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Regional differences in hepatitis testing, vaccination and treatment in the EuroSIDA study

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BACKGROUND

Hepatitis screening is a crucial step to timely care. We explored regional variability in self-reported hepatitis B and C management and linked it to liver fibrosis across Europe.

METHODS

A survey was conducted in 2014 in active EuroSIDA clinics. Separate HBV and HCV scores (**Table 1**) were developed based on screening, vaccination and treatment and linked to the clinical database to determine the odds of HBV or HCV score of 3 and of liver fibrosis (≥F2).

RESULTS

80/97 (82%) clinics completed the survey. There were no differences between eastern European (EE) and non-EE for routine screening of HBV or HCV but HBV vaccination (**Figure 1**) and HCV treatment with DAAs (**Figure 2**) varied significantly (**Table 2**). 9,304 patients were enrolled in EuroSIDA from clinics participating in the survey. Among these, those from EE had lower odds of an HBV or HCV score of 3 (aOR 0.21 [95% CI 0.18–0.56 and 0.65; 0.55–0.77 respectively]). Patients from larger clinics (n>200) were more likely to have an HBV score of 3 (aOR 1.38 [1.23–1.55]) but less likely to have an HCV score of 3 (aOR 0.86 [0.79–0.94]) .

Among 7,976 patients with fibrosis data, 498 (6.2%) had ≥F2 fibrosis. Gradually lower HBV scores related to a gradually higher risk of ≥F2 fibrosis; this trend was not observed for HCV (**Figure 3**). The relationship between HBV or HCV score for developing ≥F2 fibrosis was similar between regions.

CONCLUSIONS

This study found that EuroSIDA clinics outside of EE were more likely to vaccinate for HBV than those in EE and to use DAAs to treat HCV. Also, a novel simple measure of quality of HBV care at the clinics was found to be inversely correlated with fibrosis-staging among patients followed in the clinic, suggesting concrete steps to improve care in clinics with a low HBV score. However, a high hepatitis management score for both HBV and HCV would always be something to aim for.

Table 1

Methods: HBV and HCV Scoring

The score from the clinic survey was derived as follows:

HBV	HCV
Add 1 if routinely screened for HBV (yes or sometimes)	Add 1 if routinely screened for HCV (yes or sometimes)
Add 1 if routinely vaccinated for HBV (yes or sometimes)	Add 1 if it performs a fibroscan or biopsy (yes or sometimes for either)
Add 1 if it performs a fibroscan or biopsy (yes or sometimes for either)	Maximum 1 point from 3 treatment components, weighted equally (1/3 of a point each): • Add 1/3 if treated for HCV (sometimes or yes); • Add 1/3 if treatment is free; • Add 1/3 if access to and use DAAs.
Note: Both HBV and HCV can therefore have a score of between 0 and 3. Due to small numbers, the score for both HBV and HCV was categorised as 1, 2 or 3.	

Table 2

Results

Summary of HBV and HCV screening, vaccination and treatment questions from the EuroSIDA clinic survey

		All of Europe		Western Europe[2]		East Europe[3]		
		N centres	%	N centres	%	N centres	%	p-value
N		80	100	68	85.0	12	15.0	
N patients	Total	133,532	100	102,794	77.0	30,738	23.0	
HBV routine screening	No	5	6.2	5	7.4	0	0	0.99
	Yes/sometimes	75	93.8	63	92.7	12	100	
HCV routine screening	No	12	15.0	10	14.7	2	16.7	0.99
	Yes	67	83.8	57	83.8	10	83.3	
	Do not know	1	1.2	1	1.5	0	0	
HBV vaccination	No	16	20.0	8	11.8	8	66.7	<0.0001
	Yes/sometimes	64	80.0	60	**88.2**	4	33.3	
HCV treatment	No	4	5.0	2	2.9	2	16.7	0.10
	Yes/sometimes	76	95.0	66	97.1	10	83.3	
HCV treatment with direct acting antivirals[1]	No	14	18.0	8	12.1	6	50.0	0.0090
	Yes/sometimes	63	80.8	57	**86.4**	6	50.0	
	Don't know	1	1.3	1	1.5	0	0	

1. N=78 responses; 66 from non-east Europe and 12 from east Europe.
2. Austria, Belgium, Croatia, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Spain, Sweden, Switzerland, the United Kingdom.
3. Belarus, Estonia, Lithuania, Ukraine, the Russian Federation.

Results

HBV vaccination and HCV treatment with DAA

Figure 1

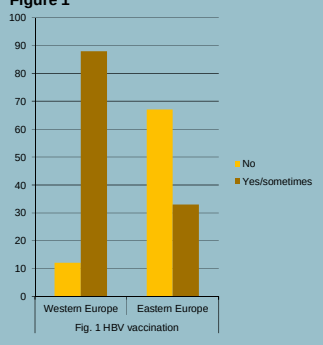


Fig. 1 HBV vaccination

Figure 2

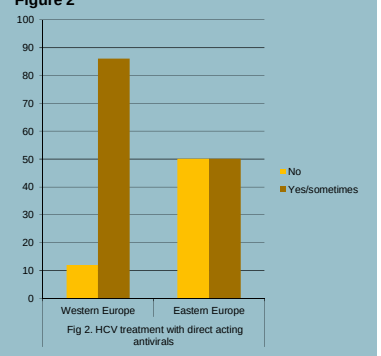
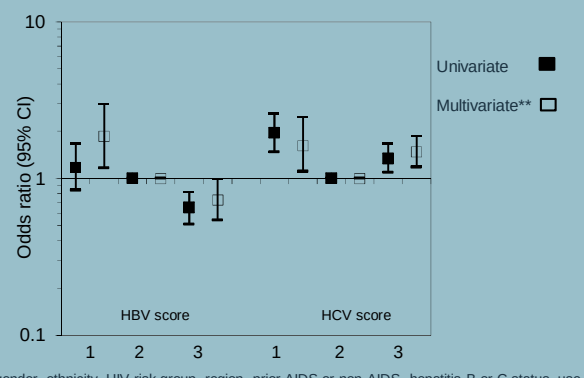


Fig 2. HCV treatment with direct acting antivirals

Figure 3

Results

Odds of liver fibrosis (≥F2), according to the Eurosida clinic's HBV score and HCV score



**Adjusted for gender, ethnicity, HIV risk group, region, prior AIDS or non-AIDS, hepatitis B or C status, use of cART, VL < 500, CD4 , age, CD4 nadir, time in EuroSIDA, size of centre, anaemia, hypertension, diabetes and smoking status

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a multicentre study EuroSIDA

SEVENTH FRAMEWORK PROGRAMME

EuroCoord