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Executive Summary

Background

Globally, the HIV epidemic continues to have an impact on the lives of millions of people. In 2008, there were an estimated 83,000 people living with HIV (both diagnosed and undiagnosed), equivalent to 1.3 per 1000 population in the UK. In that same year, 7,798 people were newly diagnosed with HIV. The global epidemic is reflected in the UK; around 38% (2,790) of these newly diagnosed infections were among black Africans who acquired their HIV through heterosexual contact. It is thought that most (87%) of these infections among black Africans in the UK were acquired abroad, mainly in sub-Saharan Africa (Health Protection Agency 2009).

Late diagnosis of HIV is defined as diagnosis taking place after anti-retroviral treatment would normally have begun, or when the person has an illness which defines them as having AIDS. It is the most important factor associated with HIV-related disease and death in the UK and is a particular problem among black Africans. In 2007, over 40% of new diagnoses among black Africans were classified as ‘late’.

HIV testing can help reduce transmission of the virus. People who find out they have HIV may change their sexual behaviour as a result of the diagnosis. A negative HIV test provides an opportunity for preventive education and advice and may also lead to changes in behaviour. Increasing the frequency of testing may result in earlier detection of HIV following infection - when it is most virulent - providing greater opportunity to reduce transmission.

Objectives

This review sought to systematically review the literature on the effectiveness and cost effectiveness of interventions that increase the uptake of HIV testing among migrant or Black and minority ethnic communities living in high income countries.

There was one overarching question to be addressed in the review:

- What are the most effective and cost effective ways of increasing the uptake of HIV testing to reduce undiagnosed infection among black Africans living in England?

Two primary questions were developed in order to explore the overarching question:

1. Which interventions have been effective and/or cost effective in increasing the uptake or awareness of HIV testing and its benefits in migrant or black and minority ethnic communities?

2. What interventions have successfully increased the opportunity for HIV testing for migrant or black and minority ethnic communities, whether aimed at this group or not?
Methods

A detailed search protocol based on the methodology in the NICE Methods Manual was developed. Searches for effectiveness and cost effectiveness studies were conducted separately.

For the effectiveness review nineteen electronic databases and nine websites were searched for studies that examined interventions that increased HIV testing among black and minority ethnic communities. Searches were restricted to studies published since 1996 (the introduction of highly active antiretroviral therapy) and written in English.

For the cost effectiveness review two literature searches were undertaken. First, the detailed search strategy used in the effectiveness review replicated in the Economic Evaluation Database within the Cochrane Library. Second, a less restrictive search, with fewer search strings, of the Cochrane Library databases and NHS EED was undertaken. No other sources were used to identify potential records.

Two reviewers independently screened all titles and abstracts. Papers selected for full paper screening were then independently screened by two reviewers and selected for full review. Data extraction was performed by one reviewer and checked for accuracy by another. Papers were quality assessed by one reviewer and checked for accuracy by another. Each paper was graded according to range of criteria which established whether potential sources of bias had been minimised and if study conclusions were open to any degree of doubt.

After the data extraction and completion of quality assessment for each study, studies were grouped according to intervention design and presented in evidence tables. Narrative summaries of each group of studies were used to derive a series of evidence statements.

Findings

No studies in the cost effectiveness review met the inclusion criteria for quality appraisal and data synthesis. Papers were rejected for two main reasons:

1. the study focused on the general population with no subgroup analysis about the populations of interest
   and/or
2. the paper did not explicitly consider the cost-effectiveness of strategies for increasing uptake.

Evidence Statement 3.1 Cost effectiveness of interventions

No evidence was found from English-language studies published since 1996 about the cost effectiveness of interventions relating to HIV testing in migrant and/or black and minority ethnic communities in high income countries.

For the effectiveness review fifteen papers (representing 14 studies) were identified from the literature review and underwent quality appraisal. Most studies (10) were carried out in the USA, two from Australia, one from the Netherlands and one was carried out in the UK. Studies were grouped according to intervention type.
Mass Media Campaigns

Three studies examined the effectiveness of culturally and linguistically targeted mass media campaigns to increase HIV testing among target communities. Only one of these studies used statistical methods to analyse observed increases in uptake rates of testing.

Evidence statement 3.2 Mass Media

There is weak evidence that mass media campaigns aimed at ethnic minority and migrant communities can increase the uptake of HIV testing in these populations. Three before and after studies (McMahon et al, 2004[-]; Olshefsky et al 2007 [-]; Futterman et al 2001 [-]) were able to show a small or a large increases in the uptake of HIV testing among migrant and ethnic minority populations after implementation of mass media campaigns. Futterman et al (2001 BA[-]) showed an increase in mean number of HIV tests from baseline 86 per week to 462 tests per week during the campaign. McMahon et al (2004 BA[-]) showed an increase in the proportion of tests among ethnic and minority communities (16.3% up to 18.8%p=0.31). Olshefsky et al 2007 [-]; observed a small increase in testing during 6 months surrounding the campaign compared with the final quarter of the year. None of these effects were statistically significant.

This evidence is directly applicable to black African communities in England. The nature of social marketing campaigns makes it very difficult to show, through empirical evidence, that a campaign has achieved its desired outcome. Although these studies were conducted in other countries, the intervention target populations were made up of diverse linguistic and cultural sub-groups. Similarly, black African communities in England are not homogenous entities. Mass media social marketing campaigns that target heterogeneous black African communities as a whole have been developed and delivered in England.

Message Framing

Message framing may influence the effectiveness of a health appeal. One study examined this hypothesis and found that among those who viewed HIV testing as having a certain outcome (with a low risk of testing positive), gain framed messages better encouraged self-reported HIV testing than loss framed messages.

Evidence statement 3.3 Message Framing

There is weak evidence from one US study (Apanovitch et al, 2003 BA[+]) to suggest that videotaped health education messages that highlight the positive outcomes of HIV testing may increase uptake of HIV testing among low income, ethnic minority women who consider themselves to be at low risk of testing positive (38% vs 26%, \( \chi^2 =4.84, p<.05 \)).

This evidence is only partially applicable because the study was conducted in the USA among low income African American and Latina women who are culturally distinct from black Africans in England. Barriers to HIV testing among black Africans in England, (many of whom survive on low income), do include poor perception of individual risk. It follows that gain-framed messages might therefore
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increase the uptake of HIV testing in this population. Further research is needed to examine if this evidence is directly applicable to black African groups in England and whether message framing has differing impacts on men and women.

**Group Level Behavioural Interventions**

Group level behavioural intervention programmes use workshops or seminars to bring together individuals to talk about sexual health issues. Three studies were found that examined how such interventions can be used to increase HIV testing in migrant and ethnic minority communities.

**Evidence Statement 3.4 Group Level Behavioural Interventions**

There is weak evidence from three studies to suggest that (workshop or opinion leader based) group level behavioural interventions can increase HIV testing in migrant and minority ethnic communities. Two non-randomised controlled trials (N-RCT) showed increased odds of self reported HIV testing (OR [95% confidence interval]) in the intervention groups: 2.50; [1.02, 6.12] (Raj et al 2002 N-RCT [-]); 2.5 [1.5-4.3] (Rhodes et al 2009 [-]). Another N-RCT (Lemieux et al 2008, N-RCT [-]) showed new HIV testing was more likely among those in the intervention group: (21.3% vs 6.7% \( \chi^2 (1) = 6.39, p<0.01 \)).

This evidence is only partially applicable to black Africans in England. That is because all three studies were conducted in the US with migrant and minority ethnic communities that were largely culturally and linguistically homogenous. While it may be possible to develop group level behavioural interventions for specific black African communities in England, (for example Shona speaking Zimbabwean communities), developing effective interventions that cut across black African communities might be more challenging. Additionally, successful culturally based group level behavioural interventions should be underpinned by findings from extensive ethnographic, psychosocial or formative research. There is limited availability of such evidence from black African communities in England.

**Changes in Clinic Policy**

Four studies were identified that addressed changes in clinic policy and practice as a means to increasing the uptake of HIV testing. Two examined how simplified consent procedures and routine offers of tests could normalise HIV testing and increase uptake in clinics. One compared two different appointment systems and the final study compared rapid testing to standard testing.

**Evidence statement 3.5 Changes in Clinic Policy**

3.5a There is moderate evidence from one before and after study (Cassell et al 2003, BA [++] to suggest that the uptake of HIV testing in GUM clinics can be increased by implementing a bookable appointment system. The study found that the proportion of HIV tests taken by new patients increased after the intervention (37.3% vs 31.0% \( p=0.04 \)).

This evidence is only partially applicable to black Africans in England. This is because the study was conducted before the introduction of universal ‘opt-out’ HIV
testing in sexual health clinics in England. Under this system patients are tested for HIV unless they specifically reject the test. Additionally, the study took place in a large clinic located in an ethnically mixed, socially deprived district in London. The evidence may not be applicable in smaller clinics or clinics in areas with a less ethnically diverse population.

3.5b There is moderate evidence from two studies to suggest that encouraging the routine offer of an HIV test may increase the uptake of HIV testing in among migrant and minority ethnic inpatients, outpatients and those attending GUM clinics. One interrupted time series study (Zetola et al 2008, ITS [++] ) found that removing the need for separate signed consent documentation increased HIV testing among various ethnic and linguistic groups [mean increase (95% confidence intervals)]: Asian - 2.80 (1.37–4.23); Black - 5.58 (2.11–9.04); Hispanic -1.56 (-0.49–3.61); White - 5.58 (2.95–8.21); English-speaking - 5.04 (2.40–7.69); Spanish-speaking -0.95 (-3.31–1.40); Other primary language - 2.69 (1.16–4.22). Findings from another study, (Van der Bij et al 2008, BA [+]) showed routine offers of HIV testing to all new patients at a sexual health clinic increased rates of HIV testing among patients from sub Saharan Africa (OR: 8.0 95 % Confidence Interval: 6.5-9.8)

This evidence is only partially applicable to black Africans in England. This is because separate signed consent is not required for HIV testing in England. Additionally, most sexual health clinics in England use a universal ‘opt-out’ testing and the uptake among black Africans is more than 85%. (HPA 2009)

3.5c. There is moderate evidence from one randomised controlled trial (RCT [+]) that suggests that rapid HIV testing in clinical settings is acceptable to all ethnic minority groups but standard HIV testing is not. The study (Wurcel et al 2005, RCT [+]) showed that the acceptance rate of standard testing differed across ethnic groups (black/Caucasian Hispanic 18.2% vs black non-Hispanic 59% p=0.04).

This evidence is partially applicable to black Africans in England. This is because the study was conducted in the US using ethnic groupings not widely used in England. Additionally, unlike in the UK, the US healthcare system is not free at the point of care. It is therefore difficult to assess if the conclusions reached would be applicable to black and minority ethnic groups in England.

**Physician Training**

Physician training can improve the uptake of HIV testing by offering more opportunities for patients to test. In particular it may reduce levels of late diagnosis. One study examined this intervention.

**Evidence statement 3.6 Physician Training**

There is weak evidence from one study to suggest that training physicians can increase the frequency with which they perform HIV tests and increase the number of patients that are tested. One US before and after (Stanton et al, 2000 BA [-]) study showed an increase in the mean number of tests performed in patients aged under-20 after the intervention (19 to 29 p=0.006).
This evidence is not applicable to black Africans in England. This is because the study conditions are unique to the areas in the USA where a large proportion of Hispanic doctors treat predominantly Hispanic clients. It is unlikely that black African physicians in England treat predominantly black African patients.

**Anonymous vs Confidential Testing**

Anonymous testing allows individuals to find out their HIV status without fearing breaches in confidentiality. Two studies examined the effectiveness of anonymous testing at increasing the uptake of HIV testing.

**Evidence statement 3.7 Anonymous Testing**

3.7a There is moderate evidence from one study to suggest that individuals that test anonymously test earlier in the course of their HIV disease. One retrospective cohort (Bindman et al 1998 CT [+]) showed that anonymous testers received their HIV diagnosis on average 529 days earlier than those tested confidentially (p=<0.001).

This evidence is partially applicable to black Africans the UK. This is because the study was conducted in the USA where both anonymous and confidential testing are widely available. In England anonymous HIV testing is informally available in sexual health clinics but not in hospitals or GP surgeries. It is unclear whether this context substantially mirrors the formal provision of anonymous testing available in the USA.

3.7b There is weak evidence from one study to suggest that anonymous testing is more acceptable in minority ethnic communities than named testing. One before and after study (Miller et al 1998 BA [-]) found HIV testing rates increased from 1.6 tests per week to 11.4 tests per week. This increase was not shown to be statistically significant.

This evidence is not applicable to black Africans in England. This is because the study was conducted in Australia by an Aboriginal controlled health service providing health services to remote communities occupying ancestral homelands. This setting and political context differs considerably from the situation in England.

**Conclusions**

There is very little evidence available about the effectiveness of interventions to increase HIV testing in black African communities in England. The evidence used in this review is only partially applicable to the population of interest. From the literature available the strongest evidence came from interventions that try to increase the opportunity to test for HIV. These interventions are seemingly most likely to increase the uptake of testing among black African groups. Weaker evidence comes from studies of complex interventions that directly target migrant and black and minority ethnic communities. This is mainly because rigorously evaluation of such interventions is complicated and rarely undertaken. Additionally, it is difficult to assess the applicability when interventions are targeted at specific but different population groups to that of the population of interest. More evidence is needed.
particularly about interventions that increase HIV testing among those living with undiagnosed HIV.

A number of gaps in the evidence have been uncovered which can only be filled with extensive research. The following actions are recommended:

- A smaller review focussed on evidence that will become available from September 2010 should be conducted to augment the results of this review.
- There should be further research to determine:
  - the factors that impact on the effectiveness of behavioural interventions that target individuals based on their ethnicity
  - how message framing impacts on the uptake of HIV testing in black African communities
  - how the normalisation of HIV testing and other changes to clinical practice affect the uptake of HIV testing among different sub-groups of black Africans
  - which interventions are effective in reducing late presentation
  - the cost effectiveness of HIV testing interventions targeted at black African communities
Glossary and Abbreviations

AIDS
Acquired Immune Deficiency Syndrome

Anonymous Testing
HIV testing where patients are given a code or number which is then linked to a blood (or other fluid) specimen. No names are recorded alongside the test or the result.

ART
Anti-retroviral therapy

BA
Before and After Study

BME
Black and Minority Ethnic Communities

CD4 + Cells
CD4+ or T Helper cells are a sub-group of T-lymphocytes that are used as a surrogate marker of the health of the immune system in HIV infection. A CD4+ count is a blood test that estimates how well a patient’s immune system is working by counting CD4+ cells.

Confidential Testing
HIV testing linking an individual name to blood (or other fluid) specimen and recording the test result in a medical chart with a name. Confidentiality assured by clinical policy and practice.

CPHE
Centre for Public Health Excellence

CT
Cohort Study

GUM
Genitourinary Medicine - the clinics where sexually transmitted infections are diagnosed and treated

HAART
Highly Active Antiretroviral Therapy

HIV
Human Immunodeficiency Virus

HPA
Health Protection Agency

ITS
Interrupted Time Series

ITT
Intention To Treat Analysis

Late diagnosis
Diagnosis after anti-retroviral treatment would normally have begun, or when the person has an illness which defines them as having AIDS.

MSM
Men who have Sex with Men

NAHIP
National African HIV Prevention Programme

NICE
National Institute for Health and Clinical Excellence

N-RCT
Non-randomised controlled Trial

NSMC
National Social Marketing Centre

PHIAC
Public Health Interventions Advisory Committee

Rapid Testing
HIV test where patients are able to receive test results within 1-60 minutes.

RCT
Randomised Controlled Trial

Standard Testing
Most standard HIV tests use Enzyme-linked immunosorbent assay (ELISA). Blood is drawn from a vein and the ELISA is used to test for the presence of HIV antibodies. The results are generally available in 5-14 days.

STI(s)
Sexually transmitted infections
1. Introduction

This review was commissioned by NICE to support the development of guidance for interventions which aim to increase the uptake of HIV testing to reduce undiagnosed HIV infection among black African communities living in England. The guidance aims to provide recommendations for interventions that implement either client or provider initiated HIV testing and aim to:

- Increase awareness of HIV testing and its benefits. For example, mass-media and other media campaigns and one-to-one or group-based information provision (planned or opportunistic and offered by practitioners or peers).
- Increase the opportunity for, and uptake of, HIV testing. This could involve changes in service delivery (for example, changes to opening times or appointment systems), increasing the number or kinds of tests offered, and increasing the number and types of venue offering tests.
- Reduce the barriers to HIV testing, for example, peer education initiatives to reduce the stigma associated with HIV.

The guidance will identify ineffective as well as effective interventions and approaches.

1.1. Background

Globally, the HIV epidemic continues to have an impact on the lives of millions of people. UNAIDS estimates that in 2008 there were between 31.1 and 35.8 million people living with HIV, of whom 2.4-3.0 million were newly diagnosed that year (UNAIDS 2009). Sub Saharan Africa remains the region most heavily affected by HIV; in 2008 there were 22.4 million adults and children living with HIV (two thirds of global infections) and 1.4 million deaths due to AIDS. The prevalence of HIV among adults in sub Saharan Africa is on average 5.2%, although there is great variability among different regions (UNAIDS 2009).

In contrast, the number of HIV infections in the UK is much smaller. HIV in the UK concentrated among specific populations rather than the generalised epidemic seen in sub Saharan Africa. In 2008, there were an estimated 83,000 people living with HIV (both diagnosed and undiagnosed), equivalent to 1.3 per 1000 population in the UK (Health Protection Agency 2009). In that same year, 7,798 people were newly diagnosed with HIV. The global epidemic is reflected in the UK; around 38% (2,790) of these newly diagnosed infections were among black Africans who acquired their HIV through heterosexual contact. It is thought that most (87%) of these infections among black Africans in the UK were acquired abroad, mainly in sub-Saharan Africa (Health Protection Agency 2009).
1.1.1. Late Diagnosis

Late diagnosis of HIV is the most important factor associated with HIV-related disease and death in the UK (British HIV Association 2008). Patients diagnosed late are more likely to become ill (Health Protection Agency 2007), have impaired response to medication (Stöhr et al. 2007) and increase costs to healthcare services (Krentz et al. 2004). Late diagnosis is defined as diagnosis taking place after antiretroviral treatment (ART) would normally have begun, or when the person has an illness which defines them as having AIDS. It is measured using a blood test known as a CD4+ count; this test estimates how well the patient’s immune system is working by counting white blood cells that are targeted and destroyed by HIV (CD4+ cells).

Previous guidelines from the British HIV Association (BHIVA) recommended that patients begin ART when their CD4 + count measured fewer than 200 cells/mm$^3$. Since 2008, BHIVA have recommended ART should be considered for patients with a CD4 count below 350 cells/mm$^3$. Consequently the proportion of people who fit the definition of late diagnosis has increased.

Late HIV diagnosis is a particular problem among black Africans (Burns 2008; Health Protection Agency 2008). In 2007, over 40% of new diagnoses among black Africans were classified as ‘late’ (Health Protection Agency 2008). More recent estimates, which look at diagnoses among heterosexual men and women (95% of whom are black African), suggests that 61% of women and 66% of men are diagnosed with a CD4+ count of fewer than 350 cells/mm$^3$ (Health Protection Agency 2009).

Estimates from anonymised data suggest that approximately 25% of HIV-positive, African born heterosexuals leave sexual health clinics undiagnosed (Health Protection Agency 2009). This may in part reflect HIV positive persons accessing GUM care without disclosing their HIV status, however this could also be because they refused or were not offered an HIV test. Lack of a diagnosis – or late diagnosis – can deprive people (including the partners of those infected) of treatment and support. It can also increase the potential for onward transmission of HIV.

1.1.2. History of HIV Testing

HIV testing was introduced in genitourinary medicine (GUM) clinics in the UK in 1985. At that time HIV infection was often accompanied by stigma and discrimination, with very little to offer in the way of effective medication. Civil libertarians and gay rights advocates feared that HIV may become defined as a “dangerous disease” with registries of infected persons, and the possibility of behavioural restrictions, and even quarantine, imposed on those infected (Bayer 1991). There was broad consensus that people should only be tested with informed, voluntary and specific consent; this differs from other blood tests, which are usually obtained with the “presumed consent” of the patient. As a result pre- and post-test counselling has usually accompanied HIV testing. This process of managing HIV differently to other chronic and infectious health conditions became known as HIV exceptionalism (Bayer 1991).

1 Defined as being diagnosed with CD4 count < 200cells/mm$^3$
In 2008, while acknowledging that stigma is still associated with HIV infection, BHIVA published HIV testing guidelines that encourage the ‘normalisation’ of HIV testing. The guidelines sought to place HIV testing within the competence of any doctor, midwife, nurse or trained healthcare worker by formally addressing misconceptions about pre-and post-test discussions. The guidelines stated that lengthy pre-test HIV counselling is not a requirement and that the primary purpose of the pre-test discussion was to establish informed consent for HIV testing (British HIV Association 2008).

1.1.3. Benefits of HIV testing

HIV testing can help reduce transmission of the virus. People who find out they have HIV may change their sexual behaviour as a result of the diagnosis. For example, they may start using condoms with partners who are not HIV-positive or whose HIV status is unknown (Weinhardt et al. 1999; Coates et al. 2000; Marks et al. 2005). In addition, people diagnosed with HIV may choose to receive anti-retroviral therapy, which suppresses the virus and can reduce further transmission. A negative HIV test provides an opportunity for preventive education and advice and may also lead to changes in behaviour. For example, people who find out they do not have HIV might use condoms or have non-penetrative sex with partners who have HIV (or whose HIV status is unknown). Increasing the frequency of testing may result in earlier detection of HIV following infection - when it is most virulent - providing greater opportunity to reduce transmission.

1.1.4. Existing policy and guidance

Previous relevant public health guidance in this area include the following:

- Better prevention, better services, better sexual health. The national strategy for sexual health and HIV’ (Department of Health 2001)
- The knowledge, the will and the power. A plan of action to meet the HIV prevention needs of Africans living in England (Dodds et al. 2008)
- Progress and priorities – working together for high quality sexual health (Medical Foundation for AIDS and Sexual Health 2008)
- UK national guidelines for HIV testing 2008 (British HIV Association 2008)

1.1.5. Summary of effectiveness review

The effectiveness review found 14 studies (published in 15 papers) of varying quality and applicability. Most of the studies examined interventions delivered the in USA and were either group level behavioural interventions, changes in service delivery or mass media education campaigns. We were able to draw limited conclusions based on the findings. The cost effectiveness review did not identify any economic evaluation studies that met inclusion criteria

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1.2. **Aims and objectives**

The aim of this project was to systematically review the literature on the effectiveness and cost effectiveness of interventions that increase the uptake of HIV testing among migrant or Black and minority ethnic communities living in high income countries.

1.3. **Research Questions**

There was one overarching question to be addressed in the review:

- What are the most effective and cost effective ways of increasing the uptake of HIV testing to reduce undiagnosed infection among black Africans living in England?

Two primary questions were developed in order to explore the overarching question:

1. Which interventions have been effective and/or cost effective in increasing the uptake or awareness of HIV testing and its benefits in migrant or black and minority ethnic communities?

2. What interventions have successfully increased the opportunity for HIV testing for migrant or black and minority ethnic communities, whether aimed at this group or not?

Also addressed were secondary questions:

1. What factors impact on the effectiveness of interventions that increase HIV testing among black-African, other BME, and migrant communities living in England?

2. Does effectiveness and cost effectiveness of interventions vary according to the diversity of the population (for example in terms of the person’s age, gender, sexuality or faith)?

3. Does effectiveness and cost effectiveness of interventions vary according to the status, knowledge and influence of the person delivering the intervention?

4. Does the effectiveness and cost effectiveness vary according to where the intervention takes place (for example in a healthcare setting or community setting) and whether the intervention is transferable to other settings?

5. What, if any, are the adverse or unintended consequences (positive or negative) of the intervention?

6. Which interventions are ineffective or not cost effective?

1.4. **Operational definitions**

**Black African:** Black African communities encompass diverse population groups from a range of countries. The term also encompasses people who identify themselves as being black African – whether they are migrants from Africa, African descendants or African nationals. Throughout this review, ’black African’ is used to describe all of these groups.
1.5. **Review Team (Alphabetical order)**

<table>
<thead>
<tr>
<th>Team member / expertise</th>
<th>Project role</th>
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<tbody>
<tr>
<td>Dr Gianluca Baio, Lecturer in Health Services Research and a member of the Health Care Evaluation Group, University College London.</td>
<td>Developed and executed search strategies, study selection, data extraction, and quality assessment of cost effectiveness studies. Wrote the initial draft of the cost effectiveness findings and commented on various drafts of the report.</td>
</tr>
<tr>
<td>Dr Fiona Burns, NIHR Clinical Lecturer, Centre for Sexual Health and HIV Research. Programme Lead: Migration Ethnicity and Sexual Health (MESH) Programme</td>
<td>Overall management responsibility for the project, third reviewer in study selection. Commented on various drafts of the report and contributed to writing of report.</td>
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<tr>
<td>Dr Alison Evans, Research Associate, Centre for Sexual Health and HIV Research</td>
<td>Study selection, data extraction, and quality assessment of effectiveness studies. Commented on various drafts of the report and contributed to writing of report.</td>
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<tr>
<td>Ms Ibidun Fakoya, Research Associate, Centre for Sexual Health and HIV Research. Programme co-ordinator: African Communities HIV Research Programme.</td>
<td>Developed and executed search strategies, study selection, data extraction, and quality assessment of effectiveness studies. Wrote the initial draft of the report and responsible for overall content of the final draft.</td>
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<tr>
<td>Professor Graham Hart, Head of the Department of Infection and Population Health and Director of the Centre for Sexual Health and HIV Research, University College London.</td>
<td>Overall management responsibility for the project. Commented on various drafts of the report and contributed to writing of report.</td>
</tr>
<tr>
<td>Professor Steve Morris, Professor of Health Economics, University College London.</td>
<td>Overall management responsibility for the cost effectiveness project. Commented on various drafts of the report and contributed to writing of report.</td>
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1.6. **Declaration of interests**

Professor Steve Morris is a member of the NICE Public Health Interventions Advisory Committee.
2. Methodology

This section details methodology used for the effectiveness review. The search for economic evaluation studies was conducted separately from the overall search for studies examining the effectiveness of interventions. Section 2.9 details the cost effectiveness review methodology and findings.

2.1. Search Strategy

Nineteen electronic databases were searched using detailed search strategies developed by the review team in collaboration with information specialists at NICE (see Appendix A). Searches were restricted to studies published since 1996 (the introduction of highly active antiretroviral therapy – HAART – when HIV testing became widely available and acceptable because of treatment availability) and written in English. The results were downloaded into a de-duplicated database in Reference Manager 11 (Thomson ResearchSoft). Items which were not able to be downloaded were saved into separate Microsoft Word or Excel documents.

The following databases were searched:

- Allied and Complementary Medicine
- Cumulative Index to Nursing & Allied Health Literature
- IBSS
- EMBASE
- Cochrane Library databases
- Current Contents
- Database of Abstracts of Reviews of Effects
- Health Management Information Consortium
- Health Technology Assessment
- ISI Web of Science (Social Science Citation Index)
- Medline (Ovid) Includes Medline In-Process & Other Non-Indexed Citations
- PsychINFO
- Social Policy and Practice
- UK Clinical Research Network Portfolio Database
- AEGIS (AIDSLine and International AIDS Society abstract archives)
- Eric (Education Resources Information Centre)
- EPPI Centre
- NHS Evidence (National Library for Public Health and National Library for Ethnicity and Health)
- Popline
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In addition the websites of African-led community based organisations and other key websites were searched. The majority of the grey literature was retrieved from these searches.

Websites searched:

- African HIV Research Forum [www.ahrf.org.uk](http://www.ahrf.org.uk)
- Avert [www.avert.org](http://www.avert.org)
- Black Health Agency [www.blackhealthagency.org.uk](http://www.blackhealthagency.org.uk)
- Centers for Disease Control (Diffusion of Effective Behavioural Interventions) [www.effectiveinterventions.org](http://www.effectiveinterventions.org)
- Global Network of People Living with HIV (GNP+) [www.gnpplus.net](http://www.gnpplus.net)
- National Africa HIV Prevention Programme (NAHIP) [www.nahip.org.uk](http://www.nahip.org.uk)
- Naz Project London [www.naz.org.uk](http://www.naz.org.uk)
- NICE website and former Health Development Agency [www.nice.org.uk](http://www.nice.org.uk)

The search process was documented by compiling the search strategies used to explore each resource. Audit information detailing numbers of records retrieved and retained from each resource, were also recorded.

### 2.2. Inclusion and exclusion criteria

#### 2.2.1. Population

The review team had anticipated that there would be few studies about the effectiveness of HIV testing that focused exclusively on or included black Africans living in England. Our previous experience suggested that while some evidence on HIV testing among this specific population does exist, these interventions were evaluated using research methods of low quality. We were aware that there had been no randomised controlled trials (RCT) of interventions to increase the uptake of HIV testing among African communities or migrant groups in the UK. We also knew about a small number of exploratory studies and prospective or retrospective operational evaluations that were unlikely to provide sufficient evidence on which to base recommendations.

Although there is more evidence available about HIV testing from studies conducted in Africa, we concluded that the generalisability of these studies to African communities in England is questionable for several reasons. First, HIV testing, health service provision and care referral pathways in resource poor settings are very different from those in England. Second, the process of migration can change individual behaviour and present barriers to HIV testing not found in the country of origin. Third, many people living in the UK who identify as black African are part of long established minority ethnic communities. HIV-related stigma within these communities and race-related prejudice from the wider community present challenges to HIV testing interventions not encountered in the African context. Finally, black African communities in the UK are far more heterogeneous than those
in Africa. Country specific, tribal, cultural and linguistic differences are magnified in the UK context.

For these reasons we hypothesised that studies that aim to increase the uptake of HIV testing among migrant or black and minority ethnic communities in developed countries were more likely to reflect the experience of black African communities in England. Black African men who have sex with men are not included in this review, but will be included in the guidance. Evidence about this population is included in a NICE commissioned systematic review about increasing HIV testing among men who have sex with men.

Studies were eligible for inclusion if the study population included:

- Black African men and women or
- other Black, Asian and Minority Ethnic groups or
- migrant populations living in high income countries (World Bank classification - High Income OECD members: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea Republic, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Spain, Sweden, Switzerland, United Kingdom, United States).

AND

- The study findings were disaggregated by race/ethnicity or
- at least 70% of the study participants were from included populations.

2.2.2. Intervention

Studies were eligible for inclusion if they assessed the effectiveness of interventions that:

- Increase awareness of provider or client initiated HIV testing in all settings except home testing or
- increase opportunity for provider or client initiated HIV testing in all settings except home testing.

Studies were excluded if they examined interventions that:

- focussed on HIV home testing (as this practice is currently illegal in the UK) or
- sought to increase uptake among pregnant women in ante-natal clinics (because HIV testing is undertaken by all a pregnant women in England unless the specifically request otherwise. The effectiveness of this policy has been established.) or
- sought to increase HIV testing among drug users, prisoners or men who have sex with men (the latter population is covered in another NICE systematic review) or
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- evaluated the validity or diagnostic effectiveness of different types of HIV test or
- evaluated testing following exposure to HIV in the workplace.

2.2.3. Comparators

- No restrictions

2.2.4. Outcomes

Studies were eligible for inclusion if they reported any of these outcomes:

- increase / decrease in number of HIV tests
- increase / decrease in uptake of HIV tests
- increase / decrease in offers of HIV tests
- increase / decrease in the time elapsed between HIV infection and diagnosis
- increase / decrease in the reported history and frequency of taking HIV tests
- increase / decrease in the number and types of venue where HIV testing is offered

Studies that only reported on HIV testing intentions or changes in knowledge about HIV testing were excluded at the full paper screening stage.

2.2.5. Study designs

Studies considered for inclusion:

- randomised or non-randomised controlled trials
- prospective or retrospective cohorts

before and after or interrupted time series studies

2.3. Implementation Process

Studies were selected using a two stage screening approach. IF and AE used CPHE approved checklists to independently screen titles and abstracts. Where agreement could not be reached about study inclusion FB acted as third reviewer. Full paper copies of the selected studies were then screened and assessed independently by IF and AE using a full paper screening tool developed by the review team (Appendix B).

In total 5,899 references were returned from database and website searches. Reviewers indentified 184 references eligible for full paper screening. Three papers could not be retrieved through library sources and three papers had been published before 1996. On examination of the full papers, a further three papers were excluded because the data collection period of the study did not overlap the introduction of HAART, that is, the studies began and ended before 1996.

Figure 1 summarises the search results and the outcome of the screening process. Fifteen papers met the inclusion criteria for quality appraisal (Appendix C). Studies
excluded at the full-paper screening stage, with reasons for their exclusion are presented in Appendix D.

Ten cross sectional/correlation studies met all inclusion criteria except study type and so were not included in quality appraisal. Cross sectional studies measure outcomes or exposures at one point in time; while this provides useful estimates of prevalence, such studies cannot be used to assess the relationship between cause and effect. The review team recognised that these studies might contain information useful for the Public Health Interventions Advisory Committee and so undertook abbreviated data extraction. This information is presented in Appendix E.

2.4. **Data Extraction**

Data about each included study’s population, settings, methodology, analysis and results was extracted from using evidence tables created in Microsoft Word (see Appendix K of the NICE Methods Manual 2009). Data extraction was performed by one reviewer and checked for accuracy by another. Full evidence tables are presented in Appendix F.

2.5. **Quality appraisal**

Fifteen papers were quality assessed by one reviewer and checked for accuracy by another (IF and AE) using a Microsoft Excel Quality Appraisal checklist supplied by the NICE CPHE team. Where disagreements could not be resolved through consensus, FB acted as third appraiser.

Each study received a quality rating for both internal and external validity. Internal validity was rated according to a range of criteria which establish whether potential sources of bias have been minimised and if study conclusions are open to any degree of doubt. External validity was assessed by examining the extent to which the study findings were generalisable to the whole ‘source population’ (that is, the population they were chosen from, *not* the population for whom the Guidance will be developed).
Results of literature searches n=5899

Title and abstract screening n=184

Published before 1996 n=3

Unavailable n=3

Full paper screening n=178

Excluded study start date n=4

Excluded study type n=32

Excluded study outcomes or setting n=117

Papers meeting inclusion criteria n=15

Figure 1. Summary of number of papers included and excluded at each stage in the study selection process

Each study was rated (‘++’, ‘+’ or ‘-’) to indicate its quality:

++ All or most of the checklist criteria have been fulfilled, where they have not been fulfilled the conclusions are very unlikely to alter

+ Some of the checklist criteria have been fulfilled, where they have not been fulfilled or not adequately described, the conclusions are unlikely to alter

- Few or no checklist criteria have been fulfilled and the conclusion are likely or very likely to alter

Inter-rater reliability of the quality appraisal process was calculated using Kappa scores (SPSS 14.0):

- Internal validity Kappa score: 1.0
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- External validity Kappa score: 0.58
- Combined core: 0.80

These scores indicate there was a high level of agreement between the two reviewers for internal validity. The small number of papers retrieved meant that disagreement between reviewers on one or two studies would have a large impact on the Kappa score. This is reflected in the external validity score which is just below the 0.60 threshold for agreement highlighted in the NICE Methods Manual (2009). On discussion with the CPHE team the external validity kappa score was deemed acceptable.

2.6. Data Synthesis

After the data extraction and completion of quality assessment for each study, studies were grouped according to intervention design and presented in evidence tables. Formal meta analysis was not possible due to the small number of studies in each intervention type reporting the same outcome. Narrative summaries of each group of studies are presented below (Section 4) including discussion of study findings and limitations.

2.7. Assessing the Strength of the Evidence

Evidence statements for each intervention grouping were derived by examining the quality, quantity and consistency of the evidence. The methodology set out in the NICE Methods Manual 2009 was used to summarise the overall strength of the evidence in each intervention category. The following terms are used in the evidence statements:

- Weak evidence: small number of [-] studies or one [+ ] uncontrolled study
- Moderate evidence: One controlled [+ ] study, [++] studies or consistent findings from small number of [+] or [++] studies.

Where possible the Size of Effect has been reported or calculated for each study. The following terms are used to describe Size of Effect:

- Small: less than 5% increase in the uptake of testing/difference between two groups; and/or odds Ratio (OR) less than 1.5.
- Medium: greater than 5% but less than 20% increase in uptake of testing/difference between two groups; and/or OR greater than 1.5 but less than 5.0
- Large: greater than 20% increase in uptake of testing/difference between two groups. and/or OR greater than 5.0
2.8. **Applicability Assessment**

Each evidence statement was assessed for applicability to the UK context. The review team examined study groupings as a whole, assessing how similar (and applicable) the populations, settings, interventions and outcomes of the studies were to black African communities in England. Following assessment, we categorised each evidence statement as:

- directly applicable
- partially applicable
- not applicable

2.9. **Cost effectiveness Review**

Two literature searches were undertaken. First, the detailed search strategy used to identify studies in the effectiveness review (above) was replicated, with the searches restricted to the Economic Evaluation Database within the Cochrane Library (the search strings and hits are summarised in Table A2 in the Appendix). Second, a less restrictive search, with fewer search strings, of the Cochrane Library databases and NHS EED was undertaken (see Table A2 in the Appendix). No other sources were used to identify potential records.

The results of both searches were combined and are shown in Figure 2.

![Figure 2. Search strategy and hits for review of cost-effectiveness studies.](image)

The combined search produced 82 papers. The titles were reviewed independently by two health economists (GB, SM). Of these, 31 studies were not relevant to the
review and three were duplicates. The title and abstract of each of the remaining 48 studies was reviewed independently by two health economists (GB, SM) using the same screening checklists used in the main effectiveness review (Appendix B).

The 48 papers were classified according to the country in which the study was based and the at-risk population considered. The results are summarised in Table 2.1. Six papers focused on the Black African population, but did so in African settings. Only one study was UK-based. Thirteen studies were based in Africa. Eleven studies were focused on the general population.

Table 2.1. Summary of searches: results by country in which study was based and at-risk population considered

<table>
<thead>
<tr>
<th>Country in which study was based</th>
<th>At-risk population considered</th>
<th>General population</th>
<th>Black Africans</th>
<th>Other at risk populations</th>
<th>Not available/not specified</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td></td>
<td>7</td>
<td>0</td>
<td>11</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>UK</td>
<td></td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Africa</td>
<td></td>
<td>0</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>13</td>
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<td>2</td>
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<td>3</td>
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<td></td>
<td>11</td>
<td>6</td>
<td>22</td>
<td>9</td>
<td>48</td>
</tr>
</tbody>
</table>

Six papers which met the inclusion criteria were selected for full paper screening. Full copies of each paper were obtained and assessed independently by two health economists (GB, SM) using an amended full paper screening checklist (Appendix B). None of the studies met the inclusion criteria for quality appraisal and data synthesis. Papers were rejected for two main reasons:

1. the study focused on the general population with no subgroup analysis about the populations of interest

   and/or

2. the paper did not explicitly consider the cost-effectiveness of strategies for increasing uptake.

Full references for the six studies that underwent full paper screening, plus the main reasons for their being discarded are presented in Appendix D.
3. Findings

Although no studies were selected for quality appraisal as part of the cost effectiveness review one study was identified as potentially useful. Phillips and Fernyak (2000), attempted to estimate the cost-effectiveness of approaches to expanded HIV counselling and testing in primary care practices in the USA. The study found that routine testing and using risk histories are both cost-effective compared with current practices in the USA. However, there was no sub-analysis by ethnicity and therefore no indication if the findings were specifically relevant to migrant or black and minority ethnic communities. So, while this study may be useful in developing a new cost-effectiveness model, evidence cannot be derived from the reported results.

Evidence Statement 3.1 Cost effectiveness of interventions
No evidence was found from English-language studies published since 1996 about the cost effectiveness of interventions relating to HIV testing in migrant and/or black and minority ethnic communities in high income countries.

3.1. Overview of selected studies

Fifteen papers (representing 14 studies) were identified from the effectiveness literature review and underwent quality appraisal. Most studies (10) were carried out in the USA, two from Australia, one from the Netherlands and one was carried out in the UK. A range of research methods were used: before and after studies (8); non-randomised controlled trials (3); retrospective cohort (1); interrupted time series (1) and randomised controlled trial (1). The review team grouped the papers according to intervention type and six categories were derived. Each category addressed one primary review question:

1. Which interventions have been effective in increasing the uptake or awareness of HIV testing and its benefits in migrant or black and minority ethnic communities?
   - Mass Media Campaigns
   - Message Framing
   - Group Level Behavioural Interventions
   - Physician Training

2. What interventions have successfully increased the opportunity for HIV testing for migrant or black and minority ethnic communities, whether aimed at this group or not?
   - Changes in Clinic Policy
   - Anonymous vs Confidential Testing

Table 3.1 provides an overview of studies identified by intervention and study design type and quality ratings.
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Table 3.1 Overview of selected studies

<table>
<thead>
<tr>
<th>Study Design</th>
<th>N Identified</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before and After Study (BA)</td>
<td>8</td>
<td>++</td>
</tr>
<tr>
<td>Interrupted Times Series (ITS)</td>
<td>1</td>
<td>+</td>
</tr>
<tr>
<td>Non-Randomised Controlled Trial (N-RCT)</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Randomised Controlled Trial (RCT)</td>
<td>1</td>
<td>+</td>
</tr>
<tr>
<td>Retrospective Cohort (CT)</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention Type</th>
<th>N Identified</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass Media Campaigns</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Message Framing</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Group Level Behavioural Interventions</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Physician Training</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Changes in Clinic Policy</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Anonymous vs Confidential Testing</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

3.2. **Mass Media Campaigns**

Social marketing is an important part of the sexual health promotion landscape in England. The National Social Marketing Centre (NSMC) is funded by the Department of Health as part of their commitment to developing a social marketing strategy for health in order to deliver behaviour change in the long-term. NSMC define health-related social marketing as the:

“systematic application of marketing alongside other concepts and techniques, to achieve specific behavioural goals, to improve health and reduce inequalities”

Key to social marketing is using behavioural theories to understand human behaviour, and to build programmes around this understanding.

Social marketing campaigns using mass media have been effective at increasing knowledge and promoting behaviour change for a number of public health interventions including smoking cessation, cancer, family planning and HIV prevention (Evans et al. 2008). These interventions are often culturally appropriate, that is, tailored to meet the specific needs of specific ethnic populations (McDermott 2000; Evans et al. 2008). Raising awareness of HIV by using posters, small media (booklets, information cards), radio and television advertisements has been part of HIV prevention since the start of the epidemic but not all campaigns have been based on behavioural theory. Recently mass media social marketing campaigns that target black African communities have been developed and delivered in England (Fenton et al 2004; Fakoya 2007; Fakoya 2009).

Measuring the effectiveness of mass media health education campaigns is complex and there is little empirical evidence of their effectiveness on specific health outcomes. Additionally, black African communities in England are not homogeneous
entities. They are composed of newly arrived, temporary, established and permanent migrants, as well as refugees and asylum seekers. Black African communities are also widely varied in their ethnic, cultural, linguistic and religious identities. The extent of this diversity makes it difficult to conceive and deliver uniform, effective ‘one-size-fits-all’ social marketing campaigns.

3.2.1. Overview of identified evidence

Three studies examined the effectiveness of mass media health education campaigns specifically targeted at migrant or minority ethnic communities. Two of the studies (Futterman et al 2001 BA[-]; Olshefsky et al 2007 BA[-]) were conducted in the USA and the other (McMahon et al 2004 BA [-]) in Australia. In each study HIV testing campaigns were designed and focus group tested by specialist social marketing agencies and then disseminated through a range of advertising and media outlets.


3.2.2. Changes in uptake in HIV testing

All three studies measured changes in the uptake of HIV testing at participating sexual health clinics in selected locations. Futterman et al (2001 BA[-]) developed the “Get Tested! Week” campaign through focus groups and interviews with the primary target group, but it was not based on an explicit behavioural theory. Radio advertisements, mass transit and outdoor advertising and a range of other marketing materials were used to disseminate the campaign. Data were collected on the number of HIV tests 3 months before (baseline), 1 month surrounding and 3 months after the campaign. They did not report the location or number of clinics that participated, but did report that the campaign was active in six US cities. The mean number of HIV tests at baseline was 86 per week and peaked during the campaign at 462 tests per week. The number of new HIV infections reported remained similar across the campaign period (13 new diagnoses at baseline, 19 during the campaign and 14 new infections during the 3 month follow up).

Similarly Olshefsky et al (2007 BA[-]) examined the uptake of HIV testing in four clinics before, during and after an 8 week Spanish language radio campaign. The campaign _Tu No Me Conoces_ (You don’t know me) was based on the principles of behavioural Stages of Change theory. Messages were developed by an advertising agency and refined using focus groups. The campaign sought to promote HIV testing action using radio advertisement, a website, a telephone hotline and brochures to reach the target population of Latino migrants living in California. Across the clinics there was an increase in testing in the two quarters surrounding the campaign period compared to the final quarter of the year.

McMahon et al (2004 BA[-]) implemented a campaign that was disseminated in 14 different languages in print media outlets. The campaign messages were developed from the (unreported) outcomes of a national consultation process and refined using...
focus groups. To assess the effectiveness of the campaign researchers collected data about the increase in the proportion of HIV tests taken by the target population in two sexual health clinics – one in Sydney and the other in Melbourne, Australia. The proportion of tests performed on the target population increased (16.3% up to 18.8%) but this was not significant (p=0.31).

3.2.3. **Quality Assessment**

Changes in HIV testing rates were measured by examining records at participating clinics before and after the delivery of testing campaigns. All three studies observed increased HIV testing rates among target populations after the campaign period. None of these increases were statistically significant.

All three studies had substantial sources of bias in the study design and were therefore rated poor quality. None of the studies clearly described why they had selected the clinics (quantity or location) which observed changes in the uptake of HIV testing. Olshefsky et al (2007 BA[-]) and Futterman et al (2001, BA[-]) did not report results in a way that could allow effect sizes to be calculated. Follow up time was particularly short in the Australian study – 15 days (McMahon et al 2004 BA[-]). None of the studies were able to provide evidence that any reported changes in uptake of HIV testing were due to exposure to their campaigns and not other factors, such as seasonal variation, simultaneous interventions and migration.

3.2.4. **Summary and evidence statements**

Mass media campaigns are a large part of the sexual health promotion landscape, yet few studies were identified that measured their effectiveness at reaching migrant and ethnic minority communities. Three studies examined the effectiveness of culturally and linguistically targeted social marketing campaigns that used mass media to increase HIV testing among target communities. Only one of these studies (McMahon et al, 2004 BA[-]) used statistical methods to analyse observed increases in uptake rates of testing.

It should be noted that each of these studies examined the impact of tailored mass media campaigns, using qualitative research methods to develop and refine messages targeted at specific ethnic minority groups. They did not all examine the same message, or messages based on the same theory.

**Evidence statement 3.2 Mass Media**

There is weak evidence that mass media campaigns aimed at ethnic minority and migrant communities can increase the uptake of HIV testing in these populations. Three before and after studies (McMahon et al, 2004[-]; Olshefsky et al 2007 [-]; Futterman et al 2001 [-]) were able to show a small or a large increases in the uptake of HIV testing among migrant and ethnic minority populations after implementation of mass media campaigns. Futterman et al (2001 BA[-]) showed an increase in mean number of HIV tests from baseline 86 per week to 462 tests per week during the campaign. McMahon et al (2004 BA[-]) showed an increase in the proportion of tests among ethnic and minority communities (16.3% up to 18.8% p=0.31). Olshefsky et al 2007 [-]; observed a small increase in testing during 6 months surrounding the
campaign compared with the final quarter of the year. None of these effects were statistically significant.

This evidence is directly applicable to black African communities in England. The nature of social marketing campaigns makes it very difficult to show, through empirical evidence, that a campaign has achieved its desired outcome. Although these studies were conducted in other countries, the intervention target populations were made up of diverse linguistic and cultural sub-groups. Similarly, black African communities in England are not homogenous entities. Mass media social marketing campaigns that target heterogeneous black African communities as a whole have been developed and delivered in England.
### Table 3.2 Studies that examined Mass Media Campaigns

<table>
<thead>
<tr>
<th>Study</th>
<th>Population and Setting</th>
<th>Intervention/control</th>
<th>Results</th>
</tr>
</thead>
</table>
| Futterman et al 2001 BA [-]     | **Selected:** Young people aged 13-24 years attending participating clinics to obtain an HIV test. | **Intervention:** Get Tested! Week in each city advertised through social marketing campaign using culturally appropriate messaging and imagery. Delivered through radio and mass transit/outdoor advertising; peer dissemination of ambient media (youth-friendly magazine, referral cards) and media outreach to African American and Latino community leaders. | **Primary outcomes:** HIV Tests taken: Baseline mean = 86 During peak =462  
**Secondary outcomes:** New HIV diagnoses: Baseline n=13  During n=19 Post n=13 |
| McMahon et al 2004 BA [-]       | **Selected:** Patients attending three clinics in Melbourne and Sidney                  | **Intervention:** Mass media campaign promoting HIV testing in 14 different languages. Advertising in ethnic media print outlets and one radio station. 52 (156 insertions) sets of advertisements. Publicity for the campaign through press releases and phone promotion to media outlets. | **Primary outcomes:** Non significant increase in proportion of tests performed on target population (16.3% vs 18.8% p=0.31) |
| Olshefsky et al, 2007 BA [-]    | **Selected:** Patients attending 4 participating clinic sites                             | **Intervention:** Mass media campaign featuring 1-min Spanish language radio ads aired 650 times on four radio stations in two cities. Campaign developed by marketing agency, messaging verified through focus groups. Target groups also reached through website and brochures. **Control/comparison:** Uptake of HIV testing in four participating clinics before, during and after campaign. Cross sectional media exposure survey of clinic testers. | **Primary outcomes:** Increase in number of testers in campaign period Q2 and Q3 compared with Q4  
**Secondary outcomes:** 30% (127/429) of testers who completed survey recalled seeing or hearing an ad about HIV testing. |

*Full evidence tables available in Appendix F*
3.3. **Message Framing**

As discussed above, social marketing, mass media and health education campaigns are often used to persuade groups of individuals to change or adopt a given behaviour. Campaigns are usually based on an overarching theory of behaviour change and messages are developed that try and elicit the wanted behavioural outcome. One factor that may influence the effectiveness of a health appeal is the frame of the health message. “Loss-framed” messages present a choice in terms of its associated costs. “Gain-framed” messages frame a choice in terms of its associated benefits. Both messages objectively describe equivalent situations, but may have different impacts on different groups of people.

3.3.1. **Overview of identified evidence**

One study addressed the issue of message framing in HIV testing (Apanovitch et al, 2003 BA [+]). The authors proposed that the moderating factor in understanding effects of message framing was likely to be an individual’s perception of the (un)certainty of the expected behavioural outcome. They tested this hypothesis by comparing videotaped messages promoting HIV testing among the target population. They hypothesised that women who viewed HIV testing as behaviour with a relatively uncertain outcome to be more persuaded to obtain an HIV test by a loss-framed than by a gain-framed video. Women who viewed HIV testing as behaviour with a relatively certain outcome would be more persuaded by a gain-framed than by a loss-framed video.

3.3.2. **Reports of HIV testing**

Participants were 480 women (87% Latina or African American) recruited from public housing developments and community centres in a low income neighbourhood in a US city. They were randomly assigned to watch one of four 15 minute, culturally appropriate, educational programmes, identical in informational content but framed differently. Structured questionnaires were administered face-to-face before and immediately after viewing the video. Telephone or face-to-face questionnaires were conducted 6 months after the intervention.

Overall, approximately one third (155/425) of the women who responded at 6 month follow up reported having had an HIV test. Two of those women tested HIV positive. Among women who viewed HIV testing as behaviour with a certain outcome, (with a low risk of testing positive), HIV testing was more likely to be reported in those viewing a gain framed video than women who saw a loss-framed message (38% vs 26%, $\chi^2=4.84$, p<0.05). Participants who considered HIV testing to be risky behaviour with uncertain outcome were not differentially affected by the framed messages.

3.3.3. **Quality assessment**

The main outcome measure in this study was the differences in self reported HIV testing. It is possible respondents’ desires to provide answers that researchers find favourable (social desirability bias) may have had an impact on the results. Women were randomised to decide which message they received therefore reducing the risk of systematic bias across conditions. Nonetheless, the authors did not assess the
impact of social desirability and so were unable to determine if the messages themselves were likely to encourage false reports of HIV testing.

There was also no unframed control condition to compare the framed versions of the video. It is possible that the results reflected unusually effective or ineffective messages in some conditions. While the authors were able to show a framing by certainty interaction, they were not able to fully explain the mechanisms driving the differential effect, particularly since they were only able to demonstrate the interaction in one direction. According to their hypothesis there should have been a strong loss-framed advantage for women who perceived HIV testing as a relatively risky behaviour with an uncertain outcome, but this was not observed.

Although the study had several limitations these were all identified by the authors and steps were taken in multivariate analysis to reduce confounding and bias. Additionally, the strong theoretical basis of the study and use of randomisation to allocate message conditions meant the study was rated as [+].

3.3.4. Summary and evidence statements

Apanovitch et al (2003 BA [+]) found that among those who viewed HIV testing as having a certain outcome (with a low risk of testing positive) gain framed messages better encouraged self-reported HIV testing than loss framed messages. The authors were unable to determine the mechanisms underpinning the framing by certainty interaction.

**Evidence statement 3.3 Message Framing**

<table>
<thead>
<tr>
<th>Evidence statement 3.3 Message Framing</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is weak evidence from one US study (Apanovitch et al, 2003 BA[+]) to suggest that videotaped health education messages that highlight the positive outcomes of HIV testing may increase uptake of HIV testing among low income, ethnic minority women who consider themselves to be at low risk of testing positive (38% vs 26%, ( \chi^2 = 4.84, p &lt; .05 )).</td>
</tr>
</tbody>
</table>

This evidence is only partially applicable because the study was conducted in the USA among low income African American and Latina women who are culturally distinct from black Africans in England. Barriers to HIV testing among black Africans in England, (many of whom survive on low income), do include poor perception of individual risk. It follows that gain-framed messages might therefore increase the uptake of HIV testing in this population. Further research is needed to examine if this evidence is directly applicable to black African groups in England and whether message framing has differing impacts on men and women.
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Table 3.3 Studies that examined Message Framing

<table>
<thead>
<tr>
<th>Study Details</th>
<th>Population and Setting</th>
<th>Method of allocation to intervention/control</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apanovitch et al, 2003 BA [-]</td>
<td><strong>Selected:</strong> Recruited door-to-door from public housing estates and a community centre. Uptake rates not reported. <strong>Excluded:</strong> Age only exclusion criterion at recruitment. HIV positive women excluded at analysis. <strong>Setting:</strong> Small Northeastern US city</td>
<td><strong>Allocation:</strong> Participants randomly assigned to watch video tape. No details of randomisation. <strong>Intervention:</strong> Hypothesis: Women uncertain of outcome of an HIV test more likely to be persuaded to obtain HIV test by loss framed message than gain framed and visa versa. Researchers assigned women to watch one of 2 “gain framed” or “loss framed” 15 minute videotaped educational programmes. Perceived certainty of HIV test outcome assessed post exposure. <strong>Control/comparison:</strong> No control/comparison</td>
<td><strong>Primary outcomes:</strong> Gain framed advantage for women who viewed HIV testing as having certain outcome compared with loss framed: 38% vs 26% tested, $\chi^2 (1, N=281) = 4.84, p&lt;.05$. <strong>Attrition:</strong> 55 (11%) lost to follow-up. No details on loss per arm.</td>
</tr>
</tbody>
</table>
3.4. **Group Level Behavioural Intervention Programmes**

Group level behavioural intervention programmes use workshops or seminars to bring together individuals to talk about sexual health issues. Based on theoretical models of behaviour change, programmes aim to address specific issues that participants might face when making decisions that affect their sexual health. Sessions are usually highly structured and facilitated by trained health professionals or community workers. Programmes try to modify behaviour by reframing participants’ thinking about sexual behaviour (for example, offering techniques to avoid situations where they might be at risk or negotiating safer sex). Typically they combine educational and interactive approaches, (for example role playing or lectures) with approaches that develop participants’ skills in developing the desired behaviour.

Group level behavioural interventions are often made up of many different components that are combined in order for the intervention to function as desired (Bonell 2001). The multifaceted nature of such interventions makes evaluation difficult and often presents problems for researchers who may struggle to reduce the impact of known and unknown confounders. While randomised controlled trials (RCT) are seen by some as the way to minimise such bias (Bonell 2001), they are often costly and random allocation is not always feasible.

3.4.1. **Overview of identified evidence**

Three studies (four papers) were identified which evaluated group level behavioural interventions. All studies were non-randomised controlled trials (N-RCT) conducted in the USA; two papers (Amaro et al 2002 and Raj et al 2001, N-RCT [-]), reported results from the same study at different follow-up time points.

All three studies assessed community-based, theoretically driven workshops with curricula specifically designed by researchers aimed at ethnically and linguistically distinct sub-groups. Rhodes et al (2009 N-RCT [-]) trained Latino men living in rural areas in the US to serve as community health advisers. Amaro et al (2002 N-RCT [-]) compared the effectiveness of two Spanish-language based, women-only workshops, to a control group. Lemieux et al (2008, N-RCT [-]) presented results from a music based intervention which took place in urban high schools. It should be noted that only Rhodes et al (2009 N-RCT [-]) designed their intervention with a view to increase HIV testing; all other programmes were primarily focussed on changing other behaviours associated with HIV risk, such as condom practice, sexual negotiation skills, partner reduction and abstinence.

3.4.2. **Self-reported HIV testing**

Although the studies examined very different intervention programmes there were some similarities between them. Lemieux et al (2008, N-RCT [-]) and Rhodes et al (2009 N-RCT [-]) both designed interventions that trained groups of community members to become opinion leaders that deliver health promotion messages to their peers.
Lemieux et al (2008, N-RCT [-]) recruited 6 “musical opinion leaders” at three urban US high schools predominantly made up of Latino and African American students. Over a period of 4 months, through a series of group discussion workshops, students were encouraged to develop a short, culturally appropriate song designed to reduce HIV and STI risks. The song, “Life’s too short”, was subsequently performed in ten health classes and disseminated via CD alongside other marketing materials (for example, T-shirts, leaflets).

Three months after the intervention, researchers compared the rate of self-reported HIV tests among sexually active students who received the intervention to those in control schools who had received standard health classes in the same period. They found that sexually active participants in the treatment group were more likely to obtain an HIV test than were sexually active participants in the control condition (21.3% vs 6.7% $\chi^2 (1) = 6.39$, p<0.01).

Rhodes et al (2009 N-RCT [-]) used also used the existing structure to deliver their peer led intervention. Thirty soccer teams from a rural Latino soccer league were selected to participate in the study (15 controls and 15 interventions). Each team selected one individual to become a lay health adviser, known as a Navegante or Navigator, to the team. Navegantes underwent four sessions (16 hours) of training in which they learned how to become opinion leaders who make referrals to increase knowledge about HIV / STI testing and increase condom skills. Follow-up occurred 18 months later and found that self-reports of HIV testing increased from baseline for the intervention group (adjusted OR 2.5 [CI 1.5-4.3] p<0.001).

Amaro/Raj et al (2001/2 N-RCT [-]) employed community health educators and trained them to deliver group based HIV prevention programmes based on differing theories of behaviour change. One programme was a general women’s health promotional programme (WHP), based on a range of theoretical concepts and reliant on didactic education and skills training exercises. The second programme was a HIV-intensive Programme (HIV-IP) whose curriculum focused only on HIV and related health topics. The HIV-IP programme was based on social cognitive and empowerment theories and used more participatory methods (such as group problem solving and critical thinking) than the WHP. Both programmes were 12 weeks long and were compared to a control group made up of women wait-listed to receive the interventions.

Surveys were conducted before the interventions (pre-test), 12 weeks after pre-test (post test), and at three month and 15 month follow up. Participants were asked to report if they had tested for HIV in the previous 3 months. Only the WHP group was significantly more likely than the wait-list control group to report increased HIV testing at post-test (OR= 2.50; 95%CI 1.02, 6.12) but this significant effect was lost at follow up. There were no other significant differences in testing between each programme and/or the control group.

3.4.3. Quality Assessment

All three studies relied on self reports of HIV testing, but did not assess or try to adjust for social desirability bias.
Amaro/Raj et al (2001/2 N-RCT [-]) reported their methodology well and presented their data with a range of measure of effect with accompanying statistical tests. There were significant sources of bias that arose from not only the quasi-experimental study design but also from the recruitment criteria and the intervention settings. Limited attempts were made to adjust for this in analysis; nonetheless the small sample size would have made it likely that the study was underpowered.

The study by Lemieux et al (2008, N-RCT [-]) was also rated poor. The methodology used to select the controls was unclear and may have introduced unknown bias. Although the authors did try to adjust for rates of attrition this was not done when examining the outcome of interest. Rhodes et al (2009 N-RCT [-]) study methodology was also unclear; there was no description of how teams were selected, rates of attrition, or what information was given to those in control teams. Additionally, HIV testing rates increased from 9.0% at baseline to 41.8% at follow up for the control group but this result is not mentioned by the authors.

3.4.4. Summary and evidence statements

Three studies were found that looked at how group level interventions can be used to increase HIV testing in migrant and ethnic minority communities. All three studies were non-randomised controlled trials that showed significant short term increases in self reports of HIV testing after the interventions. But none of the studies were able to minimise the bias or flaws in their study design and were therefore rated with poor internal validity.

Evidence Statement 3.4 Group Level Behavioural Interventions

There is weak evidence from three studies to suggest that (workshop or opinion leader based) group level behavioural interventions can increase HIV testing in migrant and minority ethnic communities. Two non-randomised controlled trials (N-RCT) showed increased odds of self reported HIV testing (OR [95% confidence interval]) in the intervention groups: 2.50; [1.02, 6.12] (Raj et al 2002 N-RCT [-]); 2.5 [1.5-4.3] (Rhodes et al 2009 [-]). Another N-RCT (Lemieux et al 2008, N-RCT [-]) showed new HIV testing was more likely among those in the intervention group: (21.3% vs 6.7% $\chi^2 (1) = 6.39$, p<0.01).

This evidence is only partially applicable to black Africans in England. That is because all three studies were conducted in the US with migrant and minority ethnic communities that were largely culturally and linguistically homogenous. While it may be possible to develop group level behavioural interventions for specific black African communities in England, (for example Shona speaking Zimbabwean communities), developing effective interventions that cut across black African communities might be more challenging. Additionally, successful culturally based group level behavioural interventions should be underpinned by findings from extensive ethnographic, psychosocial or formative research. There is limited availability of such evidence from black African communities in England.
### Table 3.4 Studies that examined group level behavioural intervention programmes

<table>
<thead>
<tr>
<th>Study Details</th>
<th>Population and Setting</th>
<th>Method of allocation to intervention/control</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amaro/Raj et al 2001/2 N-RCT [-]</td>
<td>Select: Women recruited from housing projects, community service agencies and clinics. Inclusion criteria as above. Possibility of selection bias – women were invited to participate by programme facilitators. Eligible &amp; accepted: HIV Intensive Prevention (HIV-IP) =55% Women's Health Programme (WHP) = 90%</td>
<td>Allocation: Participants allocated according to which facilitator enrolled them into the study. Wait-list controls enrolled by researchers.</td>
<td>Primary outcomes: No significant difference in self reported testing across groups: increase in HIV testing for HIV-IP (7.5%); decrease in testing for WHP (3.7%); decrease in testing for wait-list control (1.6%).</td>
</tr>
<tr>
<td></td>
<td>Setting: Community centres, Boston, US</td>
<td>Intervention: Two Spanish based HIV prevention programmes delivered by trained facilitators in a community based setting. Both programmes delivered over 12 weeks (sessions: 1.5-2 hours each).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HIV-IP: based on social cognitive theory. Includes participatory education strategies with &gt; 16 hours HIV prevention &amp; socio-cultural information.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>WHP: small group, largely didactic approach with 6-9 hours about HIV, remaining hours focused on general women's health topics suggested by participants.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control/comparison: Wait-list control</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sample Total n= 170 Intervention HIV-IP n= 44 WHP n=56 Control n=70 Baseline comparisons: NR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Study power: NR. Unlikely to be sufficiently powered with small sample size.</td>
<td></td>
</tr>
<tr>
<td>Lemieux et al, 2008, N-RCT [-]</td>
<td>Select: Pupils enrolled in high school health classes</td>
<td>Allocation: NR.</td>
<td>Primary outcomes: New HIV test more likely in treatment group: $\chi^2 (1) = 6.39$, p&lt;.01</td>
</tr>
<tr>
<td></td>
<td>Setting: Inner city schools, US</td>
<td>Intervention: Intervention took place in health classes. 6 MOLs (Musical Opinion Leaders) were selected by class peers. MOLs wrote and performed &quot;Life is too short&quot; a 5 min hip-hop/RnB style song focused on HIV prevention motivations. MOLs performed song in 10 health classes &amp; disseminated information packs. 1 month after initial class presentation another</td>
<td>Attrition: 116/422 (27%) lost to follow up. MANOVA indicates no association between intervention and attrition.</td>
</tr>
</tbody>
</table>
### Study Details

Rhodes et al, 2009, N-RCT

**Aim:** Evaluate efficacy of pilot lay health adviser intervention to increase condom use and HIV testing among Latino men.

**External Validity:** -

### Population and Setting

**Selected:** Soccer teams selected to serve as intervention and control groups; random sample of men from each group participated in evaluation

**Excluded:** NR

**Setting:** North Carolina, US.

### Method of allocation to intervention/control

**Allocation:** Intervention teams were allocated according area. Control teams selected to be geographically and socially distinct

**Intervention:** Fifteen lay health advisers from 15 soccer teams received 16 hours training (based on social cognitive theory) as health advisers who increase HIV knowledge and make referrals for HIV testing.

**Control/comparison:** No description of input received by control group

### Results

**Sample Total** n= 222 **Intervention** NR **Control** NR

**Baseline comparisons:** No significant differences in socio-demographics. Adjusted for within team clustering.

**Primary outcomes:** HIV testing increased over baseline for intervention (9.0% vs 64.4%) adjusted odds ratio - 2.5 [CI 1.5-4.3] p<0.001

**Attrition:** NR

---

*NR = Not Reported NA= Not Applicable*
3.5. **Changes in Clinic Policy**

In addition to trying to change individual attitudes and behaviours towards testing, structural changes to existing clinical practices can improve HIV testing uptake rates. The introduction of policies that change the personal experience of clinic attendees, for example through reduced waiting times, can influence HIV testing rates. Although these interventions are often not targeted at increasing HIV testing among migrant or black and minority ethnic groups they often increase the opportunity for HIV testing for individuals from these groups.

3.5.1. **Overview of identified evidence**

Four studies were found that examined the effect of changes in clinic policy on the uptake of HIV testing in migrant or black and minority ethnic communities. Two were before and after studies; one conducted in the UK (Cassell et al 2003, [++] and one in The Netherlands (Van der Bij et al 2008 [+]). The other two studies (randomised controlled trial and interrupted time series) were conducted in the USA (Wurcel et al 2005 RCT [+]; Zetola et al 2008 ITS [+]).

Cassell et al (2003, BA [++]) examined the impact of clinic attendance and the uptake of HIV testing following changes to the clinic appointment system. Van der Bij et al (2008, BA [+]) and Zetola et al (2008, ITS [++] examined clinic policies that tried to make HIV testing a routine part of clinic procedures. Wurcel et al (2005, RCT [+]) addressed the subject of rapid testing.

3.5.2. **Changing appointment systems**

Cassell et al (2003, BA [++] conducted a natural experiment at a London GUM clinic. The study compared HIV testing rates before and after the introduction of a new clinic appointment policy. Before the change the clinic offered a wholly walk-in service, in which patients arriving before the end of clinic session could wait to be seen. The new appointment policy consisted of clinic sessions where 65% of slots were bookable on the day of attendance and 35% pre-booked appointments. Most of the patients attending the clinic were from black and minority ethnic communities. The authors found that there was higher rate of HIV testing among new patients after the implementation of the new appointments policy (37.3% vs 31.0% p=0.04). The ethnic profile of the clinic population remained the same after the policy change.

3.5.3. **Normalising HIV testing**

Zetola et al (2008, ITS [++] examined the impact of a change in procedure for ordering HIV tests at a US hospital. The previous policy required physicians to obtain a patients signature on an informed consent document before they could order an HIV test. Laboratories rejected samples with incomplete documentation and the HIV test was not completed. The new policy added HIV antibody testing to routine laboratory forms and only required clinicians to document informed consent in medical records. The study analysed 20,710 HIV tests performed over a 53 month period and found a sustained increase in monthly HIV testing rates one year after the policy change. Patients were stratified according to ethnicity; there was an increased number of HIV tests per month per 1000 patient visits after the policy among African
Americans and Asians but not among Hispanics. However, the increasing HIV testing trends were similar across ethnic groups when compared to each other. There was also a significant increase in the average number of tests among patients speaking a primary language other than English or Spanish.

In the Dutch study, (Van der Bij et al 2008, BA [+]) the uptake of HIV testing was measured before and after a change in policy that introduced the routine offer of an HIV test. Before the change, HIV testing was available but not routinely offered to all attendees. The authors also conducted half-yearly, cross-sectional, anonymous HIV prevalence surveys in order to assess the proportion of HIV positive attendees aware of their serostatus. Overall there was a significant increase in HIV testing rates when comparing the period before and after the policy change (OR: 5.7 95%CI 5.6–5.9). This increase was more pronounced among patients from sub-Saharan Africa (OR: 8.0 CI: 6.5–9.8) than among white patients. There was no change in the proportion of individuals aware of their HIV infection before and after the policy change.

3.5.4. Rapid vs. Standard Testing

One RCT examined whether patients would be more likely to accept HIV testing if they were offered a rapid test versus a standard test. Rapid testing allows patients to receive their results after a 20 minute waiting period, whereas standard results are received after two weeks. Wurcel et al (2005, RCT [+]) had hypothesised that fewer patients would accept rapid testing because of the heightened fear of finding out immediately that they were HIV positive. When standard testing was offered, the results showed there were significant difference between acceptance rates among different ethnic groups (p=0.04); black Hispanic/Caucasian Hispanic group displayed the lowest acceptance (18.2%) and black non-Hispanics the highest (59%). In contrast, there was no difference in the rates of rapid testing among the ethnic groups (p=0.16). None of the tests performed returned with positive results.

3.5.5. Quality assessment

Cassell et al (2003, BA [++] ) conducted a good study that reported a clear and concise methodology. While the study was unable to collect accurate data on the numbers turned away from the clinic after the policy change, this source of bias was not thought to significantly influence the results. This study took place before routine opt-out testing was introduced in GUM clinics. It is therefore unclear whether that the observed changes in the rate of testing reflected an increase in the offers of an HIV test by healthcare workers or whether patients were more likely to accept the offer.

The other before and after study, Van der Bij et al (2008, BA [+]), was moderately well conducted but some aspects of the methodology were unclear. The results show that characteristics of the clinic population changed over time but multivariate analysis was not used to examine HIV testing before and after intervention. It is also difficult to assess how representative this clinic sample is of the source population and the authors do not address these issues in the paper.

Zetola et al (2008, ITS [++] ) conducted a very well designed interrupted time series study, describing the methodology in detail and presenting results with pre-specified
sub-group analyses. The authors also conducted sensitivity analysis and were able to establish that external factors, such as the introduction of same-day testing, had not significantly contributed to the observed effect. Although the study did report on those who tested HIV positive, no time series analysis was conducted for this group.

The only RCT to be identified in this review was moderately well conducted. Wurcel et al (2005, RCT [+]) did not report the method used to randomly allocate patients. Additionally, the study was underpowered and so was not able to determine which method of testing was more acceptable.

3.5.6. Summary and evidence statements

Only four studies were identified that addressed changes in clinic policy and practice as a means to increasing the uptake of HIV testing. One before and after study Van der Bij et al (2008, BA [+] and one interrupted time series (Zetola et al 2008, ITS [++] examined how simplified consent procedures and routine offers of tests could normalise HIV testing and increase uptake in clinics. Cassell et al (2003, BA [++] compared two different appointment systems and Wurcel et al (2005 RCT [+]) compared rapid testing to standard testing.

<table>
<thead>
<tr>
<th>Evidence statement 3.5 Changes in Clinic Policy</th>
</tr>
</thead>
</table>
| 3.5a There is moderate evidence from one before and after study (Cassell et al 2003, BA [++] to suggest that the uptake of HIV testing in GUM clinics can be increased by implementing a bookable appointment system. The study found that the proportion of HIV tests taken by new patients increased after the intervention (37.3% vs 31.0% p=0.04).

This evidence is only partially applicable to black Africans in England. This is because the study was conducted before the introduction of universal ‘opt-out’ HIV testing in sexual health clinics in England. Under this system patients are tested for HIV unless they specifically reject the test. Additionally, the study took place in a large clinic located in an ethnically mixed, socially deprived district in London. The evidence may not be applicable in smaller clinics or clinics in areas with a less ethnically diverse population.

3.5b There is moderate evidence from two studies to suggest that encouraging the routine offer of an HIV test may increase the uptake of HIV testing in among migrant and minority ethnic inpatients, outpatients and those attending GUM clinics. One interrupted time series study (Zetola et al 2008, ITS [++] found that removing the need for separate signed consent documentation increased HIV testing among various ethnic and linguistic groups [mean increase (95% confidence intervals)]: Asian - 2.80 (1.37–4.23); Black - 5.58 (2.11–9.04); Hispanic -1.56 (-0.49–3.61); White - 5.58 (2.95–8.21); English-speaking - 5.04 (2.40–7.69); Spanish-speaking -0.95 (-3.31–1.40); Other primary language - 2.69 (1.16–4.22). Findings from another study, (Van der Bij et al 2008, BA [+]) showed routine offers of HIV testing to all new patients at a sexual health clinic increased rates of HIV testing among patients from sub-Saharan Africa (OR: 8.0 95 % Confidence Interval: 6.5-9.8)

This evidence is only partially applicable to black Africans in England. This is because separate signed consent is not required for HIV testing in England.
Additionally, most sexual health clinics in England use a universal ‘opt-out’ testing and the uptake among black Africans is more than 85%. (HPA 2009)

3.5c. There is moderate evidence from one randomised controlled trial (RCT [+] ) that suggests that rapid HIV testing in clinical settings is acceptable to all ethnic minority groups but standard HIV testing is not. The study (Wurcel et al 2005, RCT [+] ) showed that the acceptance rate of standard testing differed across ethnic groups (black/Caucasian Hispanic 18.2% vs black non-Hispanic 59% p=0.04).

This evidence is partially applicable to black Africans in England. This is because the study was conducted in the US using ethnic groupings not widely used in England. Additionally, unlike in the UK, the US healthcare system is not free at the point of care. It is therefore difficult to assess if the conclusions reached would be applicable to black and minority ethnic groups in England.
### Table 3.5 Studies that examined Changes in Clinic Policy

<table>
<thead>
<tr>
<th>Study Details</th>
<th>Population and Setting</th>
<th>Method of allocation to intervention/control</th>
<th>Results</th>
</tr>
</thead>
</table>
| **Cassell et al 2003 BA [++]** | **Selected:** All new patients in the GUM clinic. **Excluded:** Patients previously diagnosed with HIV at the clinic **Setting:** London, UK | **Allocation:** Non applicable. Natural experiment  
**Intervention:** Policy change in GUM clinic: Walk-in only (phase 1) to (phase 2) all sessions either mixed pre-booked slots (35%) or slots available on the day (65%). Nurse triage offered to patients in phase 2 who could not be offered an appointment on the day.  
**Control/comparison:** NA | **Primary outcomes:** Higher uptake of HIV testing among new patients in phase 2 (37.3% vs. 31.0% p=0.04)  
**Attrition:** No information collected on those turned away from the clinic as walk-in patients. |
| **Wurcel et al 2005, RCT [+]** | **Selected:** New inpatients (medical, surgical, tuberculosis, orthopaedic services) or outpatients. **Excluded populations:** Patients who were acutely intoxicated; psychotic; depressed or incompetent excluded from enrolment. Patients also exclude if they had been tested within one month of enrolment. Number of exclusions not reported. Potential bias: attending physician determining eligibility could exclude from study due to other criteria. | **Allocation:** Patients randomised to 1:1. No details of randomisation process  
**Intervention:** Patient offered rapid HIV test, if agreed received 10-30 minute pre-test discussion. Rapid testing results delivered after 20-minute waiting period.  
**Control/comparison:** Patient offered Standard HIV test, if agreed received 10-30 minute pre-test discussion. Results delivered in follow-up appointment to be booked by the patient two weeks post-test. No results provided over the phone. | **Primary outcomes:** Significant difference between acceptance rates of standard testing among different ethnic groups (p=0.04). Hispanic groups lowest acceptance of standard testing; non-Hispanic black highest rate of acceptance. No ethnic differences in acceptance of rapid testing (p=0.16).  
**Attrition:** NR. |
## Study Details

**Authors:** Zetola et al 2008 ITS [++]

**Aim:** To describe the change in HIV testing rates after introduction of policy to eliminate the requirement of separate written consent for HIV testing.

**External Validity:** [+]  

## Population and Setting

**Setting:** Hospital, Boston, US  

**Selected:** All Patients attending health care settings where HIV screening is routinely performed: ED; urgent care clinic, inpatient services, primary care clinics; specialty clinics and affiliated community clinics.

**Excluded populations:** None  

**Setting:** Large University-based hospital, San Francisco, US.

## Method of allocation to intervention/control

**Allocation:** NA.

**Intervention:** May 16 2006 policy change eliminating the need for physicians to submit signed patient informed consent document alongside HIV test laboratory requisition form. Prior to policy change laboratory rejected samples with incomplete documentation.

**Control/comparison:** Tests undertaken before change in policy and monthly HIV testing rates compared with similar San Francisco hospital where policy change did not occur.

**Sample Total (tests) n=** 20,710  
**Intervention:** 3791  
**Control:** 16919  
**Baseline comparisons:** NA  

**Study power:** No power calculations. Large sample sufficient.

## Results

**Primary outcomes:** Mean HIV tests per month per 1000 patient visits over the expected number of tests 13 months after the change in policy (95% confidence interval):

- Asian - 2.80 (1.37–4.23) p<0.001;  
- Black - 5.58 (2.11–9.04) p= 0.002;  
- Hispanic -1.56 (-0.49–3.61) p=0.132;  
- White - 5.58 (2.95–8.21) p<0.001;  
- English-speaking - 5.04 (2.40–7.69) p= <0.001;  
- Spanish-speaking -0.95 (-3.31–1.40) p=0.419;  
- Other primary language - 2.69 (1.16–4.22) p= 0.001

**Attrition:** NR.

## Van der Bij et al 2008 BA [+]

**Aim:** To evaluate whether routinely offering HIV testing to STI clinic patients increased the uptake of HIV testing and awareness of HIV status among heterosexuals.

**Selected:** During data collection periods: 1,000 consecutive patients interviewed  
**Excluded:** NR  
**Setting:** Public health service STI clinic, Amsterdam, Netherlands

**Allocation:** NA

**Intervention:** Implementation of routine offers of HIV testing to STI clinic patients in 1999  
**Control/comparison:** Before and after implementation  
**Sample size:** Total number of consultations = 144,466; survey participants = 17,093

**Primary outcomes:** Increase in HIV testing rates pre- vs. post-intervention (OR: 5.7, CI 5.6-5.9); increase more pronounced among non-Dutch ethnicity. Surinamese/Dutch Antillean (OR: 7.7, CI 6.8-8.6) / Turkish (OR: 9.0, CI 6.9-11.8) / North-African(OR: 6.7, 5.3-8.5) / Sub-
### Study Details

<table>
<thead>
<tr>
<th>Study Details</th>
<th>Population and Setting</th>
<th>Method of allocation to intervention/control</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Validity: [+]</td>
<td>Study power: NR</td>
<td>Saharan African (OR: 8.0 CI: 6.5–9.8) / Eastern-European (OR: 4.8 4.0–6.0) / South-American (OR: 9.6, CI 8.0–11.8) / Other Ethnicity (OR 6.0, 5.4-6.5)</td>
<td>Secondary outcomes: 19% of HIV positive people aware of infection – no change over time (p=0.6)</td>
</tr>
</tbody>
</table>

Secondary outcomes: 19% of HIV positive people aware of infection – no change over time (p=0.6)

Attrition: NA

*NR = Not Reported NA= Not Applicable ITT=Intention to Treat analysis*
3.6. **Physician Training**

Although medical students learn about HIV testing during their training not all general practitioners or hospital-based doctors may feel confident offering an HIV test. This could be due, in part, to misconceptions about the HIV pre- and post-test discussions. Educational preparation and extended training of physicians, particularly those working in primary care or emergency departments, could potentially reduce late diagnosis and increase HIV test rates in communities less likely to attend sexual health clinics.

3.6.1. **Overview of identified evidence**

One study that looked at the effect of a physicians’ HIV testing training programme on the screening and testing of patients was retrieved. This before and after study (Stanton et al, 2000 BA [-]) was conducted in the USA. It aimed to train Hispanic primary care physicians to offer HIV tests to Hispanic patients at risk of contracting the virus.

3.6.2. **Frequency of performing HIV tests**

Stanton et al (2000 BA [-]) conducted a before and after study to evaluate the effects of an education intervention on physicians’ attitudes towards, practice patterns related to, and knowledge about, the testing and referral process related to HIV infection. Participants were recruited from the Hispanic physician’s medical society using a convenience sample. A total of 114 physicians (98% Hispanic) were given one-to-one educational training in their offices and included in the sample. Participants rated the frequency with which they performed HIV tests and the number of patients they tested using self-completed questionnaires administered before and after the course. The rating for frequency of HIV tests increased from 0.62 (SD 0.07) before to 0.81 (SD 0.05) after the course (p=0.10). The mean number of HIV tests performed on those under the age of 20, increased from 19 (SD 33) before to 29 (SD 50) after the intervention (p=0.006).

3.6.3. **Quality assessment**

The methods and results were poorly described and so this study was subsequently rated low quality [-]. The frequency with which HIV tests were performed and the number of patients tested were measured using a self reported questionnaire which had not been validated. It was unclear whether the frequency with which of tests were performed varied daily, weekly or monthly. The change in frequency of testing was significant at the 10% level, which does not provide strong statistical evidence. There was also no explanation for reporting the change in the average number of patients tested in the under-20’s only.

3.6.4. **Summary and evidence statement**

Physician training can improve the uptake of HIV testing by offering more opportunities for patients to test. In particular it may reduce levels of late diagnosis. We found one study that examined the role of physician HIV education training had on the uptake of HIV testing in primary care.
Evidence statement 3.6 Physician Training

There is weak evidence from one study to suggest that training physicians can increase the frequency with which they perform HIV tests and increase the number of patients that are tested. One US before and after (Stanton et al, 2000 BA [-]) study showed an increase in the mean number of tests performed in patients aged under-20 after the intervention (19 to 29 p=0.006).

This evidence is not applicable to black Africans in England. This is because the study conditions are unique to the areas in the USA where a large proportion of Hispanic doctors treat predominantly Hispanic clients. It is unlikely that black African physicians in England treat predominantly black African patients.
Increasing the effectiveness of HIV Testing in black Africans in England – Final full report

Table 3.6 Studies that examine physician training

<table>
<thead>
<tr>
<th>Study Details</th>
<th>Population and Setting</th>
<th>Method of allocation to intervention/control</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanton et al 2000 BA [-]</td>
<td>Selected: Self-selection of physicians practicing in predominantly urban areas with mostly Hispanic or Latino patients</td>
<td>Allocation: NA – all volunteers assigned to intervention programme</td>
<td>Primary outcomes: Self-reported frequency of performing HIV tests increased from mean of 0.62 (SD=0.07) to 0.81 (SD=0.05), p=0.10</td>
</tr>
<tr>
<td><strong>Aim:</strong> Examine effects of training programme for Hispanic primary care physicians on screening and testing patients at risk for HIV/AIDS</td>
<td>Excluded: NR</td>
<td><strong>Intervention:</strong> Four-part modular one-to-one programme (of three-hour sessions) on screening, testing and referral, delivered by six trained Hispanic instructors following lesson plans with specific, standardized content; developed using survey of members of national Hispanic physicians medical society</td>
<td><strong>Secondary outcomes:</strong> Mean number of patients tested increased from 19 (SD=33) to 29 (SD=50), p=0.006</td>
</tr>
<tr>
<td><strong>External Validity:</strong> [-]</td>
<td>Setting: Training in physicians’ offices, across eastern and southeastern US</td>
<td>Control/comparison: NA</td>
<td><strong>Attrition:</strong> NR</td>
</tr>
<tr>
<td></td>
<td>Sample Total n= 114</td>
<td>Baseline comparisons: NA</td>
<td>Study power: No power calculation</td>
</tr>
</tbody>
</table>

NR = Not Reported NA= Not Applicable
3.7. Anonymous vs. Confidential Testing

The stigma associated with HIV means that HIV testing can be the cause of serious anxiety for those who choose to undergo the procedure. As well as the fear of testing HIV positive, people may also be anxious about breaches in the confidentiality of their test result. Anxiety about loss of confidentiality may deter some from testing at all, particularly those from communities where there are high levels of HIV related stigma.

Confidential HIV testing involves linking a person’s name to their blood (or other bodily fluid) specimen and recording the test result in a medical chart with a name. In anonymous testing a unique identifier (typically a number) rather than a patient’s name is used to link the specimen and the result to the patient. Anonymous test results are not recorded in a medical chart that has a patient’s name.

In England anonymous HIV testing is not formally available at sexual health clinics. However, services are free at the point of care, with no need to supply proof of identity. This allows patients to provide false names and in essence, test anonymously. In contrast those who test after being admitted into hospital or through their general practitioner are only able to use confidential testing.

3.7.1. Overview of identified evidence

Two studies were found that examined anonymous testing. One study (Bindman et al 1998 CT [+]) was a retrospective cohort conducted in the USA which assessed whether anonymous HIV testing was associated with earlier HIV testing. The second study was conducted in Australia; Miller et al (1998 BA [-]) used a before and after study to assess the impact of using coded tests in the uptake of testing.

3.7.2. Anonymous testing

Both studies examined the impact of anonymous testing on HIV testing rates. Miller et al (1998 BA [-]) introduced coded HIV testing in a clinic serving remote Aboriginal communities in South Australia. Previously, HIV testing had been available, but only though named records. The authors measured uptake of HIV testing and found that HIV tests increased from 1.6 per week to 11.4 per week four years after the introduction of anonymous testing. No statistical analysis was performed.

In the US study (Bindman et al 1998 CT [+]) probability sampling was used to select patients from clinics in eight states across the US. A cohort of patients completed interviews in English and Spanish and were asked to recall the type of HIV test they received and the number of days between their HIV positive diagnosis and the onset of an AIDS defining illness. Persons tested anonymously presented earlier in the course of HIV disease than person tested confidentially. The mean time from learning they were HIV positive to the diagnosis of AIDS was 526 days longer for those tested anonymously than for those tested confidentially(P<0.001). Anonymous testers tended to be younger, white, men who have sex with men and slightly more educated than persons testing confidentially. Further, multivariate analysis which adjusted for ethnicity, found that anonymous testing was still associated with earlier diagnosis.
3.7.3. Quality Assessment

Miller et al (1998 BA [-]) used unclear methods to conduct their before and after study and reported their results poorly. No statistical analysis was performed to assess whether the differences observed were significant. Neither did the study compare the study or the healthcare worker population pre- and post-intervention. The authors acknowledge that anonymous testing was only one part of a larger community-wide HIV prevention programme which may have contributed to improved acceptability of HIV testing.

Bindman et al (1998 CT [+] presented in-depth, clear accounts of the methods used in this moderately well conducted retrospective cohort, although there were some flaws in the study design. Participants were asked to recall details of their HIV medical care such as their CD4+ count at diagnosis and whether their first positive HIV test had been anonymous or confidential. The authors did try to minimise the effects of this recall bias through multivariate analysis.

HAART was introduced in 1996 and the accompanied change in attitude to HIV testing would have had an impact on both patients and healthcare workers. Both of these studies were carried out during that period of change, but did not assess how this affected their study results.

3.7.4. Summary and evidence statement

Anonymous testing allows individuals to find out their HIV status without fearing breaches in confidentiality. Two studies examined the effectiveness of anonymous testing at increasing the uptake of HIV testing. Bindman et al (1998 CT [+] were able to show that anonymous testing was associated with earlier testing, even after adjusting for ethnicity but anonymous testers were more likely to be white. Miller et al (1998 BA [-]) showed improved acceptability of HIV testing among Aboriginal communities after anonymous testing was introduced.

Evidence statement 3.7 Anonymous Testing

3.7a There is moderate evidence from one study to suggest that individuals that test anonymously test earlier in the course of their HIV disease. One retrospective cohort (Bindman et al 1998 CT [+] showed that anonymous testers received their HIV diagnosis on average 529 days earlier than those tested confidentially (p=<0.001).

This evidence is partially applicable to black Africans the UK. This is because the study was conducted in the USA where both anonymous and confidential testing are widely available. In England anonymous HIV testing is informally available in sexual health clinics but not in hospitals or GP surgeries. It is unclear whether this context substantially mirrors the formal provision of anonymous testing available in the USA.

3.7b There is weak evidence from one study to suggest that anonymous testing is more acceptable in minority ethnic communities than named testing. One before and after study (Miller et al 1998 BA [-]) found HIV testing rates increased from 1.6 tests
per week to 11.4 tests per week. This increase was not shown to be statistically significant.

This evidence is not applicable to black Africans in England. This is because the study was conducted in Australia by an Aboriginal controlled health service providing health services to remote communities occupying ancestral homelands. This setting and political context differs considerably from the situation in England.
Table 3.7 Studies that examined anonymous vs confidential testing

<table>
<thead>
<tr>
<th>Study Details</th>
<th>Population and Setting</th>
<th>Method of allocation to intervention/control</th>
<th>Results</th>
</tr>
</thead>
</table>
| Bindman et al, 1998 CT | **Selected:** All patients included in states where incidence was fewer than 500 cases; randomly sampled in remaining states. Eligible cases: living in state, speaking Spanish or English, healthy to consent / take part; tested positive in state where sampled; voluntarily sought testing. 68.3% of eligible cases interviewed. **Excluded:** States not offering both anonymous and confidential testing (Mississippi); those initially testing HIV positive in a different state from the one which they were sampled; if the reason for testing was not voluntary; if participant provided false name at a confidential testing site. **Setting:** Arizona, Colorado, Missouri, New Mexico, North Carolina, Oregon, Texas, USA | **Allocation:** NA  
**Intervention:** Comparison of those reporting anonymous vs confidential HIV testing  
**Control/comparison:** (as above)  
**Sample size:** Total n = 835; anonymous testers = 192; confidential testers = 643  
**Baseline comparisons:** Anonymous testers were younger, white (p=0.001), more educated, MSM. Confidential testers were more likely to have HIV related symptoms  
**Study power:** NR | **Primary outcomes:** Anonymous tested presented for testing earlier in the course of HIV disease and were younger, white (p=0.001), more educated, MSM; in multivariate analysis: race / ethnicity not associated with time to medical care or AIDS diagnosis.  
**Attrition:** NA |
| Miller et al, 1998 BA | **Eligible:** People aged 12 and over, living in the Anangu Pitjantjatjara Lands in NW Australia, attending six clinics for HIV testing (1992 – 1996)  
**Selected:** NA  
**Excluded:** under 14s  
**Setting:** Clinics in Anangu Pitjantjatjara Lands, NW Australia | **Allocation:** NA  
**Intervention:** Implementation of confidential testing in August 1994  
**Sample size:** total = 1189; pre-intervention = 83; post-intervention = 1106  
**Baseline comparisons:** NR  
**Study power:** NR | **Primary outcomes:** HIV tests increased from 1.6/week in 1992 to 6.5/week in 1994. reaching 11.4/week in 1996  
**Attrition:** NA |
4. Discussion

4.1. Findings into context

This review aimed to provide evidence to support those developing guidance for interventions which aim to increase the uptake of HIV testing to reduce undiagnosed HIV infection among black African communities living in England.

There was one overarching question addressed in the review:

- What are the most effective and cost effective ways of increasing the uptake of HIV testing to reduce undiagnosed infection among black Africans living in England?

In order to explore this question two primary questions were developed:

1. Which interventions have been effective and/or cost effective in increasing the uptake or awareness of HIV testing and its benefits in migrant or black and minority ethnic communities?

2. What interventions have successfully increased the opportunity for HIV testing for migrant or black and minority ethnic communities, whether aimed at this group or not?

The evidence base about the HIV epidemic as it affects Africans living in England is poor and there have been few studies that address HIV testing. Searching such a narrow field of interest was unlikely to yield many results. With this in mind, the review team expanded the search criteria to include evidence from studies conducted in countries similar to the UK in terms of economic and political development.

The search for economic evaluations yielded no studies that met the inclusion criteria. As a result the cost effectiveness aspect of the primary and secondary questions could not be answered.

Fourteen studies were found and included in the effectiveness review. Nine of the studies were conducted in the USA, two in Australia, one in The Netherlands and one in the UK. The retrieved studies were categorised according to six intervention types: mass media campaigns; message framing; group level behavioural interventions; physician training; changes in clinic policy and anonymous testing.

Most of the studies retrieved were rated poor or moderate quality. Consequently most of the evidence statements in this review are weak or moderate in strength. The review was therefore able to provide limited answers to the research questions posed.

4.2. Implications of findings

There was very little evidence that addressed the first primary research question. The studies that examined the effectiveness of interventions that specifically targeted groups based on their ethnicity, (mass media campaigns, message framing, group level behavioural interventions and physician training), were mostly poor quality, with low internal and external validity. While much of this evidence is directly or partially applicable to black African communities in England there are some caveats.
Social marketing campaigns are difficult to evaluate because they often consist of many different components disseminated to large numbers of individuals at once in an uncontrolled, unlimited fashion. With so many different elements, researchers struggle to link directly to the intervention any measured changes in health-related outcomes. Not only is it difficult to ascertain whether the campaign has produced the desired change in behaviour, teasing out which elements of the campaign were successful for which group is also very complex. Many questions are raised when examining social marketing campaigns: does the campaign only work for women? Is it effective among young people? Is the campaign successful because it contains culturally appropriate messaging? Was it successfully merely because it raised awareness in settings frequented by the target audience?

Many of these types of questions can be answered with appropriate evaluation metrics but these were not used in the studies found. Subsequently, it is unclear whether mass media campaigns would increase HIV testing among black Africans in England, and if so, whether culturally and linguistically targeted messaging would be more effective than generic messages aimed at the entire population.

The other types of interventions directly targeting ethnic and migrant groups, (for example, group level behavioural interventions), were more contained in their delivery. This made it easier for researchers to determine the effectiveness of the intervention. Regardless of their compact nature, these interventions were also made up of many different components.

Two of the three studies that examined group level behavioural interventions were not specifically designed to change HIV testing behaviours. Indeed, in one study, (Lemieux et al 2008, N-RCT [-]) the intervention workshops did not even address HIV testing. It might not be necessary to fully understand the mechanisms behind the observed increases in HIV testing. But without knowing which elements were the key contributors to the observed increases in HIV testing, translating such interventions for use in other settings with other populations becomes, in large part, guesswork.

This review was able to provide stronger evidence that addressed the second primary research question. The evidence from the studies which increased the opportunity for HIV testing at all groups was generally stronger and more likely to have implications for black African communities in England. Changes to clinic policy and practice can increase HIV testing across all populations, regardless of ethnicity. Cassell et al (2003, BA [++] showed that changing the clinic appointment system increased HIV testing rates in an ethnically diverse sexual health clinic in London. Two studies indicated that normalising HIV testing - either by removing the need for separate consent or by routinely offering HIV tests - also increased the uptake of HIV testing. Migrant and black and minority ethnic groups tended to benefit more from these particular changes in clinic policy and practice more than those from the majority ethnic group.

While it may be tempting to extrapolate from this evidence and assume any attempts to increase the opportunity for HIV testing will benefit migrant and black and minority ethnic communities, it should be noted that some of the studies in this review were equivocal in their findings. Wurcel et al (2005 RCT[+]) found that
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standard HIV testing was acceptable to some minority ethnic groups but not others. Bindman et al (1999 CT [+]) provided moderate evidence to suggest that anonymous testers were diagnosed earlier in the course of their HIV disease, but anonymous testers were more likely to be white. It is therefore necessary to assess how each change in practice or policy affects different ethnic and migrant groups.

4.2.1. Limitations of the evidence and gaps

There are a number of limitations and gaps in the evidence. No economic evaluations were retrieved so there is no evidence about the cost effectiveness of interventions that increase the uptake of HIV test.

Most of the evidence statements about the effectiveness of interventions were derived from single studies which examined interventions in single locations. Some of these were pilot studies, with low statistical power, that were designed to measure either the feasibility of an intervention or its efficacy. Other studies did not include any statistical analysis at all or did not conduct multivariate analysis. As a result these studies were limited by biases inherent in their study design. For example, most of the studies relied on self-reported measures, but did try to assess or adjust for social desirability bias.

There is no evidence about how interventions affect subgroups within migrant or black and minority ethnic communities. For example, there is little information about the impact of interventions according to gender, age or sexuality.

Only two studies in this review included black Africans in their study population. Consequently it is unclear exactly how applicable the evidence statements are to black Africans in England. This is particularly true of the interventions that were underpinned by behavioural change theories. While it is likely that these theories are applicable to black Africans in England, additional ethnographic research would need to be undertaken before adapting the interventions on which they are based. Most studies in this review described these theories poorly and failed to discuss them in relation to the study findings.

Many of these limitations are likely to be due to the nature of health services research in peer review journals. Complex behavioural interventions are interdisciplinary, sometimes involving elements of sociology, psychology, organisational management, marketing and economics. Subject specific medical journals, with strict word limits, rarely publish the detail associated with complex behavioural interventions. It is therefore difficult to confidently draw conclusions about the transferability and adaptability of interventions from the condensed descriptions published in journals.

The most striking limitation of the evidence and the most substantial gap in the literature arises from the fact only four studies reported the number of new HIV diagnoses. Although there was weak or moderate strength evidence that interventions could increase HIV testing rates, none of the interventions were able to show these interventions effectively increased HIV testing among the undiagnosed.

Additionally, much more evidence is needed to examine the following (secondary questions):
• What factors impact on the effectiveness of interventions that increase HIV testing among black-African, other BME, and migrant communities living in England?

• Does effectiveness vary according to the diversity of the population (for example in terms of the person’s age, gender, sexuality or faith)?

• Does effectiveness vary according to the status, knowledge and influence of the person delivering the intervention?

• Does the effectiveness vary according to where the intervention takes place (for example in a healthcare setting or community setting) and whether the intervention is transferable to other settings?

• What are the adverse or unintended consequences (positive or negative) of the intervention?

• Which interventions are ineffective?

4.2.2. Limitations of the review
This review includes findings from a relatively small number of studies which is reflected in the weakness of most of the evidence statements. While we were able to group studies according to intervention type, it should be noted that the similarities between these interventions were partially superficial. Many of the interventions were underpinned by differing theories of behaviour change or examined different changes in clinic policy.

The cut off date for study inclusion was 1996. We chose this year because this is when effective anti-retroviral therapy became widely available, therefore altering the backdrop against which an HIV test was offered. From 1996 onwards individuals could test for HIV knowing that treatment was available. Since then there have been many additional changes in HIV prevention, treatment and care. Developments in rapid testing, oral testing and post exposure prophylaxis have also brought about changes in the context and the environment in which HIV testing occurs. Many of the studies included in this review were conducted before these changes. Some of the evidence is therefore slightly out of touch with England’s current HIV testing practice.

The strongest evidence in the review came from studies that increased the opportunity for HIV testing through changes in clinic policy and services. Studies about changes in clinic policy and practice that did not disaggregate their data according to ethnicity were excluded from the review. It is possible that the data from these studies would have been relevant to this review and to black African communities in England. However, as noted above, it is also quite possible that attempts to increase the opportunity for HIV testing might present unintended barriers to testing for some sub-populations and not others. Without analysis examining the impact on migrant and ethnic minority groups, it would have been difficult to assess the applicability of evidence derived from such studies.

We retrieved details of nine ongoing studies commissioned by the Department of Health in September 2009. These studies all aimed to determine the effectiveness of
innovative interventions to increase the uptake of HIV testing. Two of these studies were specifically focussed on black Africans in England. We contacted the principle investigators, but they were unable to provide us with any findings and therefore this evidence is not included in the review. It is therefore likely more up-to-date evidence will be available from September 2010 onwards.
5. **Conclusion and Recommendations**

There is very little evidence available about the effectiveness of interventions to increase HIV testing in black African communities in England. The evidence used in this review is only partially applicable to the population of interest. From the literature available the strongest evidence came from interventions that try to increase the opportunity to test for HIV. These interventions are seemingly most likely to increase the uptake of testing among black African groups. Weaker evidence comes from studies of complex interventions that directly target migrant and black and minority ethnic communities. This is mainly because rigorously evaluation of such interventions is complicated and rarely undertaken. Additionally, it is difficult to assess the applicability when interventions are targeted at specific but different population groups to that of the population of interest.

More evidence is needed particularly about interventions that increase HIV testing among those living with undiagnosed HIV.

A number of gaps in the evidence have been uncovered which can only be filled with extensive research. The following actions are recommended:

- A smaller review focussed on evidence that will become available from September 2010 should be conducted to augment the results of this review.
- There should be further research to determine:
  - the factors that impact on the effectiveness of behavioural interventions that target individuals based on their ethnicity
  - how message framing impacts on the uptake of HIV testing in black African communities
  - how the normalisation of HIV testing and other changes to clinical practice affect the uptake of HIV testing among different sub-groups of black Africans
  - which interventions are effective in reducing late presentation
  - the cost effectiveness of HIV testing interventions targeted at black African communities
6. References


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Krentz, H.B., Auld, M.C. & Gill, M.J., 2004. The high cost of medical care for patients who present late (CD4+200 cells /mm³) with HIV infection. HIV Medicine, 93-98.


7. Appendix A

7.1. Sample Search Strategy

Strategy used to search Medline (Ovid) for effectiveness studies. This strategy was adapted for other databases and websites.

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(hispanic* or latino* or Latina* or south american* or Japanese or Chinese or Korean* or Guamanian or Chamorro or Filipin* or Vietnamese or Samoan* or Cuban* or Puerto Rican* or Afro Caribbean* or Caribbean* or Pakistani* or Bangladeshi* or Arab* or Somali* or Indian* or Asian* or Eastern European* or afrocaribbean*).ti,ab. 288407

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(aboriginal* adj5 (canada or australia)).ti,ab. 533

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and 26 and 47 2132

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limit 49 to english language 1677

animals/ 4463959

humans/ 10942558

not 52 331330

not 53 1677
Table A2. Search strategy used to identify cost-effectiveness studies in the extensive search of the Cochrane Library Economic Evaluation Database.

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<td>#28</td>
<td>(#3 AND #27)</td>
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<tr>
<td>#29</td>
<td>(#28), from 1996 to 2010</td>
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Table A3. Search strings used to identify cost-effectiveness studies in the broader search of the Cochrane Library database and NHS EED

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<thead>
<tr>
<th></th>
<th>Search string</th>
<th># hits (Cochrane)</th>
<th># hits (NHS EED)</th>
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<td>#1</td>
<td>( HIV OR AIDS ) AND Test</td>
<td>704</td>
<td>372</td>
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<td>#2</td>
<td>MeSH descriptor AIDS Serodiagnosis explode all trees</td>
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<td>#3</td>
<td>(#1 AND #2), from 1996 to 2010</td>
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8. Appendix B

8.1. Methodology Checklists

8.1.1. HIV Testing in Black Africans

8.1.2. Effectiveness/Cost effectiveness Title/Abstract screening checklist

1. Does the study population include:  
   Black African men and women  
   OR  
   Other Black, Asian and Minority Ethnic groups  
   OR  
   Migrant populations living in high income countries (World Bank: OECD members): Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea Rep, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Spain, Sweden, Switzerland, United Kingdom, United States  
   YES/UNCLEAR – go to Q2  
   NO – exclude

2. Was they study carried out in any of the following countries? Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea Rep, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Spain, Sweden, Switzerland, United Kingdom, United States  
   YES/UNCLEAR – go to Q3  
   NO – exclude

3. Is the paper/study about interventions that aim to increase awareness/uptake of HIV testing?  
   YES/UNCLEAR – go to Q4  
   NO – exclude

4. Was the study published in 1996 or later?  
   YES/UNCLEAR – go to Q5  
   NO – exclude

5. Does this paper describe a primary study or is a review (of primary studies)?  
   E.g. randomised or non-randomised controlled trials, prospective observational, retrospective observational, cost benefit analysis; cost-consequence analysis; cost-effective analysis and cost utility analysis  
   YES/UNCLEAR – go to Q6  
   NO – go to Q6

6. Is the Interventions focussed on HIV home testing; Studies exclusively measuring the validity or diagnostic effectiveness of different types of HIV test; Interventions examining testing following exposure to HIV in the workplace  
   YES - Exclude  
   NO/Unclear – Include for Full paper review
### 8.1.3. HIV Testing in Black Africans

### 8.1.4. Effectiveness/Cost effectiveness Full paper Screening

<table>
<thead>
<tr>
<th><strong>Does the study population include:</strong></th>
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<th></th>
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<tbody>
<tr>
<td>Black African men and women</td>
<td></td>
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</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Black, Asian and Minority Ethnic groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Migrant populations living in high income countries (World Bank: OECD members): Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea Rep, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Spain, Sweden, Switzerland, United Kingdom, United States)</td>
<td>YES/UNCLEAR – go to Q2</td>
<td>NO – exclude</td>
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</table>

| **Was they study carried out in any of the following countries? Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea Rep, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Spain, Sweden, Switzerland, United Kingdom, United States** | YES/UNCLEAR – go to Q3 | NO – exclude |

<table>
<thead>
<tr>
<th><strong>Is the paper/study about interventions that include any of the following outcomes:</strong> *</th>
<th>YES/UNCLEAR – go to Q4</th>
<th>NO – exclude</th>
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<tbody>
<tr>
<td>Increase / decrease in number of HIV tests</td>
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<td></td>
</tr>
<tr>
<td>Increase / decrease in uptake of HIV tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase / decrease in offers of HIV tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase / decrease in the time elapsed between HIV infection and diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase / decrease in the reported history and frequency of taking HIV tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase / decrease in the number and types of venue where HIV testing is offered</td>
<td></td>
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</table>

| **Does the study period include 1996 or later?** | YES/UNCLEAR – go to Q5 | NO – exclude |

| **Does this paper describe a primary study or is a review (of primary studies)? E.g. randomised or non-randomised controlled trials, prospective observational, retrospective observational, cost benefit analysis; cost-consequence analysis; cost-effective analysis and cost utility analysis** | YES/UNCLEAR – go to Q6 | NO – exclude |

<table>
<thead>
<tr>
<th><strong>Does the intervention:</strong></th>
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<th>NO/Unclear – go to Q7</th>
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<tr>
<td>focus on HIV home testing</td>
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<tr>
<td>seek to increase uptake among pregnant women in ante-natal clinics</td>
<td></td>
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<tr>
<td>seek to increase HIV testing among drug users, prisoners or men who have sex with</td>
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</table>
Increasing the effectiveness of HIV Testing in black Africans in England – Final full report

<table>
<thead>
<tr>
<th>7</th>
<th>Is the study design:</th>
<th>YES – compile for Appendix</th>
<th>NO/Unclear – Include for full paper review</th>
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<tr>
<td></td>
<td>Cross sectional</td>
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<tr>
<td></td>
<td>Ecological (correlation study)</td>
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- Not included in criteria for cost effectiveness review.
9. Appendix C

9.1. Included Papers


# 10. Appendix D

## 10.1. Excluded Studies

### 10.1.1. Reason for excluding papers at full paper screening: cost effectiveness review

<table>
<thead>
<tr>
<th>Study</th>
<th>Reason for exclusion</th>
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</table>

### 10.1.2. Reason for excluding papers at full paper screening: effectiveness review

<table>
<thead>
<tr>
<th>Study</th>
<th>Reason for exclusion</th>
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## Study


Calderon Y, Leider J, Hailpern S, Haughey M, Ghosh R, Lombardi,
### Study

<table>
<thead>
<tr>
<th>Study</th>
<th>Reason for exclusion</th>
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<tr>
<td>Bijur P, Bauman L. 2009. A randomized control trial evaluating the</td>
<td>for minority ethnic / migrant populations</td>
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<td>educational effectiveness of a rapid HIV posttest counseling video.</td>
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<td>Sexually Transmitted Diseases 36, no. 4:207-210.</td>
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<tr>
<td>Carey MP, Braaten LS, Maisto SA, Gleason JR, Forsyth AD, Durant</td>
<td>No relevant HIV testing outcomes</td>
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<td>LE, Jaworski BC. 2000. Using information, motivational enhancement,</td>
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<tr>
<td>and skills training to reduce the risk of HIV infection for low-income</td>
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<td>urban women: a second randomized clinical trial. Health Psychology</td>
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<tr>
<td>19, no. 1:3-11.</td>
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<tr>
<td>Carey MP, Vanable PA, Senn TE, Coury-Doniger P, Urban MA. 2008.</td>
<td>All participants were tested for the study</td>
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<tr>
<td>Evaluating a two-step approach to sexual risk reduction in a</td>
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<td>publicly-funded STI clinic: Rationale, design, and baseline data</td>
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<td>from the Health Improvement Project-Rochester (HIP-R). Contemporary</td>
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<td>Clinical Trials 29, no. 4:569-586.</td>
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<td>Centers for Disease Control and Prevention (CDC). 2001. HIV testing</td>
<td>No relevant HIV testing outcomes</td>
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<td>among racial/ethnic minorities--United States, 1999. MMWR -</td>
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<td>testing in outreach and other community settings--United States,</td>
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<td>Patient perspectives with abbreviated versus standard pre-test HIV</td>
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<td>Davila YR, Bonilla E, Gonzalez-Ramirez D, Grinslade S, Villarruel AM.</td>
<td>No relevant HIV testing outcomes</td>
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<td>2008. Pilot testing HIV and intimate partner violence prevention</td>
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<td>modules among Spanish-speaking Latinas. Journal of the Association</td>
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<td>of Nurses in AIDS Care 19, no. 3:219-224.</td>
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<td>Dancy BL, Crittenden KS, Talashek M. 2006. Mothers’ effectiveness</td>
<td>No relevant HIV testing outcomes</td>
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<td>as HIV risk reduction educators for adolescent daughters. Journal of</td>
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<td>Health Care for the Poor and Underserved 17, no. 1:218-239.</td>
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<tr>
<td>Dancy BL, Hsieh Y, Crittenden KS, Kennedy A, Spencer B, Ashford D.</td>
<td>No relevant HIV testing outcomes</td>
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<td>de Anda, D. The GIG: An Innovative Intervention To Prevent</td>
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<td>Adolescent Pregnancy and Sexually Transmitted Infection in a Latino</td>
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<td>de la Fuente L, Delgado J, Hoyos J, Belza MJ, Alvarez J, Gutierrez J,</td>
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<td>Neira-Leon M, Suarez M. 2009. Increasing Early Diagnosis of HIV</td>
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<td>through Rapid Testing in a Street Outreach Program in Spain. AIDS</td>
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<td>Patient Care and STDs 23, no. 8:625-629.</td>
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<td>Appropriate, STD/AIDS Education Intervention on Black Male</td>
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<td>Adolescents’ Sexual and Condom Use Behavior.</td>
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<td>Delgado M, Santiago J. 1998. HIV/AIDS in a Puerto Rican/Dominican</td>
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<td>community: A collaborative project with a botanical shop. Social</td>
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<td>Work Vol.43, no. 2:183-186.</td>
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<td>Diaz PMJ, Farley T, Cabanis C. 2004. A Program to Improve</td>
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Increasing the effectiveness of HIV Testing in black Africans in England – Final full report
<table>
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<tr>
<th>Study</th>
<th>Reason for exclusion</th>
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<tr>
<td>Access to Health Care Among Mexican Immigrants in Rural Colorado. Journal of Rural Health 20, 258-264.</td>
<td>outcomes</td>
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### Study

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<th>Study</th>
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<td>El-Bassel N, Witte SS, Gilbert L, Sormanti M, Moreno C, Pereira L,</td>
<td>No quantitative evaluation of effectiveness of intervention</td>
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<td>Elam E, Steinglass P. 2001. HIV prevention for intimate couples: A</td>
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<td>Eldred L, Cheever L, Parham Hopson D. 2006. Accessing care for U.S./</td>
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<td>Mexico border populations living with HIV/AIDS: the role of</td>
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<td>HRSA's HIV/AIDS bureau and the special projects of national</td>
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<td>significance. <em>Journal of HIV/AIDS and Social Services</em> 5, no. 2:</td>
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<td>Falvo N, Norman S. 2004. Never too old to learn: the impact of an</td>
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<td>HIV/AIDS education program on older adults’ knowledge. *Clinical</td>
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<td>Gerontologist* 27, no. 1/2:103-117.</td>
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<td>Fenton KA, French R, Giesecke J, Johnson AM, Trotter S,</td>
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<td>notification for HIV infection in genitourinary medicine clinics in</td>
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<td>Fernandez Ml, Bowen GS, Perrino T, Royal S, Mattson T, Arheart</td>
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<td>KL, Cohn S. 2003. Promoting HIV testing among never-tested Hispanic</td>
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<td>Feudo R, Vining-Bethea S, Shulman LC, Shedlin MG, Burleson JA. 1998.</td>
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<td>Bridgeport's Teen Outreach and Primary Services (TOPS) project: a</td>
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<td>model for raising community awareness about adolescent HIV risk.</td>
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<td>STD and AIDS* 20, no. SUPPL. 1:April.</td>
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<td>Flaskerud JH, Nymathl AM, Uman GC. 1997. Longitudinal effects of an</td>
<td>All participants were tested for the study</td>
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<td>HIV testing and counseling programme for low-income Latina women.</td>
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<td><em>Ethnicity &amp; Health</em> 2, no. 1-2:89-103.</td>
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<td>testing at an American Indian substance abuse treatment facility.</td>
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<td><em>Journal of Psychoactive Drugs</em> 37, no. 3:321-329.</td>
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<td>community-based sexual health services for young people in urban</td>
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<td>areas: are we meeting the needs of the local community? *International</td>
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<td>of routine ELISA testing among black women STD patients: Relation-</td>
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<td>Diseases* 35, no. 3:211-213.</td>
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<td>Acquired Immune Deficiency Syndromes* 25, no. SUPPL. 2:15.</td>
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<td>Gaydos CA, Hsieh YH, Galbraith J, Barnes M, Waterfield G, Stanton</td>
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<td>B. 2008. Focus-on-Teens, sexual risk-reduction intervention for</td>
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<td>high-school adolescents: impact on knowledge, change of risk-behaviours, and prevalence of sexually transmitted diseases.</td>
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<td>Factors affecting uptake of antenatal HIV testing in</td>
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<td>studies.</td>
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</table>

74
Study


Reason for exclusion

No relevant HIV testing outcomes

No disaggregated data for minority ethnic / migrant populations

No relevant HIV testing outcomes

Review paper

No relevant HIV testing outcomes

Study initiated before 1996

No relevant HIV testing outcomes

No disaggregated data for minority ethnic / migrant populations

No relevant HIV testing outcomes
<table>
<thead>
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<th>Reason for exclusion</th>
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<tr>
<td>Jemmott JB, Jemmott LS, Braverman PK, Fong GT. 2005. HIV/STD risk</td>
<td>No relevant HIV testing outcomes</td>
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<tr>
<td>reduction interventions for African American and Latino adolescent</td>
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<td>girls at an adolescent medicine clinic - A randomized controlled</td>
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<td>Jemmott LS, Jemmott JB, O'Leary A. 2007. Effects on sexual risk</td>
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<td>Behavior and STD rate of brief HIV/STD prevention interventions for</td>
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<td>African American women in primary care settings. American Journal</td>
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<td>of Public Health 97, no. 6:1034-1040.</td>
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<td>Jennings TSD. 1996. Screening for human immunodeficiency virus</td>
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<td>in inner city females with abnormal cervical cytology. Infectious</td>
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<td>Diseases in Obstetrics and Gynecology 4, no. 5:1996.</td>
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<td>screening in pregnancy in an area of low prevalence. BJOG: An</td>
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<td>Johnson AD. The effects of culturally sensitive messages and</td>
<td>Population - military</td>
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<td>health beliefs. -unknown. 1998. TriService Nursing Research</td>
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<td>Program (TSNRP).</td>
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<td>Johnson BT, Scott-Sheldon LAJ, Smoak ND, LaCroix JM, Anderson</td>
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<td>JR, Carey MP. 2009. Behavioral Interventions for African Americans</td>
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<td>to Reduce Sexual Risk of HIV: A Meta-Analysis of Randomized</td>
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<td>Controlled Trials. JAIDS-Journal of Acquired Immune Deficiency</td>
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<td>Syndromes 51, no. 4:492-501.</td>
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<td>Kalichman SC, Rompa D, Coley B. 1997. Lack of positive outcomes</td>
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<td>from a cognitive-behavioral HIV and AIDS prevention intervention</td>
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<tr>
<td>for inner-city men: lessons from a controlled pilot study. AIDS</td>
<td></td>
</tr>
<tr>
<td>Education &amp; Prevention 9, no. 4:299-313.</td>
<td></td>
</tr>
<tr>
<td>a strategy for improving posttest counseling rates. AIDS Education</td>
<td></td>
</tr>
<tr>
<td>&amp; Prevention 13, no. 6:541-550.</td>
<td></td>
</tr>
<tr>
<td>Kimbrough LW, Fisher HE, Jones KT, Johnson W, Thadiparthi S,</td>
<td>Non-comparative study</td>
</tr>
<tr>
<td>Dooley S. 2009. Accessing social networks with high rates of</td>
<td></td>
</tr>
<tr>
<td>reduction education and skills training (ARREST) program. The</td>
<td></td>
</tr>
<tr>
<td>Journal of adolescent health: official.publication.of.the.Society.for</td>
<td></td>
</tr>
<tr>
<td>Adolescent Medicine 14:533-539.</td>
<td></td>
</tr>
<tr>
<td>Klein JD, Handwerker L, Sesselberg TS, Sutter E, Flanagan E,</td>
<td>No relevant HIV testing outcomes</td>
</tr>
<tr>
<td>services of health plan enrollees and school-based health center</td>
<td></td>
</tr>
<tr>
<td>led AIDS education aimed at Turkish and Moroccan male immigrants in</td>
<td></td>
</tr>
<tr>
<td>The Netherlands - A randomised controlled evaluation study.</td>
<td></td>
</tr>
</tbody>
</table>
Study | Reason for exclusion
---|---
MacKellar DAH. 2009. Exposure to HIV partner counseling and referral services and notification of sexual partners among persons recently diagnosed with HIV. Sexually Transmitted Diseases 36, no. 3:March. | No relevant HIV testing outcomes
### Study

<table>
<thead>
<tr>
<th>Study</th>
<th>Reason for exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mishra S, Fernando Sanudo I, Conner RF. Collaborative research toward HIV prevention among migrant farmworkers. 69-95. 2004.</td>
<td>No relevant HIV testing outcomes</td>
</tr>
<tr>
<td>Oliva G, Rienks J, Udoh I, Dillard Smith C. 2005. A University and Community-Based Organization Collaboration to Build Capacity to Develop, Implement, and Evaluate an Innovative HIV Prevention Intervention for an Urban African American Population. <em>AIDS Education and Prevention Vol.17</em>, no. 4:300-316.</td>
<td>All participants were tested for the study</td>
</tr>
<tr>
<td>Paikoff RL. 2007. Overview of community collaborative partnerships and empirical findings: the foundation for youth HIV prevention.</td>
<td>No relevant HIV testing outcomes</td>
</tr>
</tbody>
</table>
### Study

**Social Work in Mental Health** 5, no. 1/2:2007-2026.


Silitsky C, Jones S. Mothers’ Voices: Enhancing Mother-Child

---

### Reason for exclusion

- **Cross sectional study**
- No relevant HIV testing outcomes

---

79
Increasing the effectiveness of HIV Testing in black Africans in England – Final full report

Study


Reason for exclusion
outcomes
Study initiated before 1996
No relevant HIV testing outcomes
No quantitative evaluation of effectiveness of intervention
Correlation study
No relevant HIV testing outcomes
No quantitative evaluation of effectiveness of intervention
No intervention
Review paper
No relevant HIV testing outcomes
Review paper
1067
Ante-natal testing
Review paper
No relevant HIV testing outcomes
Increasing the effectiveness of HIV Testing in black Africans in England – Final full report

**Study**


Zinski A. 2009. Who is in a hurry for HIV test results? An exploration of presentation for oraquick rapid result HIV antibody testing in urban clinical and outreach settings in Alabama.

10.1.3. **Reason for excluding grey literature at full paper screening: effectiveness review**

**Study**


**Reason for exclusion**

Based in Mexico

Ante-natal testing

No relevant HIV testing outcomes

No relevant HIV testing outcomes

No relevant HIV testing outcomes

No intervention

No relevant HIV testing outcomes

No quantitative evaluation of effectiveness of intervention

Review paper

No relevant HIV testing outcomes
Increasing the effectiveness of HIV Testing in black Africans in England – Final full report

Health Development Agency. *HIV prevention: a review of reviews assessing the effectiveness of interventions to reduce the risk of sexual transmission.*

Fisher M. HIV Testing in acute admissions.
http://public.ukcrn.org.uk/search/

Sullivan D. HIV Testing in Non-traditional settings -The HINTS Study.
http://public.ukcrn.org.uk/search/


Fakoya I. *Improving HIV testing in African Communities.*


## 11. Appendix E

### 11.1. Cross Sectional Studies

<table>
<thead>
<tr>
<th>Study Details</th>
<th>Population and Setting</th>
<th>Results</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Authors:</strong> Prost A, Griffiths, CJ, Anderson, J, Wright D, Hart GJ</td>
<td><strong>Source population:</strong> Patients who register with primary care in London</td>
<td><strong>Primary outcomes:</strong> 44.7% (38/85) of patients agreed to have rapid HIV test; black Caribbean and black African patients more likely to test than other ethnic groups (p=0.014)</td>
<td><strong>Limitations identified by author:</strong> data not collected on patients’ HIV risk and serostatus</td>
</tr>
<tr>
<td><strong>Year:</strong> 2009</td>
<td><strong>Eligible population:</strong> Anglophone and Francophone new patients aged 18-55 years registering at a large inner city general practice in London (December 2007 – March 2008)</td>
<td></td>
<td><strong>Source of funding:</strong> UK Medical Research Council</td>
</tr>
<tr>
<td><strong>Citation:</strong> Feasibility and acceptability of offering rapid HIV tests to patients registering with primary care in London (UK): a pilot study. <em>Sexually Transmitted Infections</em> 85, no. 5:326-329.</td>
<td><strong>Selected population:</strong> 47 out of 85 eligible patients took part</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aim of study:</strong> to assess the acceptability and feasibility of offering rapid HIV tests to patients registering with primary care in London</td>
<td><strong>Setting:</strong> Large inner city general practice in London, UK</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Study design:</strong> Cross sectional</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Authors:</strong> Merchant RC, Clark MA, Seage III GR, Mayer KH, DeGruttola VG, Becker BM</td>
<td><strong>Source population:</strong> ED patients in the USA</td>
<td><strong>Primary outcomes:</strong> 24% (571 / 2155) of selected patients agreed to be tested (no breakdown by race / ethnicity)</td>
<td><strong>Limitations identified by author:</strong> conducted in one ED so findings may not be generalisable; responses to questionnaire affected by: low risk for HIV among respondents; social desirability; all respondents had agreed to be tested</td>
</tr>
<tr>
<td><strong>Year:</strong> 2009</td>
<td><strong>Eligible population:</strong> Patients attending an ED in New England aged 18-55 years; English-speaking; no relevant mental, psychiatric or physical disability; not prison inmates, pregnant, critically ill / injured, known to be HIV infected or in HIV vaccine study (July 2005 –</td>
<td></td>
<td><strong>Source of funding:</strong> National Institute for Allergy and Infectious Diseases; Centers for Disease Control and Prevention; Center for AIDS Research</td>
</tr>
<tr>
<td><strong>Citation:</strong> Emergency department patient perceptions and preferences on opt-in rapid HIV screening program components. <em>AIDS Care</em> 21, no. 4:490-500.</td>
<td><strong>Secondary outcomes:</strong> Compared to white patients, Hispanic / Latinos prefer standard to rapid HIV tests, RR=2.82 (CI:1.31-6.06); and more willing to be tested even if departure delayed, RR=1.73 (CI:1.09–2.75), as were those with</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aim of study:</strong> to assess emergency</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Study Details

- **Population and Setting**
  - **Study design:** Cross sectional
  - **Source population:** Communities disproportionately affected by HIV
  - **Setting:** Outreach and community settings identified by 8 CBOs in Boston; Chicago; Detroit; Kansas City, Missouri; Los Angeles; San Francisco; Washington DC, USA

- **Primary outcomes:** 23,900 rapid HIV tests – 39% non-Hispanic blacks, 31% Hispanics, 21% non-

## Results

- **Primary outcomes:** 23,900 rapid HIV tests (267 new HIV diagnoses – 1.1%); acceptance of HIV testing among those approached: Detroit = 27.4%; Washington = 64.7%

## Notes

- This is the same study as Bowles et al (2008)

## Limitations identified by author:

- People offered HIV testing not systematically selected; data on refusal not consistently collected

## Source of funding:

- Centers for Disease Control and Prevention, USA

---

**Study Details**

- **Population and Setting**
  - **Study design:** Cross sectional
  - **Source population:** Communities disproportionately affected by HIV
  - **Setting:** High patient volume, urban, academic ED in New England, USA

- **Primary outcomes:** 23,900 rapid HIV tests (267 new HIV diagnoses – 1.1%); acceptance of HIV testing among those approached: Detroit = 27.4%; Washington = 64.7%

## Notes

- This is the same study as CDC paper (2007)

## Limitations identified by author:

- People offered HIV testing not systematically selected; data on refusal not consistently collected

## Source of funding:

- Centers for Disease Control and Prevention, USA

---

**Authors:** Bowles KE, Clark HA, Tai E, Sullivan PS, Song B, Tsang J, Dietz CA, et al

**Year:** 2008

**Citation:** Implementing rapid HIV testing in outreach and community settings: results from an advancing HIV prevention demonstration project conducted in seven US cities. *Public Health Reports* 123:Suppl-85:78-85

**Aim of study:** to assess the feasibility of rapid HIV testing in outreach and community settings among groups disproportionately affected by HIV

**Study design:** Cross sectional

**Authors:** Centers for Disease Control and Prevention (CDC)

**Source population:** Communities disproportionately affected by HIV

**Primary outcomes:** 23,900 rapid HIV tests (267 new HIV diagnoses – 1.1%); acceptance of HIV testing among those approached: Detroit = 27.4%; Washington = 64.7%

**Secondary outcomes:** Among 267 with new HIV diagnosis, 76% from racial / minority ethnic groups

**Notes:** at Lifespan/Tufts/Brown

---

**Study Details**

- **Population and Setting**
  - **Study design:** Cross sectional
  - **Source population:** Communities disproportionately affected by HIV
  - **Setting:** Randomly selected patients attending randomly selected shifts; 24% of selected patients agreed to be tested; 98.2% completed all survey questions

- **Primary outcomes:** government health insurance RR=1.45 (CI:1.00-2.08) and previously tested, RR=1.62 (CI:1.17–2.24)

## Notes

- This is the same study as Bowles et al (2008)

---

**Authors:** Bowles KE, Clark HA, Tai E, Sullivan PS, Song B, Tsang J, Dietz CA, et al

**Year:** 2008

**Citation:** Implementing rapid HIV testing in outreach and community settings: results from an advancing HIV prevention demonstration project conducted in seven US cities. *Public Health Reports* 123:Suppl-85:78-85

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**Study Details**

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  - **Study design:** Cross sectional
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## Notes

- This is the same study as Bowles et al (2008)
<table>
<thead>
<tr>
<th>Study Details</th>
<th>Population and Setting</th>
<th>Results</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year:</strong> 2007</td>
<td><strong>Eligible population:</strong> People with self-reported HIV status negative or unknown; meeting age requirement for consent to HIV testing; able to provide informed consent (2004 – 2006)</td>
<td>Hispanic whites</td>
<td><strong>Limitations identified by author:</strong> NR</td>
</tr>
<tr>
<td><strong>Citation:</strong> Rapid HIV testing in outreach and other community settings - United States, 2004-2006. <em>MMWR: Morbidity &amp; Mortality Weekly Report</em> 56, no. 47:1233-1237.</td>
<td><strong>Selected population:</strong> NA</td>
<td><strong>Source of funding:</strong> Centers for Disease Control and Prevention, USA</td>
<td></td>
</tr>
<tr>
<td><strong>Aim of study:</strong> to assess the feasibility of rapid HIV testing in outreach and community settings among groups disproportionately affected by HIV</td>
<td><strong>Setting:</strong> Outreach and community settings identified by 8 CBOs in Boston; Chicago; Detroit; Kansas City, Missouri; Los Angeles; San Francisco; Washington DC, USA</td>
<td><strong>Authors:</strong> Li J, Marks SM, Driver CR, Diaz FA, Castro III AF, de Regner AF, Gibson AE, et al</td>
<td></td>
</tr>
<tr>
<td><strong>Study design:</strong> Cross sectional</td>
<td><strong>Source population:</strong> Close contacts of TB patients</td>
<td><strong>Primary outcomes:</strong> Among 569 contacts, 61% did not test for HIV, 10% were previously tested (of whom 24 were HIV positive), 29% tested during study period (all tested negative); being newly tested for HIV was associated with age 18–24 years (RR_adj=1.6, CI:1.2-2.2), Hispanic ethnicity (RR_adj=3.3, CI:1.3-8.8), or being newly TST-positive (RR_adj=2.0, CI:1.4-2.7)</td>
<td><strong>Limitations identified by author:</strong> Small number of persons tested reduced power to detect new HIV cases; unable to use rapid HIV testing</td>
</tr>
<tr>
<td><strong>Year:</strong> 2007</td>
<td><strong>Eligible population:</strong> Close contacts aged 13 years and above of pulmonary TB patients verified in Manhattan between 1st December 2002 and 30th November 2003</td>
<td><strong>Limitations identified by author:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Citation:</strong> Human immunodeficiency virus counseling, testing, and referral of close contacts to patients with pulmonary tuberculosis: feasibility and costs. <em>Journal of Public Health Management &amp; Practice</em> 13, no. 3:252-262.</td>
<td><strong>Selected population:</strong> 614 close contacts from 205 index cases - 34 unable to locate, 11 not offered HIV information</td>
<td><strong>Source of funding:</strong> Centers for Disease Control and Prevention; Tuberculosis Epidemiologic Studies Consortium</td>
<td></td>
</tr>
<tr>
<td><strong>Aim of study:</strong> to increase HIV counselling, testing, referral (CTR) of TB patient close contacts</td>
<td><strong>Setting:</strong> New York City Department of Health and Mental Hygiene TB Bureau, Manhattan, USA</td>
<td><strong>Primary outcomes:</strong> 67% refused</td>
<td><strong>Limitations identified by author:</strong></td>
</tr>
<tr>
<td><strong>Study design:</strong> Cross sectional</td>
<td><strong>Source population:</strong> Patients</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Authors:</strong> Liddicoat RV, Losina E,</td>
<td></td>
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</tbody>
</table>
Increasing the effectiveness of HIV Testing in black Africans in England – Final full report

Study Details
Kang M, Freedberg KA, Walensky RP
Year: 2006
Citation: Refusing HIV testing in an urgent care setting: results from the "Think HIV" program. AIDS Patient Care & STDs 20, no. 2:84-92.

Aim of study: to identify factors associated with HIV test refusal in a statewide, routine, voluntary HIV testing programme

Study design: Cross sectional

Population and Setting
attending urgent care centers in USA

Eligible population: Patients attending four hospital-associated urgent care centers in areas with high HIV prevalence in Massachusetts during health educator (HE) operation hours (January – December 2002)

Selected population: Number of patients who refused to speak to HE unknown; 88% (9,129/10,354) of those who spoke HE provided complete data and included in analysis

Setting: Four hospital-associated urgent care centers in Massachusetts, USA

Source population: African American college students

Eligible population: Non-infected African American students aged 18-24 at a southern HBCU

Selected population: Recruited from classes in liberal arts building; 203 students approached and 161 met inclusion criteria

Setting: Southern HBCU, USA

Results
testing. White, female, older, more educated were more likely to refuse. White/African American non-English speakers refused less (57%) than English speakers (71%) (p=0.002); Hispanic/Haitian/Other non-English speakers refused more (65%) than English speakers (44%) (p<0.001)

Notes
Lack of information on number of patients who refused to speak to HE; findings may not be generalisable to areas with low HIV prevalence

Future research: Qualitative research to understand why H/H/O non-English speakers refuse

Source of funding: Harvard Medical School Faculty Development and Fellowship Program in General Internal Medicine; National Institute of Allergy and Infectious Diseases

Authors: Payne NS, Beckwith CG, Davis M, Fianigan T, Simmons EM, Crockett K, Ratcliff TM, Brown LK, Sly KF
Year: 2006

Source population: African American college students

Eligible population: Non-infected African American students aged 18-24 at a southern HBCU

Selected population: Recruited from classes in liberal arts building; 203 students approached and 161 met inclusion criteria

Setting: Southern HBCU, USA

Primary outcomes: 50% (81/161) underwent rapid HIV testing (all tested negative)

Limitations identified by author: Small convenience sample may not generalise to all African American college students; extra course credit for participation may influence participation; limited resources may impact recruitment

Source of funding: National Institute of Drug Abuse-Centers for AIDS Research; National Institute of Child and Human Development
### Study Details

**Aim of study:** to investigate the acceptability of rapid HIV testing among African American college students on historically black college/university (HBCU) campus

**Study design:** Cross sectional

**Authors:** Ford CL, Konrad TR, Godette DC, Corbie-Smith G

**Year:** 2008

**Citation:** Acceptance of routine ELISA testing among black women STD patients: relationship to patient-provider racial concordance. *Sexually Transmitted Diseases* 35, no. 3:211-213.

**Aim of study:** to determine whether racial concordance is associated with black women STD patients obtaining routinely offered HIV tests

**Study design:** Cross sectional

### Population and Setting

**Source population:** Black women STD patients in USA

**Eligible population:** Women, 18 years and above, self-reported black race, newly seeking STD diagnosis or screening at public STD clinic (April – June 2003)

**Selected population:** Refusal rate not reported

**Setting:** County public STD clinic in a southeastern US city

### Results

**Primary outcomes:** 61% (84/137) accepted HIV test: 80% seen by black providers, 55% seen by non-black providers ($\chi^2=6.92, p=0.01; \text{aOR}=3.41, \text{CI}:1.28-9.08$)

### Notes

**Limitations identified by author:** Cross-sectional design precludes attribution of causality; no direct observance of clinical consultations to assess quality of interpersonal communication

**Future research:** to clarify relationships between patient preferences, cross-cultural communication and distrust of clinicians; to explore gender interactions and salience among different subpopulations

**Source of funding:** University of North Carolina; Center for Advancement of Health; WK Kellogg Foundation

### Study Details

**Aim of study:** HIV prevalence and testing practices among tuberculosis cases in London: a missed opportunity for

**Year:** 2010

**Citation:** HIV prevalence and testing practices among tuberculosis cases in London: a missed opportunity for

**Source population:** Patients with TB in London

**Eligible population:** Patients with TB known to TB services in London on 1st July 2003 (and at follow up on 1st July 2004)

**Primary outcomes:** 48.2% (884/1836) of patients unaware of HIV status offered HIV testing; more likely to be offered of aged 20-49, black ethnic group, smear positive pulmonary TB, good understanding of English; 72.9%

**Limitations identified by author:** recent guidance from CMO and BHIVA may have improved HIV testing in patients with TB; HIV tests may not have been recorded; lack of information on reasons for not offering testing and test refusal
### Study Details

**HIV diagnosis?** Thorax 65, no. 1:63-69.

**Aim of study:** to describe the prevalence and testing practices of HIV in TB centres in London

**Study design:** Cross sectional

**Authors:** Surah S, O’Shea S, Dunn H, Mitra R, Fitzgerald C, Ibrahim F, Sethi, G

**Year:** 2009

**Citation:** Utilization of HIV point-of-care testing clinics in general practice and genitourinary medicine services in south-east London. *International Journal of STD & AIDS*; 20(3):168-169.

**Aim of study:** to compare point-of-care testing (POCT) in GP and GUM clinics

**Study design:** Correlation

### Population and Setting

**Selected population:** Data collected from 97% of eligible patients (1941/1995)

**Setting:** TB centres in Greater London, UK

**Source:** Patients attending GP and GUM clinics

**Eligible:** Patients attending GP and GUM practice in inner London (February 2005 – July 2007)

**Setting:** GUM and GP practice, inner London, UK

### Results

**Aim of study:**

- Accepted testing (603/827): no significant difference between ethnic groups on acceptance

**Primary outcomes:**

- GP services significantly more likely to attract heterosexuals (74.3% vs 58.3% P<0.001); and those of black ethnicity (Black African 16.5% vs 8.7% p<0.001; black Caribbean 5.1% vs 0.9% p<0.001 and black other 5.4% vs 2.1% p=0.001)

### Notes

**Future research:**

- to address attitudes and practice of healthcare staff to universal testing and determine barriers; to identify barriers to accepting testing

**Source of funding:** NR

**Limitations identified by author:** NR

**Source of funding:** NR
## 11.2. Summary Table on Uptake of HIV Testing for Cross Sectional and Correlation Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample</th>
<th>Sample ethnicity</th>
<th>Location</th>
<th>Setting</th>
<th>Uptake of HIV testing</th>
<th>Ethnic group differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prost et al (2009)</td>
<td>Patients registering in primary care</td>
<td>Mixed (19% black African and black Caribbean)</td>
<td>London, UK</td>
<td>Healthcare</td>
<td>45%</td>
<td>Black African and black Caribbean more likely to test (p=0.014)</td>
</tr>
<tr>
<td>Rodger et al (2010)</td>
<td>TB patients</td>
<td>Mixed (81% black African)</td>
<td>London, UK</td>
<td>Healthcare</td>
<td>73%</td>
<td>No significant difference in testing by ethnic group</td>
</tr>
<tr>
<td>Surah et al (2009)</td>
<td>GP and GUM clinic patients</td>
<td>Mixed</td>
<td>London, UK</td>
<td>Healthcare</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Liddicoat et al (2006)</td>
<td>Patients in urgent care centres</td>
<td>Mixed</td>
<td>Massachusetts, USA</td>
<td>Healthcare</td>
<td>33%</td>
<td>White/African American non-English speakers refused to test less than English speakers (p=0.002); Hispanic/Haitian/Other non-English speakers refused more than English speakers (p&lt;0.001)</td>
</tr>
<tr>
<td>Li et al (2007)</td>
<td>TB patient contacts</td>
<td>Mixed</td>
<td>Manhattan, USA</td>
<td>Healthcare</td>
<td>29%</td>
<td>Hispanic more likely to test (RRadj=3.3, CI:1.3- 8.8)</td>
</tr>
<tr>
<td>Ford et al (2008)</td>
<td>STD patients</td>
<td>African American</td>
<td>Southeastern USA</td>
<td>Healthcare</td>
<td>61%</td>
<td>80% tested when seen by black providers, 55% seen by non-black providers (p=0.01)</td>
</tr>
</tbody>
</table>
### 12. Appendix F

#### 12.1. Evidence Tables

<table>
<thead>
<tr>
<th>Study Details</th>
<th>Population and Setting</th>
<th>Method of allocation to intervention/control</th>
<th>Outcomes and methods of analysis</th>
<th>Results</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Authors:</strong> Amaro H, Raj A, Reed E, Cranston K.</td>
<td><strong>Source:</strong> Hispanic women in the US</td>
<td><strong>Allocation:</strong> Participants allocated according to which facilitator enrolled them into the study. Wait-list controls enrolled by researchers.</td>
<td><strong>Primary outcomes:</strong> Self reports of HIV testing in the previous 3 months</td>
<td><strong>Primary outcomes:</strong> No significant difference in self reported testing across groups: increase in HIV testing for HIV-IP (7.5%); decrease in testing for WHP (3.7%); decrease in testing for wait-list control (1.61%).</td>
<td><strong>Limitations</strong> Author: Quasi-experimental nature of study design; mixing participants with differing prevention needs due to eligibility criteria; results not generalisable to source population if demographic and sexual risk profile differ from study sample.</td>
</tr>
<tr>
<td><strong>Year:</strong> 2002</td>
<td><strong>Eligible:</strong> Spanish speaking Latina aged 18-35, aiming to remain resident in Boston in the forthcoming year, who had not used condoms consistently with a steady male partner in past 3 months or engaged in injecting drug use or sex work</td>
<td><strong>Intervention:</strong> Two Spanish based HIV prevention programmes delivered by trained facilitators in a community based setting. Both programmes delivered over 12 weeks (sessions: 1.5-2 hours each).</td>
<td><strong>Follow-up:</strong> 15 months</td>
<td><strong>Analysis:</strong> No ITT analysis. Logistic regression models used details of analysis not reported.</td>
<td><strong>Reviewer:</strong> Small sample size/study design prevented complex analysis.</td>
</tr>
<tr>
<td><strong>Citation:</strong> Implementation and long-term outcomes of two HIV intervention programs for Latinas. Health Promotion Practice; 3(2):245-254</td>
<td><strong>Selected:</strong> Women recruited from housing projects, community service agencies and clinics. Inclusion criteria as above. Possibility of selection bias – women were invited to participate by programme facilitators. Eligible &amp; accepted: HIV Intensive Prevention (HIV-IP) =55% Women’s Health Programme (WHP) = 90%</td>
<td>HIV-IP: based on social cognitive theory. Includes participatory education strategies with &gt; 16 hours HIV prevention &amp; socio-cultural information. WHP: small group, largely didactic approach with 6-9 hours about HIV, remaining hours focused on general women’s health topics suggested by participants.</td>
<td></td>
<td><strong>Funding:</strong> NR</td>
<td></td>
</tr>
<tr>
<td><strong>Design:</strong> N-RCT</td>
<td><strong>Excluded:</strong> NR</td>
<td><strong>Control/comparison: wait-list control</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quality Score:</strong> [-]</td>
<td><strong>Setting:</strong> Community</td>
<td><strong>Sample Total n= 170</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>External Validity:</strong> [-]</td>
<td><strong>Intervention</strong> HIV-IP n= 44</td>
<td><strong>WHP=56 Control n=70</strong></td>
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<tr>
<td><strong>Authors:</strong> Apanovitch AM, McCarthy D, Salovey P.</td>
<td>centres, Boston, US</td>
<td><strong>Baseline comparisons:</strong> NR</td>
<td><strong>Primary outcomes:</strong> Gain framed advantage for women who viewed HIV testing as having certain outcome compared with loss framed: 38% vs 26% tested, $\chi^2(1, N=281) = 4.84$, $p&lt;.05$.</td>
<td><strong>Primary outcomes:</strong></td>
<td><strong>Notes</strong></td>
</tr>
<tr>
<td><strong>Year:</strong> 2003</td>
<td><strong>Study power:</strong> NR. Unlikely to be sufficiently powered with small sample size.</td>
<td><strong>Study power:</strong> No power calculations reported. Unclear how many subjects allocated to each arm.</td>
<td><strong>Attrition:</strong> 55 (11%) lost to follow-up. No details on loss per arm.</td>
<td></td>
<td><strong>Limitations</strong></td>
</tr>
<tr>
<td><strong>Citation:</strong> Using message framing to motivate HIV testing among low-income, ethnic minority women. Health Psychology; 22(1):60-67</td>
<td><strong>Allocation:</strong> Participants randomly assigned to watch video tape. No details of randomisation.</td>
<td><strong>Secondary outcomes:</strong> Self reported HIV Test Follow-up: Before and after, 3, 6 and 9 months follow up after exposure to videos. Data from 6 months reported.</td>
<td><strong>Analysis:</strong> $\chi^2$. ANOVA, logistic regression. No ITT analysis</td>
<td></td>
<td><strong>Author:</strong> Self-reported HIV testing, no assessment of social desirability biases. Assessment of certainty after exposure. Lack of unframed control</td>
</tr>
<tr>
<td><strong>Aim:</strong> Identify factors that influence the persuasiveness of materials promoting HIV testing among low-income women</td>
<td></td>
<td></td>
<td></td>
<td><strong>Future research:</strong> Identification of key mediators of framing effects.</td>
<td></td>
</tr>
<tr>
<td><strong>Design:</strong> BA</td>
<td></td>
<td></td>
<td></td>
<td><strong>Funding:</strong> NR.</td>
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<tr>
<td><strong>Quality Score:</strong> [+</td>
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<tr>
<td><strong>External Validity:</strong> [+</td>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Authors:</strong> Bindman AB, Osmond D, Hecht FM, Lehman JS, Vranizan K, Keane D &amp; Reingold A</td>
<td><strong>Source:</strong> People newly diagnosed with AIDS, in the USA</td>
<td><strong>Allocation:</strong> NA</td>
<td><strong>Primary outcomes:</strong> Number of days from self-reported positive HIV test to HIV-related medical care and AIDS diagnosis</td>
<td><strong>Primary outcomes:</strong> Anonymously tested presented for testing earlier in the course of HIV disease and were younger, white (p=0.001), more educated, more MSM. Confidential testers were more likely to have HIV related symptoms</td>
<td><strong>Author:</strong> Outcome measures dependent on self-report; observational study so not able to tease out contribution of factors</td>
</tr>
<tr>
<td><strong>Year:</strong> 1998</td>
<td><strong>Eligible:</strong> AIDS patients diagnosed within previous 12 months; alive at time of report; 18 years and over; in Arizona, Colorado, Mississippi, Missouri, New Mexico, North Carolina, Oregon, Texas (reported May 1995 - December 1996)</td>
<td><strong>Intervention:</strong> Comparison of those reporting anonymous vs confidential HIV testing</td>
<td><strong>Follow-up:</strong> 18 months</td>
<td><strong>Analysis:</strong> $\chi^2$, multivariate linear regression</td>
<td><strong>Reviewer:</strong> Retrospective study so unhealthy and dead patients could not be interviewed; no adjustments made by place of testing</td>
</tr>
<tr>
<td><strong>Citation:</strong> Multistate evaluation of anonymous HIV testing and access to medical care. Multistate Evaluation of Surveillance of HIV (MESH) Study Group. <em>JAMA</em> 280, no. 16:1416-1420.</td>
<td><strong>Selected:</strong> All patients included in states where incidence was fewer than 500 cases; randomly sampled in remaining states. Eligible cases: living in state, speaking Spanish or English, healthy to consent / take part; tested positive in state where sampled; voluntarily sought testing. 68.3% of eligible cases interviewed</td>
<td><strong>Control/comparison:</strong> (as above)</td>
<td></td>
<td><strong>Attrition:</strong> NA</td>
<td><strong>Funding:</strong> CDC</td>
</tr>
<tr>
<td><strong>Aim:</strong> To assess whether anonymous HIV testing is associated with earlier HIV testing and HIV-related medical care than confidential testing</td>
<td><strong>Sample size:</strong> Total n = 835; anonymous testers = 192; confidential testers = 643</td>
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<tr>
<td><strong>Design:</strong> Retrospective cohort study</td>
<td><strong>Baseline comparisons:</strong> Anonymous testers were younger, white (p=0.001), more educated, more MSM. Confidential testers were more likely to have HIV related symptoms</td>
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<tr>
<td><strong>Quality Score:</strong> +</td>
<td><strong>Study power:</strong> NR</td>
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<tr>
<td><strong>External Validity:</strong> +</td>
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<tr>
<td><strong>Study Details</strong></td>
<td><strong>Anonymity and Confidentiality Testing</strong> (Mississippi): those initially testing HIV positive in a different state from the one which they were sampled; if the reason for testing was not voluntary; if participant provided false name at a confidential testing site.</td>
<td><strong>Setting</strong>: Arizona, Colorado, Missouri, New Mexico, North Carolina, Oregon, Texas, USA</td>
<td><strong>Source</strong>: Individuals that access GUM clinics in the United Kingdom. <strong>Eligible</strong>: GUM clinic patients in an outer London clinic. Population not representative of non-metropolitan areas. <strong>Selected</strong>: All new patients in the GUM clinic. <strong>Excluded</strong>: Patients previously diagnosed with HIV at the clinic. <strong>Allocation</strong>: Non applicable. Natural experiment. <strong>Intervention</strong>: Policy change in GUM clinic: Walk-in only (phase 1) to (phase 2) all sessions either mixed pre-booked slots (35%) or slots available on the day (65%). Nurse triage offered to patients in phase 2 who could not be offered an appointment on the day. <strong>Control/comparison</strong>: NA.</td>
<td><strong>Primary outcomes</strong>: Higher uptake of HIV testing among new patients in phase 2 (37.3% vs. 31.0% p=0.04)</td>
<td><strong>Authors</strong>: Cassell JA, Brook MG, Mercer CH, Murphy S, Johnson AM. <strong>Year</strong>: 2003 <strong>Citation</strong>: Maintaining patient access to GUM clinics: is it compatible with appointments? Sexually Transmitted Infections; 79(1):11-15</td>
</tr>
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</table>
| **Aim**: Determine whether policy change | **Follow-up**: Phase 1: One calendar month before policy change. Phase 2: Eight weeks beginning 10 weeks after the change. **Analysis**: $\chi^2$. No ITT analysis | **Attrition**: No information collected on those turned away from the clinic as walk-in patients. | **Primary outcomes**: HIV test taken | | **Limitations** | **Author**: No accurate data on the number of patients turned away or number of patients triaged. **Reviewer**: Although >70% of participants non-white ethnicity, difficult to establish whether increase in HIV testing directly applied to BME communities. Study did not assess the impact of appointment systems on...
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<tr>
<td>in STI clinic affected access to clinic and clinical outcomes including HIV testing</td>
<td>Setting: London, UK</td>
<td>Sample sizes: Phase 1: n= 836, Phase 2: n=1514</td>
<td>Primary outcomes: HIV tests taken</td>
<td>Primary outcomes: Baseline mean = 86 During peak = 462</td>
<td>the offer of an HIV test.</td>
</tr>
<tr>
<td>Design: BA</td>
<td>Baseline comparisons: NA</td>
<td>Secondary outcomes: New HIV diagnoses</td>
<td>Secondary outcomes: Baseline n=13 During n=19 Post n=13</td>
<td>Attrition details NA</td>
<td>Future research: More evidence needed about effects of running different types of appointment services on access to care.</td>
</tr>
<tr>
<td>Quality Score: [++]</td>
<td>Study power: NR.</td>
<td>Follow-up: 3 months prior, 1 month during, 3 months post</td>
<td>Analysis: No statistical analysis reported.</td>
<td></td>
<td>Funding: NR</td>
</tr>
<tr>
<td>External Validity: [+]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Limitations</td>
</tr>
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</table>

**Authors:** Futterman DC, Peralta L, Rudy BJ, Wolfson S, Guttmacher S, Rogers AS. campaign. 

**Year:** 2001

**Citation:** The ACCESS (Adolescents Connected to Care, Evaluation, and Special Services) Project: social marketing to promote HIV testing to adolescents, methods and first year results from a six city *Journal of Adolescent Health;* 29(3S):19-29.

**Aim:** Describe methods and results of HIV testing project aimed at improving HIV testing in youth of color in the US disproportionately affected by HIV

**Source:** Youth of colour in the US disproportionately affected by HIV

**Eligible:** Youth attending participating HIV clinics

**Selected:** Young people aged 13-24 years attending participating clinics to obtain an HIV test

**Excluded:** NR

**Setting:** New York City, Baltimore, Los Angeles, Miami, Philadelphia and Washington DC, USA.

**Allocation:** NA

**Intervention:** Get Tested! Week in each city advertised through social marketing campaign using culturally appropriate messaging and imagery. Delivered through radio and mass transit/outdoor advertising; peer dissemination of ambient media (youth-friendly magazine, referral cards) and media outreach to African American and Latino community leaders.

**Sample size:** Total n=3737

**Study size:** Total n=3737

**Sample size:** Total n=3737

**Study power:** NR

**Funding:** NIH and HRSA (US); Griffin Bacal Inc. developed campaign materials; Medisphere, Inc.
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<tr>
<td>and care among at risk youth</td>
<td></td>
<td></td>
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<td></td>
<td>and Sensei Health Communications, PR and strategic planning</td>
</tr>
<tr>
<td>Design: BA</td>
<td>Population and Setting</td>
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<td>Outcomes and methods of analysis</td>
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<tr>
<td>Quality Score: [-]</td>
<td>External Validity: [-]</td>
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<tr>
<td>Authors: Lemieux AF, Fisher JD, Pratto F.</td>
<td>Year: 2008</td>
<td>Design: N-RCT</td>
<td>Quality Score: -</td>
<td>External Validity: -</td>
<td></td>
</tr>
<tr>
<td>Aim: Evaluate music-based HIV prevention intervention among urban adolescents.</td>
<td>Eligible: Adolescents attending health classes in three public inner-city high schools.</td>
<td>Allocation: NR.</td>
<td>Primary outcomes: Self report of HIV test</td>
<td>Primary outcomes: New HIV test more likely in treatment group. ( \chi^2 (1) = 6.39 ), ( p&lt;.01 )</td>
<td></td>
</tr>
<tr>
<td>Design: N-RCT</td>
<td>Selected: Pupils enrolled in high school health classes</td>
<td>Intervention: Intervention took place in health classes. 6 MOLs (Musical Opinion Leaders) were selected by class peers. MOLs wrote and performed “Life is too short” a 5 min hip-hop/RnB style song focused on HIV prevention motivations. MOLs performed song in 10 health classes &amp; disseminated information packs. 1 month after initial class presentation another dissemination phase.</td>
<td>Follow-up: 3 months</td>
<td>Attrition: 116/422 (27%) lost to follow up. MANOVA indicates no association between intervention and attrition.</td>
<td></td>
</tr>
<tr>
<td>Quality Score: -</td>
<td>Excluded: NR Setting: Inner city schools, US</td>
<td>Control/comparison: Pupils in control schools received normal health class lessons.</td>
<td>Analysis: ( \chi^2 ). No ITT analysis</td>
<td>Limitations</td>
<td>Author: Short follow up period. Intervention did not directly address HIV testing.</td>
</tr>
<tr>
<td>External Validity: -</td>
<td>Sample Total (sexually active): n=137 Intervention n=47 Control n= 90</td>
<td>Baseline comparisons: NR Study power: NR. Sample size adequate.</td>
<td></td>
<td>Reviewer: Unclear whether bias was introduced bias at school selection stage. No discussion about proportion of source population attending high school regularly. No baseline analysis for sexually active respondents.</td>
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<td></td>
<td>Future research: Extend follow up time; RCT of intervention and include HIV testing in intervention with biological outcome.</td>
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<td></td>
<td></td>
<td>Funding: NR</td>
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<tr>
<td><strong>Authors:</strong> McMahon T, Fairley CK, Donovan B, Wan L, Quin J</td>
<td><strong>Source:</strong> People from culturally and linguistically diverse (CALD) backgrounds in Australia.</td>
<td><strong>Allocation:</strong> NA</td>
<td><strong>Primary outcomes:</strong> Proportion of HIV tests taken by target population</td>
<td><strong>Primary outcomes:</strong> Non significant increase in proportion of tests performed on target population (16.3% vs 18.8% p=0.31)</td>
<td><strong>Limitations</strong></td>
</tr>
<tr>
<td><strong>Year:</strong> 2004</td>
<td><strong>Eligible:</strong> Patients attending sexual health clinics located near areas with high density of people from CALD backgrounds</td>
<td><strong>Intervention:</strong> Mass media campaign promoting HIV testing in 14 different languages. Advertising in ethnic media print outlets and one radio station. 52 (156 insertions) sets of advertisements. Publicity for the campaign through press releases and phone promotion to media outlets.</td>
<td><strong>Follow-up:</strong> 15 working days.</td>
<td><strong>Attrition:</strong> NA</td>
<td><strong>Author:</strong> Short follow up time, most of testing of target campaign may have occurred elsewhere and scale of the campaign small. Study powered to detect significant increase but larger sample from more diverse clinical sites might have detected significant effect.</td>
</tr>
<tr>
<td><strong>Citation:</strong> Evaluation of an ethnic media campaign on patterns of HIV testing among people from culturally and linguistically diverse backgrounds in Australia. Sexual Health; 1(2):91-94.</td>
<td><strong>Selected:</strong> Patients attending three clinics in Melbourne and Sidney</td>
<td><strong>Control/comparison:</strong> NA</td>
<td><strong>Analysis:</strong> NR</td>
<td><strong>Reviewer:</strong> It is possible that positive findings are completely unrelated to intervention; no measurement of those who recalled seeing intervention and having HIV test.</td>
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<tr>
<td><strong>Aim:</strong> Evaluate 2 week pilot mass media campaign</td>
<td><strong>Setting:</strong> Sexual health clinics in Sydney and Melbourne, Australia.</td>
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<td><strong>Future research:</strong> Expand scale of campaign and include measures to estimate campaign recall among testers.</td>
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<tr>
<td><strong>Design:</strong> BA</td>
<td><strong>Sample size:</strong> n=1067</td>
<td></td>
<td></td>
<td><strong>Funding:</strong> Commonwealth Department of Health</td>
<td></td>
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<tr>
<td><strong>Quality Score:</strong> [-]</td>
<td><strong>Baseline comparisons:</strong> NA</td>
<td></td>
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</tbody>
</table>
### Study Details

**Authors:** Miller PJ & Torzillo PJ  
**Year:** 1998  
**Citation:** Private business: the uptake of confidential HIV testing in remote aboriginal communities on the Anangu Pitjantjatjara Lands. *Australian & New Zealand Journal of Public Health* 22, no. 6:700-703.

**Aim:** to assess the impact of voluntary confidential HIV testing on uptake of testing  
**Design:** Before and after study

**External Validity:** -

### Population and Setting

**Source:** Remote Aboriginal communities in Australia  
**Eligible:** People aged 12 and over, living in the Anangu Pitjantjatjara Lands in NW Australia, attending six clinics for HIV testing (1992 – 1996)  
**Selected:** NA  
**Excluded:** under 14s  
**Setting:** Clinics in Anangu Pitjantjatjara Lands, NW Australia

### Method of allocation to intervention/control

**Allocation:** NA  
**Intervention:** Implementation of confidential testing in August 1994  
**Control/comparison:** Before and after implementation  
**Sample size:** total = 1189; pre-intervention = 83; post-intervention = 1106  
**Baseline comparisons:** NR  
**Study power:** NR

### Outcomes and methods of analysis

**Primary outcomes:** Uptake of HIV testing  
**Follow-up:** NA  
**Analysis:** No statistical analysis  
**Attrition:** NA

### Results

**Primary outcomes:** HIV tests increased from 1.6/week in 1992 to 6.5/week in 1994, reaching 11.4/week in 1996

### Notes

and Aged Care (Australia)  

**Author:** Introduction of confidential testing only one component of a large STD and HIV prevention programme  
**Reviewer:** No comparison of pre- and post-intervention groups; no statistical analysis  
**Funding:** NR
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<tbody>
<tr>
<td><strong>Authors:</strong> Olshefsky AM, Zive MM, Scolari R, Zuniga ML.</td>
<td><strong>Source:</strong> Latino migrants living in California</td>
<td><strong>Allocation:</strong> NA</td>
<td><strong>Primary outcomes:</strong> Increase in number of testers in campaign period Q2 and Q3 compared with Q4</td>
<td><strong>Primary outcomes:</strong> Number of HIV testers</td>
<td><strong>Limitations</strong>&lt;br&gt;Author: Measured increase may be due to unmeasured factors other than campaign activity. Small number of participating clinics. Recall bias.</td>
</tr>
<tr>
<td><strong>Year:</strong> 2007</td>
<td><strong>Eligible:</strong> Latino migrants living on the California-Mexico border listening to four radio stations</td>
<td><strong>Intervention:</strong> Mass media campaign featuring 1-min Spanish language radio ads aired 650 times on four radio stations in two cities. Campaign developed by marketing agency, messaging verified through focus groups. Target groups also reached through website and brochures.</td>
<td><strong>Secondary outcomes:</strong> Testers recalled seeing campaign</td>
<td><strong>Secondary outcomes:</strong> 30% (127/429) of testers who completed survey recalled seeing or hearing an ad about HIV testing.</td>
<td><strong>Attrition:</strong> NR</td>
</tr>
<tr>
<td><strong>Citation:</strong> Promoting HIV risk awareness and testing in Latinos living on the U.S.-Mexico border: the Tu No Me Conoces social marketing campaign. AIDS Education and Prevention; 19(5):422-435.</td>
<td><strong>Selected:</strong> Patients attending 4 participating clinic sites</td>
<td><strong>Control/comparison:</strong> Uptake of HIV testing in four participating clinics before, during and after campaign. Cross sectional media exposure survey of clinic testers.</td>
<td><strong>Follow-up:</strong> 3 months</td>
<td><strong>Analysis:</strong> NR</td>
<td><strong>Future research:</strong> Cost effectiveness analysis.</td>
</tr>
<tr>
<td><strong>Aim:</strong> Evaluate 8 week culturally specific social marketing campaign targeting Latinos living on California-Mexico border.</td>
<td><strong>Setting:</strong> HIV testing clinics in San Ysidro, Imperial County, Vista and San Diego, US.</td>
<td><strong>Sample sizes:</strong> Unclear</td>
<td><strong>Baseline comparisons:</strong> NR</td>
<td><strong>Study power:</strong> NR</td>
<td><strong>Funding:</strong> US Department of Health and Human Services, Health Resources and Services Administration.</td>
</tr>
<tr>
<td><strong>Design:</strong> BA</td>
<td><strong>Source:</strong> Hispanic women in the US</td>
<td><strong>Allocation:</strong> Participants allocated according to which facilitator enrolled them into the study. Wait-list controls enrolled by researchers. Significant</td>
<td><strong>Primary outcomes:</strong> Self report of HIV test in the past 3 months</td>
<td><strong>Follow-up:</strong> Post</td>
<td><strong>Limitations</strong>&lt;br&gt;Author: Intervention setting confounded with intervention type. Non-random assignment of</td>
</tr>
<tr>
<td><strong>Quality Score:</strong> [-]</td>
<td><strong>Eligible:</strong> Spanish speaking Latina aged 18-35, aiming to remain</td>
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<tr>
<td><strong>External Validity:</strong> [-]</td>
<td><strong>Source:</strong></td>
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</tr>
<tr>
<td><strong>Authors:</strong> Raj A, Amaro H, Cranston K, Martin B, Cabral H, Navarro A, Conron K.</td>
<td><strong>Allocation:</strong> Participants allocated according to which facilitator enrolled them into the study. Wait-list controls enrolled by researchers. Significant</td>
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<tr>
<td><strong>Year:</strong> 2001</td>
<td>resident in Boston in the forthcoming year, who had not used condoms consistently with a steady male partner in past 3 months or engaged in injecting drug use or sex work</td>
<td>confounding not likely.</td>
<td>test (12 weeks after pre-test) and 3 months</td>
<td>95% CI 1.02, 6.12, lost at three month follow-up; no significant difference between HIV-IP and WHP on HIV testing</td>
<td>participants; variability in facilitator skill and experience; no inclusion of cost effectiveness.</td>
</tr>
<tr>
<td><strong>Citation:</strong> Is a general women’s health promotion program as effective as an HIV-intensive prevention program in reducing HIV risk among Hispanic women? <em>Public Health Reports</em>; 116(6):599-607.</td>
<td><strong>Selected:</strong> Women recruited from housing projects, community service agencies and clinics. Inclusion criteria as above. Possibility of selection bias – women were invited to participate by programme facilitators. Eligible &amp; accepted: HIV Intensive Prevention (HIV-IP) =55% Women’s Health Programme (WHP) = 90%</td>
<td><strong>Intervention:</strong> Two Spanish based HIV prevention programmes delivered by trained facilitators in a community based setting. Both programmes delivered over 12 weeks (sessions: 1.5-2 hours each).</td>
<td><strong>Analysis:</strong> Crude and adjusted ORs; Logistic and linear regression</td>
<td><strong>Attrition:</strong> NR</td>
<td><strong>Future research:</strong> Replication of study using RCT; dose and facilitator effects.</td>
</tr>
<tr>
<td><strong>Aim:</strong> Compare effectiveness of two HIV prevention interventions and a wait-list control in increasing safer sex behaviours.</td>
<td><strong>Excluded:</strong> 8 participants dropped at pre-test for specified reasons</td>
<td>HIV-IP: based on social cognitive theory. Includes participatory education strategies with &gt; 16 hours HIV prevention &amp; socio-cultural information.</td>
<td></td>
<td></td>
<td><strong>Funding:</strong> NR</td>
</tr>
<tr>
<td><strong>Design:</strong> N-RCT</td>
<td><strong>Setting:</strong> Community centres, Boston, US.</td>
<td>WHP: small group, largely didactic approach with 6-9 hours about HIV, remaining hours focused on general women’s health topics suggested by participants.</td>
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<tr>
<td><strong>Quality Score:</strong> -</td>
<td><strong>Control/comparison:</strong> Wait-list controls referred to bilingual social and health care providers, including HIV counsellors.</td>
<td><strong>Sample Total n= 162</strong></td>
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<tr>
<td><strong>External Validity:</strong> -</td>
<td><strong>Intervention</strong> HIV-IP n= 42</td>
<td><strong>WHP=54</strong></td>
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<tr>
<td></td>
<td><strong>Control</strong> n=66</td>
<td><strong>Baseline comparisons:</strong> NR</td>
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<tr>
<td></td>
<td><strong>Study power:</strong> NR. Unlikely to be sufficiently powered with small sample size.</td>
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</tr>
</tbody>
</table>
**Study Details**

**Authors:** Rhodes SD, Hergenrather KC, Bloom FR, Leichliter JS, Montano J.

**Year:** 2009

**Citation:** Outcomes from a community-based, participatory lay health adviser HIV/STD prevention intervention for recently arrived immigrant Latino men in rural North Carolina. *AIDS Education and Prevention*; 21(Suppl:B):103-108

**Aim:** Evaluate efficacy of pilot lay health adviser intervention to increase condom use and HIV testing among Latino men.

**Design:** N-RCT

**Quality Score: -

**External Validity:** -

---

**Population and Setting**

**Source:** Latino men in North Carolina

**Eligible:** Men from a rural soccer league in North Carolina

**Selected:** Soccer teams selected to serve as intervention and control groups; random sample of men from each group participated in evaluation

**Excluded:** NR

**Setting:** North Carolina, US.

---

**Method of allocation to intervention/control**

**Allocation:** Intervention teams were allocated according area. Control teams selected to be geographically and socially distinct

**Intervention:** Fifteen lay health advisers from 15 soccer teams received 16 hours training (based on social cognitive theory) as health advisers who increase HIV knowledge and make referrals for HIV testing.

**Control/comparison:** No description of input received by control group

**Sample Total n= 222**

**Intervention Control**

**NR**

**Baseline comparisons:** No significant differences in sociodemographics. Adjusted for within team clustering.

---

**Outcomes and methods of analysis**

**Primary outcomes:** Self report of HIV test

**Follow-up:** 18 months

**Analysis:** Adjusted OR

**Results**

**Primary outcomes:** HIV testing increased over baseline for intervention (9.0% vs 64.4%) adjusted odds ratio - 2.5 [CI 1.5-4.3] p<0.001

**Attrition:** NR

---

**Notes**

**Limitations**

**Author:** Pilot study to assess feasibility; use of self reported data, non random assignment; lack of biomarker and lack of generalisability of findings.

**Reviewer:** Unclear allocation, attrition. No details on controls. HIV testing increased in controls from baseline but no discussion of this result.

**Future research:** Replication of study using RCT with controls receiving cancer prevention intervention. Dose effects should be measured and introduction of DVD component to reduce facilitator effects.

**Funding:** CDC and Association for Prevention Teaching
## Study Details

**Authors:** Stanton, M and Johnson, P  
**Year:** 2000  
**Citation:** Effect of training program on physicians' attitude towards knowledge and practice patterns related to assessment and screening of clients with HIV/AIDS. Online Journal of Rural Nursing & Health Care, 1, no. 3: 31-41

**Aim:** Examine effects of training programme for Hispanic primary care physicians on screening and testing patients at risk for HIV/AIDS

**Design:** Before and after study

**Quality Score:** [-]

**External Validity:** [-]

### Population and Setting

**Source:** Hispanic primary care physicians in the US  
**Eligible:** Physicians who were members of a national Hispanic physicians medical society and those they referred into the study  
**Selected:** Self-selection of physicians practicing in predominantly urban areas with mostly Hispanic or Latino patients  
**Excluded:** NR  
**Setting:** Training in physicians' offices, across eastern and southeastern US

### Method of allocation to intervention/control

**Allocation:** NA – all volunteers assigned to intervention programme

**Intervention:** Four-part modular one-to-one programme (of three-hour sessions) on screening, testing and referral, delivered by six trained Hispanic instructors following lesson plans with specific, standardized content; developed using survey of members of national Hispanic physicians medical society

**Control/comparison:** NA

### Outcomes and methods of analysis

**Primary outcomes:** Frequency of performing HIV testing  
**Secondary outcomes:** Number of patients tested  
**Follow-up:** Four to five weeks after completion of fourth module

**Analysis:** t-tests

### Results

**Primary outcomes:** Self-reported frequency of performing HIV tests increased from mean of 0.62 (SD=0.07) to 0.81 (SD=0.05), p=0.10  
**Secondary outcomes:** Mean number of patients tested increased from 19 (SD=33) to 29 (SD=50), p=0.006

**Attrition:** NR

### Notes

Research.

**Limitations**

**Author:** Use of convenience, self-selected sample limits generalisability

**Reviewer:** Use of not validated, self-reported measures; no control group

**Future research:** Testing findings on larger, more representative sample and with other health care professionals; replication of study with rural physicians treating migrant or seasonal workers

**Funding:** NR

---

## Study Details

**Authors:** Wurcel A, Zaman T, Zhen S,  
**Source:** Patients in public health hospital in  
**Allocation:** Patients randomised to 1:1. No details

**Primary outcomes:** HIV tests taken;  
**Secondary outcomes:** Significant difference

**Notes**

Research.

**Limitations**

**Author:** Use of convenience, self-selected sample limits generalisability

**Reviewer:** Use of not validated, self-reported measures; no control group

**Future research:** Testing findings on larger, more representative sample and with other health care professionals; replication of study with rural physicians treating migrant or seasonal workers

**Funding:** NR
### Increasing the effectiveness of HIV Testing in black Africans in England - Final full report

#### Study Details
- **Stone D.**
- **Year:** 2005
- **Citation:** Acceptance of HIV antibody testing among inpatients and outpatients at a public health hospital: a study of rapid versus standard testing. *AIDS Patient and Care and STDs;* 19(8):499-505

#### Population and Setting
- **US**

#### Method of allocation to intervention/control of randomisation process

#### Outcomes and methods of analysis acceptance rates

#### Results
- between acceptance rates of standard testing among different ethnic groups (p=0.04). Hispanic groups lowest acceptance of standard testing; non-Hispanic black highest rate of acceptance. No ethnic differences in acceptance of rapid testing (p=0.16).

#### Notes
- Author: Study not powered to resolve acceptability of rapid vs standard testing; patients at greatest risk may not have participated
- Reviewer: Did not describe method of randomisation.
- Future research: Blinded serosurvey.
- Funding: NR

### Table

<table>
<thead>
<tr>
<th>Study Details</th>
<th>Population and Setting</th>
<th>Method of allocation to intervention/control</th>
<th>Outcomes and methods of analysis</th>
<th>Results</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stone D.</strong></td>
<td>US</td>
<td>Patient offered rapid HIV test, if agreed received 10-30 minute pre-test discussion. Results delivered in follow-up appointment to be booked by the patient two weeks post-test. No results provided over the phone.</td>
<td>Patient offered standard HIV test, if agreed received 10-30 minute pre-test discussion. Results delivered in follow-up appointment to be booked by the patient two weeks post-test. No results provided over the phone.</td>
<td></td>
<td>Author: Small numbers of HIV positive people</td>
</tr>
<tr>
<td><strong>Year:</strong> 2005</td>
<td>Eligible: Inpatients and those visiting outpatient clinics</td>
<td></td>
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<tr>
<td><strong>Citation:</strong> Acceptance of HIV antibody testing among inpatients and outpatients at a public health hospital: a study of rapid versus standard testing. <em>AIDS Patient and Care and STDs;</em> 19(8):499-505</td>
<td>Selected: New inpatients (medical, surgical, tuberculosis, orthopaedic services) or outpatients.</td>
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<tr>
<td><strong>Aim:</strong> To determine whether patients would be more or less likely to accept HIV testing if it were offered as a rapid test versus standard test</td>
<td>Excluded populations: Patients who were acutely intoxicated; psychotic; depressed or incompetent excluded from enrolment. Patients also exclude if they had been tested within one month of enrolment. Number of exclusions not reported. Potential bias: attending physician determining eligibility could exclude from study due to other criteria.</td>
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<tr>
<td><strong>Design:</strong> RCT</td>
<td>Setting: Public hospital, Boston, US</td>
<td><strong>Sample Total n= 203</strong></td>
<td>Baseline comparisons: No significant difference.</td>
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<tr>
<td><strong>Quality Score:</strong> [+</td>
<td><strong>Intervention:</strong> 101 Control: 102</td>
<td><strong>Baseline comparisons:</strong> No significant difference.</td>
<td><strong>Study power:</strong> Not powered for statistical significance.</td>
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<tr>
<td><strong>External Validity:</strong> [-</td>
<td><strong>Allocation:</strong> NA</td>
<td></td>
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<tr>
<td><strong>Authors:</strong> Van der Bij AK, Dukers NH, Coutinho RA</td>
<td><strong>Source:</strong> STI clinic attendees in the Netherlands</td>
<td><strong>Primary outcomes:</strong> Uptake of HIV testing</td>
<td><strong>Primary outcomes:</strong> Increase in HIV testing rates pre- vs. post-intervention</td>
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</tbody>
</table>
## Fennema HS

**Year:** 2008

**Citation:** Low HIV-testing rates and awareness of HIV infection among high-risk heterosexual STI clinic attendees in The Netherlands. *European Journal of Public Health* 18, no. 4:376-379.

**Aim:** To evaluate whether routinely offering HIV testing to STI clinic patients increased the uptake of HIV testing and awareness of HIV status among heterosexuals

**Design:** BA  
**Quality Score:** +  
**External Validity:** +

<table>
<thead>
<tr>
<th>Study Details</th>
<th>Population and Setting</th>
<th>Method of allocation to intervention/control</th>
<th>Outcomes and methods of analysis</th>
<th>Results</th>
<th>Notes</th>
</tr>
</thead>
</table>
| **Eligible:** (i) all heterosexuals attending STI outpatient clinic in Amsterdam for first time or first episode of STI; (ii) those visiting for new STI episode eligible to complete half-yearly survey (1994 – 2004)  
**Selected:** During data collection periods: 1,000 consecutive patients interviewed  
**Excluded:** NR | to STI clinic patients in 1999  
**Control/comparison:** Before and after implementation | **Secondary outcomes:** Awareness of HIV positive status  
**Sample size:** Total number of consultations = 144,466; survey participants = 17,093  
**Follow-up:** 11 years (1994-2004)  
**Analysis:** Univariate and multivariate logistic regression | (OR: 5.7, CI 5.6-5.9); increase more pronounced among non-Dutch ethnicity. Surinamese/Dutch Antillean (OR: 7.7, CI 6.8-8.6) / Turkish (OR: 9.0, CI 6.9-11.8) / North-African (OR: 6.7, 5.3-8.5) / Sub-Saharan African (OR: 8.0 CI: 6.5–9.8) / Eastern-European (OR: 4.8 4.0-6.0) / South-American (OR: 9.6, CI 8.0–11.8) / Other Ethnicity (OR 6.0, 5.4-6.5) | in surveys  
**Reviewer:** Findings based on patients in a single clinic; no multivariate analysis to examine change in HIV testing over time  
**Funding:** NR |
### Study Details

**Year:** 2008

**Citation:** Simplifying consent for HIV testing is associated with an increase in HIV testing and case detection in highest risk groups, San Francisco January 2003-June 2007. PLoS ONE [Electronic Resource]; 3(7):e2591

**Aim:** To describe the change in HIV testing rates after introduction of policy to eliminate the requirement of separate written consent for HIV testing.

**Design:** ITS

**Quality Score:** ++

**External Validity:** +

### Population and Setting

- **Attending Health Care Settings:** Where HIV screening is routinely performed: ED; urgent care clinic, inpatient services, primary care clinics; specialty clinics and affiliated community clinics.
- **Selected:** All Patients attending health care settings where HIV screening is routinely performed: ED; urgent care clinic, inpatient services, primary care clinics; specialty clinics and affiliated community clinics.
- **Excluded Populations:** None
- **Setting:** Large University-based hospital, San Francisco, US.

### Method of allocation to intervention/control

Document alongside HIV test laboratory requisition form. Prior to policy change laboratory rejected samples with incomplete documentation.

### Control/comparison

Tests undertaken before change in policy and monthly HIV testing rates compared with similar San Francisco hospital where policy change did not occur.

### Sample Total (tests) n=

- **Intervention:** 3791
- **Control:** 16919

### Baseline comparisons

NA

### Study power

No power calculations. Large sample sufficient.

### Outcomes and methods of analysis

13 months after change in policy (95% confidence interval):

- **Asian** - 2.80 (1.37–4.23) p<0.001
- **Black** - 5.58 (2.11–9.04) p= 0.002
- **Hispanic** - 1.56 (-0.49–3.61) p=0.132
- **White** - 5.58 (2.95–8.21) p<0.001
- **English-speaking** - 5.04 (2.40–7.69) p<0.001
- **Spanish-speaking** - 0.95 (-3.31–1.40) p=0.419
- **Other primary language** - 2.69 (1.16–4.22) p= 0.001

### Results

- **Attrition:** NR.

### Notes

Publicity surrounding publication of previous study and new availability of rapid tests; inability to calculate HIV testing rates in control hospital

**Reviewer:** None

**Future research:** Confirm findings with further studies on other populations using different designs.

**Funding:** NIH, California HIV Research Program Grant, San Francisco Dept of Health. No competing interest.