

HCV cascade of care of people on treatment for drug dependence at the substance use services in Catalonia, Spain (2015-2019)

Juliana Reyes-Urueña^{1,2,3}, Laia Egea-Cortés^{1,3}, Regina Muñoz³, Xavier Majo³, Elisabeth Buira³, Venus Forero³, Sandra Manzanares-Laya³, Jordi Casabona^{1,2,3,4}, Joan Colom³.

¹ Centre for Epidemiological Studies on Sexually Transmitted Infections and HIV/AIDS of Catalonia (CEEISCAT). Group 27, Biomedical Research Networking Centre in Epidemiology and Public Health (CIBERESP), Instituto de Salud Carlos III, Madrid, Spain; ³ Programme for Prevention, Control and Treatment of HIV, STIs and Viral Hepatitis, ASPCAT, Barcelona, Spain

Authors declare non disclosures



Generalitat de Catalunya
Departament
de Salut



Centre d'Estudis Epidemiològics
sobre les Infeccions de Transmissió
Sexual i Sida de Catalunya

Salut/



ICO
Institut Català d'Oncologia



ciberesp

Background

Globally: 2017 → 1,0% (71 millions) where living with HVC infection ⁽¹⁾
Europe: 2018 → 8,8 cases / 100.000 hab (4% were acute, 26% chronic and 67% unknown. Prevalence: 1,5% ⁽²⁾

Seroprevalence in Catalonia: 1,02% (IC 95% 0,65-1,39)

Prevalence of chronic HVC infection: 0,49% (IC 95% 0,23 -0,74)

N=3328

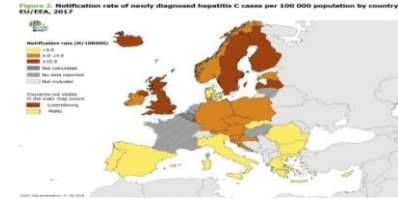
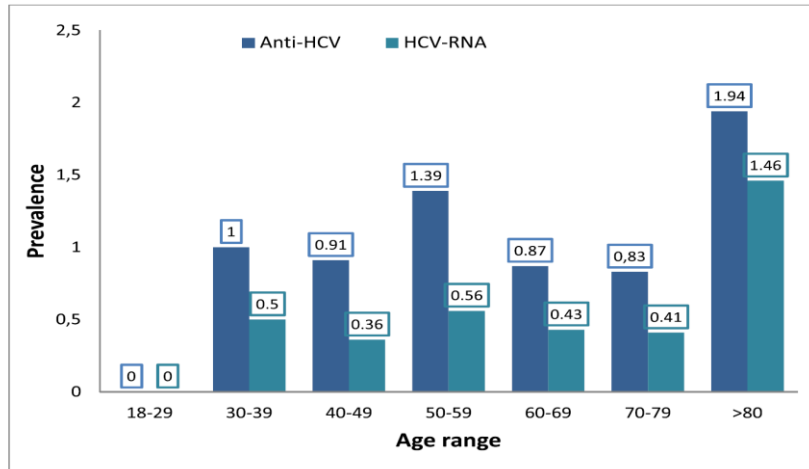


Table 2 Risk factors of the hepatitis C virus positive subjects

	Hepatitis C: N, % (95% CI)	Univariable: OR (95% CI)
Age		
> 40 years	29, 1.09 (0.69–1.49)	1.84 (0.65–5.26)
< 40 years	4, 0.60 (0.01–1.17)	
Gender		
Female	14, 0.74 (0.36–1.13)	1.77 (0.89–3.55)
Male	19, 1.31 (0.73–1.90)	
Nationality		
Spanish	29, 1.02 (0.64–1.39)	0.83 (0.29–2.37)
Foreigner	4, 0.84 (0.02–1.67)	
Relative with HCV		
Yes	5, 2.96 (0.40–5.51)	3.40 (1.30–8.94)
No	28, 0.89 (0.56–1.21)	
Piercing or tattoo		
Yes	10, 1.67 (0.64–2.69)	1.99 (0.94–4.20)
No	23, 0.84 (0.50–1.19)	
Drug consumption		
Yes	13, 3.77 (1.76–5.78)	5.79 (2.86–11.8)
No	20, 0.67 (0.38–0.96)	
Major surgery		
Yes	26, 1.33 (0.82–1.84)	2.64 (1.14–6.10)
No	7, 0.51 (0.13–0.88)	
Blood transfusion		
Yes	7, 2.46 (0.66–4.25)	2.92 (1.26–6.79)
No	26, 0.85 (0.53–1.19)	
Risk sex		
Yes	3, 1.08 (0–2.28)	1.03 (0.33–3.61)
No	30, 0.98 (0.63–1.33)	
Hospital admission		
Yes	32, 1.14 (0.74–1.53)	5.89 (0.80–43.2)
No	1, 0.19 (0.00–0.58)	
Invasive procedures		
Yes	27, 0.95 (0.59–1.40)	0.74 (0.30–1.80)
No	6, 1.27 (0.26–2.28)	
DM		
Yes	9, 2.80 (0.99–4.60)	3.57 (1.65–7.75)
No	24, 0.80 (0.48–1.12)	

1. World Health Organization. Global Hepatitis Report 2017. Geneva: World Health Organization; 2017 Licence: CC BY-NC-SA 3.0 IGO. WHO. 2017.

2. European Centre for Disease Prevention and Control (ECDC). Hepatitis C, Annual Epidemiological Report for 2018. Surveillance Report. Stockholm; 2020

3. Rodríguez-Tajes, S., et al. (2020). Significant decrease in the prevalence of hepatitis C infection after the introduction of direct acting antivirals. Journal of Gastroenterology and Hepatology.

Objectives

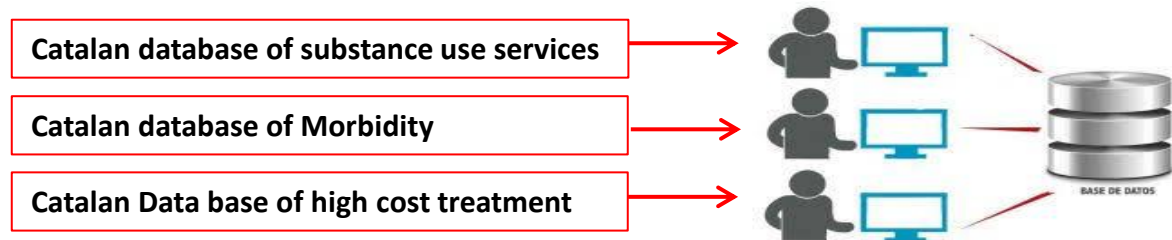
1. Characterize the HCV care cascade of people on treatment for drug dependence at the substance use services in Catalonia, Spain, by drug of consumption.
2. Describe risk factors for HCV infection
3. Describe the risk factors for not accessing HCV treatment

Methods

Study: Retrospective descriptive population based study

Population: People in treatment for any drug dependence admitted to the **61** substance use services (**01/2015–12/2019**)

Information system:

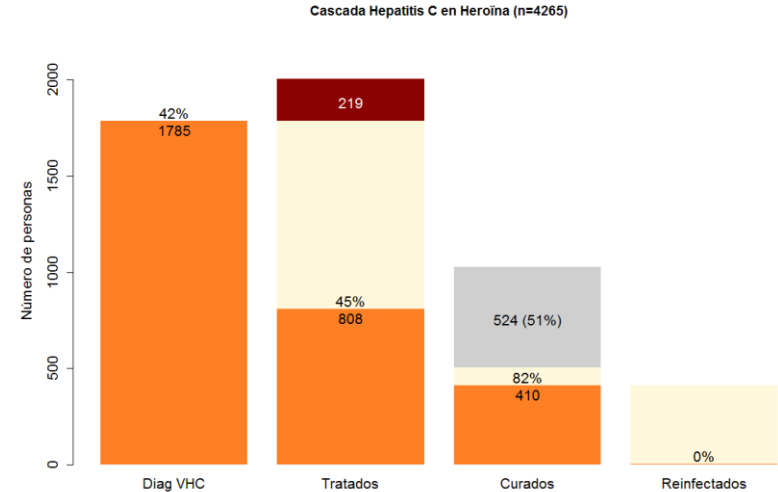
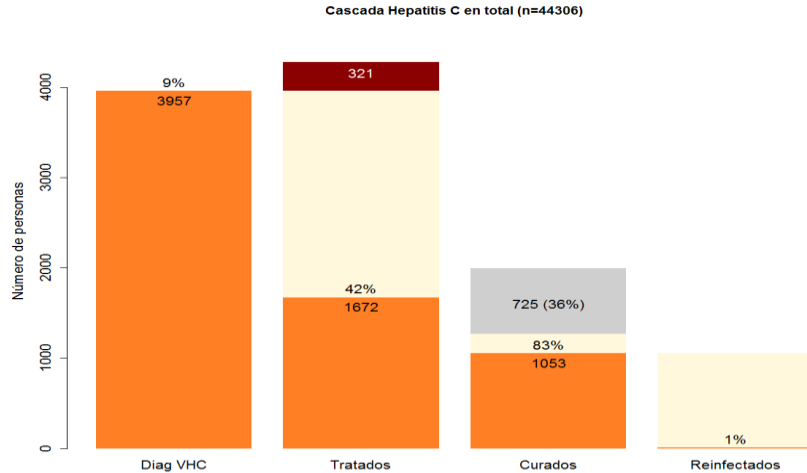


Continuum of care: Four steps: HVC diagnosis; access to treatment; cure and reinfection by main drug consumption: heroin, cocaine, cannabis, alcohol, Tabaco.

Statistical Analysis: In order to identify predictors of HCV infection and not access to treatment, multivariate regression models were used.

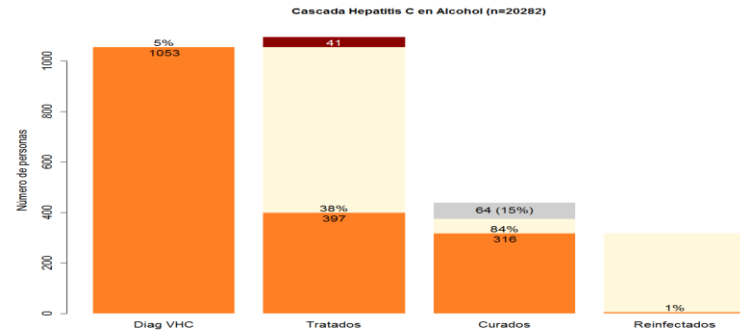
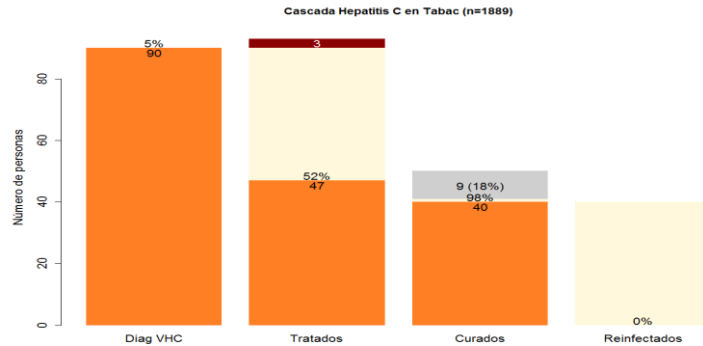
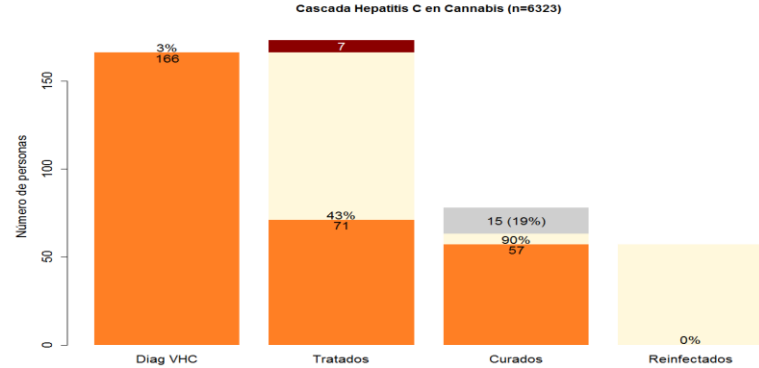
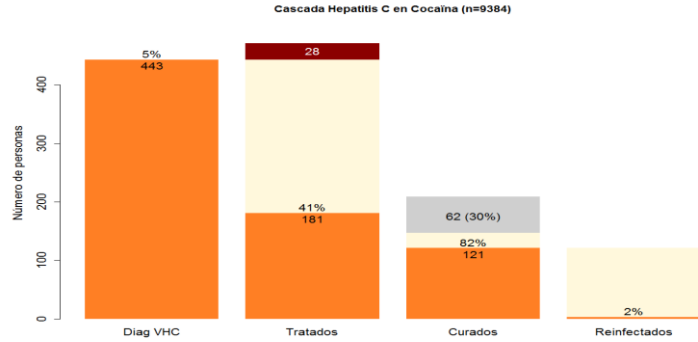
Results

HVC Care cascade among people on substance abuse treatment



Results

HVC Care cascade among people on substance abuse treatment by drug



HVC infection determinants

		HVC (n=3960)		No HVC (n=40488)		Total (n=44448)		OR	Pvalue
		N	%	N	%	N	%		
Sex	Women	773	19.54	9603	23.8	10376	23.47	Ref.	
	Men	3184	80.46	30746	76.2	33930	76.58	1,16	0,014
Age at the beginning of treatment (IQR)		41.16	17-67	45.85	29-61	40.7	17-68	1,05	<0,001
Region of origin	Spanish born	3340	84.41	33619	83.32	36959	83.42	Ref.	
	Outside Spain	401	10.13	5470	13.51	5871	13.21	0,71	<0,001
Education Level	Primary	2878	72.73	25720	63.74	28598	64.55	Ref.	
	Secondary	594	15.01	9019	22.35	9613	21.7	0,84	0,006
	Undergraduate	157	3.97	3556	8.81	3713	8.38	0,59	<0,001
	Missing	328	8.29	2054	5.09	2382	5.38		
Situació laboral	Working	621	15.69	15722	38.97	16343	36.89	Ref.	
	Unemployment	1520	38.41	13970	34.62	15490	34.96	1,7	<0,001
	Disability / pensioner	1052	26.59	5053	12.52	6105	13.78	1,86	<0,001
	Others	463	11.7	3914	9.7	4377	9.88	0,92	0,483
	Missing	301	7.61	1690	4.19	1991	4.49		
History of imprisonment	No	3495	88.32	38948	96.53	42443	95.8	Ref.	
	Yes	462	11.68	1401	3.47	1863	4.2	0,85	0,221
Age at the time of first drug consumption (mean, IQR)		20.34	10-47	21.32	10-47	20.25	10-47	0,98	<0,001
Drug injection	No	1887	47.69	37681	93.39	39568	89.31	Ref.	
	Yes	1812	45.79	1081	2.68	2893	6.53	10,67	<0,001
	Missing	258	6.52	1587	3.93	1845	4.16		
Injection status	No history of drug injection	1887	47.69	37681	93.39	39568	89.31	Ref.	
	Current injection	995	25.15	688	1.71	1683	3.8	12,9	<0,001
	Injection at least once in lifetime	817	20.65	393	0.97	1210	2.73	8,85	<0,001
	Missing	258	6.52	1587	3.93	1845	4.16		
Past HVC treatment	No	631	15.95	20500	50.81	21131	47.69	Ref.	
	Yes	3030	76.57	15952	39.54	18982	42.84	2,55	<0,001
	Missing	296	7.48	3897	9.66	4193	9.46		
Drug treatment	Alcohol	1053	26.61	19229	47.66	20282	45.78	Ref.	
	Other substances	420	10.61	1743	4.32	2163	4.88	2,77	<0,001
	Cannabis	166	4.2	6157	15.26	6323	14.27	1,12	0,342
	Cocaine	443	11.2	8941	22.16	9384	21.18	1,2	0,021
	Heroin	1785	45.11	2480	6.15	4265	9.63	4,53	<0,001
	Tobacco	90	2.27	1799	4.46	1889	4.26	0,86	0,27
HIV coinfection	No	2745	69.37	39759	98.54	42504	95.93	Ref.	
	Yes	1212	30.63	590	1.46	1802	4.07	12,57	<0,001

Determinants of non HVC treatment access

		Treated		No Treated		Total		OR	Pvalue
		(N=1.994)		(N=2.288)		(N=4.282)			
		N	%	N	%	N	%		
Sex	Women	305	15.3	494	21.62	799	18.68	Ref.	
	Men	1688	84.7	1791	78.38	3479	81.32	0.68	<0.001
Age at the beginning of treatment (IQR)		45.47	28-61	45.12	28-59	45.78	29-62	0.99	0.256
Region of origin	Spanish born	1647	82.64	1903	83.28	3550	82.98	Ref.	
	Outside Spain	249	12.49	250	10.93	499	11.65	0.55	1.07
Education Level	Primary	1467	73.61	1648	72.12	3115	72.81	Ref.	
	Secondary	273	13.7	363	15.89	636	14.87	0.96	0.645
	Undergraduate	80	4.01	95	4.16	175	4.09	1.13	0.465
	Missing	173	8.68	179	7.83	352	8.23		
Situació laboral	Working	285	14.3	381	16.67	666	15.57	Ref.	
	Unemployment	732	36.73	898	39.3	1630	38.1	1.05	0.631
	Disability / pensioner	487	24.44	590	25.82	1077	25.18	1.07	0.579
	Others	342	17.16	244	10.68	586	13.7	0.94	0.707
	Missing	147	7.38	172	7.53	319	7.46		
History of imprisonment	No	1620	81.28	2065	90.37	3685	86.14	Ref.	
	Yes	373	18.72	220	9.63	593	13.86	1.97	<0.001
Age at the time of first drug consumption (mean, IQR)		21.27	10-47	21.04	11-46	21.48	10-48	1	0.675
Drug injection	No	847	42.5	1147	50.2	1994	46.61	Ref.	
	Yes	1020	51.18	987	43.19	2007	46.91	1.13	0.149
	Missing	126	6.32	151	6.61	277	6.47		
Injection status	No history of drug injection	847	42.5	1147	50.2	1994	46.61	Ref.	
	Current injection	588	29.5	542	23.72	1130	26.41	1.19	0.084
	Injection at least once in lifetime	432	21.68	445	19.47	877	20.5	1.07	0.455
	Missing	126	6.32	151	6.61	277	6.47		
Past HVC treatment	No	299	15	390	17.07	689	16.11	Ref.	
	Yes	1537	77.12	1732	75.8	3269	76.41	0.991	1
	Missing	157	7.88	163	7.13	320	7.48		
Drug treatment	Alcohol	438	21.98	656	28.71	1094	25.57	Ref.	
	Other substances	191	9.58	252	11.03	443	10.36	0.99	0.948
	Cannabis	78	3.91	95	4.16	173	4.04	1.07	0.716
	Cocain	209	10.49	262	11.47	471	11.01	1.07	0.617
	Heroin	1027	51.53	977	42.76	2004	46.84	1.05	0.655
	Tobacco	50	2.51	43	1.88	93	2.17	1.64	0.042
HIV coinfection	No	1286	64.53	1727	75.58	3013	70.43	1.62	<0.001
	Yes	707	35.47	558	24.42	1265	29.57	Ref.	

Conclusions

- The global prevalence of HVC in people attending a substance use services in Catalonia (2015-2019) is **9%** (**3%** → Cannabis, **42%** → Heroin, **5%** → Alcohol, tobacco, cocaine).
- Access to HCV treatment is of **42%**, (52% → tobacco, 38% → alcohol)
- Cure rate of **83%**, 98% → Tobacco.
- Reinfection (**2%**) → people on treatment for alcohol and cannabis dependence.
- **Determinants of HCV infection:** being a man, on a unemployment or disability situation, with a history of drug injection, use of heroin and cocaine and coinfecting with HIV.
- **Determinants for low HVC treatment access:** Being a woman with history of imprisonment and non HIV coinfecting.

Recommendations

- Although PID has been identified as a key group to focus DX - TTO strategies, there is still a lack of intensification of elimination strategies in this population.
- Inclusive diagnostic and access to treatment strategies must be created for HVC, which take into account other types of drug dependencies such as alcohol and with a gender perspective.

Thank you

Juliana Reyes-Urueña

jmreyes@iconcologia.net



Generalitat de Catalunya
**Departament
de Salut**



Centre d'Estudis Epidemiològics
sobre les Infeccions de Transmissió
Sexual i Sida de Catalunya

Salut/



ICO
Institut Català d'Oncologia



IGTP
Institut de Recerca Germans Trias i Pujol

ciberesp