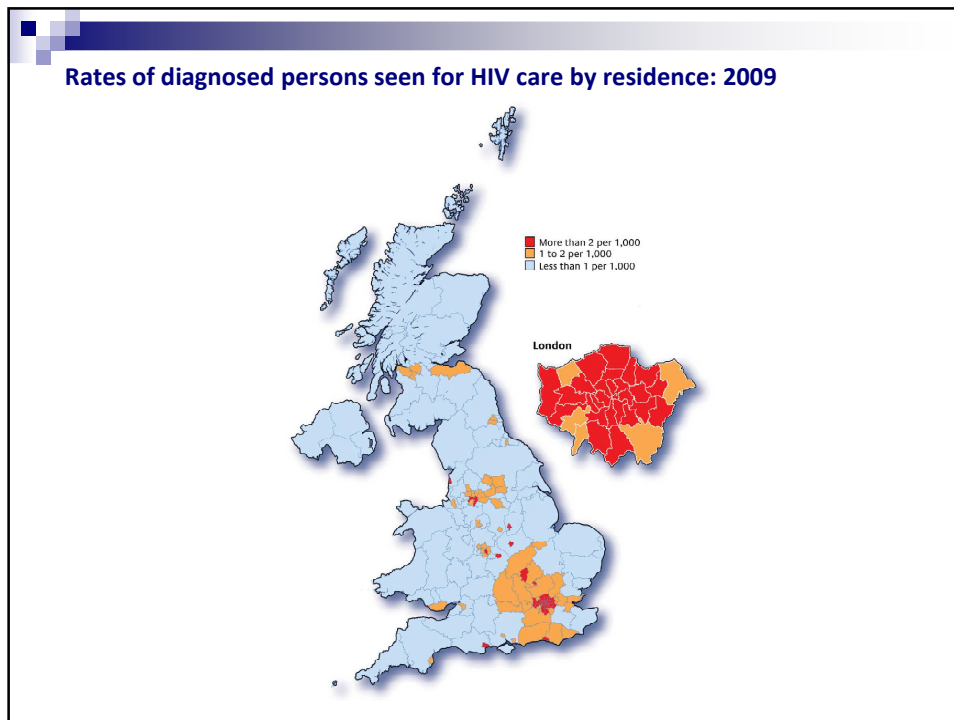


### Recommendations:

- (1) Targeted screening: risk groups
- (2) Targeted screening: indicator diseases
- (3) Routine screening in general medical settings when local diagnosed HIV prevalence >0.2%

NICE Guidance – March 2011

Reiterates much of BHIVA Guidance

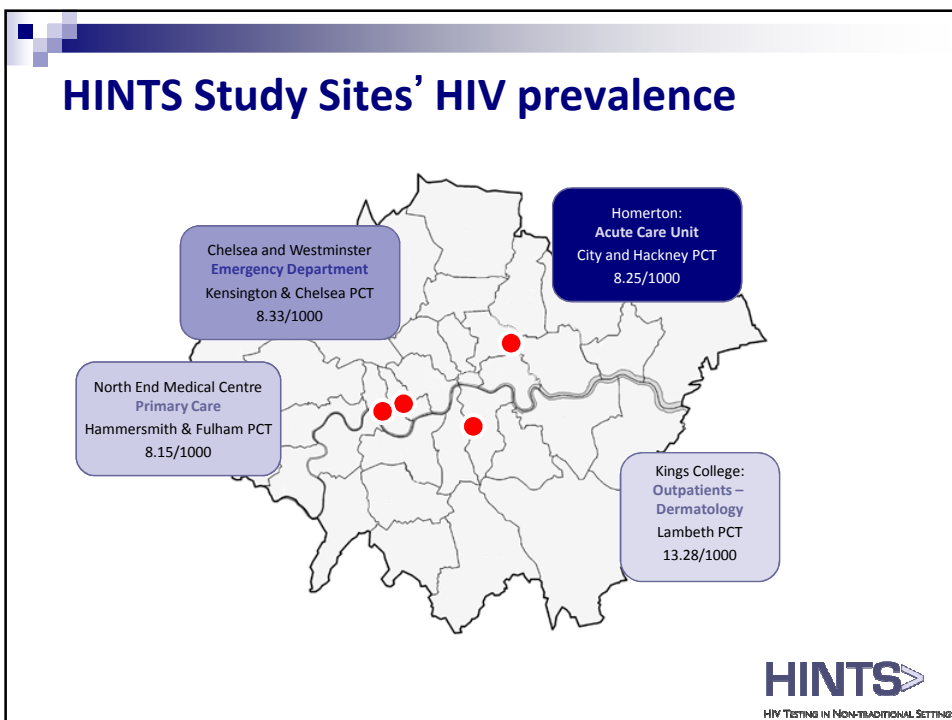


### Department of Health Pilot Projects

- **Aim to investigate the feasibility, acceptability and effectiveness of HIV testing in non-traditional settings**
- **8 projects funded in early 2009 in 3 settings:**
  - 3 hospital projects
  - 2 primary care (GP)
  - 3 community testing

### Hospital Pilot Projects

<u>Leicester</u>	<u>London</u>	<u>Brighton</u>
<b>Setting:</b> <ul style="list-style-type: none"> <li>Acute Care Unit (ACU)</li> </ul>	<b>Setting:</b> <ul style="list-style-type: none"> <li>ACU (Homerton)</li> <li>Out-patient (Kings)</li> <li>A&amp;E (Chelsea &amp; West)</li> </ul>	<b>Setting:</b> <ul style="list-style-type: none"> <li>Medical Admissions</li> </ul>
<b>Method:</b> <ul style="list-style-type: none"> <li>Routine offer</li> <li>16-59 year olds</li> <li>Serological test</li> </ul>	<b>Method:</b> <ul style="list-style-type: none"> <li>Routine offer</li> <li>16-65 year olds</li> <li>Serological in ACU and saliva elsewhere</li> <li>Staff and patients attitudes</li> </ul>	<b>Method:</b> <ul style="list-style-type: none"> <li>Routine offer</li> <li>16-79 year olds</li> <li>Serological test</li> <li>Unlinked anonymous prevalence survey</li> </ul>
<b>Duration:</b> <ul style="list-style-type: none"> <li>1 year</li> </ul>	<b>Duration:</b> <ul style="list-style-type: none"> <li>3 months per location</li> </ul>	<b>Duration:</b> <ul style="list-style-type: none"> <li>6 months</li> </ul>



## Methods

- Mixed methodology, multi-site study
  - quantitative data including HIV testing behaviour, patient demographics and responses from patient and staff questionnaires
  - qualitative data from interviews and focus groups
  
- All 16-65 year olds; routine offer of HIV test
  - Oral fluid            ED, OPD, PC
  - Serology            ACU



## Test offer and uptake results

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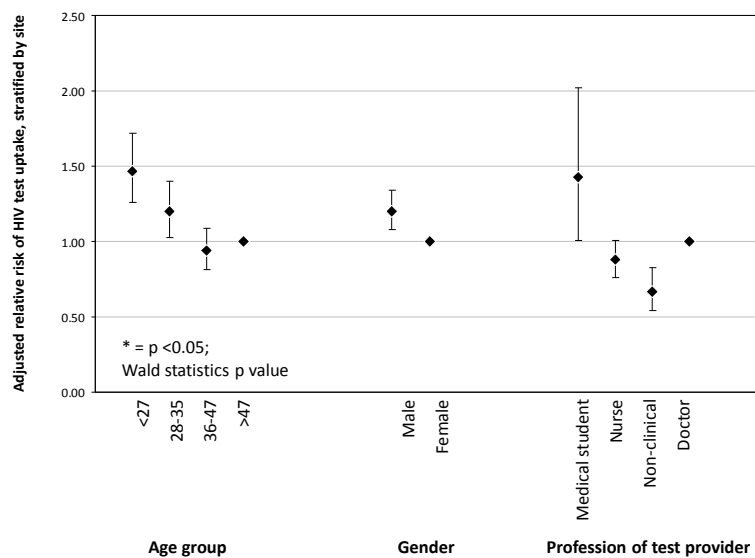
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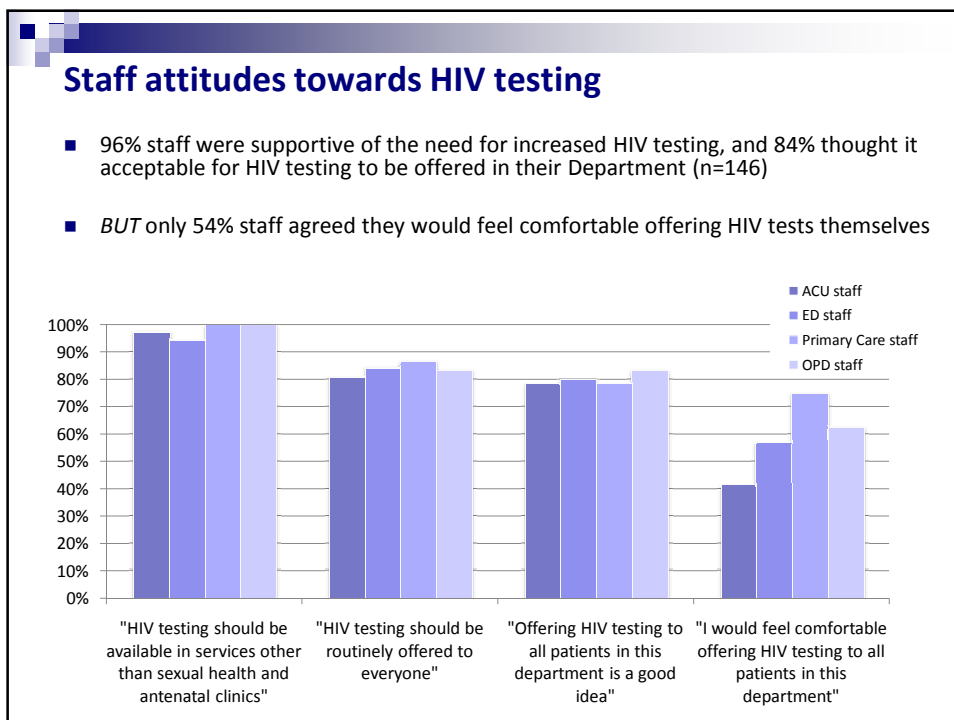
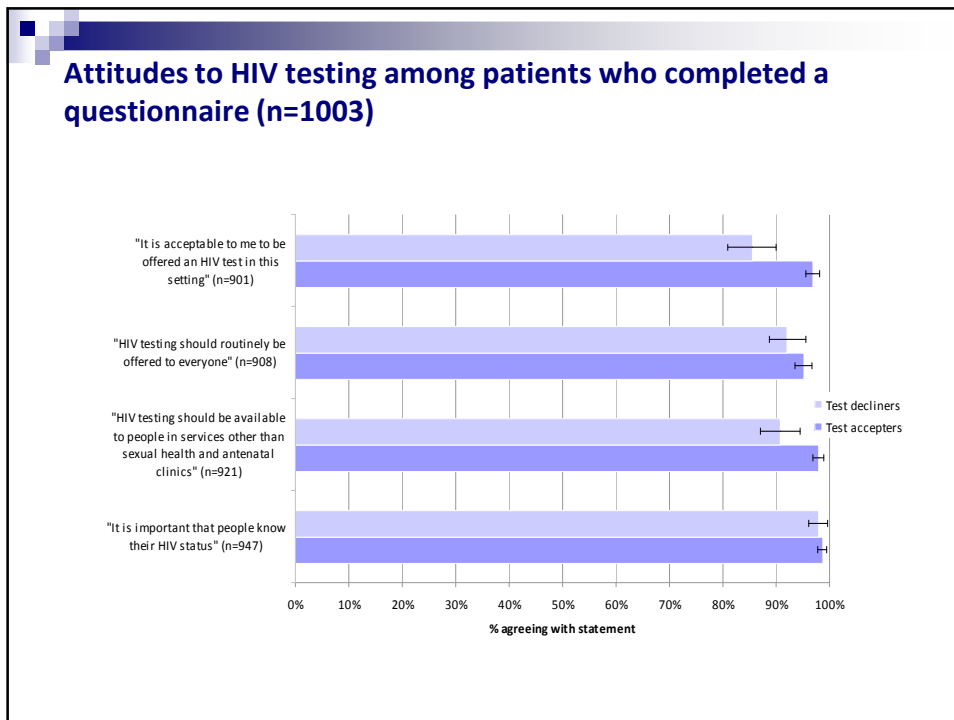
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Newly diagnosed individuals; Prevalence (per 1000) [95% CI]	8 (1.9 [0.6 – 3.2])	0 – 10.1
Proportion transferred to care	100%	

Two further individuals diagnosed by partner notification



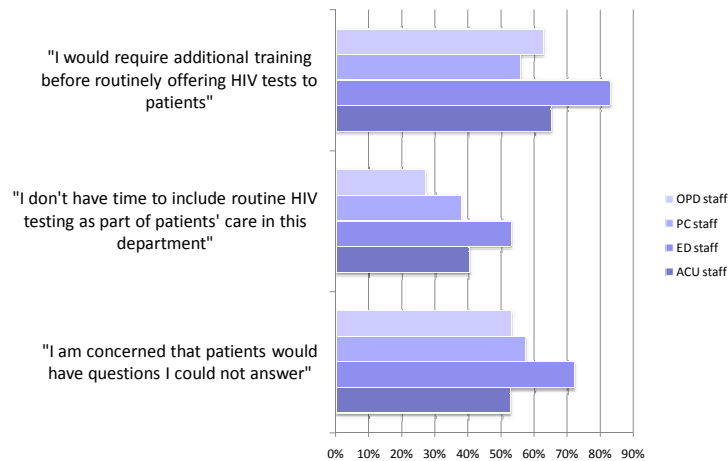
### Multivariable Analysis of Factors associated with HIV test uptake – total population offered tests (n=6194)





## Staff Attitudes towards HIV Testing

- Most staff felt they would require further training to offer HIV tests, in addition to identifying operational barriers in many settings

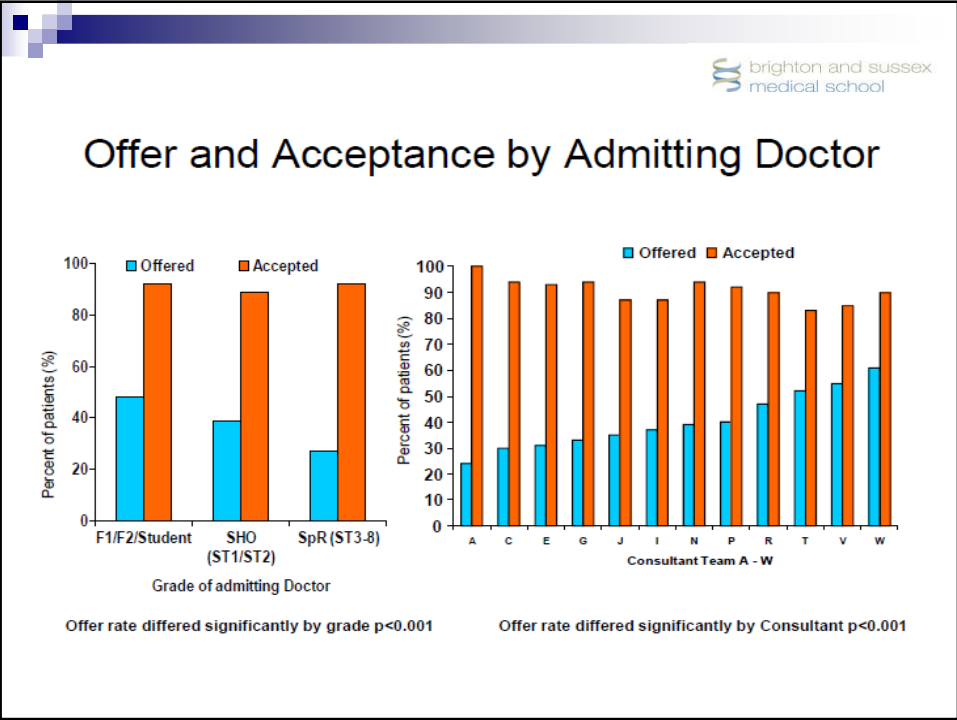


## HINTS Study - Key Messages

- Routinely offering HIV testing in non-traditional settings is a highly acceptable strategy to both patients and staff
- Uptake was high across all groups
- It as an effective strategy, identifying previously undiagnosed individuals and transferring them to care
- It is feasible to deliver HIV testing in these settings but sustainable testing will critically depend upon capacity building and training among all staff groups

### Interim results of all DH-funded hospital projects

Pilot project	% Eligible offered	Number of tests	Uptake	Number Positive	Positivity (/1000)
London – ACU	48%	384	70%	4	10.4
Brighton – ACU	40%	1413	91%	2	1.4
Leicester – ACU	-	984	-	10	10.2
London – A&E	74%	2121	62%	4	1.9
London – OPD	52%	604	68%	0	0
<b>TOTAL</b>	-	<b>5506</b>	-	<b>20</b>	<b>3.6</b>



### **Effectiveness and cost effectiveness**

- A total of 10,478 HIV tests performed with 50 new diagnoses (5/1,000)
- Sero-positivity rates ranged from 0 to 20.9/1,000
  - 13.6/1,000 in community projects
  - 4.8/1,000 in primary care
  - 3.6/1,000 in hospitals
- Overall positivity rates in antenatal (0.7/1,000) and STI clinics (4.9/1,000)
- Cost-effective threshold of 1/1,000 in USA (*MMWR 2006*)
- Two projects undertaking cost-effectiveness and economic analyses

### **Access to Care**

- All projects specified clear patient pathways
- Positive/reactive results handled by local GU service
- Of 50 new diagnoses, 5 (10%) were lost to follow up
- Transfer to care rates:
  - 67% in a community project
  - 79% in a primary care project
  - 100% in all other projects

## Sustainability

- **5 of 8 projects have continued outside of the pilot**
  - Inclusion of HIV testing questions in pro-forma
  - Use of local performance indicator (CQUIN)
  - Including POCT tests in primary care contracts for level 1 LES
  
- **Staff training**
  - Variation in the offer of an HIV test according to consultant
  - Anxieties about patients questions
  - Anxieties about managing reactive results

## HIV Indicator Diseases across Europe

- HIV in Europe Conference – 2007
  - Indicator condition targeted testing
  - Cost effective if HIV prevalence > 0.1%
  - Proposed pilot study to evaluate this approach prior to a wider roll out phase



## Indicator Conditions (IC)

- Conditions occurring with increased frequency in individuals infected with HIV because they share transmission pathways or their emergence is a consequence of the HIV-related immune deficit
- 52 conditions of which 11 are also AIDS defining illnesses
- US data – HIV testing in 4.3% patients with any potential AIDS defining event and only 12.5% with multiple potential AIDS defining events (Chen JY CROI 2009)



## Indicator Conditions

Pilot survey selected 8 indicator conditions:

- Sexually Transmitted Infections (STI)
- Hepatitis B + C
- Malignant lymphoma (LYM)
- AIN or CIN II or above
- Unexplained thrombocytopaenia or neutropaenia >4 weeks
- Herpes zoster <65 years
- Seborrhoeic dermatitis or exanthema
- Mononucleosis-like illness (IM)





## Preliminary Results

Descriptor	Number
Total number of patients tested	<b>3588</b>
Mean age (range across IC's)	<b>36</b> <b>(24 (IM) - 53 (LYM))</b>
Sex	<b>55% male</b>
HIV seropositivity	<b>1.84%</b>

- 36% had previously tested for HIV
- Potential missed opportunities; 7-10% had experienced HIV related symptoms, attended a STI clinic or been hospitalised in the preceding 5 years

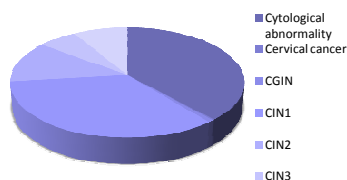


## Study specific barriers

### Case study – Colposcopy


- *Site:* Colposcopy clinic  
Chelsea and Westminster Hospital  
London, UK  
Mr Nick Wales and SRN Sue Ogden
- *Indicator Condition:* CIN II and above
- *Study period:* 7 months

Descriptor	Number
Total number eligible attendees	<b>722</b>
Total number of HIV tests offered (Coverage: %)	<b>600</b> <b>(83%)</b>
Total number of HIV tests accepted (Uptake: %)	<b>442</b> <b>(74%)</b>
Number of reactive HIV tests	<b>0</b>

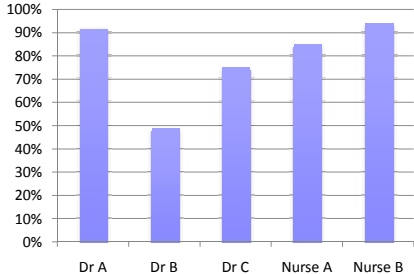


**Study specific barriers**  
**Case study – Colposcopy**

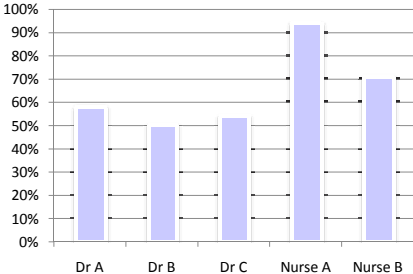
- **Reasons for non-offer:**
  - “forgot to offer” 64%
  - “anxious patient” 13%
  - No obvious bias, as these patients did not differ significantly in terms of age, ethnicity or referral diagnosis
- **Characteristics of Test Providers:**
  - Medical staff 21%
  - Specialist nurses 77%
  - Healthcare assistants 2%
  - Significant differences *were* observed in both test offer rate and HIV test uptake by test provider




**Study specific barriers**  
**Case study – Colposcopy, UK**



**Test offer rate by provider (%)**

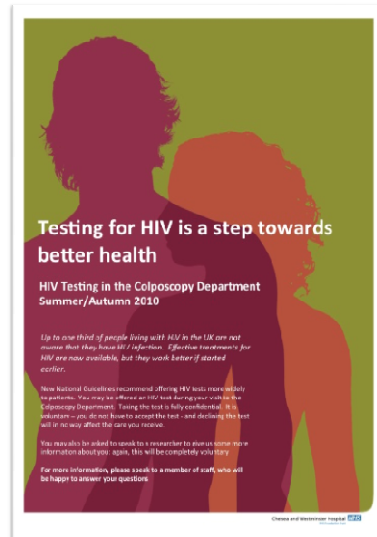


**HIV test uptake by provider (%)**



## The staff experience (from the front line)

- Logistics of implementing routine testing
- Impact on clinic time
- Staffing attitudes
- Results governance and management



## The patient experience



## Conclusions

- Routine HIV testing in the UK is an effective and acceptable strategy in healthcare and community settings
- Indicator disease based testing appears feasible in a wider, European context
- Sustainable testing in all contexts will be challenging, and depend upon stakeholder buy-in, and dissemination of supportive evidence



### *Time to Test for HIV: Expanded healthcare and community HIV testing in England*

Interim Report

December 2010



Time to test for HIV: Expanded healthcare  
and community HIV testing in England

Interim report





## Acknowledgments

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