

# Developments in the HIV epidemic in the Netherlands: testing and treating

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# Overview

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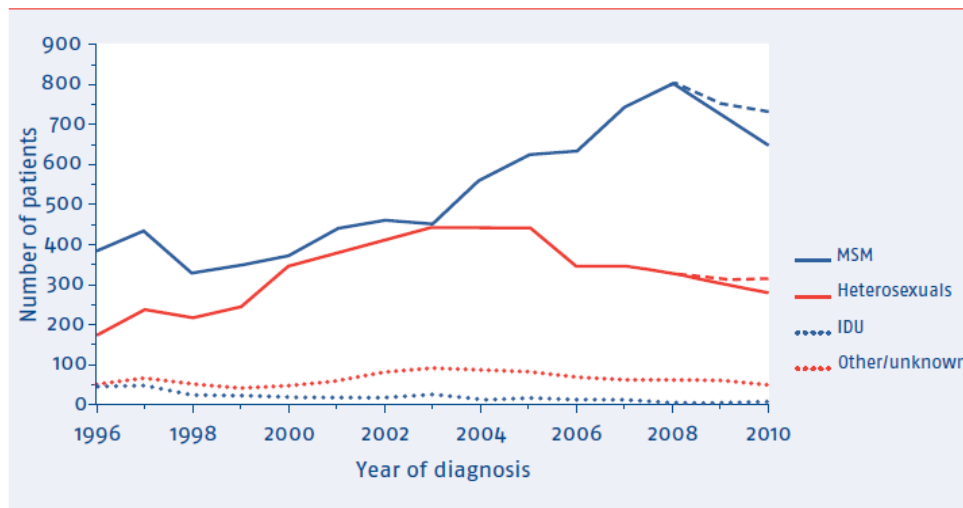
- Changing trends?
- How has this occurred?
- What risks remain?
- How to proceed?

# Changing trends

## MSM:

Estimated number of 750 new HIV diagnoses per year in 2009 and 2010.

Yearly increase of new HIV diagnoses seems to slow since 2008.



## Hetero's:

No change.

year	MSM	Hs	IDU	other	total
2006	632	349	13	78	1072
2007	747	351	12	67	1177
2008	804	328	4	73	1209
2009*	725	303	4	68	1100
2010*	648	281	6	57	992
2011*	133	44	0	16	193

\*ongoing data collection

# How has this occurred?

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- Transmission risk behaviour
- Testing behaviour
- HIV suppression through cART

# Transmission risk behaviour

Van Empelen et al. Poster 31

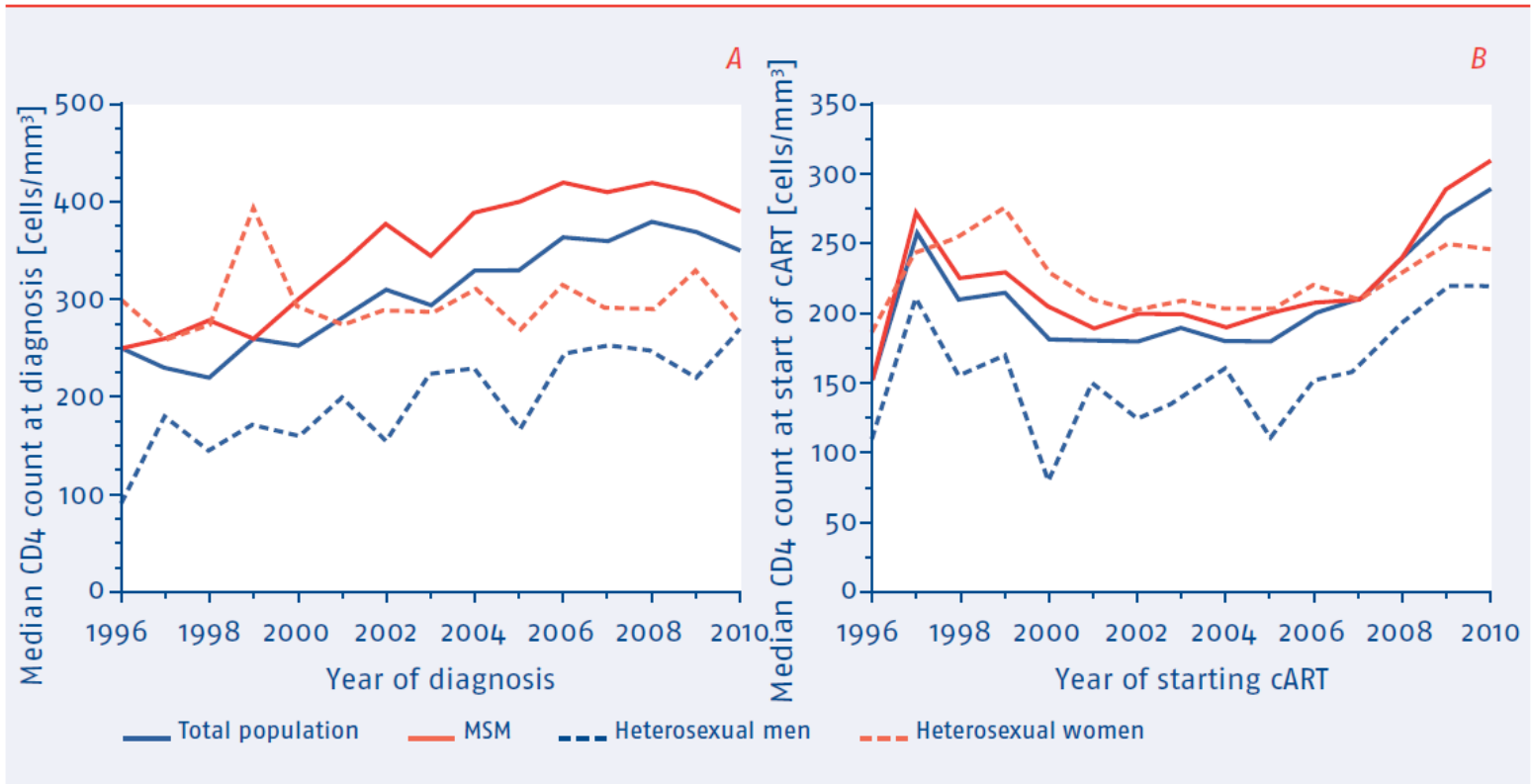
Schorer Monitor 2011	2009	2010	2011
	%	%	%
<b>Male sex partners</b>			
• None	8	9	8
• Regular partner only	18	17	17
• Casual partner only	46	46	46
• Both regular and casual partners	28	28	29
<b>Anal sex regular partner</b>			
• Unprotected	57	57	53
<b>Anal sex casual partners</b>			
• Unprotected	33	36	36
○ Not tested for HIV	26	27	26
○ Tested negative	30	31	32
○ Tested positive	62	70	70

# Testing behaviour

Schorer Monitor 2011	2009	2010	2011
	%	%	%
Ever tested for HIV	73	75	78
HIV positive	16	16	15
HIV negative last 12 months	38	39	44
HIV negative last 6 months	25	24	32
STD test last 12 months	46	47	51
STD diagnosis last 12 months	26	29	25

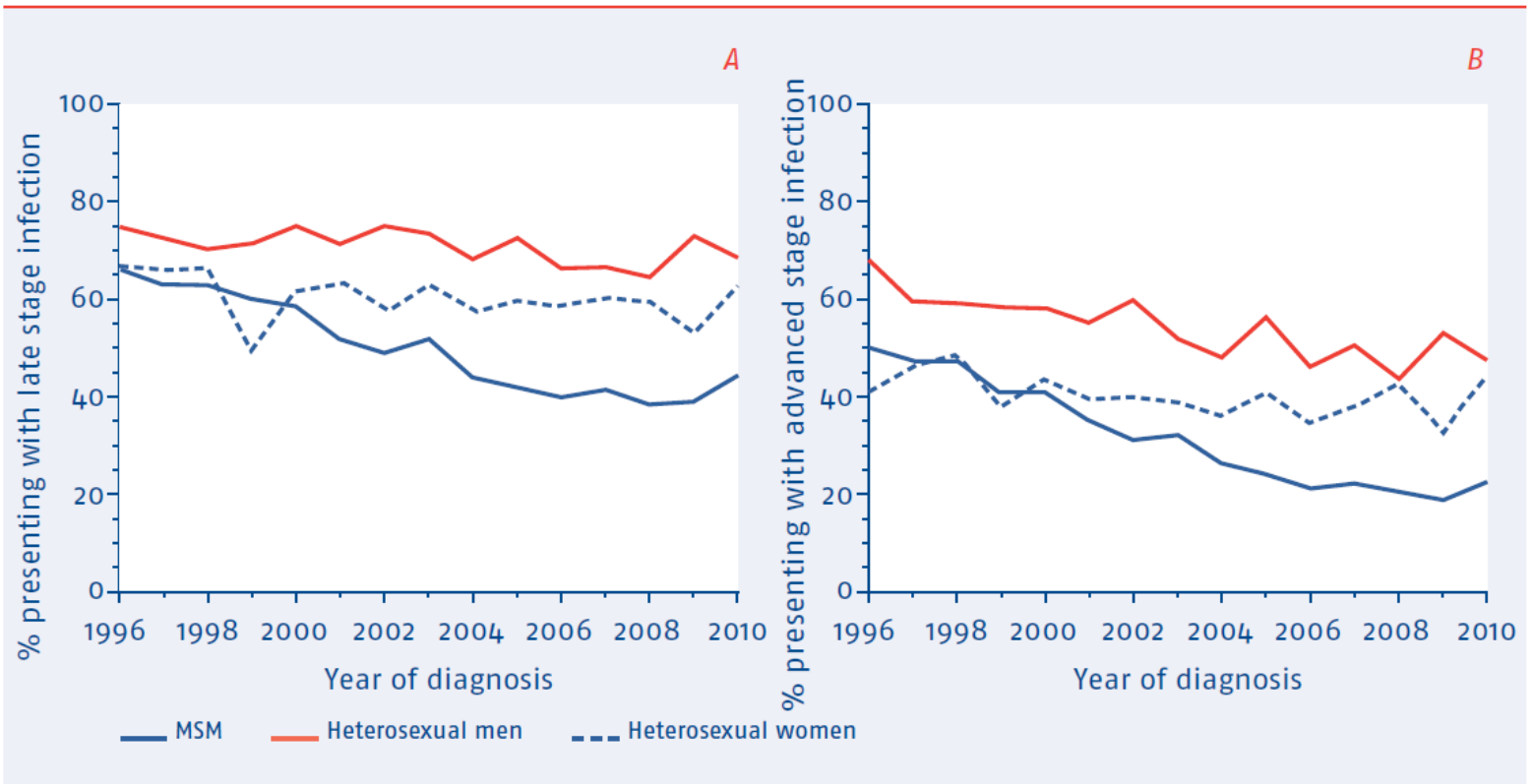
- Steadily increasing proportion ever tested and proportion recently tested

# CD4 count at diagnosis and start cART



- Earlier in infection when tested positive
- Increase in testing frequency
- Earlier start of cART in recent years
- Late presentation, late start

# Entry in HIV care



## Late stage:

CD4-cell counts < 350 cells/mm<sup>3</sup> or AIDS, regardless of CD4 count.

## Advanced stage:

CD4 counts < 200 cells/mm<sup>3</sup> or AIDS, regardless of CD4 count.



# cART and CD4 cell response

Patients starting cART with 350-500 CD4 cells/mm<sup>3</sup> reach near normal values after 8 yrs of virologically successful cART

Increasing proportion and absolute number of patients with CD4 cell counts >500 cells/mm<sup>3</sup>

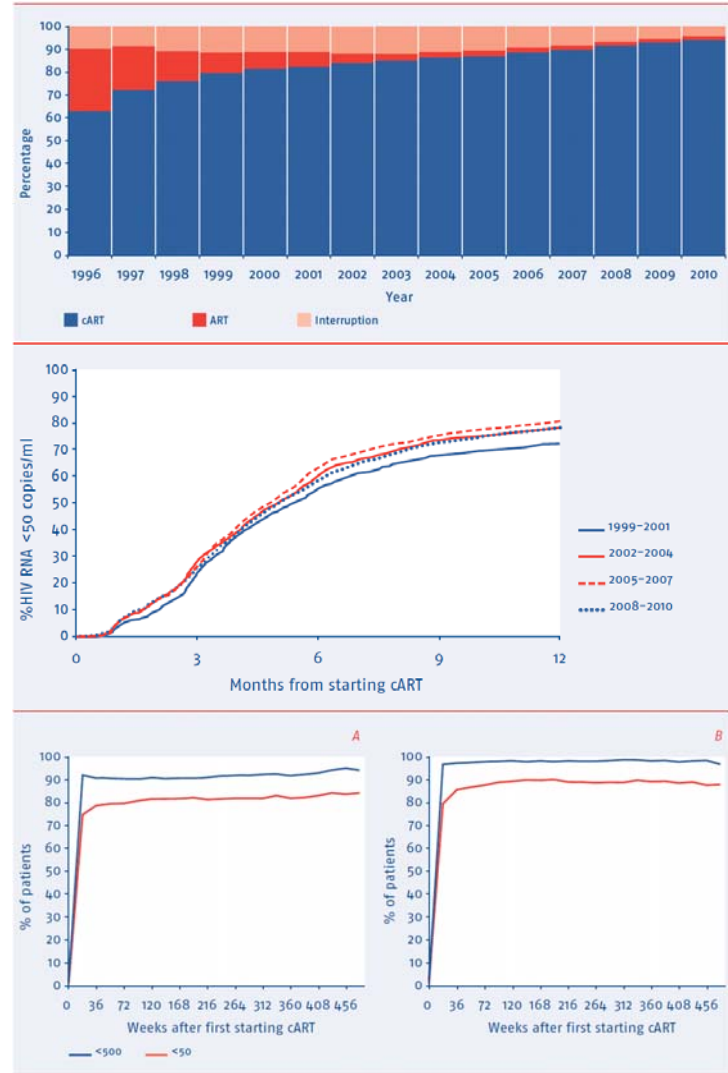


# HIV suppression through cART

- 14,874 patients started cART (1995 - 2010)
- Fraction of patients who remained on cART from 63% (1996) to 94% (2010)
- Short term HIV suppression: 58.3% at 6, 72.3% at 9 and 80% at 12 weeks of cART

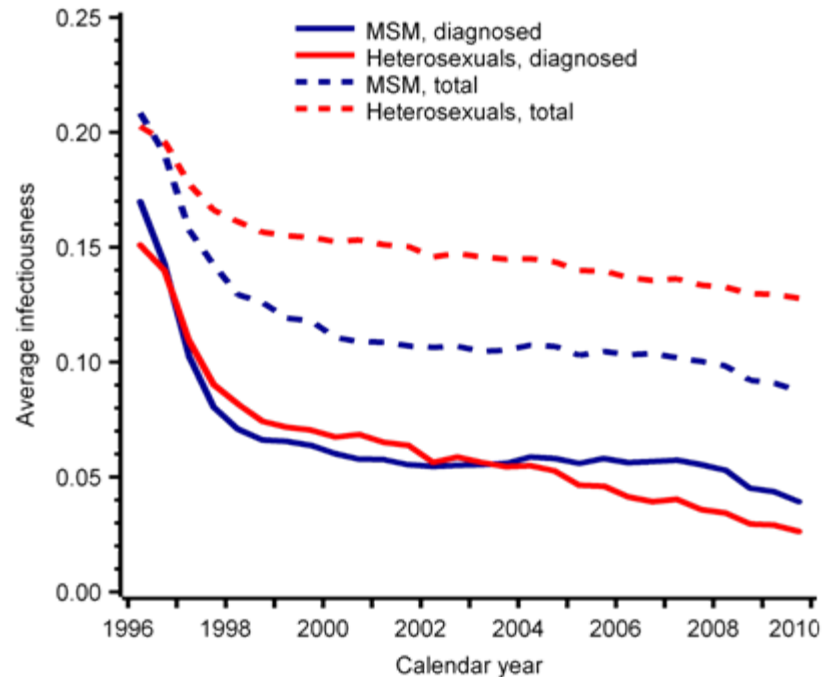
## All patients starting cART

- 82 – 84% HIV RNA <50 cps/ml Patients continuously on cART
- 88 - 90% HIV RNA <50 cps/ml



# Infectiousness

- Translate HIV-RNA levels into infectiousness
- Infectiousness: transmission rate per year (Fraser C, PNAS 2007)
- Change over time in diagnosed population (MSM 80%; heterosexuals 60%) and total population.



- cART changes infectiousness of infected population

# What risks remain?

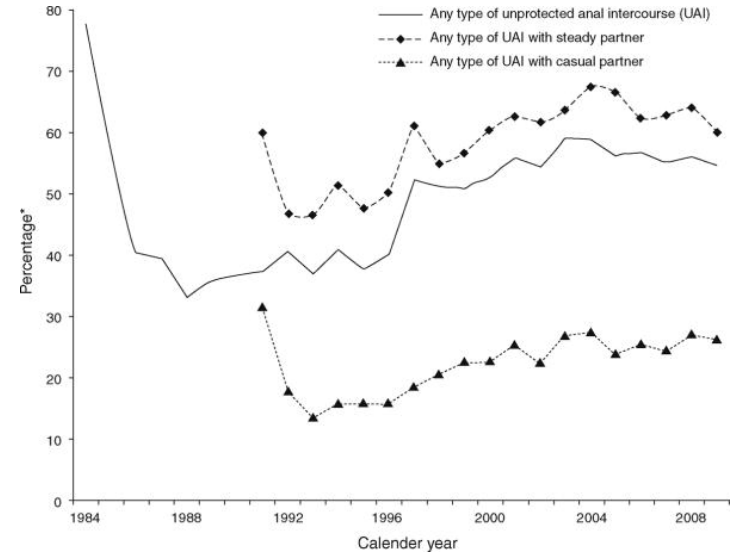
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- Changing transmission risk behaviour
- Changing testing behaviour
- cART failure

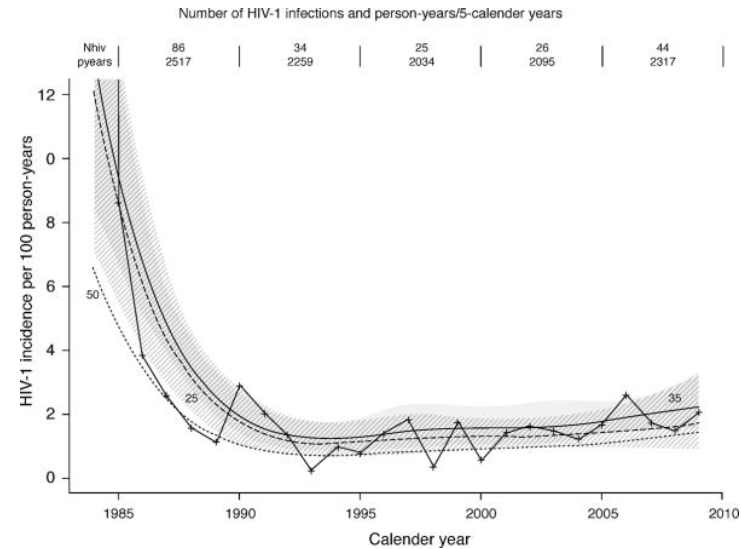
# Transmission risk behaviour

Jansen, I. et al AIDS 2011

“Unprotected anal intercourse (UAI) increased significantly from 1996 onwards.”

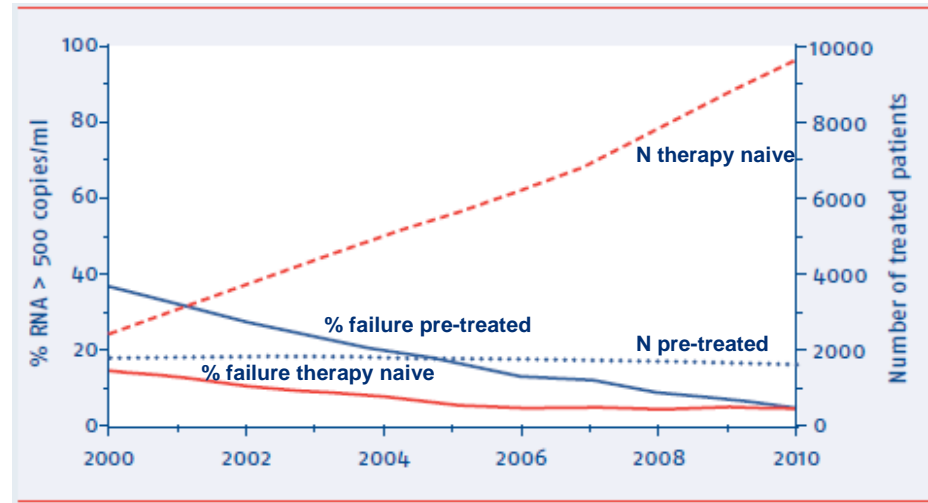


“In latest years the HIV-incidence remained relatively stable, although there is a suggestion toward a slight increase from 1.4/100 person-years in 1996 to 2.0/100 person-years in 2009.”

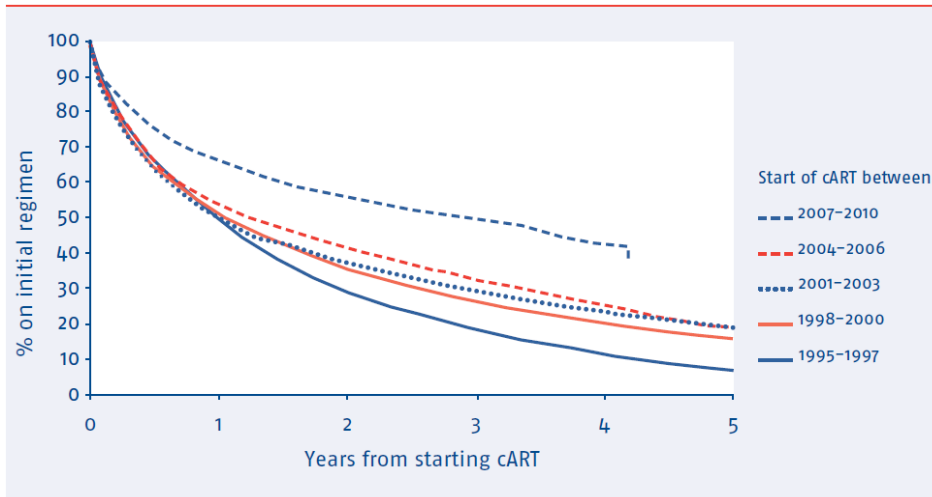


# Virologic failure

- ARV naive patients: Decline from 15% in 2000 to 5% in 2010
- ATV experienced patients: decline from 37% in 2000 to 5% in 2010
- Survivor effect
- New more potent antiretroviral drugs

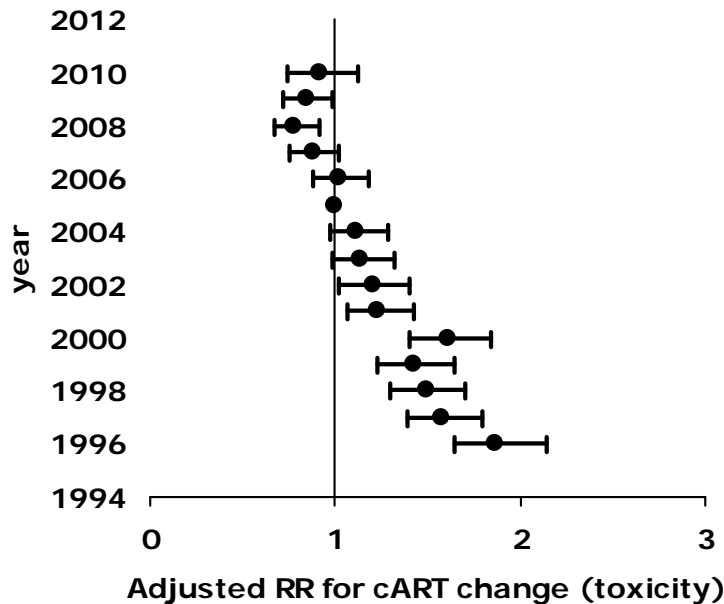


# Patients and cART change



Toxicity most common reason for discontinuing cART regimens.

Duration of initial cART regimens increased



Risk of toxicity driven regimen change during first 3 years of cART declined.

# Resistance

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- In 1400/14610 (10%) patients currently in follow-up high level resistance mutations were found in HIV RT and protease
- Resistance tests only in 30% of patients with virological failure
- True prevalence estimated at 30%, in line with findings in other European countries (Switzerland approx 40%).
- Amongst the 1400 with high level resistance:
  - 74% to lamivudine and emtricitabine
  - 38% to one other NRTI
  - 33% to a PI
  - 60% to at least one NNRTI
- 5% of patients infected with HIV already resistant to antiretroviral drugs

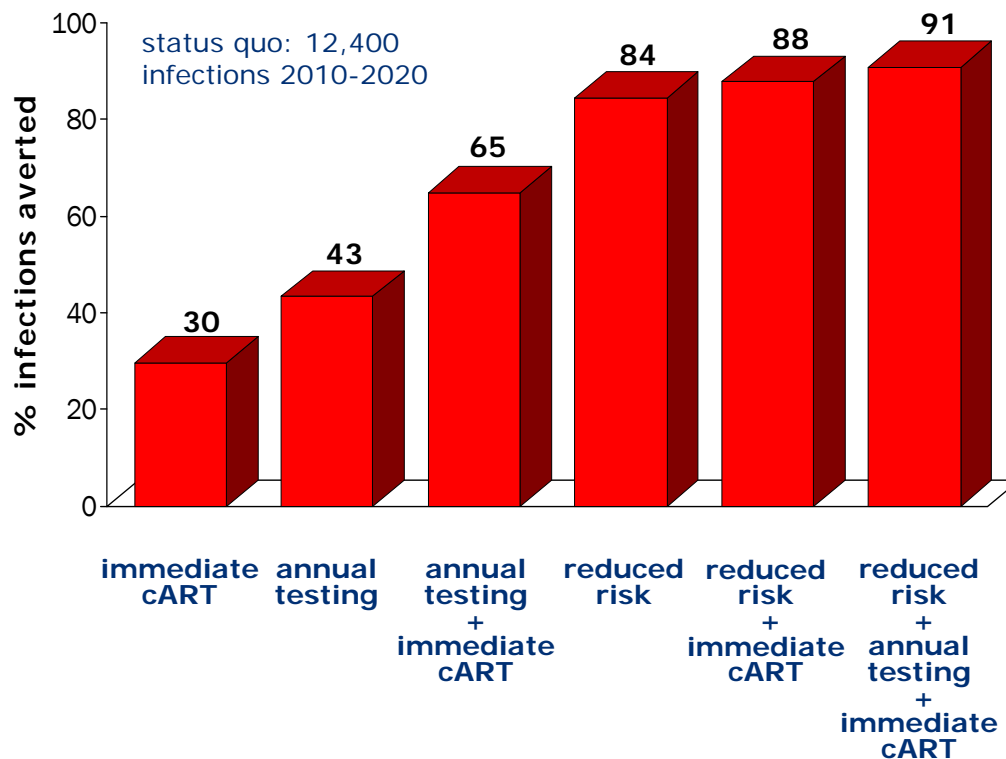


# Summary

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- 18,735 people with HIV registered; 14,610 in follow-up (2011)
- Slow down of increasing rate of new registrations amongst MSM to around 750 per year for 2009 and 2010
- Increasing number tested for HIV and increasing testing frequency
- Stabilising risk behaviour
- >80% of those registered with HIV on cART
- HIV suppression in 80% from 72 weeks of cART treatment onwards
- Timely start of cART has improved

# How to proceed



- Improve testing
- Treatment as prevention:
  - Treat early
  - PreP
- Reduce risk behaviour

- Treat to eradicate
- Vaccines
- Continue monitoring HIV: It remains a fragile balance

# Acknowledgements

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**Academisch Medisch Centrum bij de Universiteit van Amsterdam, Amsterdam:** Prof. dr. J.M. Prins\*, Prof. dr. T.W. Kuijpers, Dr. H.J. Scherpbier, Dr. K. Boer, Dr. J.T.M. van der Meer, Dr. F.W.M.N. Wit, Dr. M.H. Godfried, Prof. dr. P. Reiss, Prof. Dr. T. van der Poll, Dr. F.J.B. Nellen, Prof. dr. J.M.A. Lange, Dr. S.E. Geerlings, Dr. M. van Vugt, Drs. D. Pajkrt, Drs. J.C. Bos, Drs. M. van der Valk, Drs. M.L. Grijssen, Dr. W.J. Wiersinga. **Academisch Ziekenhuis Maastricht, Maastricht:** Dr. G. Schreij\*, Dr. S. Lowe, Dr. A. Oude Lashof. **Catharina-ziekenhuis, Eindhoven:** Drs. M.J.H. Pronk\*, Dr. B. Bravenboer. **Erasmus Medisch Centrum, Rotterdam:** Dr. M.E. van der Ende\*, Drs. T.E.M.S. de Vries-Sluijs, Dr. C.A.M. Schurink, Drs. M. van der Feltz, Dr. J.L. Nouwen, Dr. M.H. van Nispen tot Pannerden, Dr. L.B.S. Gelinck, Dr. A. Verbon, Drs. B.J.A. Rijnders, Prof. dr. T.W. Schurink, Dr. E.C.M. van Gorp, Prof. dr. P. Hassing, Dr. B. Smeulders. **Erasmus Medisch Centrum–Sophia, Rotterdam:** Dr. N.G. Hartwig, Dr. G.J.A. Driessen. **Flevoziekenhuis, Almere:** Dr. J. Branger\*. **HagaZiekenhuis, Den Haag:** Dr. E.F. Schippers\*, Dr. C. van Nieuwkoop. **Isala Klinieken, Zwolle:** Dr. P.H.P. Groeneveld\*, Dr. M.A. Alleman, Drs. J.W. Bouwhuis. **Kennemer Gasthuis:** Prof. dr. R.W. ten Kate\*, Dr. R. Soetekouw. **Leids Universitair Medisch Centrum, Leiden:** Dr. F.P. Kroon\*, Prof. dr. P.J. van den Broek, Prof. dr. J.T. van Dissel, Dr. S.M. Arend, Drs. C. van Nieuwkoop, Drs. M.G.J. de Boer, Drs. H. Jolink, Dr. H.J.M. ter Vollaard. **Maasstadziekenhuis, Rotterdam:** Dr. J.G. den Hollander\*, Dr. K. Pogany. **Medisch Centrum Alkmaar, Alkmaar:** Drs. G. van Twillert\*, Drs. W. Kortmann\*. **Medisch Centrum Haaglanden, Den Haag:** Dr. E.M.S. Leyten\*, Dr. L.B.S. Gelinck. **Medisch Spectrum Twente, Enschede:** Drs. G.J. Kootstra\*. **Onze Lieve Vrouwe Gasthuis, Amsterdam:** Prof. dr. K. Brinkman\*, Dr. W.L. Blok, Dr. P.H.J. Frissen, Drs. W.E.M. Schouten, Drs. G.E.L. van den Berk. **Sint Elisabeth Ziekenhuis, Tilburg:** Dr. J.R. Juttman\*, Dr. M.E.E. van Kasteren, Drs. A.E. Brouwer. **Sint Lucas Andreas Ziekenhuis, Amsterdam:** Dr. J. Veenstra\*, Dr. K.D. Lettinga. **Slotervaartziekenhuis, Amsterdam:** Dr. J.W. Mulder\*, Drs. P.M. Smit, Drs. S.M.E. Vrouwenraets. **Stichting Medisch Centrum Jan van Goyen, Amsterdam:** Drs. A. van Eeden\*, Dr. D.W.M. Verhagen\*. **Universitair Medisch Centrum Groningen, Groningen:** Drs. H.G. Sprenger\*, Drs. R. Doedens, Dr. E.H. Scholvinck, Drs. S. van Assen, Dr. W.F.W. Bierman. **Universitair Medisch Centrum Sint Radboud, Nijmegen:** Dr. P.P. Koopmans\*, Dr. M. Keuter, Dr. A.J.A.M. van der Ven, Dr. H.J.M. ter Hofstede, Dr. A.S.M. Dofferhoff, Dr. A. Warris, Dr. K.D. Crevel. **Universitair Medisch Centrum Utrecht, Utrecht:** Prof. dr. A.I.M. Hoepelman\*, Dr. T. Mudrikova, Dr. M.M.E. Schneider, Drs. C.A.J.J. Jaspers, , Dr. P.M. Ellerbroek, Dr. J.J. Oosterheert, Dr. J.E. Arends, Dr. M.W.M. Wassenberg, Dr. R.E. Barth. **Vrije Universiteit Amsterdam, Amsterdam:** Dr. M.A. van Agtmael\*, Dr. R.M. Perenboom, Drs. F.A.P. Claessen, Dr. M. Bomers. **Wilhelmina Kinderziekenhuis, Utrecht:** Dr. S.P.M. Geelen, Dr. T.F.W. Wolfs, Dr. L.J. Bont. **Ziekenhuis Rijnstate, Arnhem:** Dr. C. Richter\*, Dr. J.P. van der Berg, Dr. E.H. Gisolf. **Admiraal De Ruyter Ziekenhuis, Vlissingen:** Drs. M. van den Berge\*, Drs. A. Stegeman. **Medisch Centrum Leeuwarden, Leeuwarden:** , Dr. M.G.A. van Vonderen\*, Drs. D.P.F. van Houte. **Rode Kruis Bloedbank & Sint Elisabeth Hospitaal, Willemstad - Curaçao:** Prof Dr A. Duits, Dr. C. Winkel, Drs. F. Muskiet, Drs. A. Durand, Drs. R. Voigt.

# Acknowledgements

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- SHM, Amsterdam:
  - Ard van Sighem
  - Luuk Gras
  - Colette Smit
  - Daniela Bezemer
  - Rebecca Holman
  - Sima Zaheri
  - Louise Dolging
- GGD Amsterdam:
  - Ineke Stolte
  - Maria Prins
- Curaçao:
  - Ashley Duits
  - Gonneke Hermanides
- Imperial College, London:
  - Geoff Garnett
  - Christophe Fraser

