The Swiss Urgent Action Plan 2012 (MSM)

Steven Derendinger, MA
Epidemiological and behavioral data
New HIV diagnoses among MSM (I)
New HIV diagnoses among MSM (II)

Year of test

01 02 03 04 05 06 07 08 09 10 11

Number of cases

0 100 200 300 400 500

Hétéro, MSM, IDU, Autres

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New HIV diagnoses among MSM (III)
At what stage are MSM diagnosed for HIV?

Internal data
Swiss Federal Office of Public Health
(2001 – 2010)
Risk behaviour with steady partners (I)

Among the MSM in a steady relationship, 83% reported practicing anal sex.

Among these MSM, 65% had unprotected anal sex.

% reporting anal sex in last 12 months
% anal sex that was unprotected
Risk behaviour with sexual casual partners (II)

Gay Survey 2009:

75% of respondents have had casual partners the last 12 months.

Among MSM with casual partners, 85% practiced anal sex.
Among these MSM, 18% practiced unprotected anal sex.
WO BIST DU IN DIESEN NETZWERKEN?
Risk behaviour among MSM

• Steady partner → without condom after HIV test.

• Regular casual partner (sex-buddies): if regularly tested HIV-negative → without condom.

→ Networks of men who have unsafe sex between them.

→ One infection is enough for the virus to spread in these networks and infect numerous men.
The Mathematical Model
Methods overview

Literature input parameters

SHCS longitudinal viral loads

SFOPH surveillance Input data sets yearly # diagnoses

Swiss Gaysurvey behaviour

Model validation Max Likelihood

Best-fit estimates:
• number of HIV-infected
• risk behaviour rate, diagnosis rate
• number of new infections in-country and abroad
Model Results: remodelling of HIV diagnoses

- infected in Switzerland
- infected abroad

Number of HIV diagnoses

Calendar year

1980 1990 2000 2010
Mathematical Model: results from remodelling

• In 2010, about 13% of infected MSM were unaware of their infection and were the origin of about 80% of new infections among this population.

• MSM get diagnosed within 2.2 years after the infection.

• Benefits from therapy have been offset by increases in risk behaviour.
What can be done?
Model Results: hypothetical scenarios future

Number of new infections

Incidence


Scenario 1
Scenario 2
Scenario 3
Scenario 4
Scenario 5
Prevalence in 10 years with regards to the scenarios

Difference in 10 years: 2000 cases
Our hypothesis:

• 50% of transmissions occur within the Primary HIV Infection phase (PHI).

• 30% of transmissions occur after PHI and before diagnostic.

• 20% of transmissions occur after diagnostic.
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Action field 1 | Action field 2 | Action field 3

50% | 30% | 20%

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The brochure of the Swiss FOPH:

« Sex between Men: Towards a Better Sexual Health 2012 »
Action field I :
Transmissions within PHI (50%)

Objective:
Lower the “community viral load among gay men” by breaking the chain of PHI.

Reduce the number of men with PHI as low as possible.
Action field II:
Transmissions after PHI and before diagnostic (30%)

Objective:
Reduce time from infection to diagnostic.
BIG 5 promotion

Assure follow up of HIV+ men and prepare for treatment.
Action field III:
Transmissions after diagnostic (20%)

Objective:
No transmission in couples and with occasional partners after diagnosis.
Thank you.

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