

Les rencontres de Biarritz ATHS 12

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**The role and function of
heroin-assisted treatment at the
system level**

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Overview

- Opiate maintenance: a long tradition
- Heroin-assisted treatment (HAT): where and what
- Main concerns against HAT
- HAT in the treatment system
 - Extent in relation to other treatments
 - Impact on the treatment system
- HAT in a Public Health / Public order perspective
 - Mortality and morbidity
 - Social integration
 - Delinquency
- Economic aspects
- Conclusions



Opiate maintenance regimes in history

- **Opium:** medical prescription of smokable opium since antiquity, non-medical rationing schemes, opium-tincture in maintenance clinics
- **Morphine:** medical prescription of injectable and oral morphine 19./20. century
- **Heroin:** medical prescription of injectable diamorphine 20. century

- **References:**

Mino A (1990): Analyse scientifique de la littérature sur la remise contrôlée d'héroïne ou de morphine. Expertise sur mandat de l'OFSP
Berne

Uchtenhagen A (2011). Heroin maintenance treatment. From idea to research to practice. *Drug Alcohol Review* 30:130-137

Heroin-assisted treatment HAT

• Switzerland	since 1991	regular
• Netherlands	since 1995	regular
• Germany	since 2002	regular
• Spain (Granada)	since 2003	<i>compass.</i>
• Canada	since 2005	<i>compass.</i>
• England	since 2005	regular
• Denmark	since 2009	regular
• Belgium	2011 – 2012	RTC only



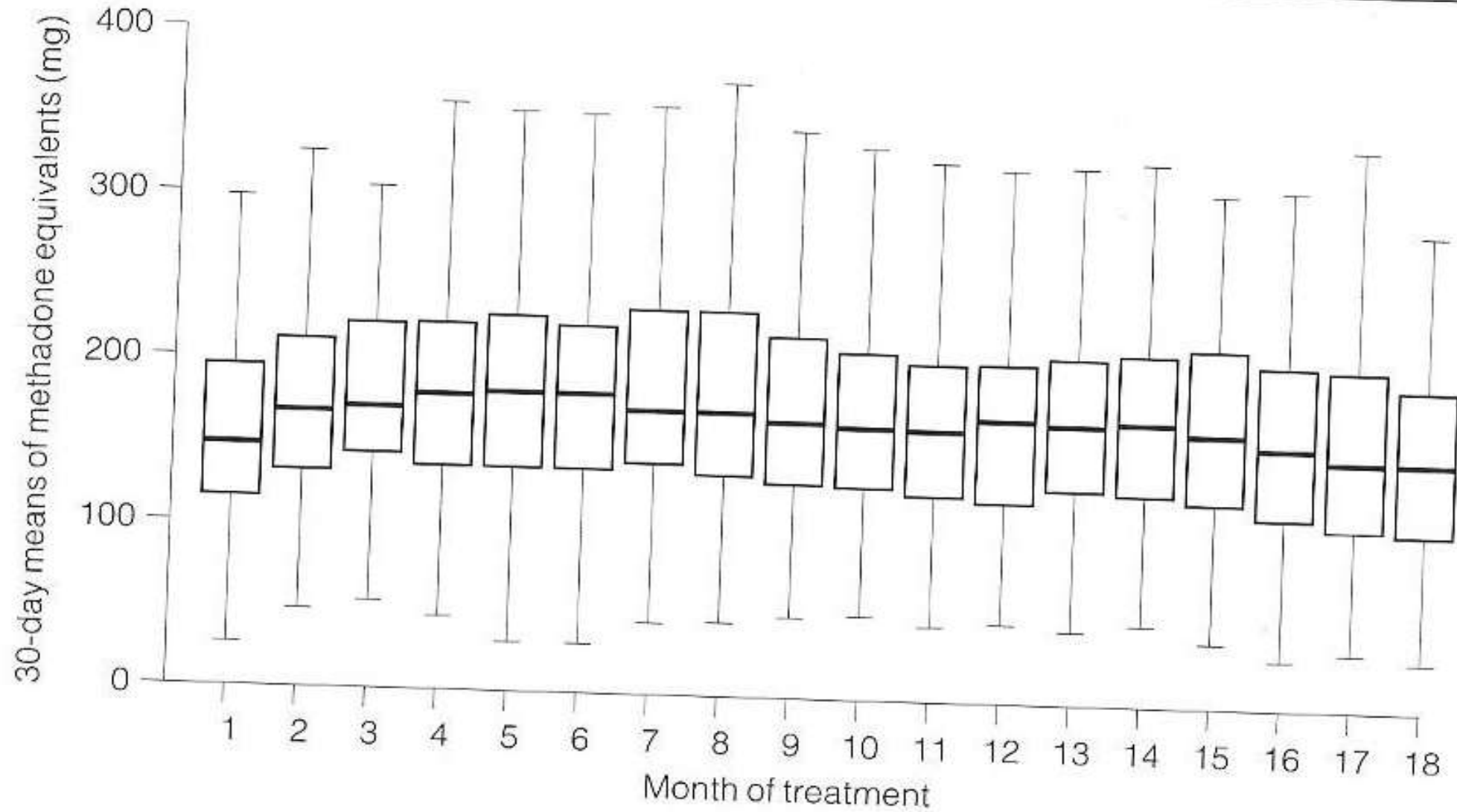
Heroin-assisted treatment: main characteristics

- **Framework:**
 - **Comprehensive assessment and care programme**
 - **Needs-based individual treatment regime**
- **Target population (entry criteria):**
 - **Failed previous other treatments**
 - **Minimal age, social and/or health deficits**
- **Supervised intake of injectables**
 - **Restricted take-home for oral preparations**

Main concerns against HAT

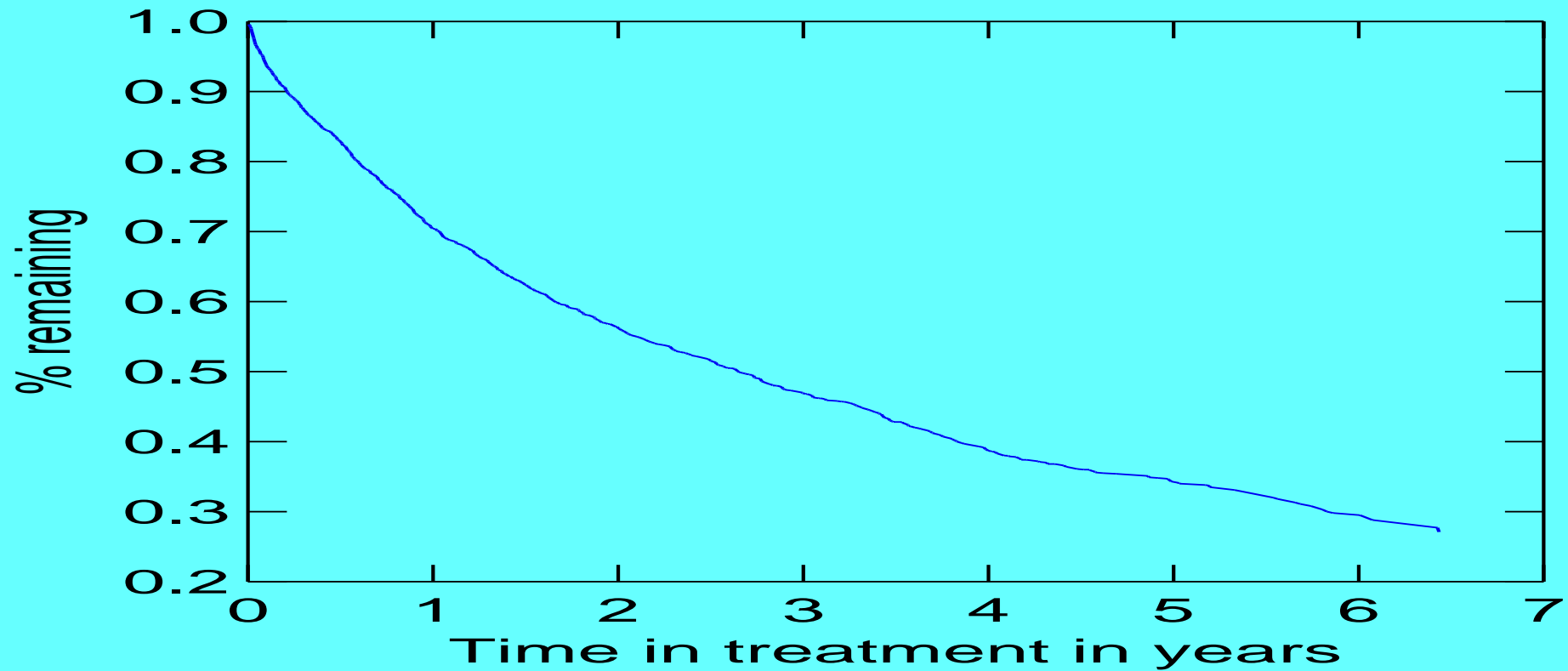
- **«Limitless hunger»: demand for increasing dosages ?**
- **«Hooked forever»: weakening the will for recovery ?**
- **Increase of heroin-related mortality and morbidity ?**
- **Deviation of prescribed heroin to the illegal market ?**
- **Lower threshold for starting heroin use, «wrong message» ?**
- **Negative impact on other treatment approaches ?**
- **Misplaced resources !**

Demand for increasing dosages ?

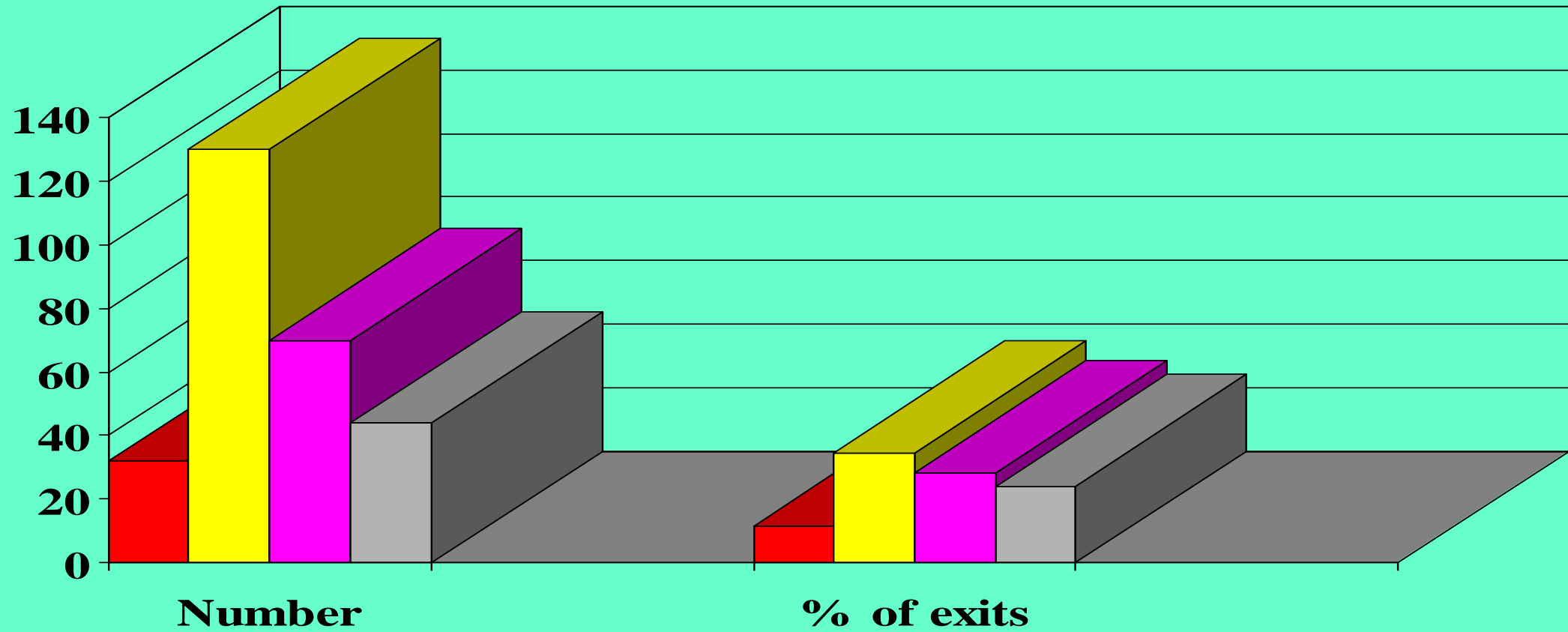


Weakening the will for recovery ?

Remainders in treatment by time



Referrals to drug-free treatment from heroin assisted treatment (as related to duration of treatment)



< 4 Mte **4-12 mths** **> 12 mths** **6 years**

Comparing selected outcomes over time across studies (significant improvements)

Domain	6 mths	9 mths	12 mths	18 mths	24 mths	4 years	6 years (patients in treatment)	6 years (ex- patients)
Health Improvements	CH	E	CH, BRD, NL	CH	BRD	NL		
Reduction in illicit heroin use	CH, BRD	E	CH, BRD, NL	CH	BRD	NL	CH	CH
Increased employment	CH		CH, BRD	CH	BRD			
Reduction in crime	CH, BRD	E	CH, BRD, NL	CH	BRD	NL	CH	CH

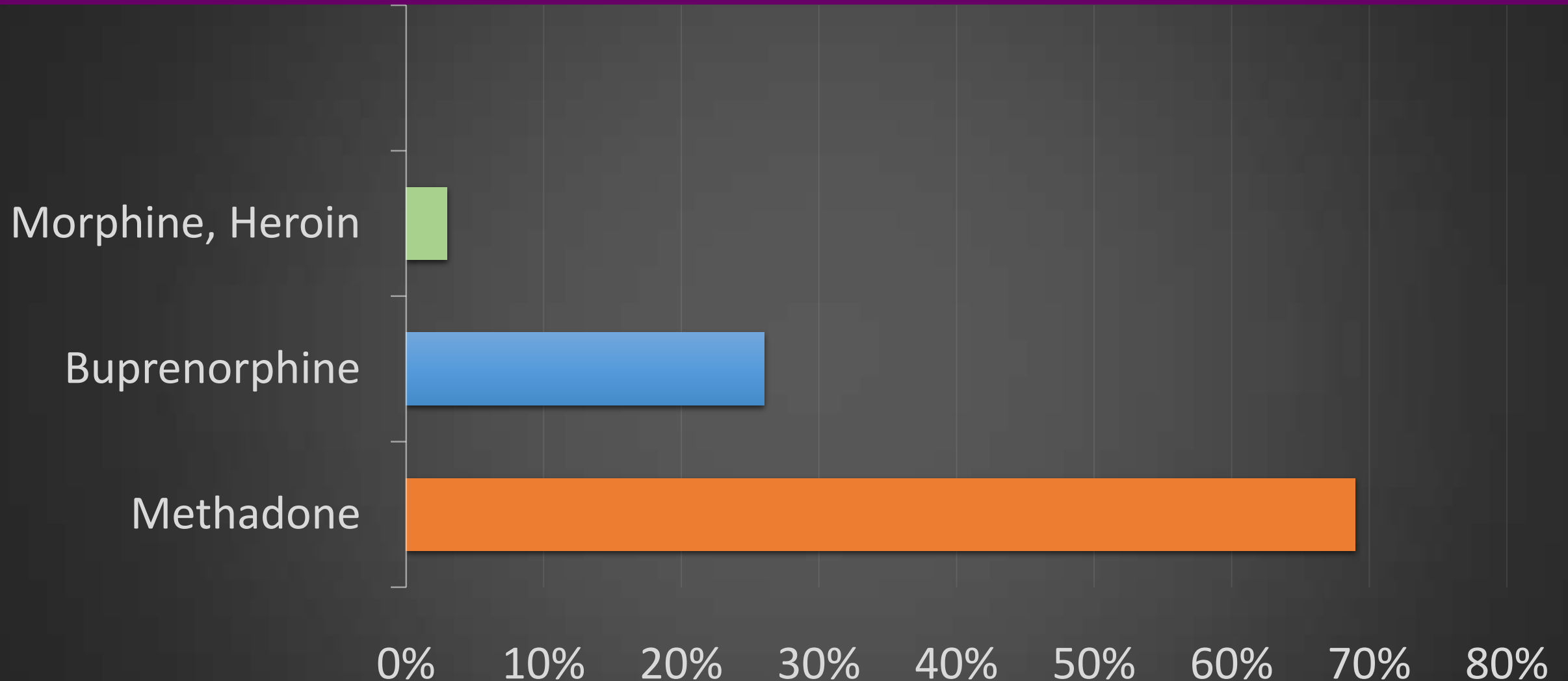
The role of HAT at the treatment system level

Total capacity of HAT

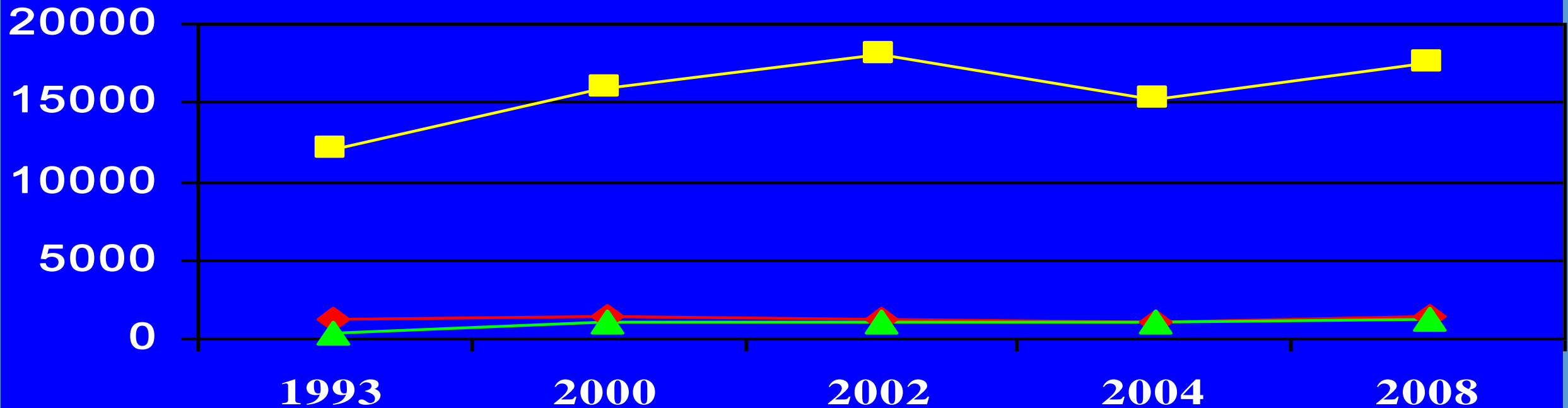
Country	Nr of HAT clinics	Total capacity	Nr patients in OST	% HAT of all OST
Switzerland	23	1'600	18'000	9.0
Netherlands	18	745	8'185 (MMT only)	(9.0)
Spain	1	56	69'111	0.001
Germany	7	300	77'300	0.7
Canada	2	140	14'700 (BC only)	0.9
England	3	100	147'640	0.007
Denmark	5	300	7'600	0.02
Belgium	(1)	?	17'482	?
Total	58	3'095	Ca. 360'018	Ca. 0.86

The place of HAT in the EU treatment system 2013

(estimated nr in OST is ca. 700'000, covering >50% of opioid users,
European Drug Report 2015)



Treatment for opiate dependence CH 1993-2008



- ◆— Drug-free residential
- MMT
- ▲— Heroin assisted treatment HAT

Impact on other treatment approaches

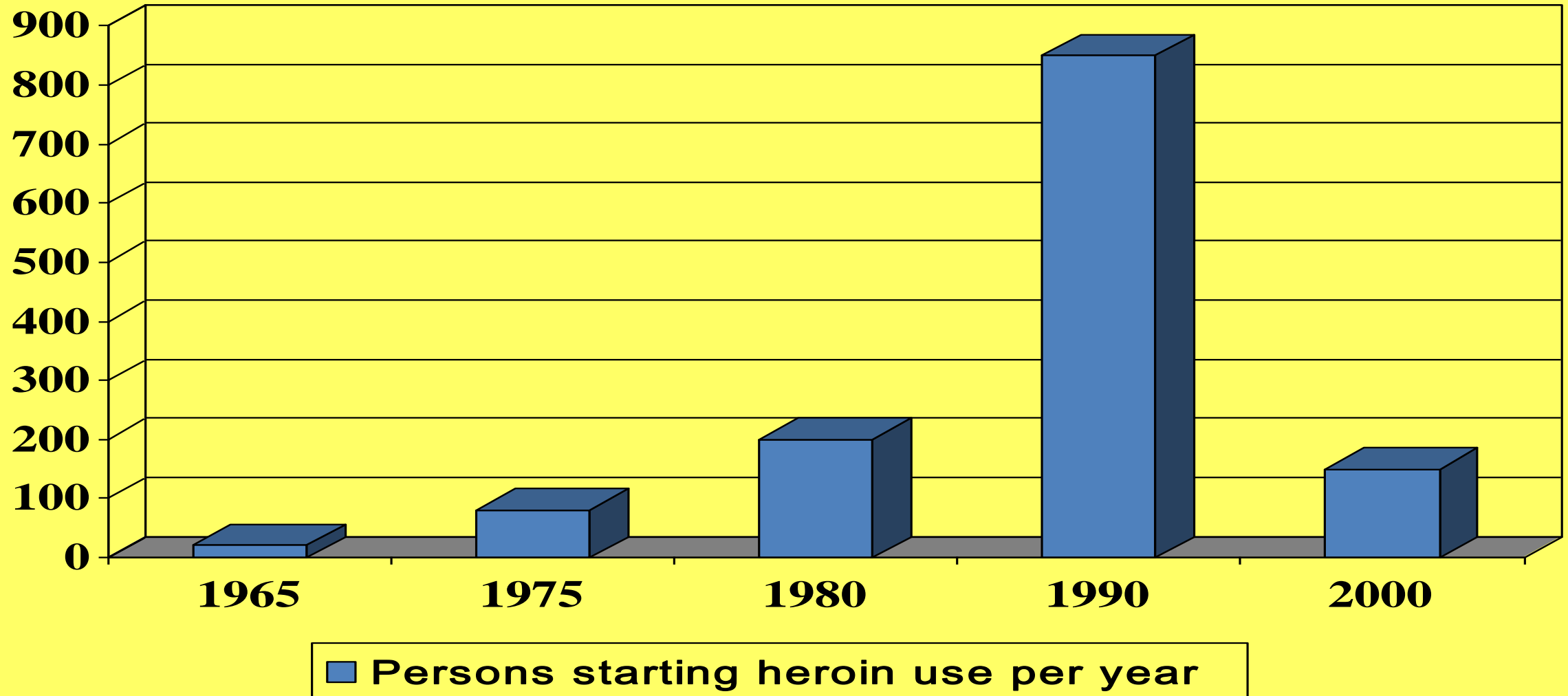
- Lessening the burden of the most chronic and problematic heroin dependent clients/patients
- Setting new quality standards for comprehensive and personalised care
- Demonstrating deficiencies in current OST programmes via improvements in the control groups receiving OST

The function of HAT for public health and public order

«Wrong message» ?:

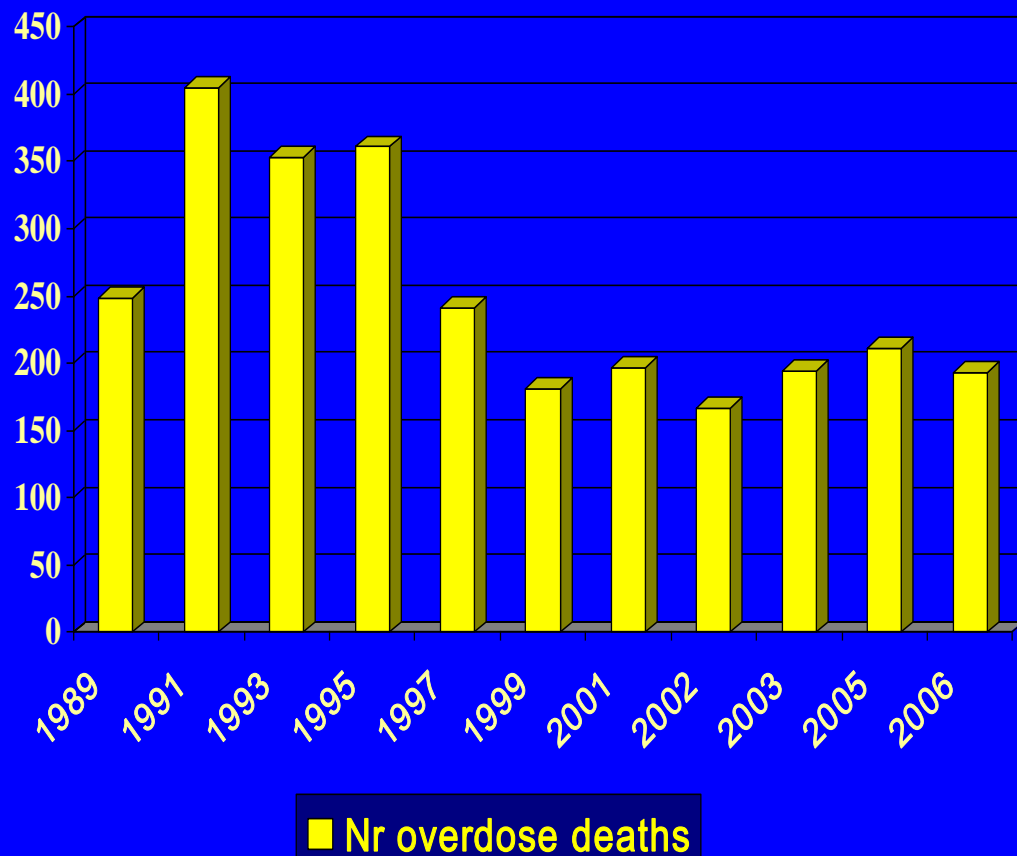
Incidence of new heroin users CH

(Nordt & Stohler, The Lancet 2006)

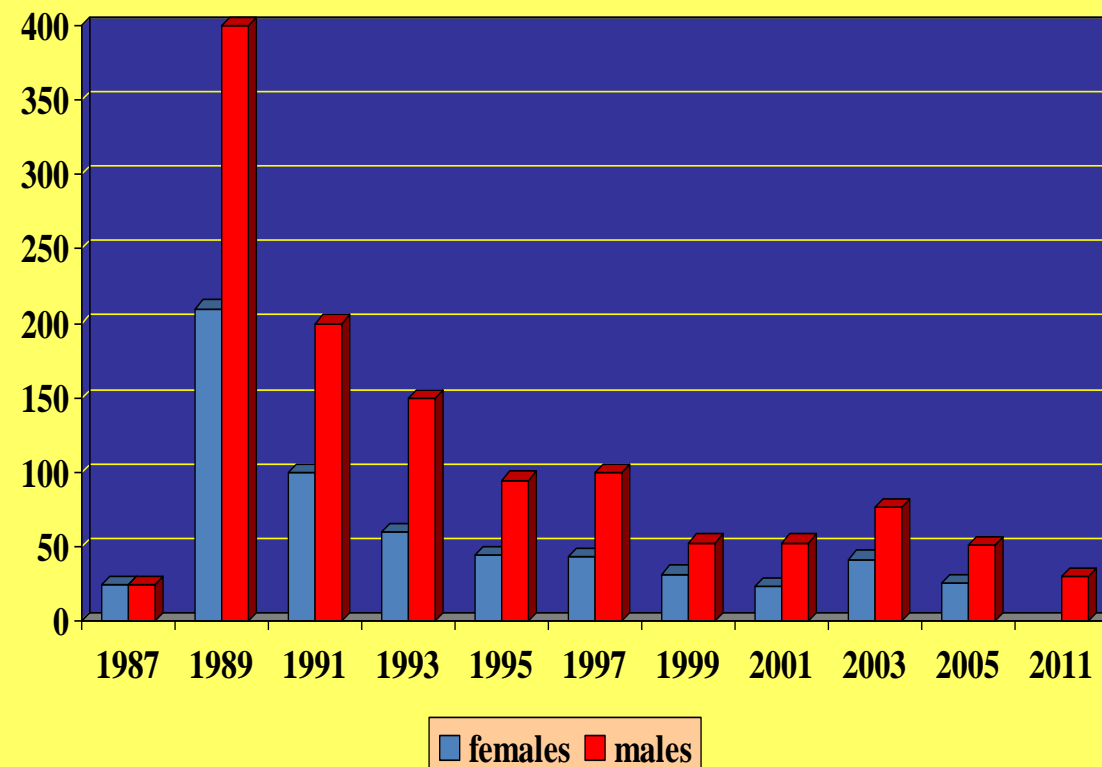


Decrease of heroin-related mortality and morbidity (CH)

Mortality (Overdose) of Drug Users (Federal Office of Police 2007)



New HIV+ cases in IVDU (Federal Office of Public Health 2006)

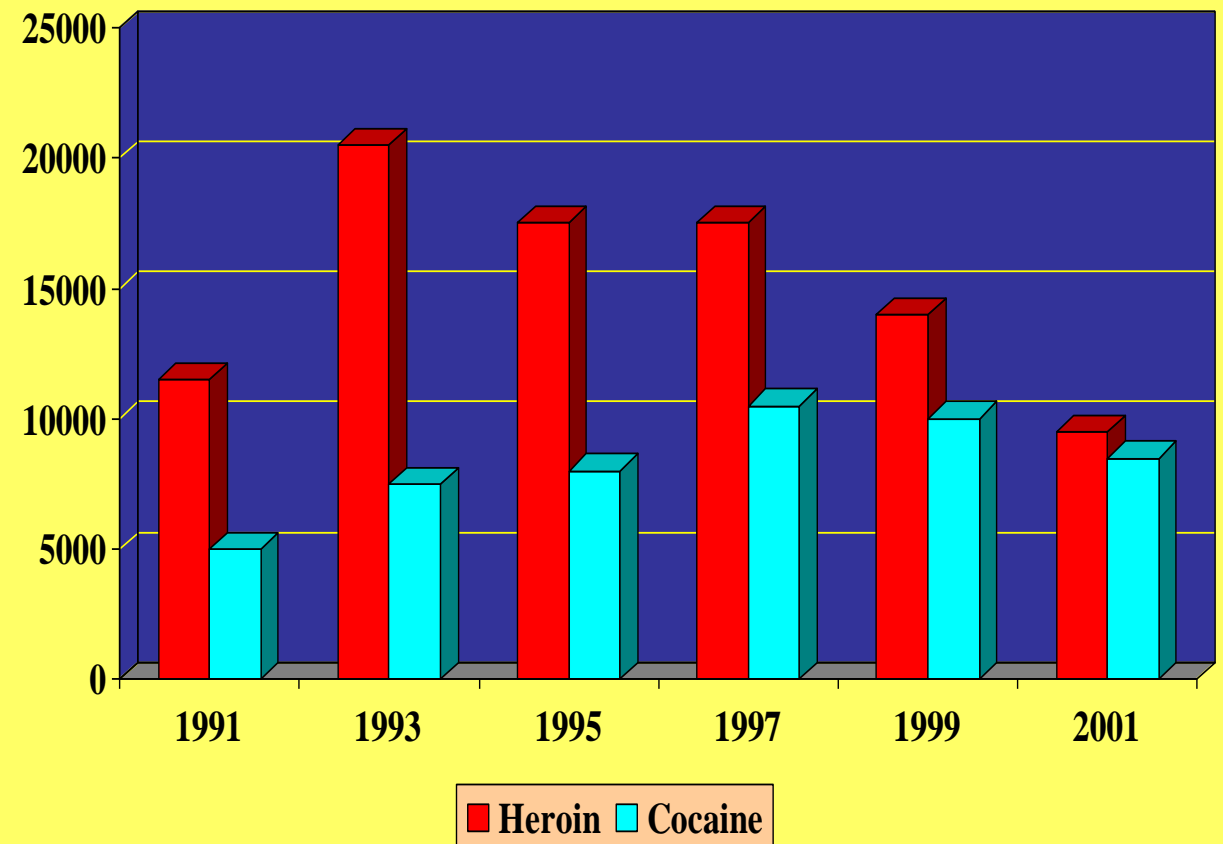


Reduced delinquency of HAT patients and reduced heroin market (CH)

Reduced delinquency during HAT (Police data, Killias et al 1999)

Observation period	Prevalence % of offenders	Incidence % of offences	significant (t test for paired samples)
6 months n=604	-43.2	-68.2	+
12 months n=336	-40.1	-68.4	+
18 months n=153	-41.2	-69.7	+
24 months n=108	-39.3	-71.1	+

Police notifications for drug use (Proportion of substances used)



Economic aspects

Costs of HAT as a routine treatment : CH 2004/06

- **Effective costs 2004**
 - Per patient day CHF 57.-, per patient year 20'840.-
 - Total costs 28.3 Mio CHF per year
- **Amount and costs of diamorphine**
 - 246 kg Diamorphine (39% Tablets) per year (basis 2004)
 - Average daily dose per patient 533 mg
 - Price SFr 15.50 (€ 10.50) per gram
- **Contributions from FOPH**
(Monitor, Databank, Handbook, Coordination, Education etc.)

Cost-benefit analysis of heroin assisted treatment (CH 1996)

(Frei et al 2000)

Costs (SFr) per patient/day

- Direct costs 9.39
- Staff 35.37
- other 5.87

Total 50.63

Benefits (SFr) per patient/day

- housing, work 6.31
- Health 17.11
- Delinquency 72.08

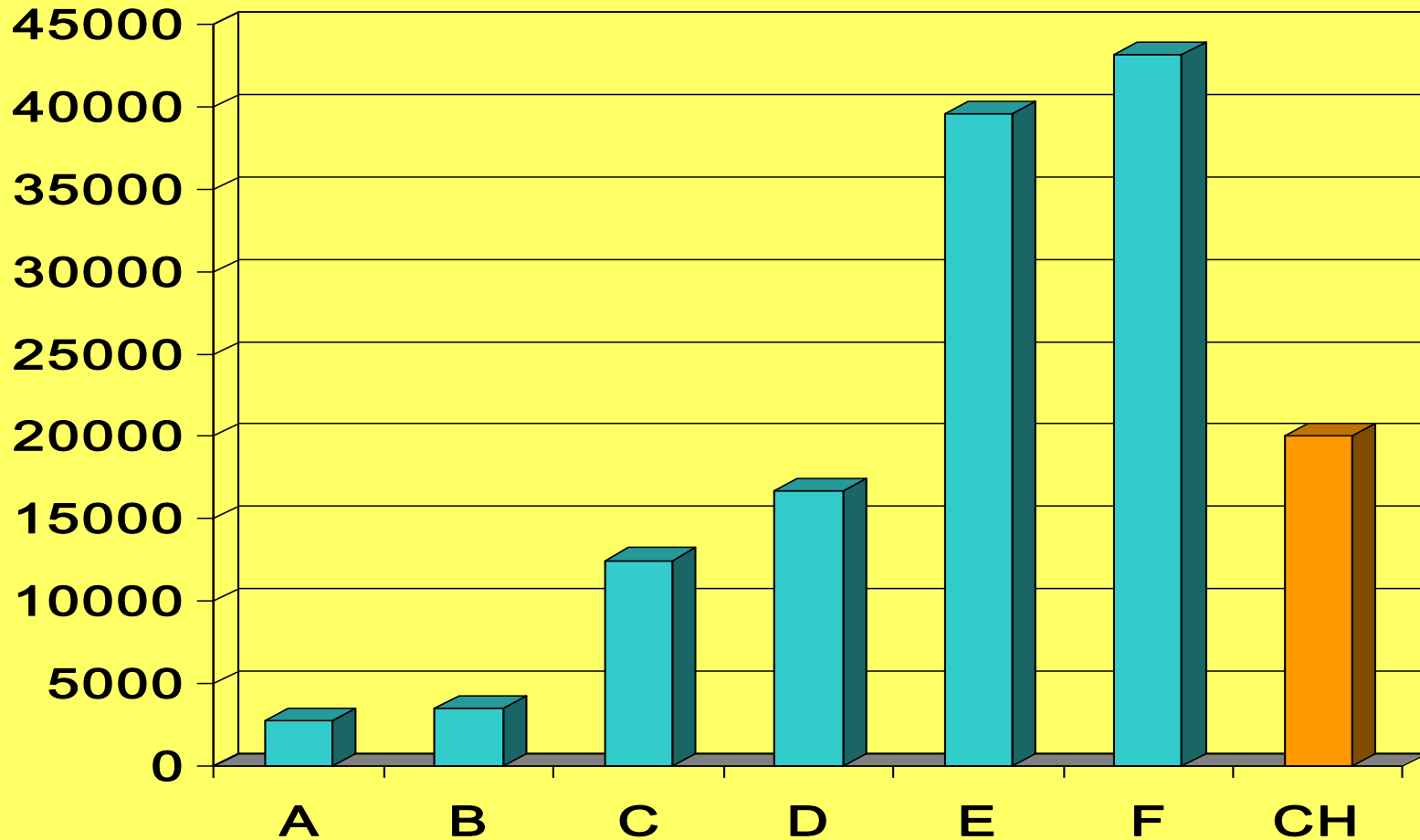
Total 95.50



Costs / benefits of HAT: an international comparison

Country	Costs HAT pat/year	Costs MMT pat/year	Benefits HAT	Benefits MMT	Curr.
NL	17'634	14'012	12'793 lower total costs	-	€
BRD	18'060	6'147	5'966	2'069	€
UK	17'990	i.v. 9'348 p.o. 5'138	-	i.v. - 4'930 p.o. + 4'790	£
CH	18'328	-	34'571	-	CHF

Costs of drug abuse treatment , imprisonment and non-treatment per person per year in \$ (Institute of Medicine 1996) in estimated comparison to HAT



- A Outpatient treatment
- B Methadone maintenance
- C Residential treatment
- D Probation
- E Prison
- F Untreated addiction
- CH Heroin maintenance

Main conclusions

- **The implementation of the present model of HAT is feasible and safe**
- **All RCT's document superior results for HAT in comparison to controls**
- **The concerns about HAT are in striking contrast with positive outcomes, for participant patients as well as on the system level**
- **Although small in numbers, HAT is contributing remarkably to reduce heroin-related problems for Public Health and Public Order**
- **The higher costs are compensated by higher overall benefits**

Thank you !