

現況

Prevalence of anti-HCV in Taiwan

Populations	Prevalence
General population	2 - 4%
Volunteer blood donors	1 - 2%
With elevated ALT	10%
Chronic liver disease	
HBsAg(+)	10.6%
HBsAg(-)	76 - 88%
Spouse	15 - 20%
Hemodialysis	20 - 40%
Hemophiliacs	90%
IV drug users	67 - 81%
Prostitutes	10 - 18%
Childhood liver disease	9.7%
“Hepatitis C village”	30 - 60%

Updated from Chen DS et al. J Infect Dis 1990;162:817.



Prevalence:

A Survey of Anti-HCV from a National Nutrition Survey Subjects in Taiwan

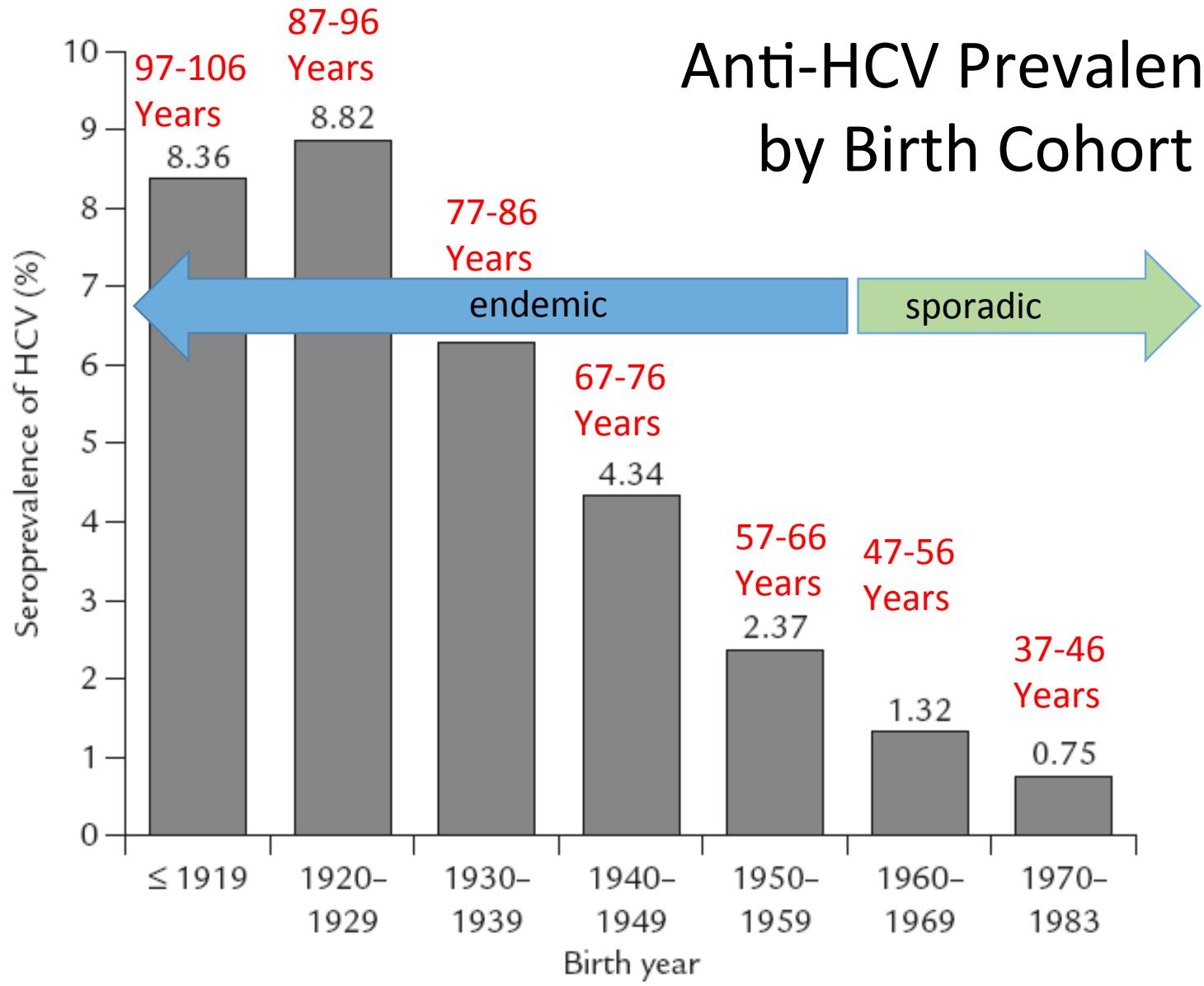
- Bureau of Health Promotion, Taiwan
- Subjects: ≥ 15 y/o, 6588 cases, Feb. 2002
 - Randomly selected from 88 townships

	Case no.	Anti-HCV Positive rate
Male	3159	3.39
Female	3429	4.32
Overall	6588	3.87

Hsu LC. et al, data from Bureau of Health Promotion 2003

About 700000 sero-positive cases

Anti-HCV Prevalence by Birth Cohort

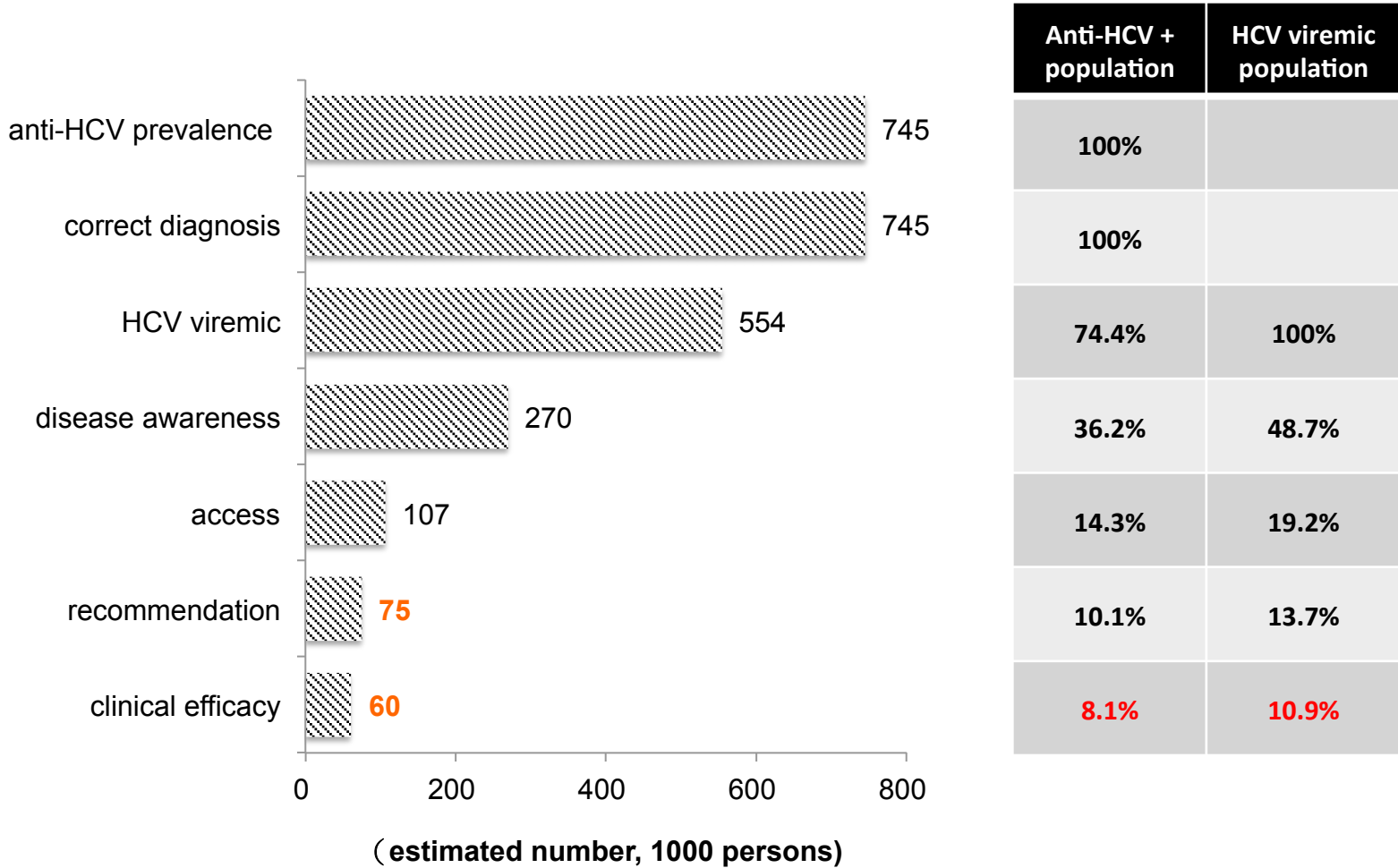


Why we need to revise TAsL HCV Guideline?

A Huge Gap between clinical efficacy and community effectiveness for HCV naïve patients in Taiwan (2012)

Screening!

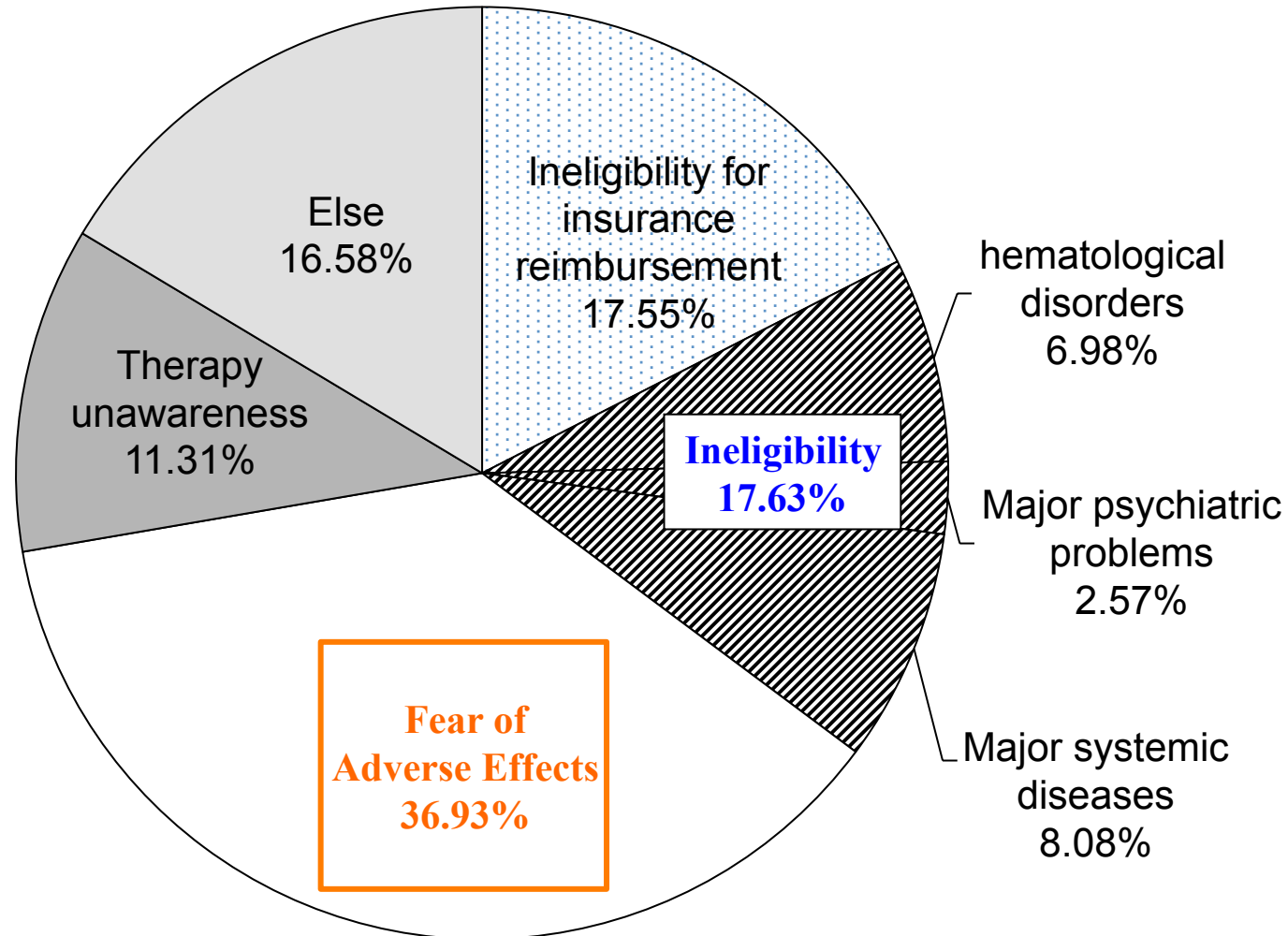
就醫可近性不夠!



* References: (34) Yang JF, 2011; (35) Huang JF, 2007; (14) Yu ML, 2007; and (15) Yu ML, 2008

Causes for not Being Treated with Antiviral Therapy for HCV in Clinics

45.2% of 3,043 patients from 89 Gastroenterologists/Hepatologists



現況：BMS & AbbVie

給付條件	推估人數	三年內人數	Genotype 1
先前接受干擾素+ribavirin 治療失敗者	22500	22500	13500
不適合接受干擾素 +ribavirin治療者	28000	11200	6720
器官移植術後	11000	500	300
失代償性肝硬化	2000	1000	600
肝纖維化F3(含)以上	39750	15900	9540
C型肝炎合併HIV感染者	7900	3160	1896
共計	111150	54260	32556

給付條件	推估人數	三年內人數	Genotype 1	策略
先前接受干擾素+ribavirin 治療失敗者+肝纖維化 F3(含)以上	11250	11250	6750	第一年 第一階段
先前接受干擾素+ribavirin 治療失敗者(不限肝纖維 化)	11250	11250	6750	第一年 第二階段
肝纖維化F3(含)以上	39750	15900	9540	第二年 第一階段
不適合接受干擾素 +ribavirin治療者	28000	11200	6720	第三年 第一階段
器官移植術後	11000	500	300	?
失代償性肝硬化	2000	1000	600	Compassionate use
C型肝炎合併HIV感染者	7900	3160	1896	第三年 第一階段

總計：

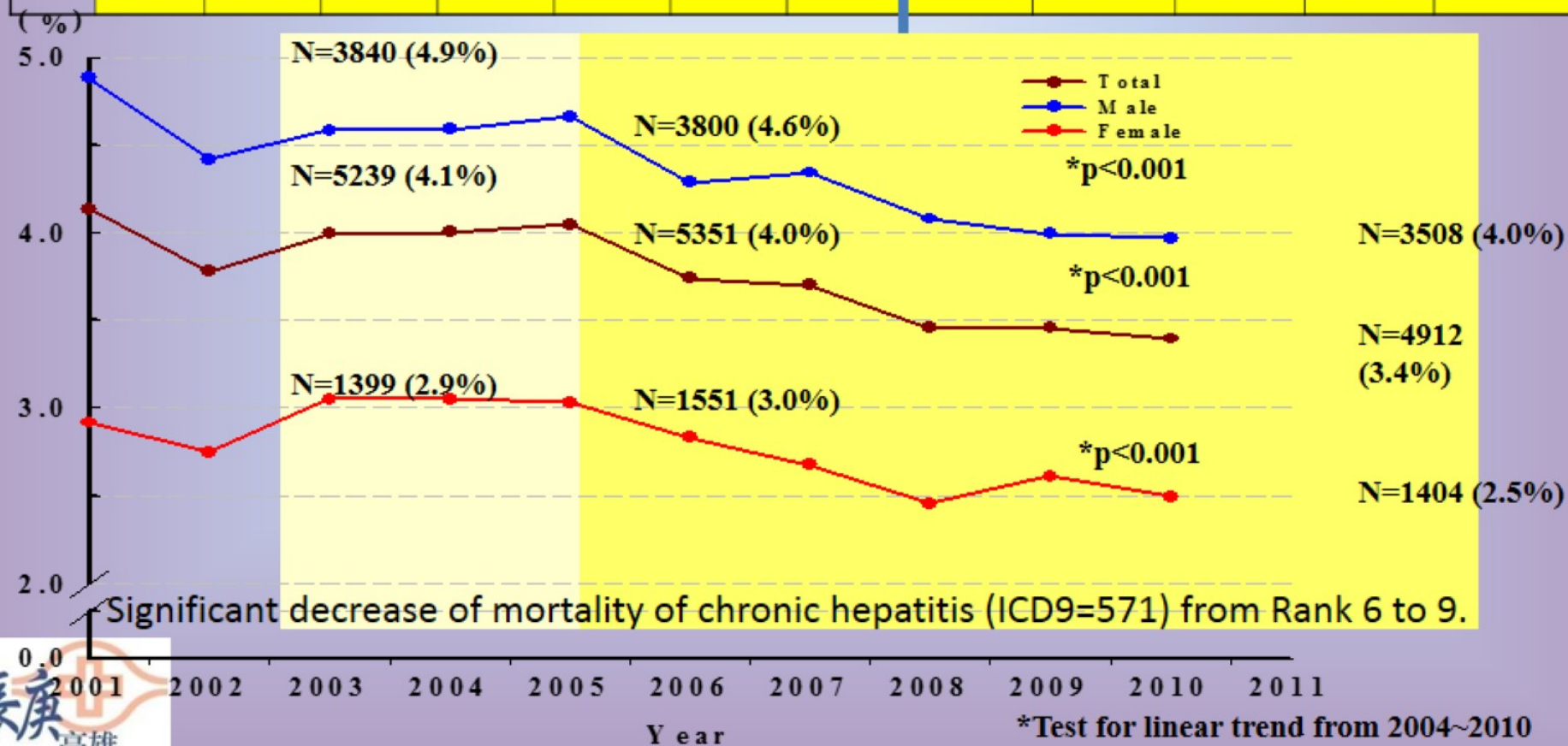
- 1.未治療人數：170,000人
- 2.已治療但失敗的人數：22,500人
- 3.推估80歲以上不願治療的人數：20,000人
- 4.合計：172,500人
- 5.健保三年後仍有118,240人未治療
- 6.更有280,000人未診斷出來

所以…….

過去

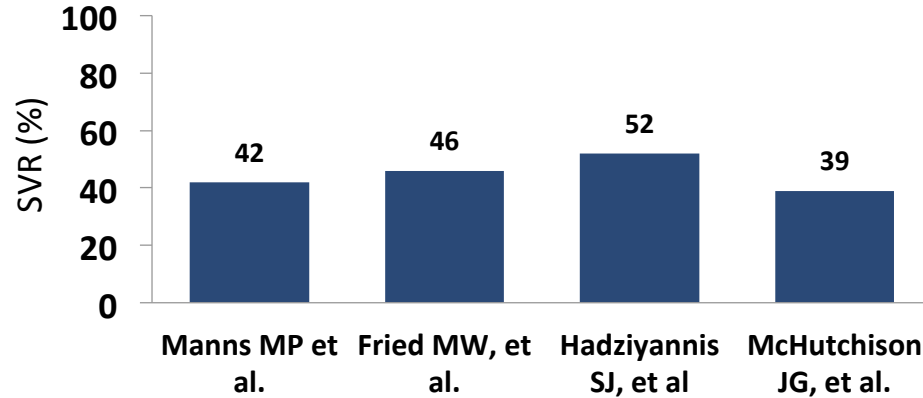
Cumulating case number of NHI reimbursement for anti-viral treatment of CHB and CHC, 2004~2014

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
N	CHB	9,073	14,786	20,990	28,193	36,347	47,850	69,281	87,911	105,407	147,917	168,499
	CHC	5,249	8,769	11,891	15,783	19,359	24,831	37,613	48,630	58,415	71,230	80,144
	Total	14,322	23,555	32,881	43,976	55,706	72,681	106,894	136,541	163,822	219,147	248,643

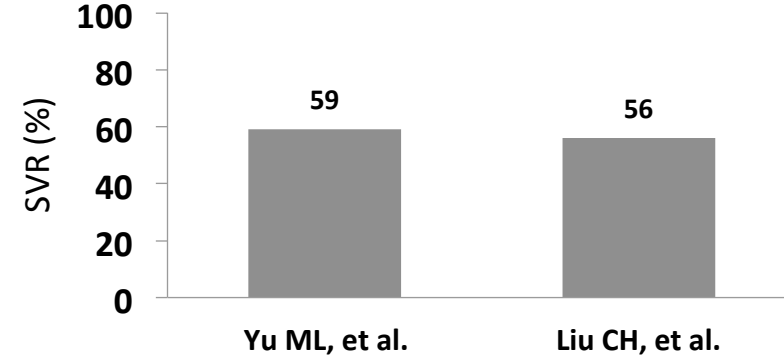


Peginterferon plus Ribavirin for Patients HCV Genotype 1 Infection: East (Taiwan) vs. West

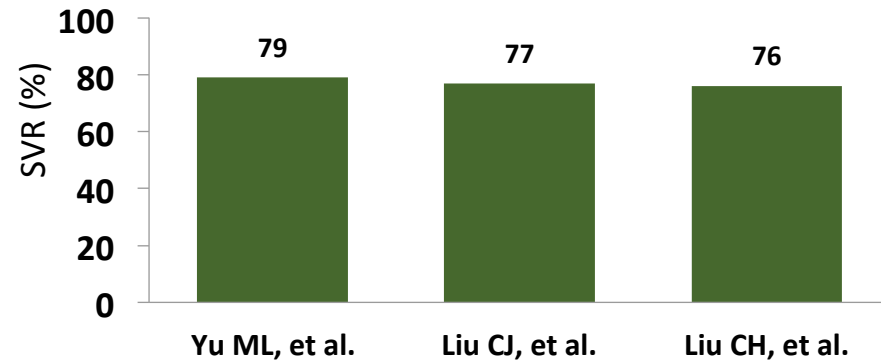
Genotype 1, 48 weeks



Genotype 1, 24 weeks



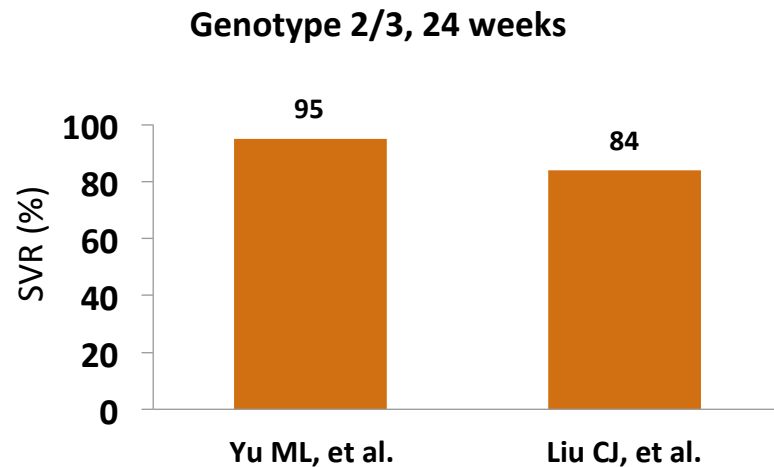
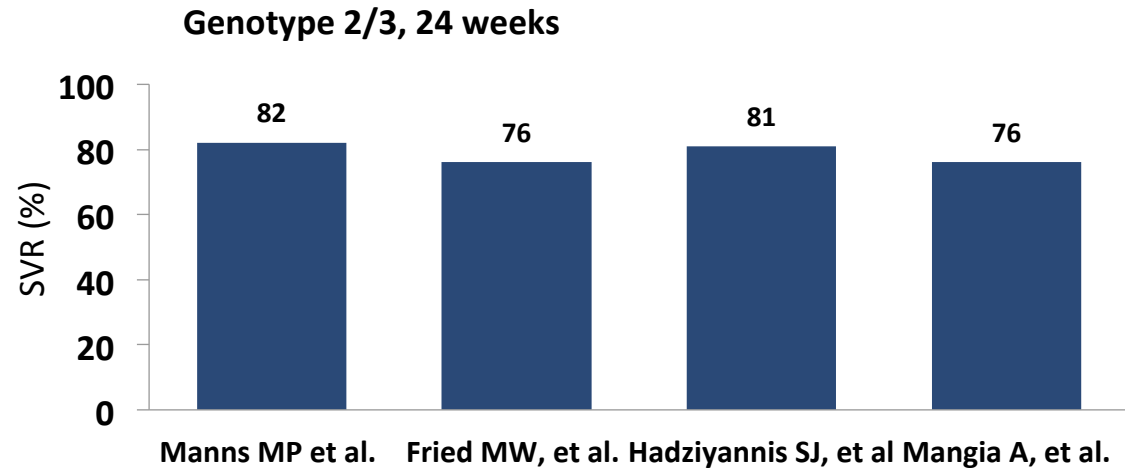
Genotype 1, 48 weeks



Manns MP et al. Lancet 2001;358:958-65
 Fried MW, et al. N Engl J Med 2002;347:975-82
 Hadziyannis SJ, et al. Ann Intern Med 2004;140:346-55
 McHutchison JG, et al. N Engl J Med 2009;361:580-93
 Yu ML, et al. Hepatology 2008;47:1884-93
 Liu CJ, et al. Gastroenterology 2009;134:104-11
 Liu CH, et al. Clin Infect Dis 2008;47:1200-9



Peginterferon plus Ribavirin for Patients HCV Genotype 2/3 Infection: East (Taiwan) vs. West



Manns MP et al. Lancet 2001;358:958-65
Fried MW, et al. N Engl J Med 2002;347:975-82
Hadziyannis SJ, et al. Ann Intern Med 2004;140:346-55
Mangia A, et al. N Engl J Med 2005;352:2609-17
Yu ML, et al. Gut 2009;58:1009-14
Liu CJ, et al. Gastroenterology 2009;138:496-504

Annual Incidence:

Updated Annual new HCV infection in Taiwan:

Confirmed anti-HCV seroconversion rate among repeated donors is 0.03% per year

Table 1: Breakdown data by age (between 2013/01/16 and 2014/07/15, 1.5 years)

Birth	N of donors	N of donations	ALT elevated (>68)		HBV infection				HCV infection			
					HBsAg+		Confirmed ¹		EIA+		Confirmed ²	
					N	/100	N	/1,000	N	/1,000	N	/10,000
First time donors												
1994-2099	96,876	96,958	1,198	1.2	287	3.0	164	1.7	185	19	52	5
1984-1993	79,314	79,379	1,681	2.1	604	7.6	468	5.9	237	30	104	13
1974-1983	19,148	19,154	518	2.7	963	50.3	771	40.3	133	69	98	51
1964-1973	12,403	12,407	266	2.1	750	60.5	642	51.8	162	131	134	108
1900-1963	12,880	12,880	226	1.8	790	61.3	658	51.1	242	188	194	151
total	220,621	220,778	3,889	1.8	3,394	15.4	2,703	12.3	959	43	582	26
Repeat donors												
1994-2099	66,231	112,159	849	1.3	67	1.0	2	0.03	48	7	2	0.3
1984-1993	321,005	612,674	7,546	2.4	319	1.0	21	0.07	273	9	43	1.3
1974-1983	289,552	625,024	9,356	3.2	394	1.4	45	0.16	300	10	106	3.7
1964-1973	213,591	535,994	5,115	2.4	433	2.0	154	0.72	215	10	92	4.3
1900-1963	202,466	549,207	3,846	1.9	369	1.8	135	0.67	227	11	81	4.0
total	1,092,845	2,435,058	26,712	2.4	1,582	1.4	357	0.33	1,063	10	324	3.0

Presumably there are at least 7000 new HCV infection a year in Taiwan.

A reduction of HCV load in Taiwan after implementing IFN-based therapy

New HCV Infections:
Ca. 10000 cases
A year



Cured:
About
7000 cases
A year

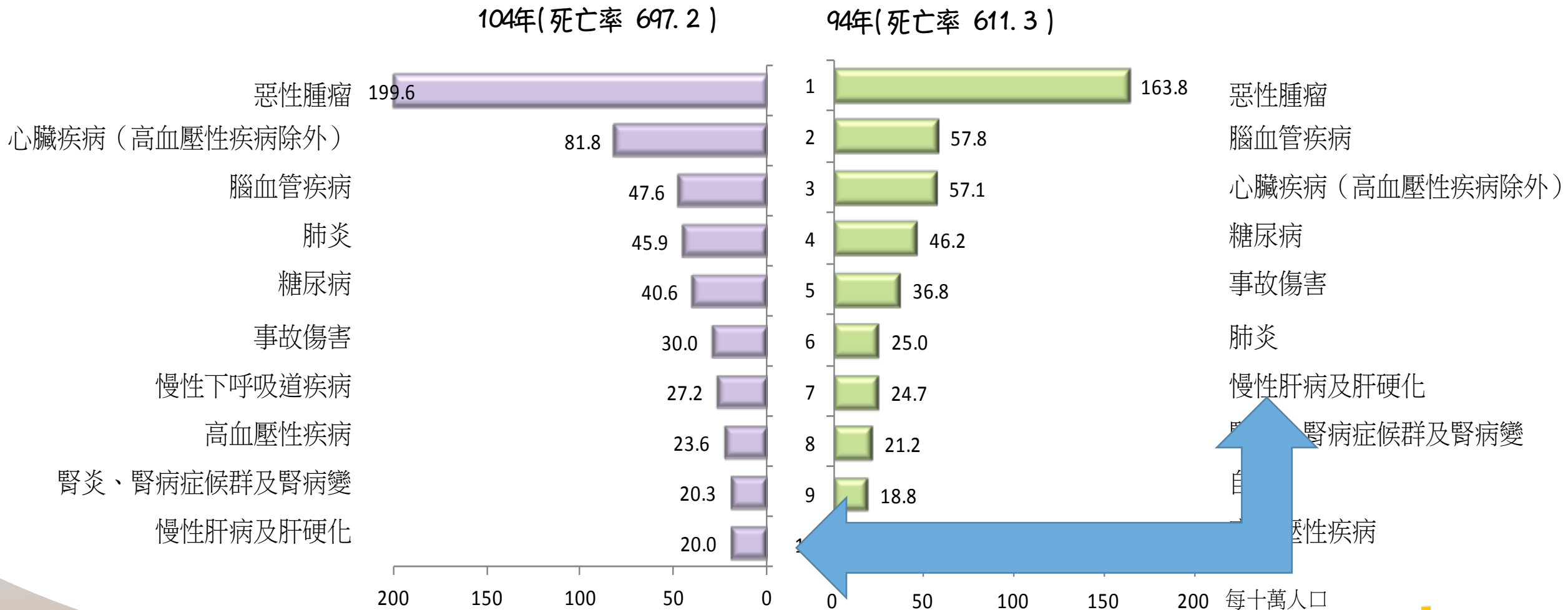
Mortality:
About 4000 cases
Died of ESLD;
And 4500 cases
Of non-liver deaths
A year

A Reduction of 5000 HCV cases
a year in Taiwan after P+R
therapy
At present time.

成效



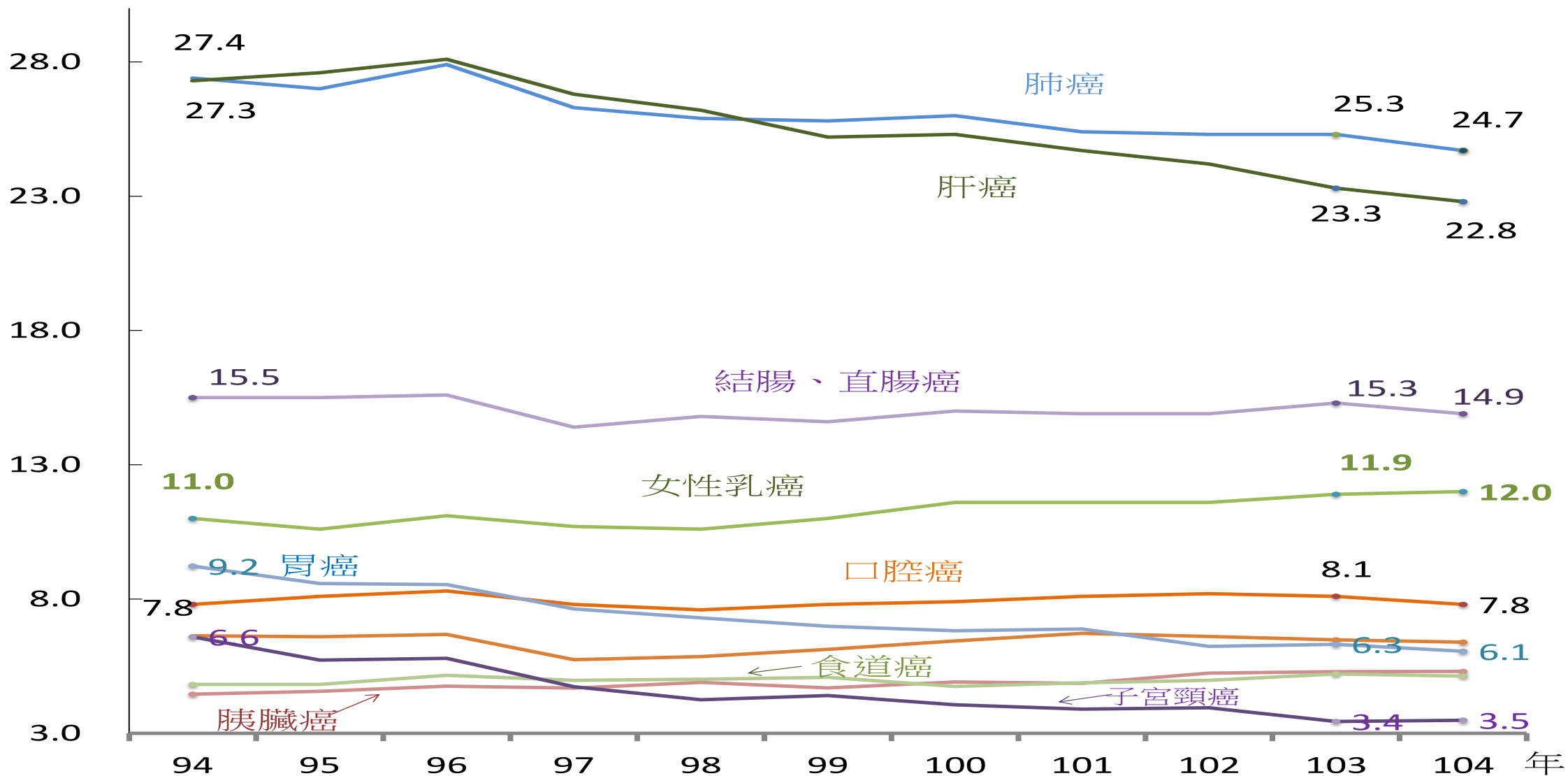
十大死因





十大癌症標準化死亡率

每十萬人口



未來

MEDIA ALERT

Embargoed until 00:01 Wednesday 2nd September 2015

New data shows relentless rise in hepatitis deaths:

World leaders meet in Scotland to discuss urgent response and move towards elimination of 7th biggest global killer

- **Governments from around the world convene to agree on a road map towards elimination of viral hepatitis**
- **Worldwide, viral hepatitis kills more than 1.4 million people a year, 4000 people a day, and more than 400 million people are chronically infected with hepatitis B or C**

- Hosted by the Scottish Government - widely recognized as having 'a world leading approach' towards the testing and treatment of hepatitis C – the three-day Summit will discuss the draft WHO Global Health Sector Strategy on Viral Hepatitis with its targets for 2030 that importantly pave the way for the elimination of viral hepatitis as a problem of public health concern and on the national action required to reach those targets. Specifically the draft Strategy aims to achieve by 2030:

- 90% reduction in new cases of chronic hepatitis B and C
- 65% reduction in hepatitis B and C deaths
- 80% of treatment eligible persons with chronic hepatitis B and C infections treated



**World Health
Organization**

SIXTY-NINTH WORLD HEALTH ASSEMBLY
Provisional agenda item 15.1

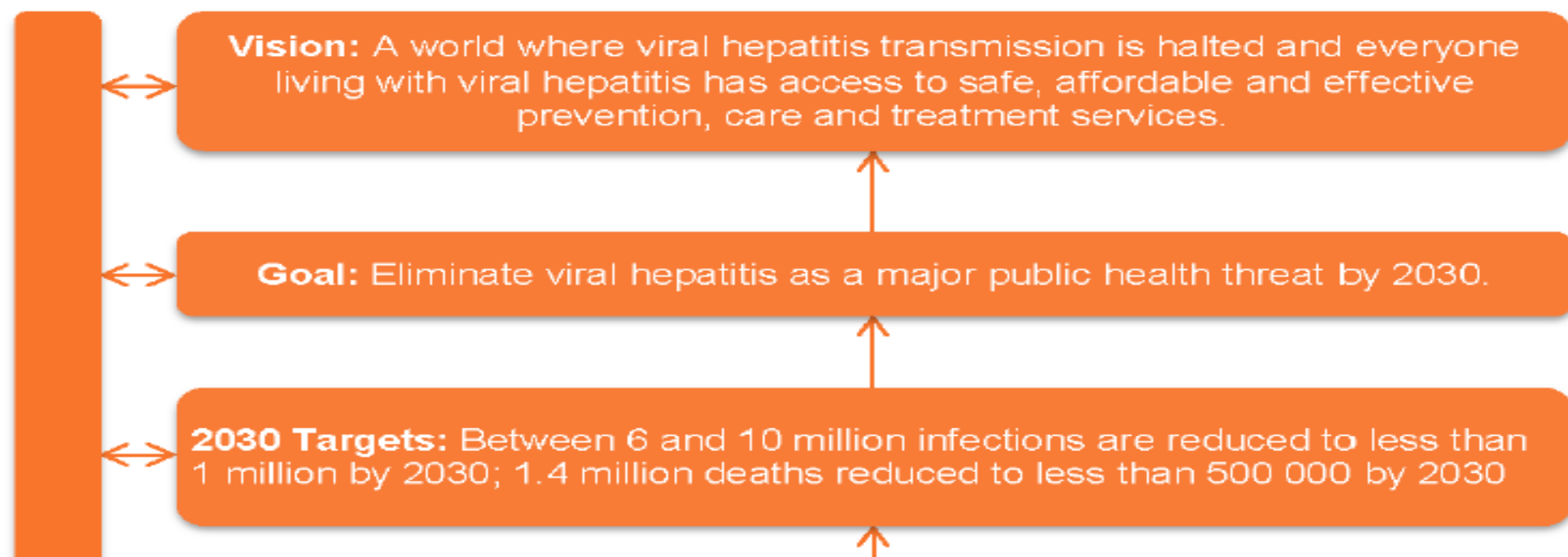
A69/32
22 April 2016

Draft global health sector strategies

Viral hepatitis, 2016–2021

Report by the Secretariat

Figure 1. Framework for the global health sector strategy on viral hepatitis, 2016-2021

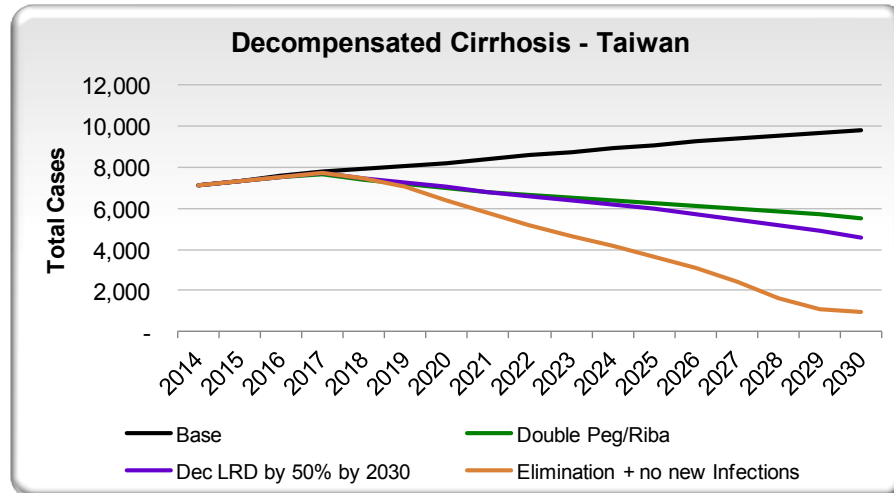
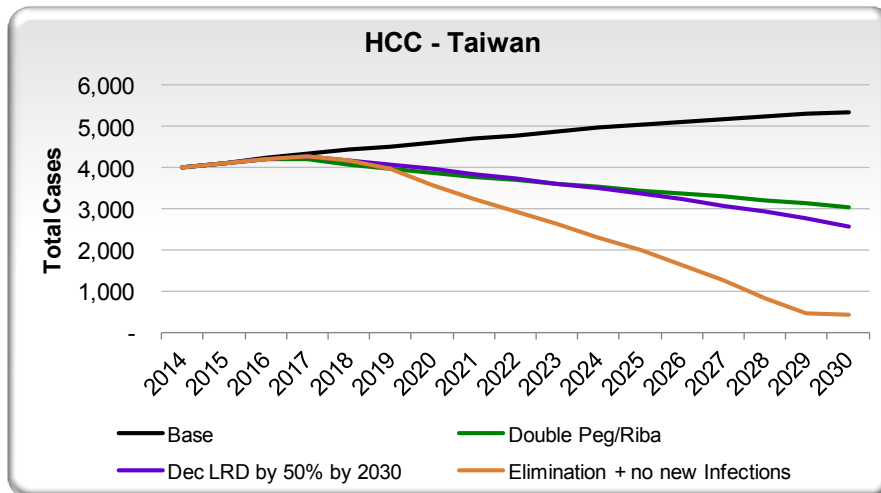
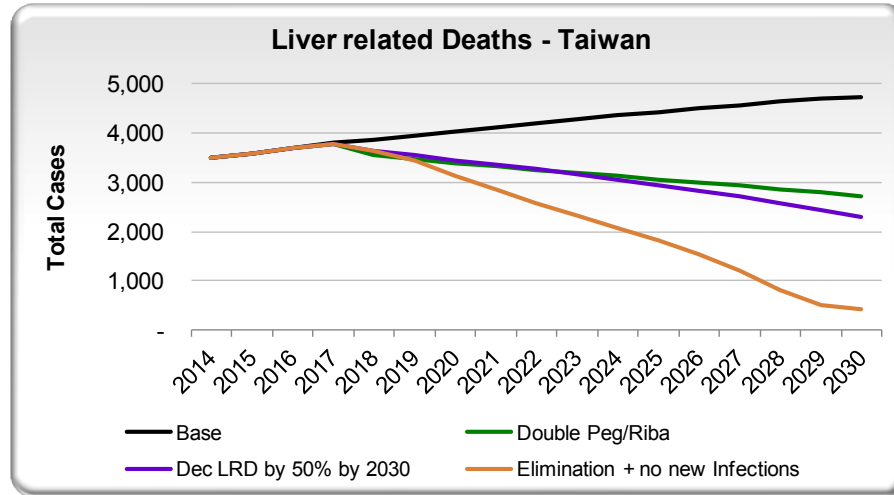
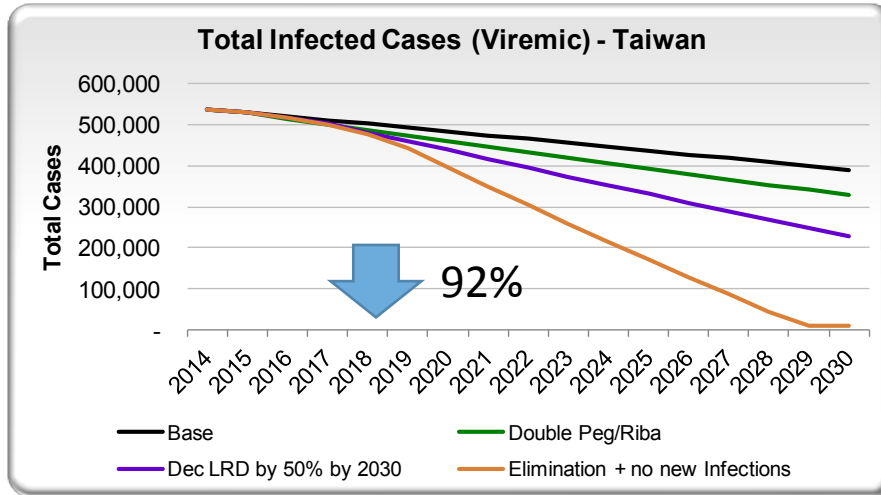


Implement Evidence-Based National Hepatitis Plans

Priority actions for countries

- **Establish a national governance structure and coordination mechanism** to oversee the national hepatitis response, integrated within the national health programme.
- **Develop a national plan on viral hepatitis with a budget** based on the global health sector strategy on viral hepatitis and integrate it into the broader national health programme.
- **Set national targets and define indicators** based on global targets and indicators, to monitor and evaluate, and to report on the national hepatitis response.
- **Regularly review the national hepatitis response** and revise the national plan as necessary.
- **Raise national awareness on viral hepatitis**, by promoting the national plan, celebrating World Hepatitis Day (July 28), and engaging community and political leaders advocates and “champions”.

Total infections will decrease by 98% while morbidity and mortality will decline by ~90%



WHO: C肝治療指引 (05/18/2016)

特色一: 權責單位提升至國家層級

(預防, 篩檢, 治療)

特色二: 由公衛的角度看C肝治療

特色三: 治療藥物以口服抗病毒藥物
(DAA)為首選

A reduction of HCV load in Taiwan
after implementing IFN-based therapy

預防感染

**New HCV
Infections:
Ca. 10000 cases
A year**



增加治療人數

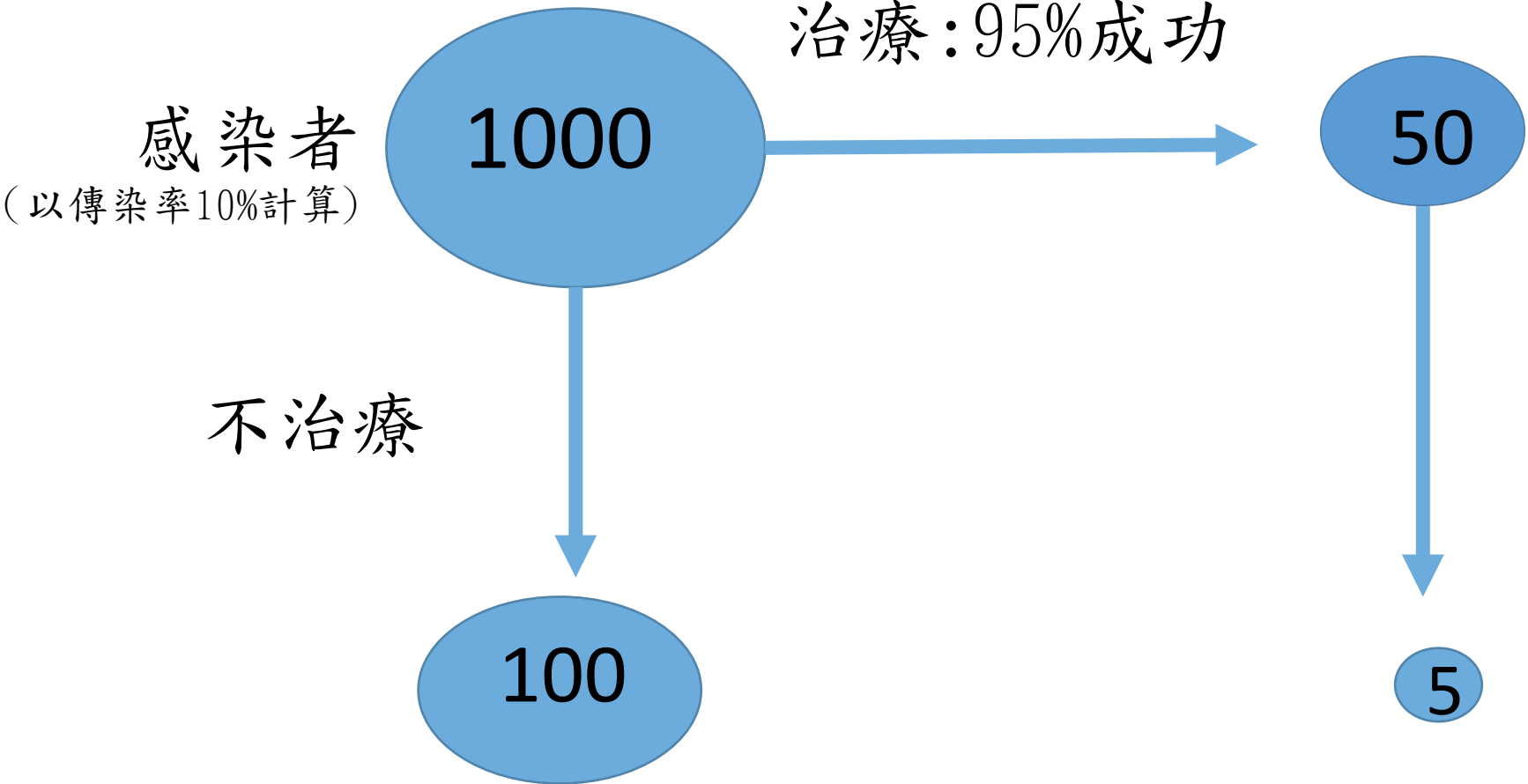
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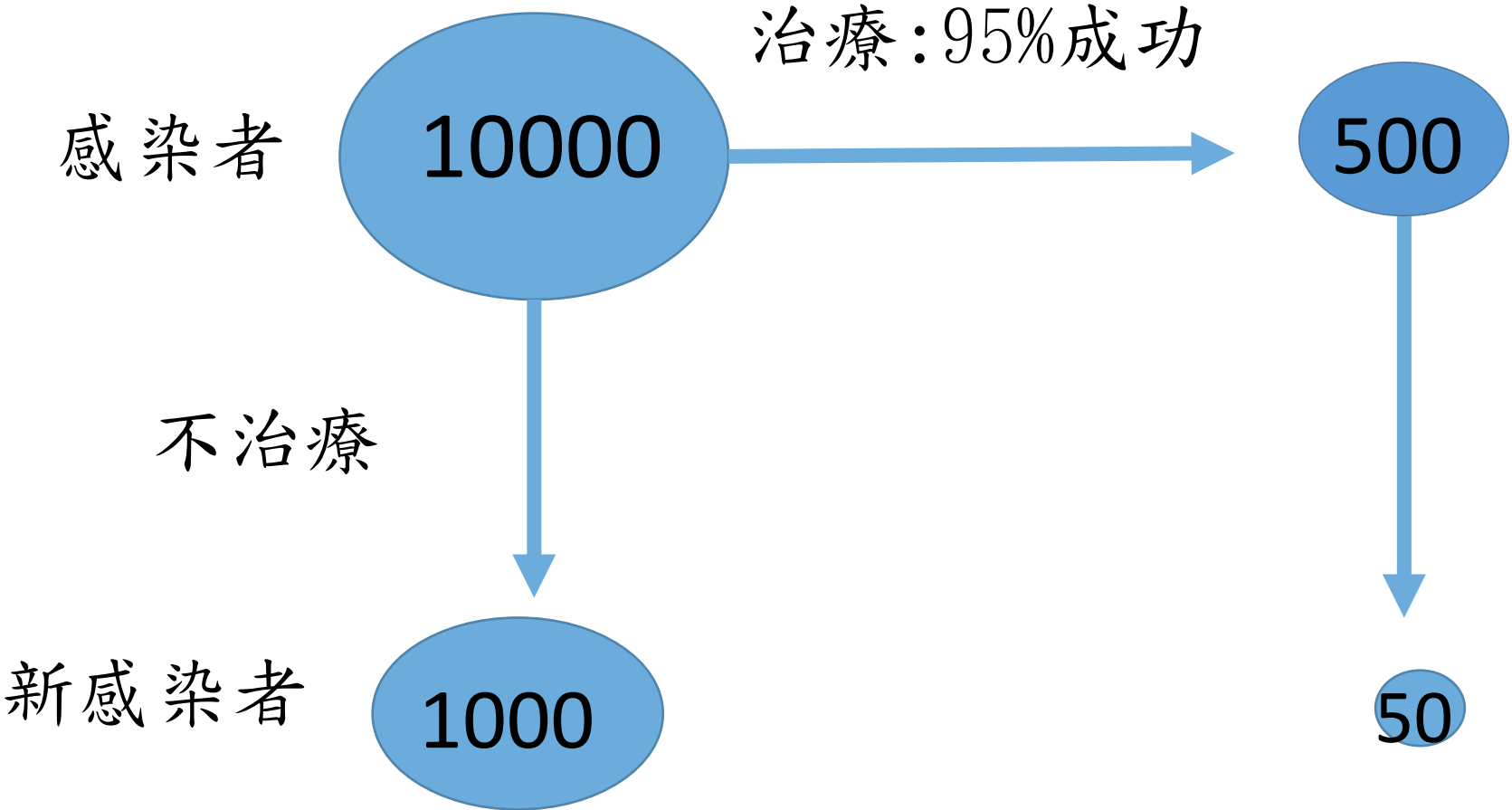
A Reduction of 5000 HCV cases
a year in Taiwan after P+R
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At present time.

減少死亡人數

治療就是預防



提高治療人數



Important reports:

1. 國家型C肝防治計畫的成效
2. 國家型C肝篩檢的成效
3. 國家型C肝防治cost-effective analysis
4. 國家型C肝DAA治療的成效及long-term outcome
- 5.....

所以.....

1. 加強C肝防治教育
2. 現況:Registry platform
3. 降低藥價
4. 全面篩檢全面治療
5. 全面監控

國家型C肝防治計畫

5-10年後WHA成果報告????