

MENTAL DISORDERS AND HEPATITIS C PREVALENCE IN PEOPLE ON OPIOID AGONIST THERAPY FOLLOWED AT THE SAMMSU COHORT, SWITZERLAND

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Background:

We lack knowledge on mental disorders possibly triggering risk behavior for hepatitis C infection. This study evaluates whether specific mental disorders are associated with hepatitis C prevalence in the SAMMSU cohort in order to provide Swiss guidance.

SAMMSU cohort

The SAMMSU cohort is an ongoing, prospective, open cohort of people with history or continuous drug use following opioid agonist therapy in Switzerland. The cohort was launched in 2014 with the approval of the ethics committee for human research from the canton of St-Gallen. Data are collected annually with a wide list of key parameters including demographical and socio-economical variables, drug and alcohol use, transmissible and non communicable diseases as well as medical treatments. Participating settings include eight centers across French, German and Italian Swiss regions.

Methods:

We analyzed data from 825 patients on opioid substitution treatment followed between 2014 to 2019 in the SAMMSU cohort. Follow-up consisted of annual visits for drug use, mental disorders (ICD-10 /F1-9; F10-19) and HCV antibody screening among other health conditions. Disease-10 Risk ratios and stratification analyses were calculated using HCV prevalence and mental disorders (MD). Patients were followed longitudinally to evaluate the risks of drug use, HCV-sero-prevalence, MD categories and risk ratios (RR) were calculated using patients with drug use only as reference group.

Results:

At least one additional MD was recorded in 72% of the 825 SAMMSU participants. Mood disorder was found in 45% with a RR = 0.90 [95%-CI: 0.75 - 1.09], personality and behavior disorder in 30% with a RR = 1.31 [95%-CI: 0.95 - 1.83] and 17% schizophrenia or delusional disorders, with a RR=0.69 [95%-CI: 0.53 - 0.92] for positive HCV antibodies, respectively. HCV prevalence was 75.97% in the reference group and 70.82% among patients with ≥ 2 MD.

In addition to history of opioid use disorder, 34% of patients reported use of benzodiazepines (RR=1.40 [95%-CI: 1.04 - 1.87]), 54% of cannabis and derivatives (RR=1.28 [95%-CI: 1.04 - 1.57]) and 46% of cocaine (RR=1.29 [95%-CI: 1.02 - 1.62]).

Conclusion:

Schizophrenia and delusional disorders were negatively associated with HCV, whereas personality and behavior disorders were positively associated with HCV prevalence. Overall, HCV antibody prevalence was higher in patients with multiple drug use patterns.

Study collaboration:

This project is a research collaboration between the SAMMSU cohort authors group with Gueorguiev B, Combescure C and F Girardin. Statistical analysis were performed by Boris Gueorguiev as part of his Master degree in biomedical sciences at the *Université de Genève*

References:

- Girardin F, Tuch A, Eddowes L, Preisig M, Negro F. Scaling-up hepatitis C screening and treatment in Swiss outpatient psychiatric settings: A cost-effectiveness analysis. *JHEP Rep.* 2022 Mar 4;4(5):100464.
- Bregenzer A, Bruggmann P, Castro E, et al. Hepatitis C virus elimination in Swiss opioid agonist therapy programmes - the SAMMSU cohort. *Swiss Med Wkly* 2021; 151:w20460.

Figure 1 : Distribution of HCV serostatus within cohort sites, 2019

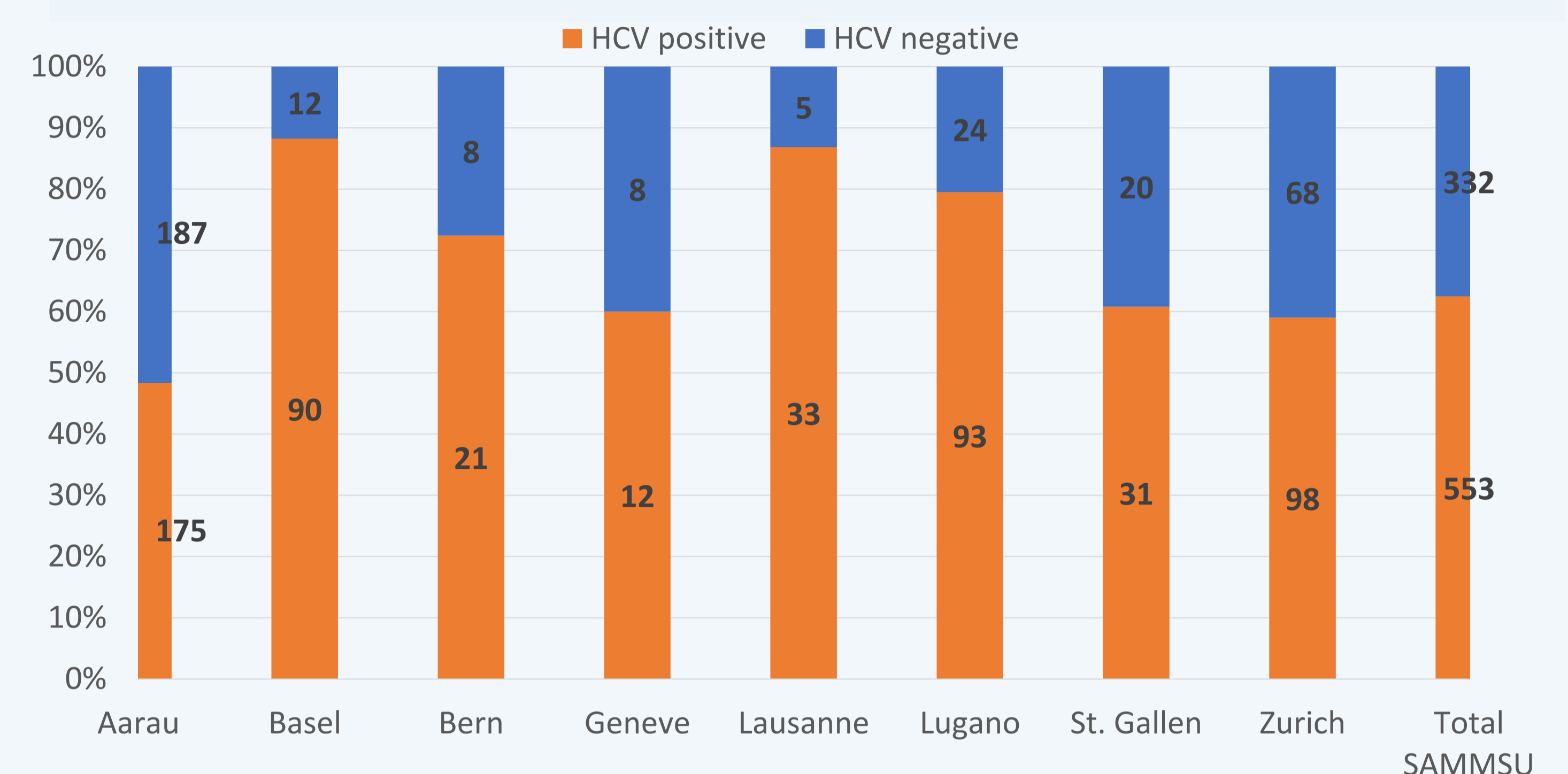


Figure 2 : Risk ratios measures of HCV prevalence according to psychiatric and sociodemographic factors in the SAMMSU cohort

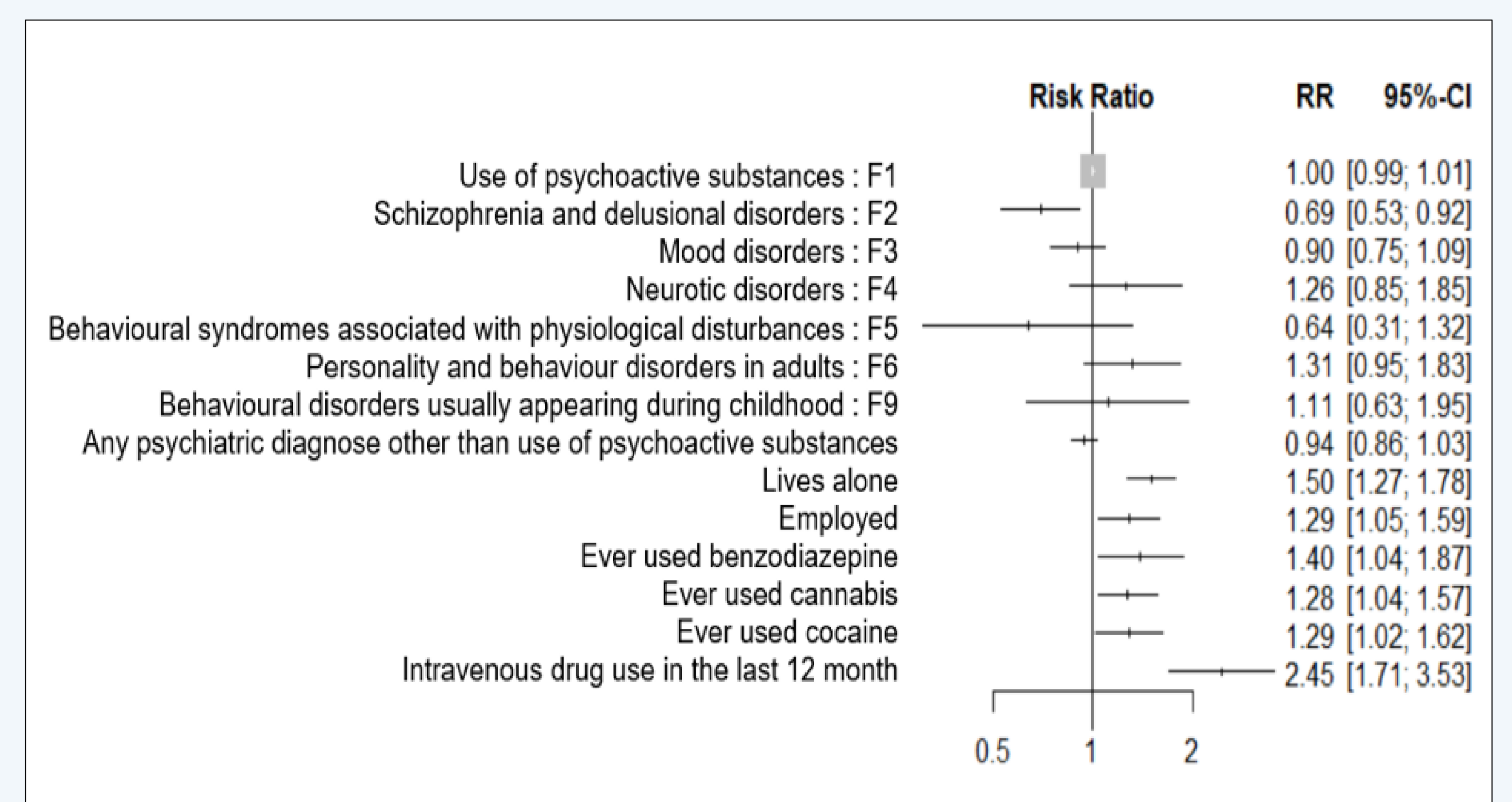


Table 1 : Overall statistical measures and associations with HCV prevalence in the SAMMSU cohort

Variables	Chi ² p-value	HCV positive	HCV negative	Risk Difference	Risk Ratio	RR IC 95%	RR p-value
Use of psychoactive substances : F1	n/a	100%	100%	0%	1,00	(0,90 ; 1,11)	n/a
Schizophrenia and delusional disorders : F2	0,013*	17%	25%	-8%	0,69	(0,53 ; 0,92)	0,039*
Mood disorders : F3	0,355	45%	50%	-5%	0,90	(0,75 ; 1,09)	0,600
Neurotic disorders : F4	0,288	22%	18%	5%	1,26	(0,85 ; 1,85)	0,504
Behavioural syndromes associated with physiological disturbances : F5	0,319	4%	7%	-3%	0,64	(0,31 ; 1,32)	0,464
Personality and behaviour disorders in adults : F6	0,115	30%	23%	7%	1,31	(0,95 ; 1,83)	0,247
Behavioural disorders usually appearing during childhood : F9	0,767	11%	17%	-6%	1,11	(0,63 ; 1,95)	0,955
Any psychiatric diagnose other than use of psychoactive substances	0,897	72%	71%	1%	1,01	(0,90 ; 1,14)	0,969
Ever used benzodiazepine	0,025*	34%	25%	10%	1,40	(1,04 ; 1,87)	0,062
Ever used cannabis	0,016*	54%	43%	12%	1,28	(1,04 ; 1,57)	0,045*
Ever used cocaine	0,033*	46%	36%	10%	1,29	(1,02 ; 1,62)	0,083
Intravenous drug use in the last 12 month	0,000*	36%	15%	21%	2,45	(1,71 ; 3,53)	0,000*

Disclosure of Interest Statement

The SAMMSU cohort is a multisponsored project, initially supported by funding institutions and after co-sponsored by the Federal Office of Public Health, Switzerland, pharmaceutical companies and other national addiction medicine organizations. Dr Castro is a recipient of a co-sponsoring grant of Gilead to attend the meeting.

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