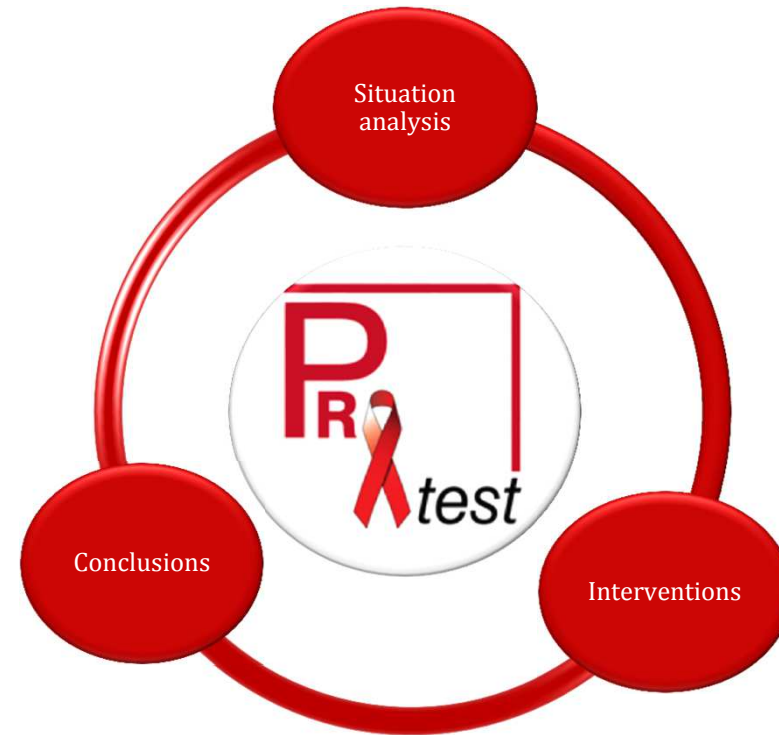# Project PRO-test: Pro-active HIV testing for prevention of late presentation

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Background

- In the Netherlands 25.000 persons are living with HIV; 27% undiagnosed; 43% enter late in care. [1]

- GPs play a central role as point of access to secondary healthcare. [2]

- Targeting populations at higher risk for HIV have been insufficient. [2]

Figure 6.4 Number of new HIV diagnoses per 100,000 inhabitants per PHS region, the Netherlands, 2013.

New HIV diagnoses per 100.000
- 1.6 - 2.6
- 2.6 - 3.8
- 3.8 - 5.1
- 5.1 - 9.9
- 9.9 - 16.9
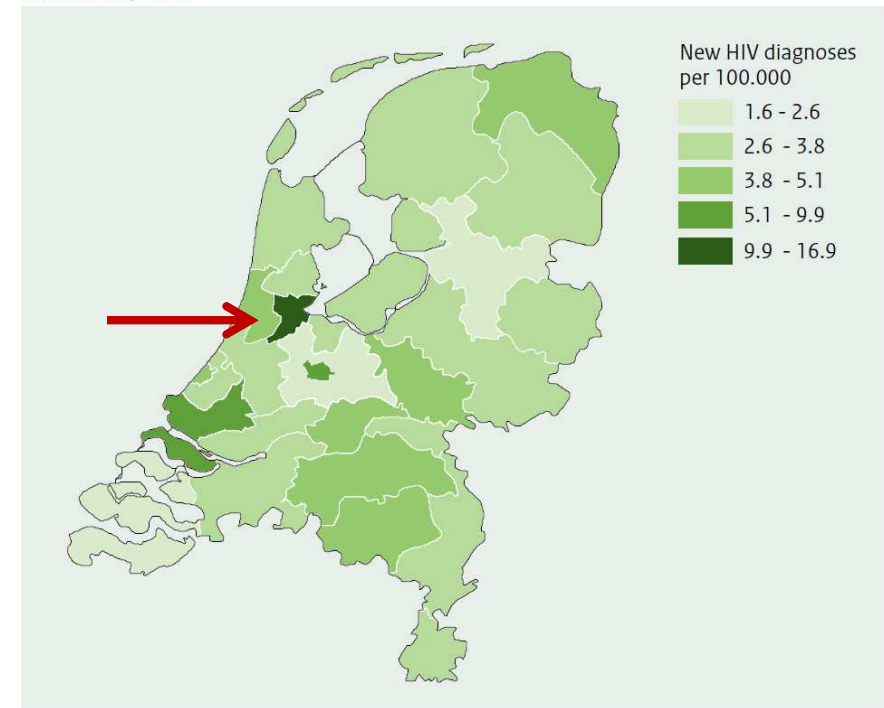
Footnote: calculations based on HIV diagnoses per PHS region. (Sources: Stichting HIV Monitoring, CBS)

1. Stichting Hiv Monitoring 2013
2. Trienekens BMJ OPEN 2013
RIVM 2013

Background (2)

- HIV indicator conditions[1]:

  ❖ Conditions which are AIDS defining among people living with HIV.

  ❖ Conditions associated with an undiagnosed HIV prevalence of > 0.1%.

  ❖ Conditions in which missing a diagnosis of HIV infection may have significant adverse implications for the individual's clinical management.

- Routine HIV testing among all 15- to 59-year-olds in primary care settings where HIV prevalence exceeds 2 in 1000.[2]

1. European Centre for Disease Prevention and Control (ECDC) ;2012
2. National Institute of Health and Care Excellence (NICE)'; 2012

Table 1: Definitions of indicator conditions and recommendations for HIV testing

1. Conditions which are AIDS defining among PLHIV*

Strongly recommend testing:

Neoplasms:
- Cervical cancer
- Non-Hodgkin lymphoma
- Kaposi's sarcoma

Bacterial infections
- Mycobacterium Tuberculosis, pulmonary or extrapulmunary
- Mycobacterium avium complex (MAC) or Mycobacterium kansasii, disseminated or extrapulmunary
- Mycobacterium, other species or unidentified species, disseminated or extrapulmunary
- Pneumonia, recurrent (2 or more episodes in 12 months)
- Salmonella septicaemia, recurrent

Viral infections
- Cytomegalovirus retinitis
- Cytomegalovirus, other (except liver, spleen, glands)
- Herpes simplex, ulcer(s) >1 month/ bronchitis/ pneumonitis
- Progressive multifocal leucoencephalopathy

Parasitic infections
- Cerebral toxoplasmosis
- Cryptosporidiosis diarrhoea, >1 month
- Isosporiasis, >1 month
- Atypical disseminated leismaniasis
- Reactivation of American trypanosomiasis (meningoencephalitis or myocarditis)

Fungal infections
- Pneumocystis carinii pneumonia
- Candidiasis, oesophageal
- Candidiasis, bronchial/ tracheal/ lungs
- Cryptococcosis, extra-pulmonary
- Histoplasmosis, disseminated/ extra pulmonary
- Coccidiodomycosis, disseminated/ extra pulmonary
- Penicilliosis, disseminated

2a. Conditions associated with an undiagnosed HIV prevalence of >0.1 %**

Strongly recommend testing:

- Sexually transmitted infections
- Malignant lymphoma
- Anal cancer/dysplasia
- Cervical dysplasia
- Herpes zoster
- Hepatitis B or C (acute or chronic)
- Mononucleosis-like illness
- Unexplained leukocytopenia/ thrombocytopenia lasting >4 weeks
- Seborrheic dermatitis/ exanthema
- Invasive pneumococcal disease
- Unexplained fever
- Candidaemia
- Visceral leishmaniasis
- Pregnancy (implications for the unborn child)

2b. Other conditions considered likely to have an undiagnosed HIV prevalence of >0.1%

Offer testing:

- Primary lung cancer
- Lymphocytic meningitis
- Oral hairy leukoplakia
- Severe or atypical psoriasis
- Guillain–Barré syndrome
- Mononeuritis
- Subcortical dementia
- Multiplesclerosis-like disease
- Peripheral neuropathy
- Unexplained weightloss
- Unexplained lymphadenopathy
- Unexplained oral candidiasis
- Unexplained chronic diarrhoea
- Unexplained chronic renal impairment
- Hepatitis A
- Community-acquired pneumonia
- Candidiasis

3. Conditions where not identifying the presence of HIV infection may have significant adverse implications for the individual's clinical management despite that the estimated prevalence of HIV is most likely lower than 0.1%

Offer testing:

- Conditions requiring aggressive immuno-suppressive therapy:
  - Cancer
  - Transplantation
  - Auto-immune disease treated with immunosuppressive therapy
- Primary space occupying lesion of the brain.
- Idiopatic/ Thrombotic thrombocytopenic purpura

* Based on CDC and WHO classification system [46]
** References in appendix 2

Updates to the table based on future evidence of HIV prevalence in indicator conditions under 2b can be found at www.hiveurope.eu

1. European Centre for Disease Prevention and Control (ECDC) ;2012

Aims

- to determine the prevalence of HIV infection in six general practices in the southeast district of Amsterdam.

- to identify the incidence of HIV indicator conditions in the five years prior to HIV diagnosis, using data from the HAGnet general practice database.
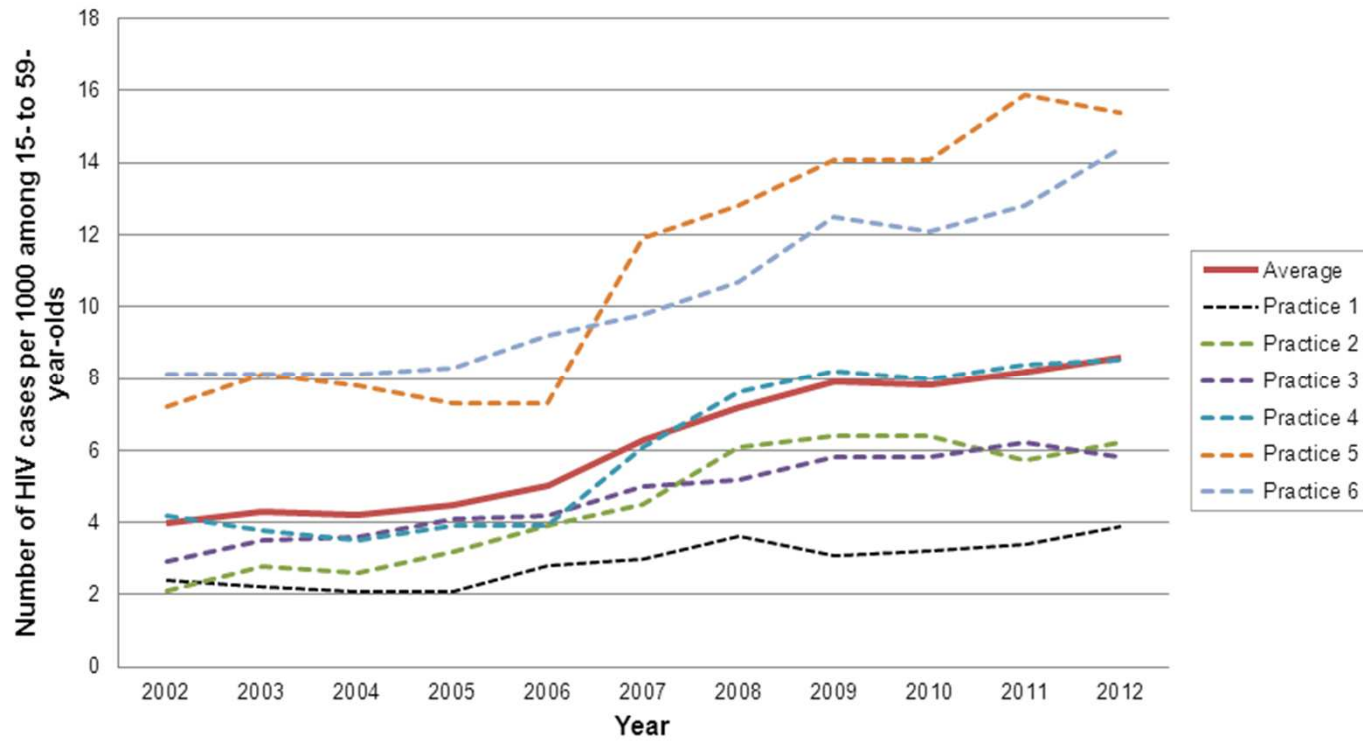
Methods

- HAGnet general practice database contains patient records from six general practices in the southeast district Amsterdam.

- A search was performed for HIV from 2002-2012 by using the International Classification of Primary Care (ICPC) code B90: HIV-infection.

Results (1)

Preliminary results

ICPC code B90: HIV infection
N = 452

Excluded
- No HIV   N = 1
- Diagnosis before 1st of July 2002   N = 291
- Age < 18 years   N = 10
- < 1year of information available prior
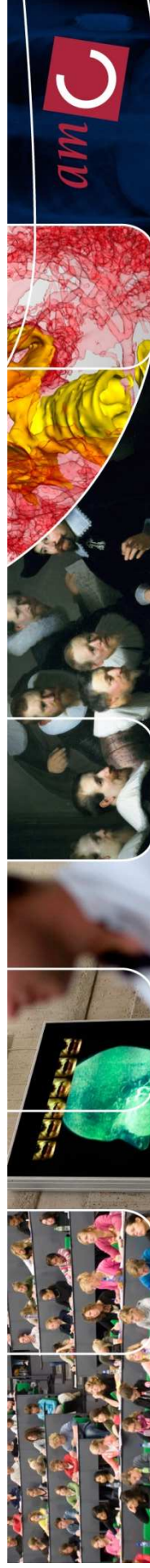 to HIV diagnosis   N= 48

Cases
N = 102

Controls
N = 299

Matching
- gender
- age
- practice
- year the HIV cases received their diagnosis,
- years of information available in the medical
  file prior to HIV diagnosis

Results (2)

Preliminary results

- Males: 73%

- Mean age: 44.5 years

- Sexual orientation was reported in 90.2% of the HIV cases: 48.8% was MSM.

- Ethnicity was reported in 78.4% of the HIV cases: 57.2% originated from an HIV endemic country.

Results (3)

Preliminary results

	Cases		Controls	
Total N	102		299	
	n	%	n	%
HIV indicator conditions	60	58.5	22	7.4
Number of HIV indicator conditions per patients				
None of the indicator conditions	42	41.2	277	92.6
One of the indicator conditions	36	35.3	20	6.7
Two or more indicator conditions	24	23.5	2	0.7

Results (4)

Preliminary results

	Cases		Controls		Odds ratio	95% CI	
Total N	102		299				
	n	%	n	%			
Weight loss	9	8.8	0	0	39.6	6.2	INF
Syphilis	12	11.7	1	0.3	39.3	5.7	1703.9
Lymphadenopathy	7	6.9	0	0	29.8	4.4	INF
Herpes zoster	7	6.9	2	0.7	10.9	2.0	108.9
Pneumonia	8	7.8	3	1.0	8.3	2.0	49.8

Conclusions

- Pro-active HIV testing is recommended to reduce the number of undiagnosed and prevent late presentation.

- The southeast district of Amsterdam qualifies as a high prevalence area where routine testing is indicated, according to the UK guidelines.

- The incidence of HIV indicator conditions is substantially higher in HIV cases compared to controls and more than half (58.5%) of HIV cases had an HIV indicator condition in the five years prior to diagnosis.

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Questions?