



# 2016 International Conference on Addiction Treatment in Taiwan

## From Past to Future In Medication Assisted Treatment in Asia: Challenges, Treatment Policy, and Suggestions

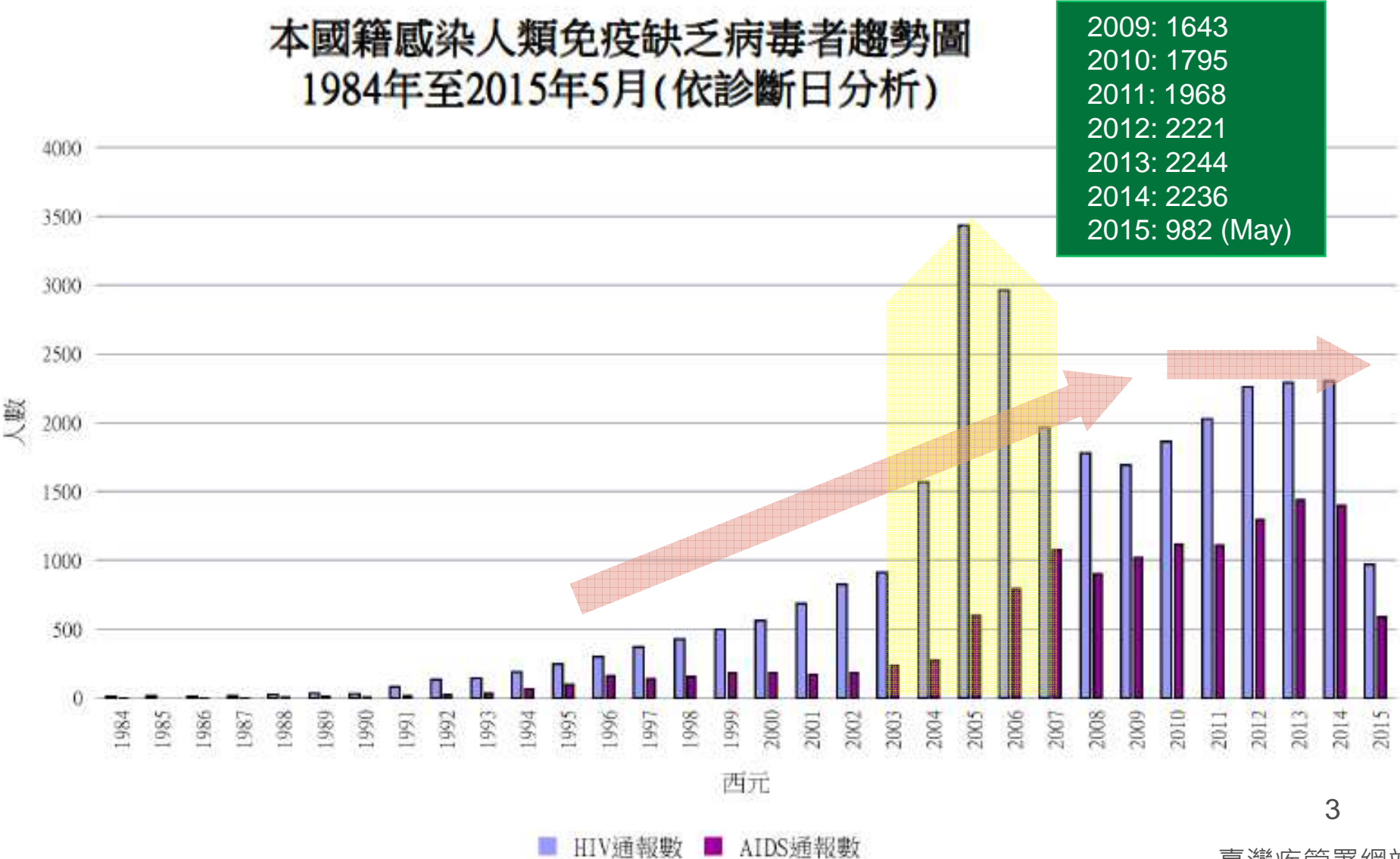
Lian-Yu Chen, M.D., PhD  
Department of Addiction, Taipei City Psychiatric Hospital  
Assistant Professor,  
Department of Psychiatry, National Cheng Kung University  
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# Disclosures

- I have no conflict of interests to declare.

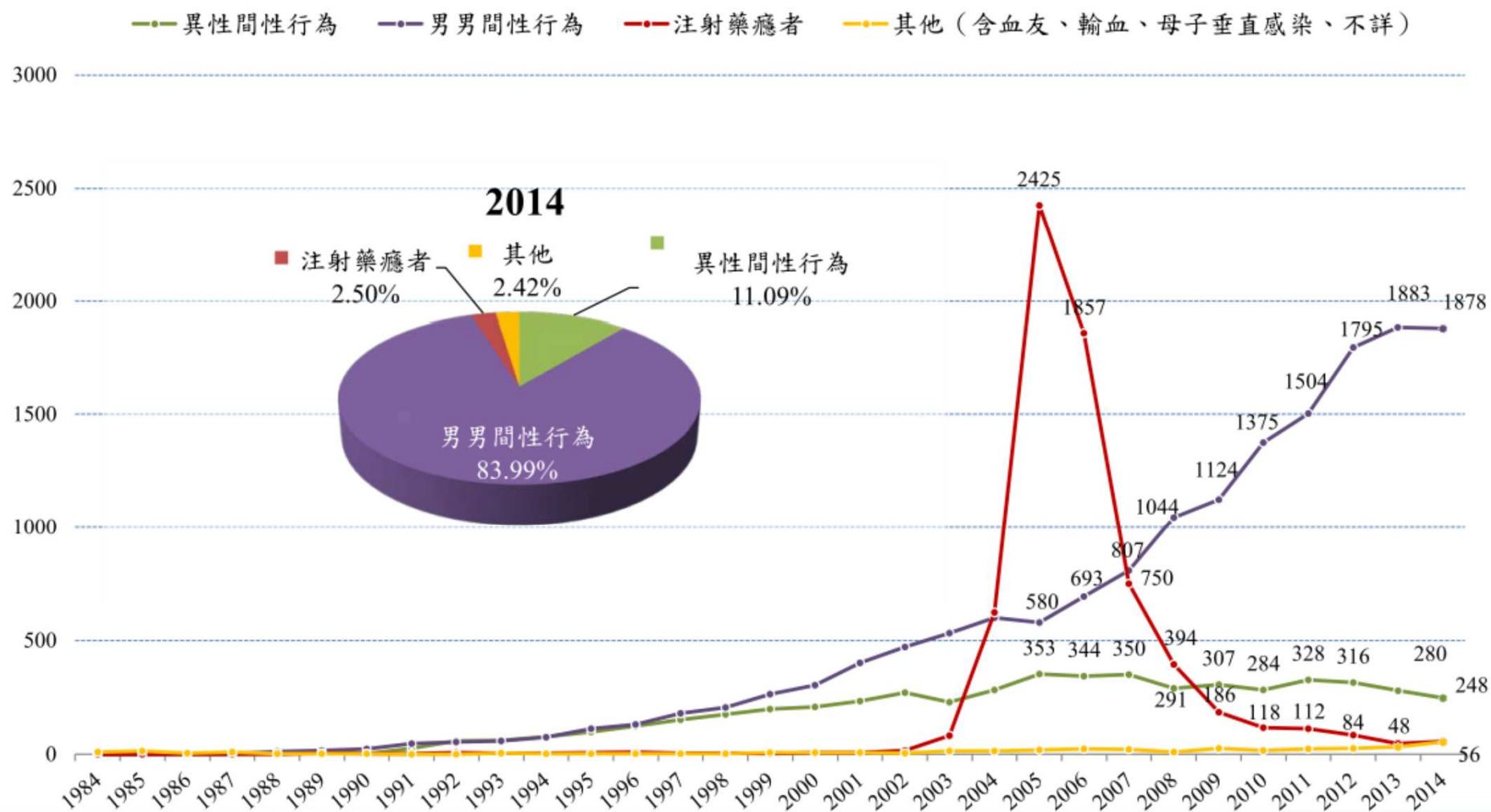
# Trends of HIV Infections

本國籍感染人類免疫缺乏病毒者趨勢圖  
1984年至2015年5月(依診斷日分析)

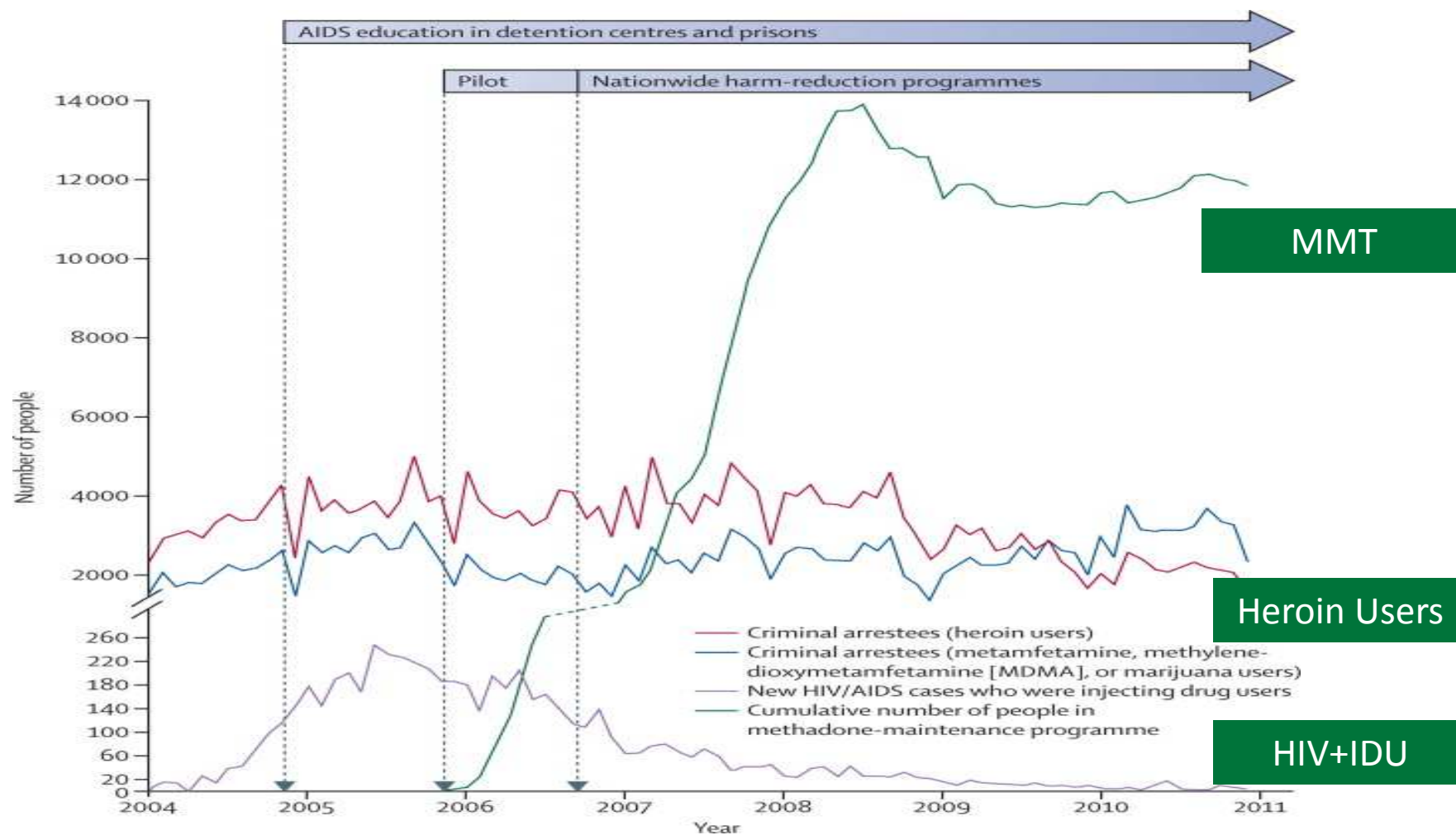


# Risk Factors of HIV Infection

(1984-2014)



# Effects of Harm Reduction Program



# Methadone Maintenance Treatment



# Factors Associated With MMT Treatment Duration

Variable	Mean(S.D.)	HR
Retention duration (days)	344.65(203.68)	
Age	36.65(8.34)	1.010
Age at first heroin use	27.25(7.07)	0.993
House-to-clinic distance (km)	5.63(5.01)	1.083**
Methadone dose after 30 days (mg)	61.27(26.31)	0.989**
	N (%)	
Incarcerated during study period		
No	90(70.3)	0.438**
Yes	38(29.7)	Referent
Gender		
Male	113(88.3)	0.445*
Female	15(11.7)	Referent
Education		
Less than 9 years	34(26.6)	1.049
At least 9 years	94(73.4)	Referent
Employed		
Yes	85(66.4)	0.76
No	43(33.6)	Referent
Marital status		
Single	69(53.9)	1.285
Divorced/Widowed	25(19.5)	1.794
Married	34(26.6)	Referent
HIV serostatus		
Positive	12(9.4)	0.554
Negative	116(90.6)	Referent
HCV serostatus		
Positive	115(89.8)	3.914*
Negative	13(10.2)	Referent

# Clinical Characteristics by HIV Status

		HIV-positive	HI- negative	Total
		n = 71 (12%)	n = 505 (88%)	
Age	(years, mean ± SD)	39.3 ± 7.8	40.8 ± 9.4	40.6 ± 9.3
Age at first heroin use	(years, mean ± SD)	25.9 ± 6.2	27.4 ± 7.5	27.2 ± 7.4
Gender	Male Female	67 (90%) 7 (10%)	438 (87%) 64 (13%)	503 (87%) 73 (13%)
Source of treatment fee	Self-paid	0 (0%)	330 (65.3%)	330 (57.3%)**
	Government sponsor	71 (100%)	175 (35.4%)	246 (42.7%)
Education	Less than 9 years At least 9 years	22 (31%) 49 (69%)	142 (28%) 363 (72%)	164 (29%) 412 (71%)
Employed (n = 549) <sup>a</sup>	No	30 (44%)	157 (33%)	187 (34%)
	Yes	38 (56%)	324 (67%)	362 (66%)
HCV (n = 552) <sup>a</sup>	Negative	0 (0%)	38 (8%)	38 (7%)**
	Positive	66 (100%)	442 (92%)	514 (93%)
Morphine at intake (n = 545) <sup>a</sup>	Negative	31 (45%)	145 (31%)	176 (32%)*
	Positive	38 (55%)	331 (69%)	369 (68%)
Morphine at interview (n = 506) <sup>a</sup>	Negative	48 (76%)	294 (66%)	342 (68%)
	Positive	15 (24%)	149 (34%)	164 (32%)
Average methadone dose at intake	(mg, mean ± SD)	37.5 ± 20.4	38.7 ± 20.3	38.5 ± 20.3
Average methadone dose at interview	(mg, mean ± SD)	60.4 ± 35.0	48.2 ± 30.9	49.8 ± 31.7**
Time from intake to interview	(days, mean ± SD)	218 ± 164	179 ± 146	184 ± 149*

\*p < 0.05.

\*\*p < 0.01.



# Improvement of Quality of Life in MMT Patients

**Table 3 Quality-of-life (QoL) scores and cost per QoL point in the four domains at the 6-month assessment (*n* = 285)**

	Baseline score <i>M (SD)</i>	6-month score <i>M (SD)</i>	QoL gained	Cost per QoL point
Physical	58.53(15.51)	60.13(14.68)	1.6	368.7
Psychological	49.89(16.64)	53.19(17.15)	3.3 <sup>***</sup>	178.7
Social Relations	54.71(18.13)	55.77(17.05)	1.06	556.5
Environmental	52.92(16.97)	55.42(16.20)	2.5 <sup>***</sup>	235.9

# Predictors of Post-release Utilization of MMT

- 295 (93.7%) incarcerated IV heroin users, 24-month follow-up
- Only 50.8% received MMT post-release.
- HIV and previous MMT predicted post-release receipt of MMT.

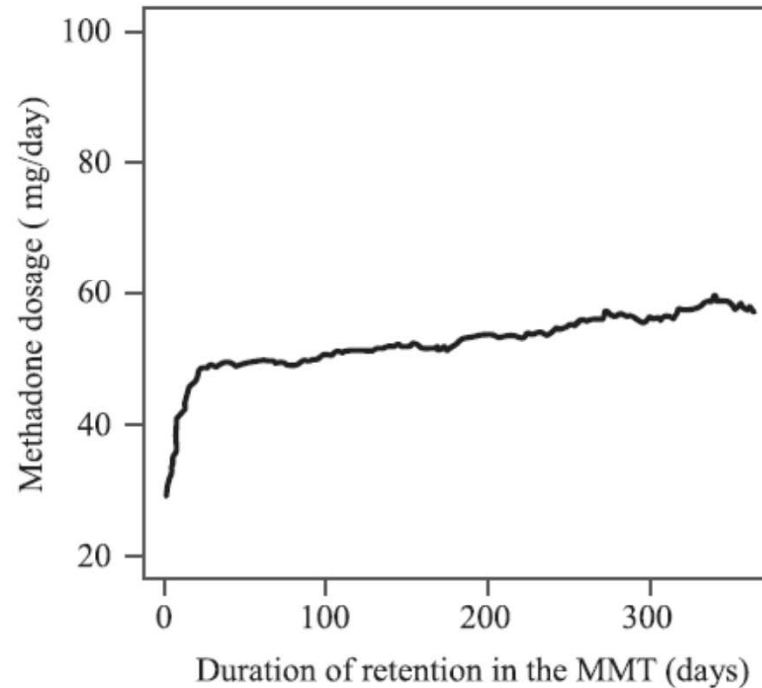
Strategies including  
providing MMT prior to release  
should be considered.

# Health Insurance Coverage Among Infants of Mothers in MMT



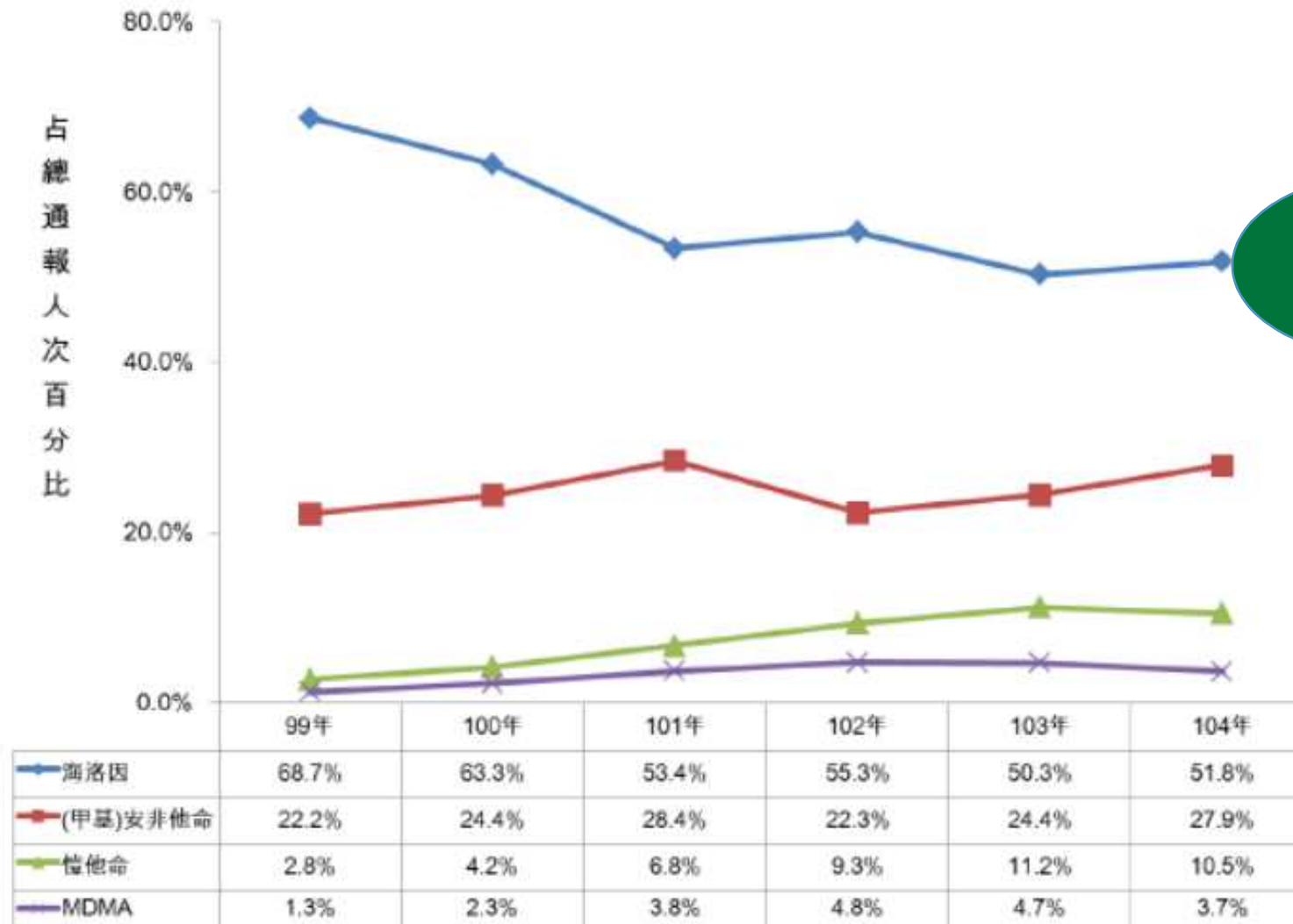
- 1056 neonates born to women in the MMT program
  - 857 born before mother's enrollment [BM]
  - 199 born after mother's enrollment [AM]
- Infants born to mothers on MMT were more likely to have no or incomplete insurance coverage.
  - BM: aOR = 1.29 (1.10–1.53)
  - AM: aOR = 1.56 (1.14–2.13)
- The BM infants had fewer preventive care visits  
aRR = 0.85 (0.80–0.90)
- AM infants utilized more outpatient and emergency room services.
  - Outpatient: aRR = 1.11(1.01–1.23)
  - Emergency: aRR = 1.46( 1.11–1.90)

# Lower Average Dosage?



**Figure 3.** The average daily dosage of methadone in the duration of the methadone maintenance treatment. The average daily dosage of methadone was  $49.97 \pm 25.8$  mg in the whole cohort. The average daily dosage was gradually increased with methadone duration.

# Trends of Illicit Drug Use



Steady

# Reflections on MMT in Taiwan

- Is MMT in the prison an option ?
- How do we offer a more integrated care considering high HCV prevalence in heroin-dependent patients?
- Why do we have lower average dosage of methadone ?
- How to provide continuous health care and social services for both mothers and the babies?
- What is the next step to lower number of heroin users in Taiwan?

Thank you very much!



Email: [lianyu0928@gmail.com](mailto:lianyu0928@gmail.com)