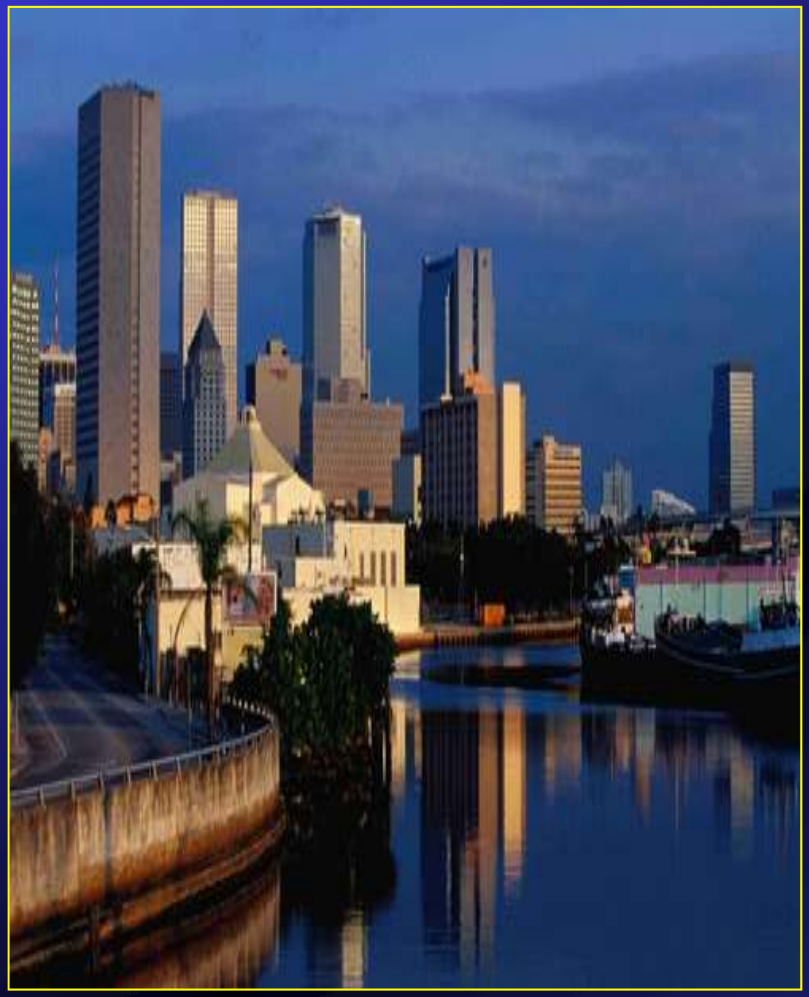
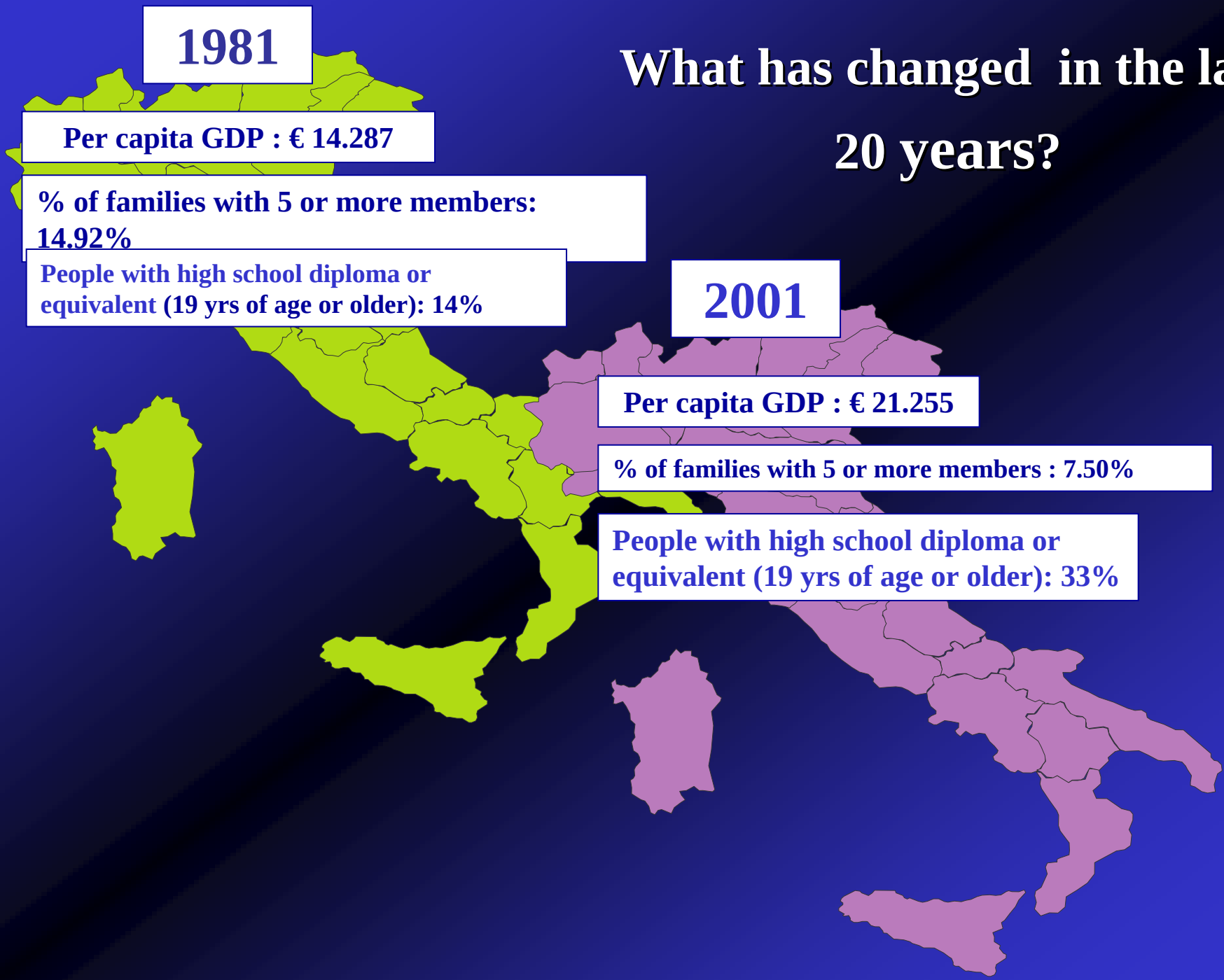


Incidence, risk factors and control of Hepatitis A in Italy

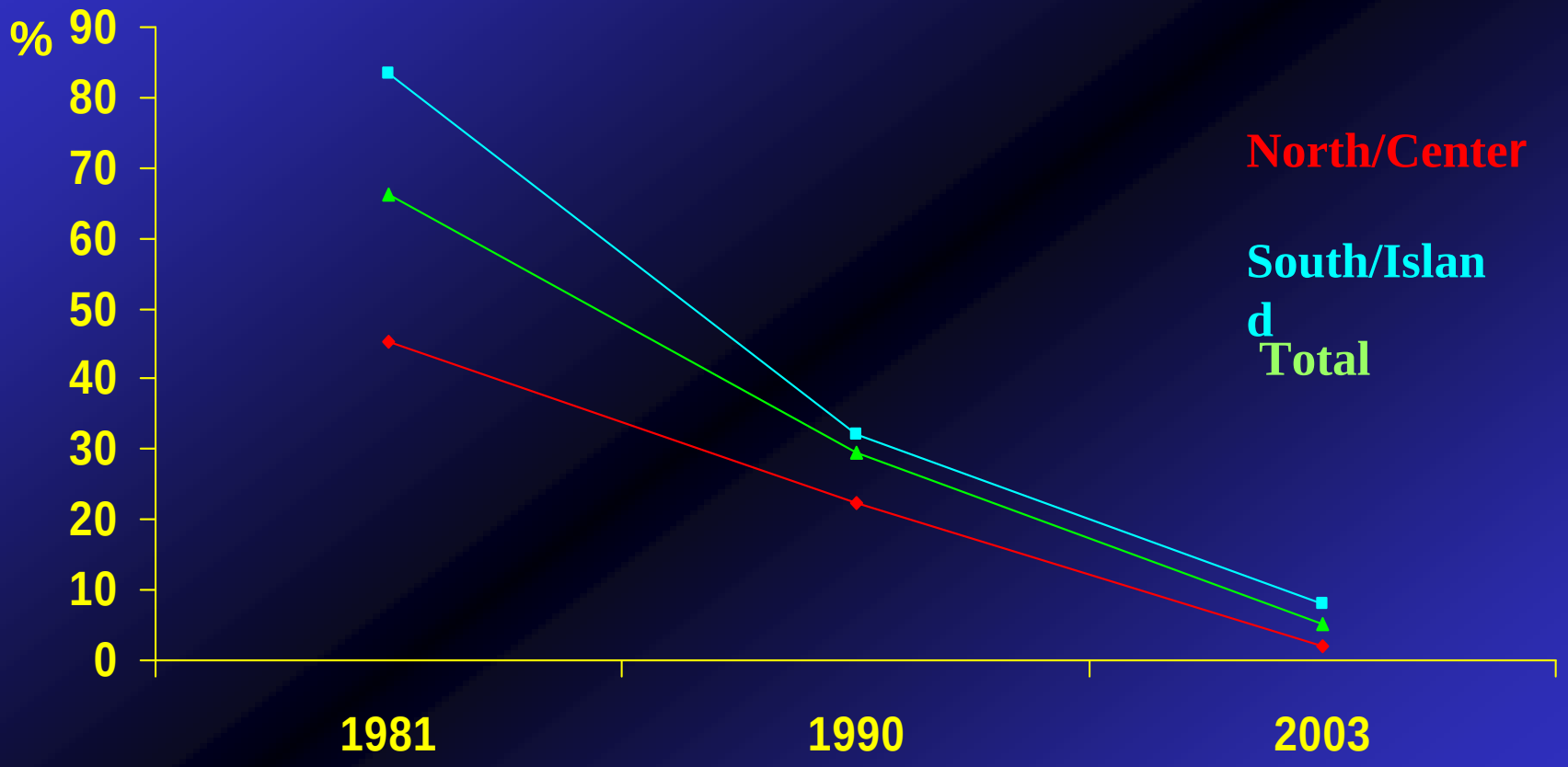
A. Mele

Miami 1-12-2007

What has changed in the last 20 years?



Anti-hepatitis A virus prevalence among military recruits in Italia: 1981-2003



R. D'Amelio 2003

Objectiv
e
To evaluate the incidence and the role of specific risk factors of HAV in Italy through SEIEVA

Number of Local Health Units (ASL) participating in the SEIEVA surveillance.

148 out of 197 (61.8% of Italian population)

SEIEVA METHODOLOGY

- Notification
- Interview
- Ascertainment of markers
- Weekly line listing of cases and questionnaires are forwarded to SEIEVA

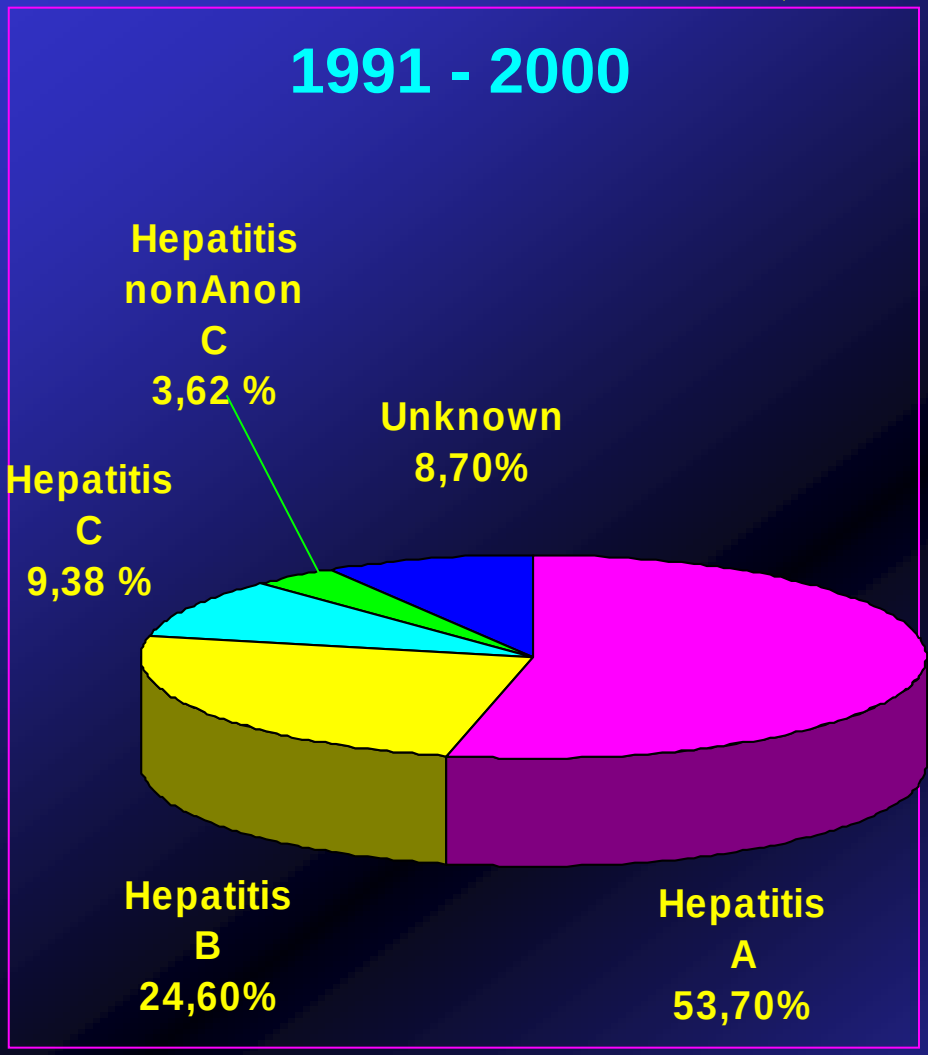
Serological definition of types of acute viral hepatitis

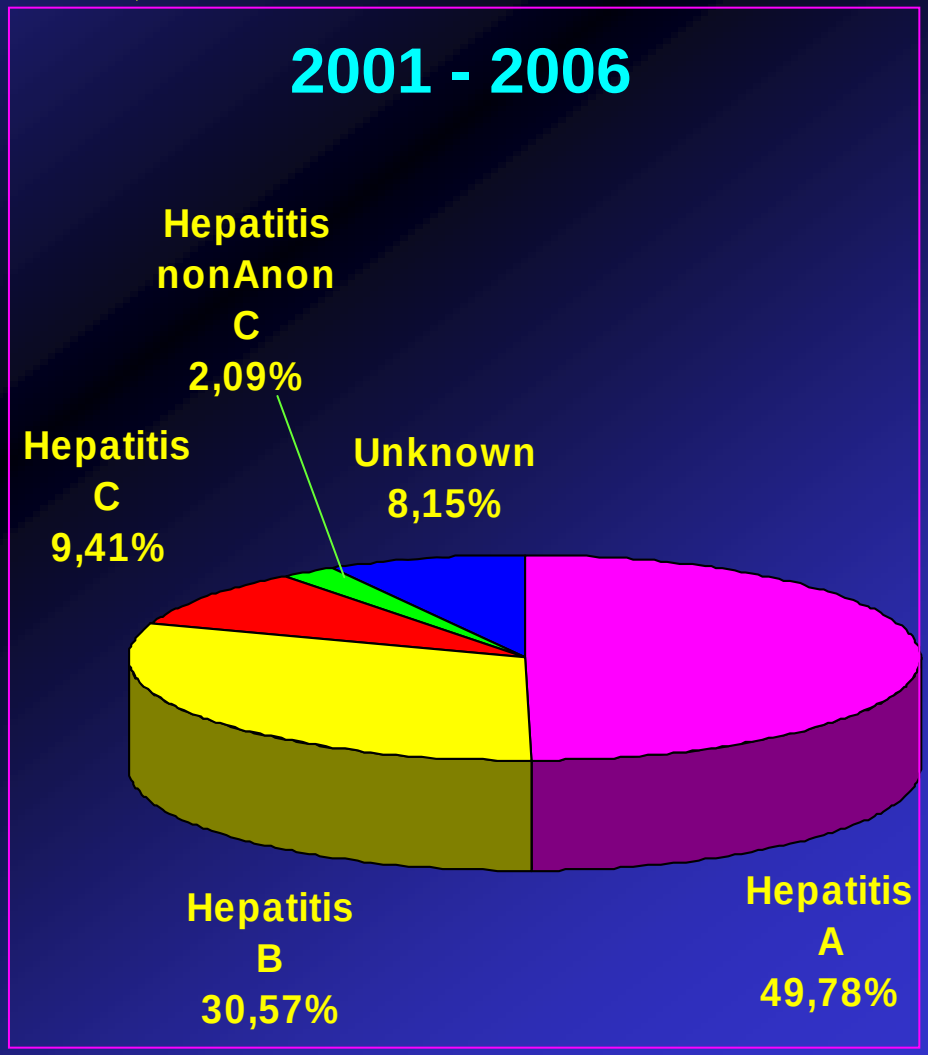
SEIEVA

HBsAg	IgM anti-HBc	IgM anti-HAV	Anti-HCV	Anti-Delta	Hepatitis
+ - NR	- NR	+	+ - NR	- NR	A
+ - NR	+	- NR	+ - NR	- NR	B
+ - NR	-	-	+	- NR	C
+	+	- NR	+ - NR	+	Coinfection Delta
+ -	-	- NR	+ - NR	+	Superinfec. Delta
+ - NR	-	-	-	-	NonA-NonC
NR	NR	NR	NR	NR	Unspecified
+	NR	- NR	+	NR	Unspecified

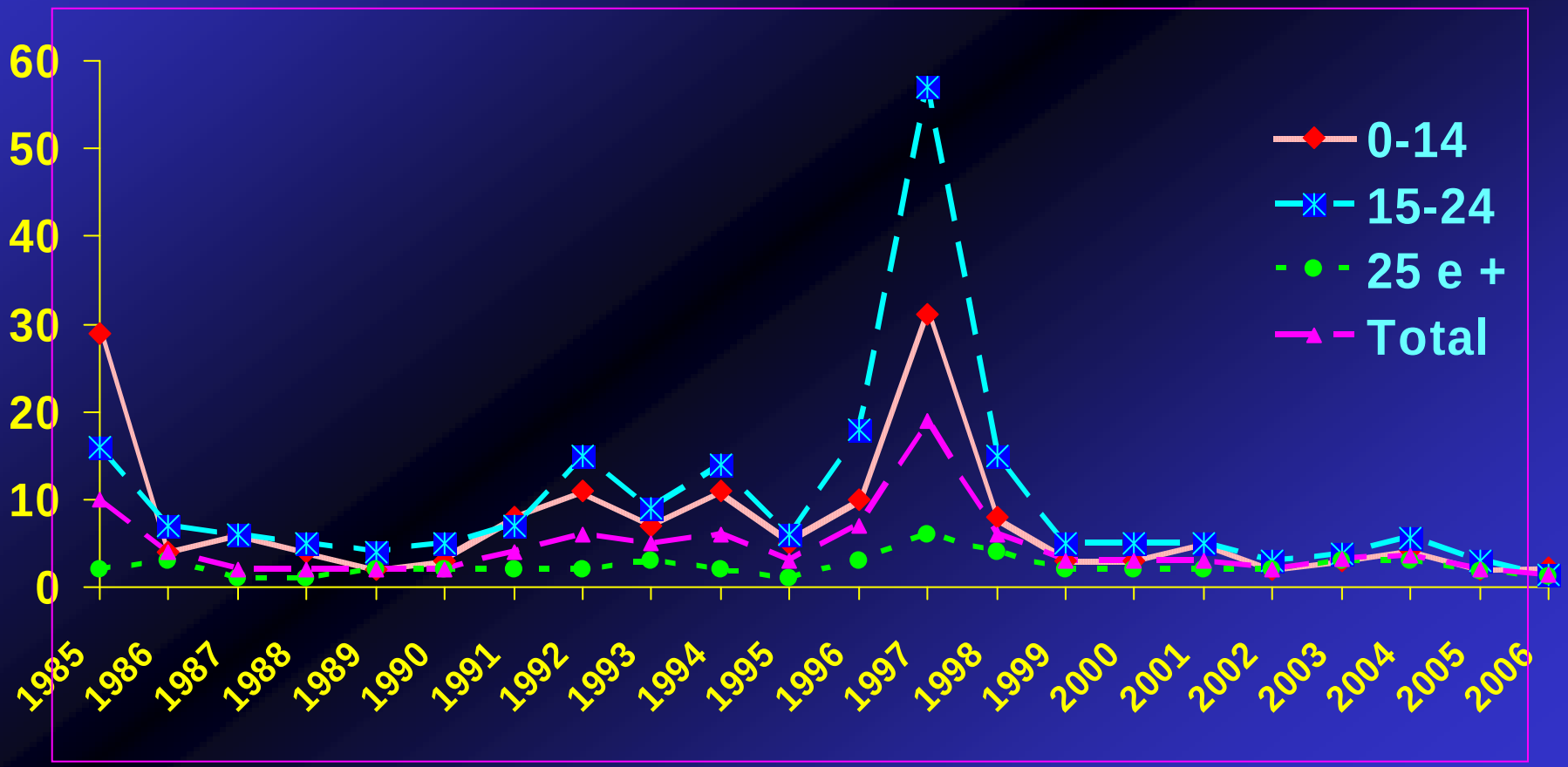
"+" = positive, "-" = negative, "NR" = Not reported

Distribution of notified cases of acute viral hepatitis by aetiological agent (SEIEVA)

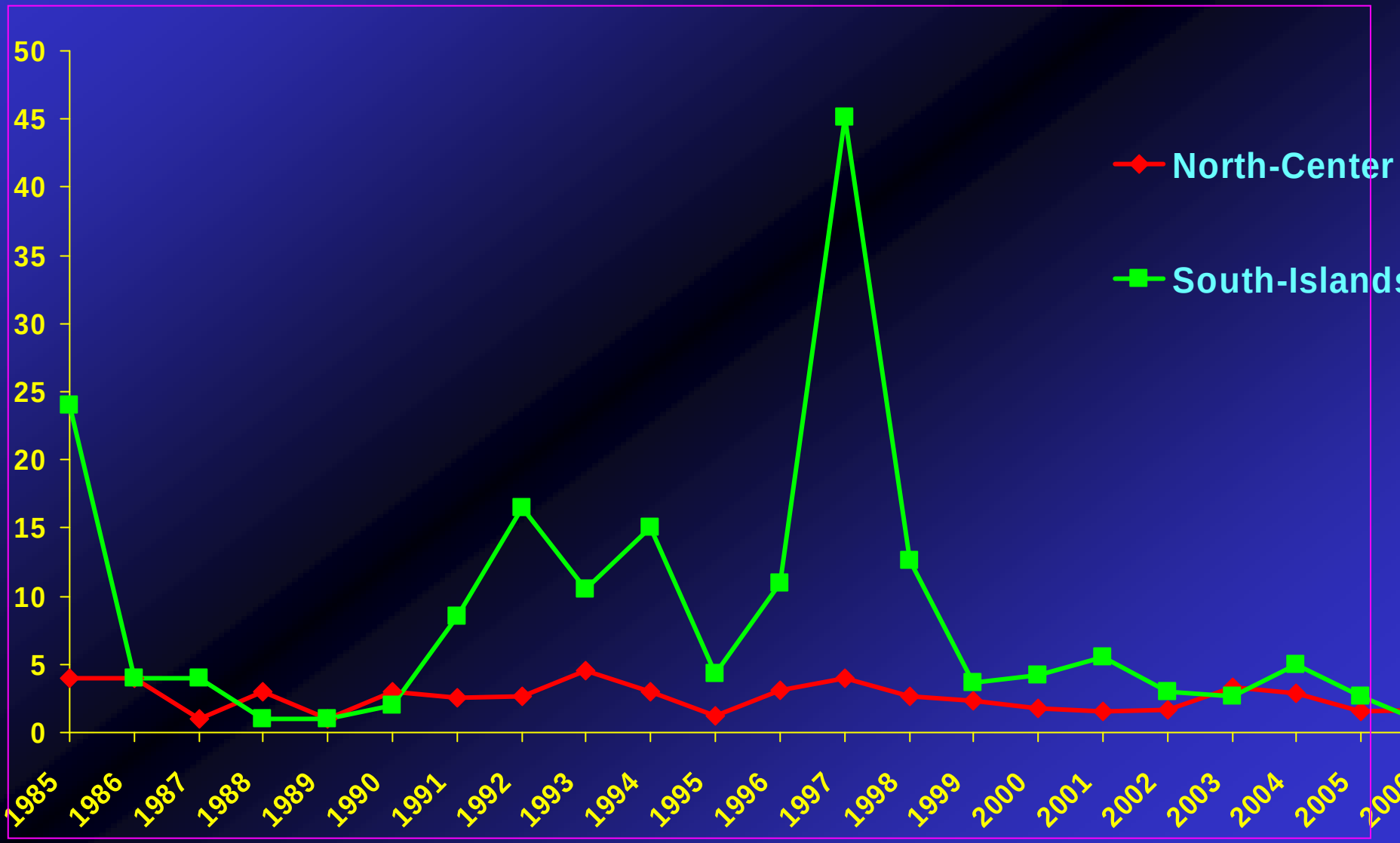




Incidence of notified case of acute hepatitis A in Italy by age and year. (SEIEVA 1985-2006)



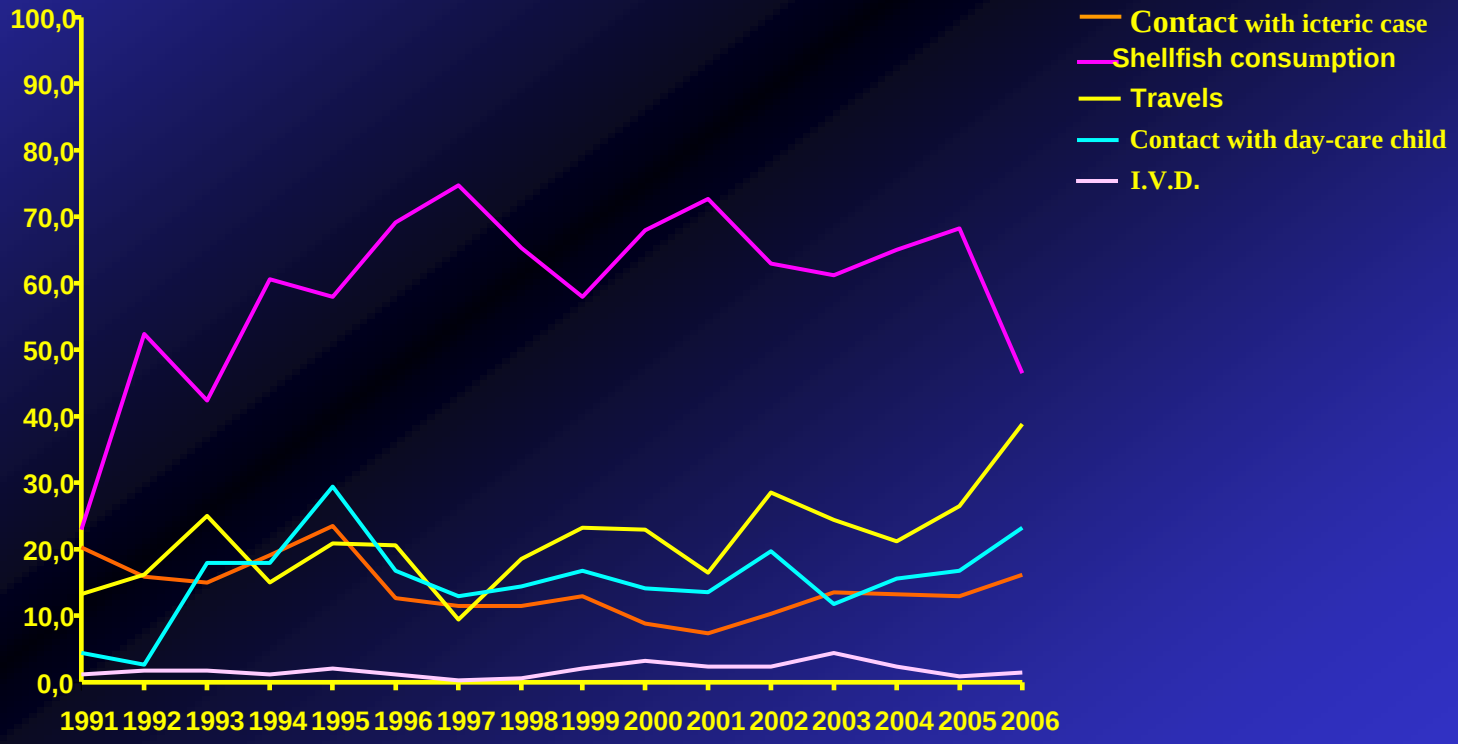
Incidence (cases per 100,000) of acute hepatitis A in Italy by geographical area. SEIEVA 1985-2006



Case fatality rate per 10,000 of acute viral hepatitis in Italy by type SEIEVA 1991-2006

Hepatitis type	No. Deaths/No. Cases	‰	95%CI
A	6/20,867	2.9	1.1 – 6.3
B	47/10,398	45.2	33.2 – 60.1
C	6/3,723	16.1	5.9 – 35.1
NonA-NonC	2/1,270	15.8	1.9 – 56.9

Time-trend of reported risk factors SEIEVA 1991-2006



Risk factors associated to HAV: adjusted* O.R. (hepatitis B cases have been used as controls) SEIEVA 2001-2006

Risk Attributable factors	Hepatitis A %	Controls %	Adjusted O.R. 95% CI	Pop. Risk %
Shellfish consumption	64.3	45.2	1.8 (1.6-2.1)	7.5
Travel to high endemic areas	24.2	11.5	3.1 (2.6-3.8)	19.5
Household of day-care child	16.0	8.0	1.3 (1.01-1.7)	2.3
Contact with an icteric cases	11.9	2.9	3.8 (2.7-5.5)	2.7
N. of cases	5,384	3,306		

* Adjusted for sex, age, area of residence, educational level and the other variables of the table.

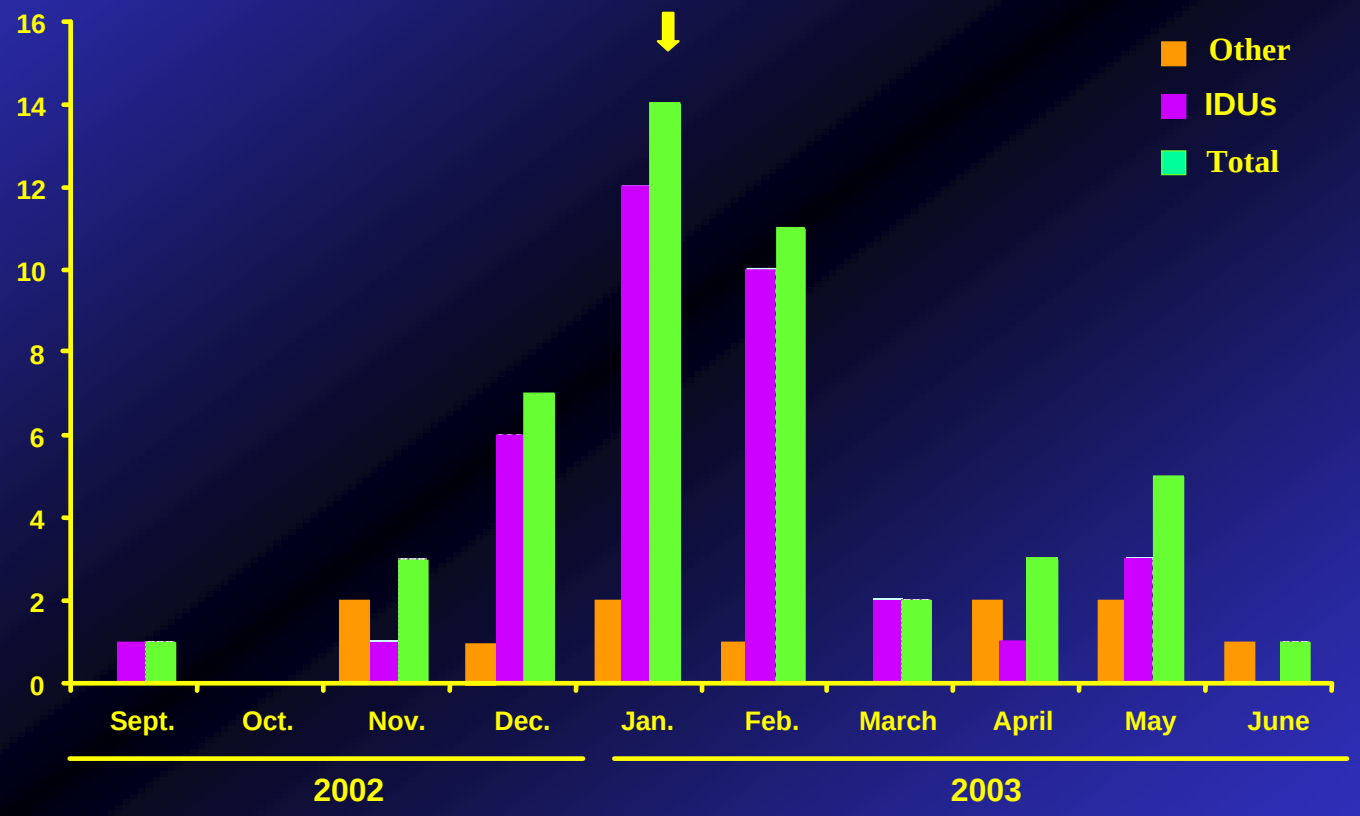
Association between travel* and hepatitis A virus infection: adjusted** O. R., SEIEVA 1997-2003

Area of destination	Adjusted O.R.	95% C.I.
No travel	1.0	--
Northern Europe, Northern America Northern/Central Italy	1.3	1.1-1.6
Southern Italy	2.4	1.7-3.4
Mediterranean Area, Eastern Europe	2.8	2.1-3.7
Latin America, Asia.Africa	6.7	4.6-9.7

* Reported in the 6 weeks before the onset of the disease.

** Adjusted for age, gender, educational level, area of residence, shellfish consumption, contact with an icteric case and household of day-care child.

Outbreak of HAV among injecting drug users (37/43) (Italy 2002-2003)



E. Spada, 2005

Outbreak of HAV among injecting drug users (37/43) Italy 2002-2003

Three individuals died of Acute Liver Failure: 2 with HCV and 1 HCV/HIV positive. All had chronic liver disease

During the period 2001-2006, 83 per 100 of IVDs with HAV notified through SEIEVA attended a drug dependency unit but where not vaccinated

Conclusions 1

Italy has become an area of low endemicity of hepatitis A and increasing number of young adults are susceptible to HAV.
Shellfish consumption, travelling to endemic areas, contact with individuals with HAV and being an household of day care child are important risk factors.
Intravenous drug users are at risk of HAV.

Conclusions 2

Vaccination of travelers, household contact of acute cases and of risk groups such as intravenous drug users coupled with surveillance of retail outlet of shellfish are efficient control measures