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## Background

- Risk of vertical transmission of hepatitis C virus (HCV) is ~6%,<sup>1</sup> and evidence suggests HCV negatively affects pregnancy and infant outcomes.
- Direct acting antivirals (DAA) have a very good safety profile and very high efficacy but are not yet approved for use during pregnancy/breastfeeding.
- A phase I trial (n=8) showed sofosbuvir-ledipasvir in pregnancy was well tolerated, achieved 100% maternal cure and no vertical transmission.<sup>2</sup>
- Ukraine has high burden of HCV with ~2 million people anti-HCV positive, and high prevalence among women living with HIV (~33%) and people who inject drugs (~55%), of whom ~25% are women of childbearing age.
- There are scarce data on the acceptability of **universal antenatal HCV screening** and, if DAAs were approved for use in pregnancy, the potential **acceptability of treatment** in pregnancy in women in high burden settings such as Ukraine.<sup>3</sup>

## Aims

- The aims of this study were to assess:
- the acceptability of free universal antenatal HCV screening
  - potential uptake of DAA treatment in the scenario of DAAs being approved for use in pregnancy.

## Participants and methods

### Inclusion Criteria:

- Pregnant or postpartum (<6 months since delivery) women attending 3 antenatal clinics/maternity hospitals in Ukraine, including a specialist infections centre. Women were included irrespective of HCV status.

### Methods:

- Women were invited to complete a survey and provide basic data on their HCV and HIV status and potential HCV risk factors
- HCV infection was defined as self-reported ever HCV antibody or PCR positive. HIV was also self-reported
- Acceptability of HCV testing and DAA treatment in pregnancy were summarised by HCV/ HIV status

## Results – participant characteristics

- 150 women participated, with median age 33 [IQR 28,37] years (Table)
- 60 (40%) had HCV mono-infection, 23 (15%) HCV/HIV co-infected, 67 (45%) were HCV uninfected or had unknown HCV status

Table: Characteristics of participants by HCV / HIV status

		HCV+/HIV- n=60	HCV+/HIV+ n=23	HCV- or unknown n=67	Total n=150	p-value
		n (%) or median [IQR]				
Centre	Kiev AIDS Center	0 (0)	12 (52)	39 (58)	51	<0.001
	Kiev Maternity	37 (62)	3 (13)	17 (25)	57	
	Odessa Maternity	23 (38)	8 (35)	11 (16)	42	
Age, years		32 [28, 36]	35 [30, 37]	33 [27, 37]	33 [28, 37]	0.647
Relationship status	Married/co-habiting	56 (93)	16 (70)	62 (93)	134	0.004
	Not married/co-habiting	4 (7)	7 (30)	5 (7)	16	
Education level	< Secondary	7 (12)	5 (22)	0 (0)	12	0.002
	≥ Secondary	53 (88)	18 (78)	67 (100)	138	
Employment status	Full-time or student	16 (27)	6 (26)	33 (49)	55	0.074
	Part-time	13 (22)	4 (17)	10 (15)	27	
	Unemployed	31 (52)	13 (57)	24 (36)	68	
Pregnant previously	No	28 (47)	3 (13)	30 (45)	61	0.013
	Yes	32 (53)	20 (87)	37 (55)	89	
Ever injected drugs	Yes	4 (7)	7 (30)	2 (3)	13	<0.001
	No	56 (93)	16 (70)	65 (97)	137	

## Results – acceptability

- 97% of women supported universal antenatal HCV testing, with no difference by HCV or HIV status (Figure 1)
- 78% would take DAAs in pregnancy if they were safe and approved for use (75%, 65%, 85% for HCV+/HIV-, HCV+/HIV+, HCV-/HCV status unknown respectively), while 22% of women preferred to start treatment after delivery/breastfeeding (Figure 2)
- Among women who considered DAAs in pregnancy acceptable, 68% would take DAAs only if they prevented vertical transmission or had other potential benefits for their baby and 32% would take them for maternal cure regardless.

## Results – acceptability continued...

Figure 1: Acceptability of free universal HCV testing in pregnancy

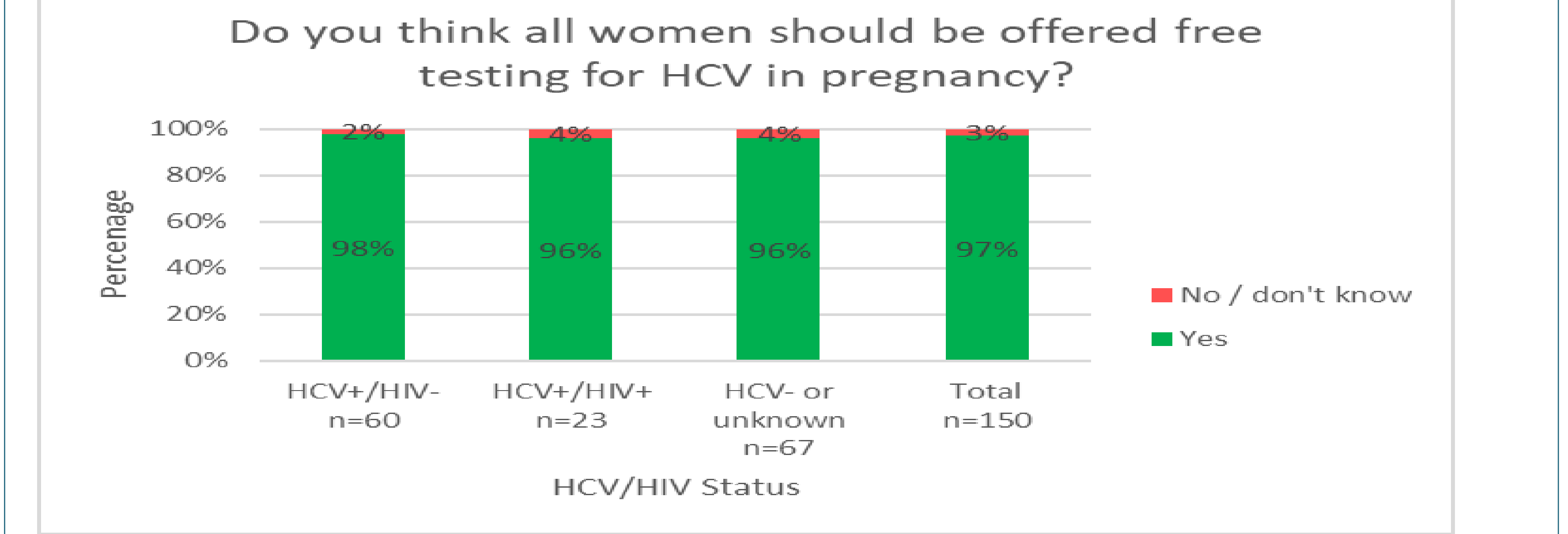
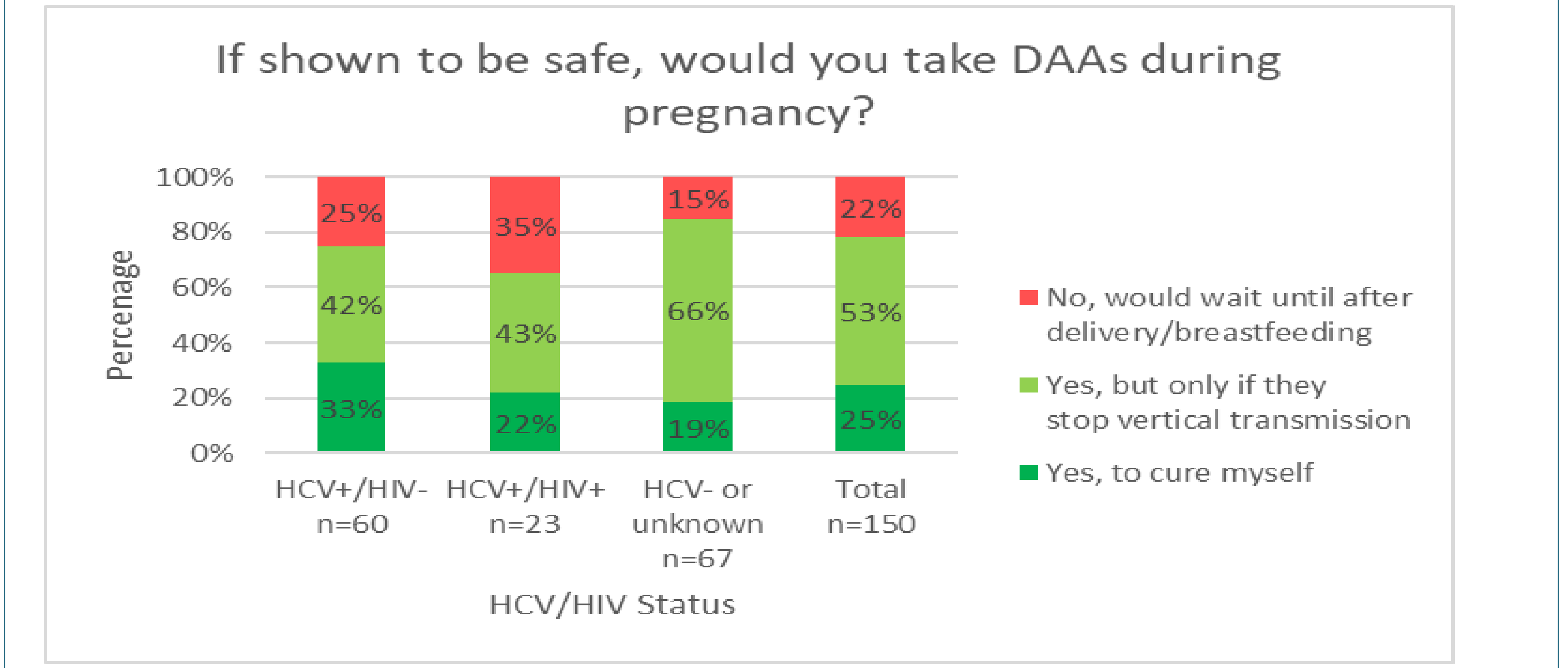


Figure 2: Acceptability of DAAs in pregnancy, if known to be safe



## Conclusions

- Among pregnant and post-partum women in Ukraine, there was very high acceptability of universal HCV screening in pregnancy
- Additionally, DAAs, if approved for use in pregnancy, were acceptable for maternal cure and/or prevention of vertical transmission
- Acceptability of DAAs was high regardless of HCV/HIV status, but was highest (85%) among women without HCV or with unknown HCV status
- Phase II/III trials to evaluate the safety/efficacy of DAAs during pregnancy and breastfeeding are urgently required

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## References

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