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Background & Methods

Background

- Robust epidemiological data to monitor progress of the elimination of hepatitis C virus (HCV) infection are needed
- The European Centre for Disease Prevention and Control contracted the Robert Koch Institute (RKI) to develop a protocol for undertaking HCV prevalence surveys in the general population under SPHERE-C
- We aimed at piloting the stand-alone survey design, one of three designs covered in the protocol, in Stara Zagora, the 6th largest city in Bulgaria

Methods

- Sample size calculated: N=999 (expected prevalence of current HCV infection (anti-HCV and HCV RNA positive) of 1%)
- Probability-based random sample of the general population >18 years, stratified by age and sex, drawn from population registry
- A non-response rate of 50% expected, 1998 persons drawn from registry
- People from sample invited via letter (1 reminder letter)
- Letters were tracked and needed to be picked up at post office
- Local media campaign organised to encourage participation
- Evaluation of protocol, materials and processes done weekly and after end of survey

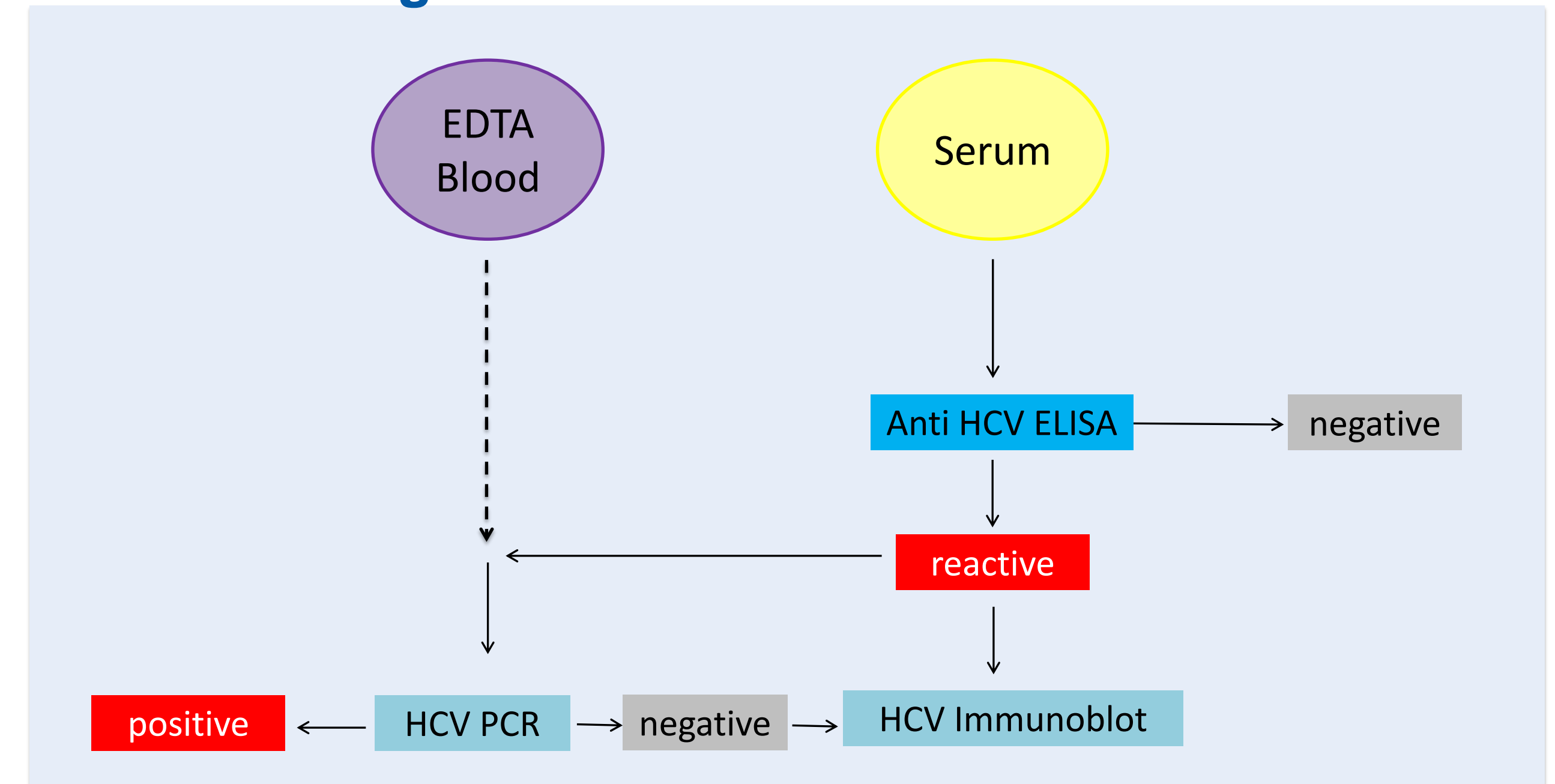
Data Collection

Data collection: 05.09.-16.11 2018 at the Regional Health Inspectorate

Questionnaire and non-participant form

- Participants completed questionnaire, and invitees who declined participation asked to answer non-response questionnaire

Blood Processing



- Those who tested positive were linked to care

Results

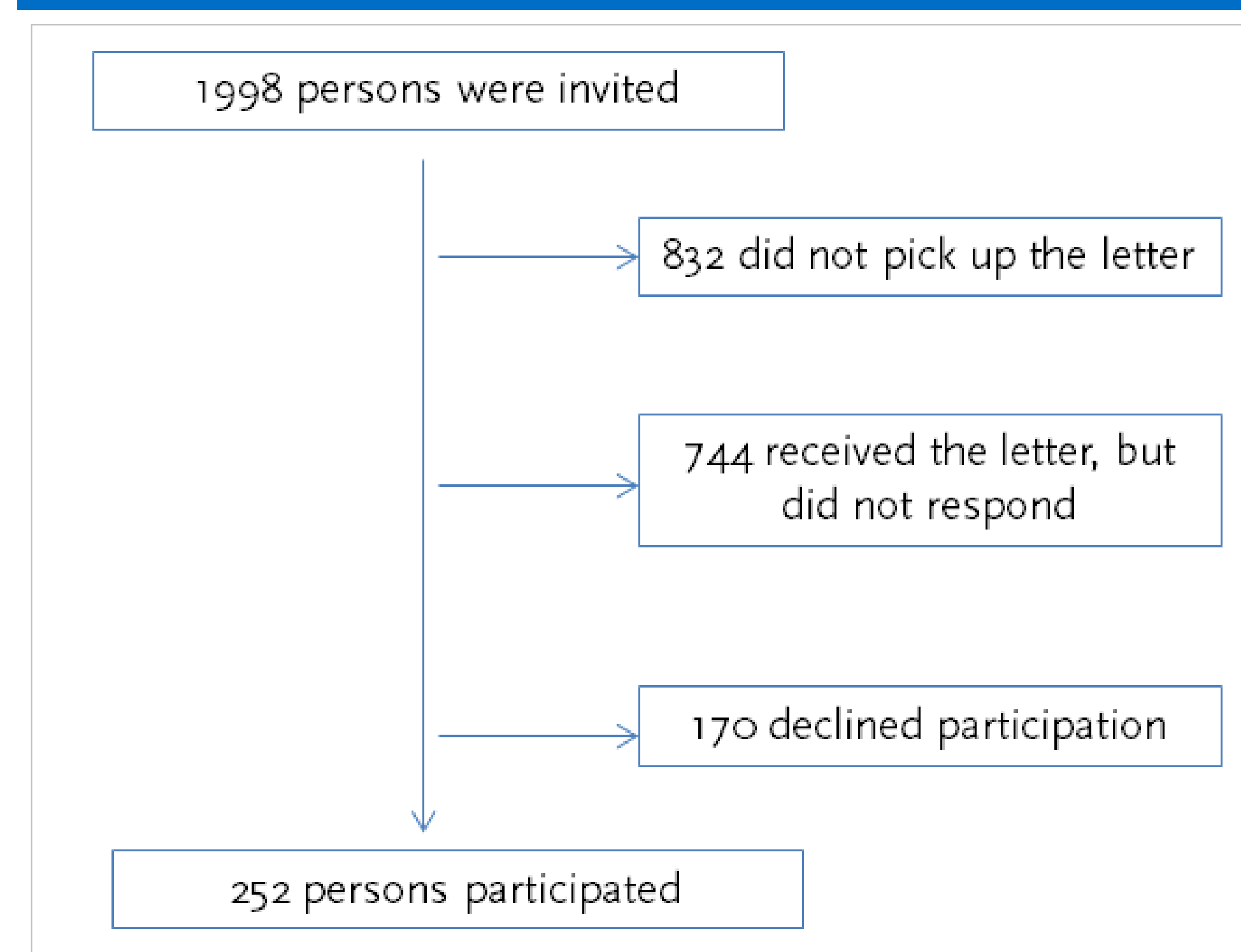
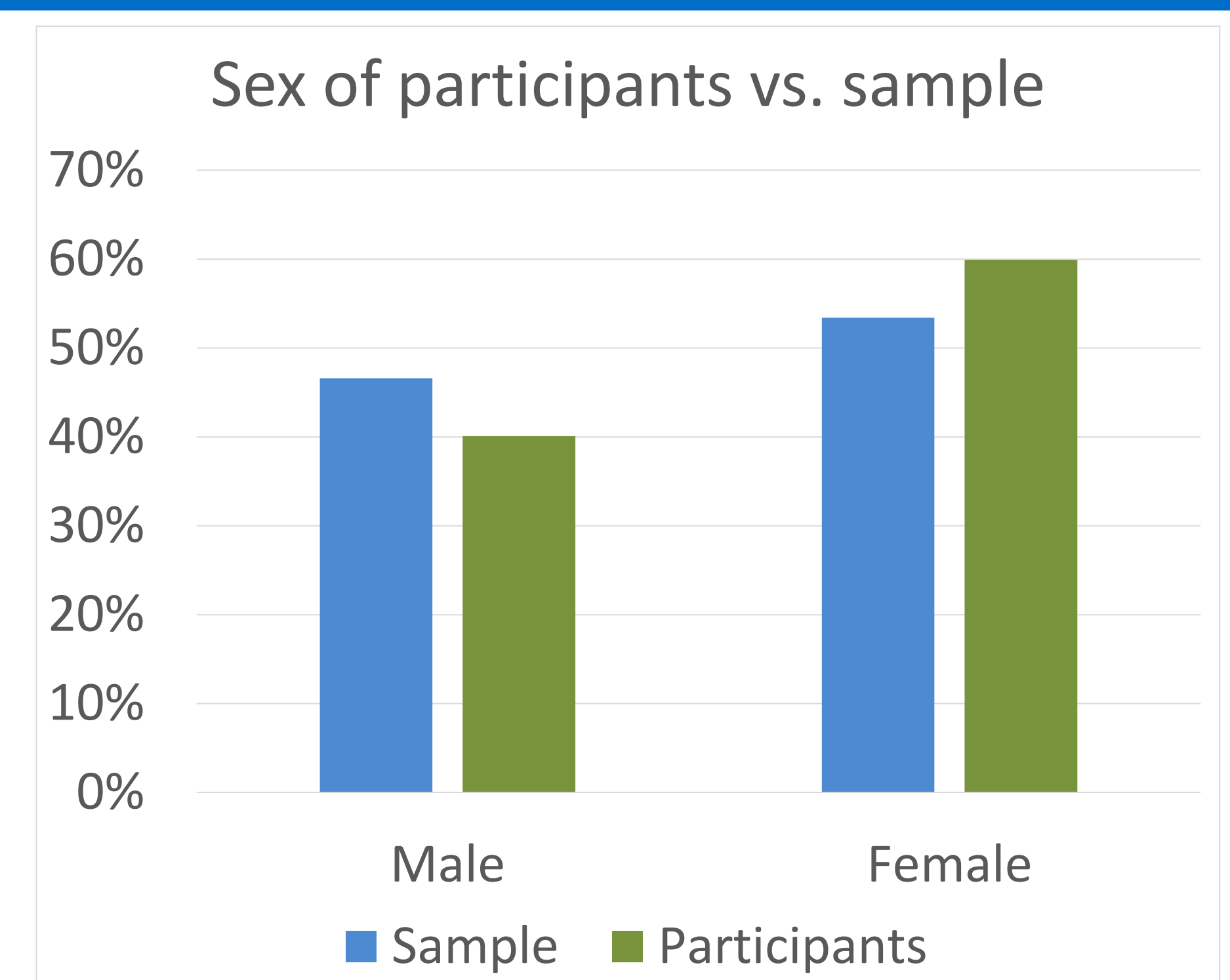
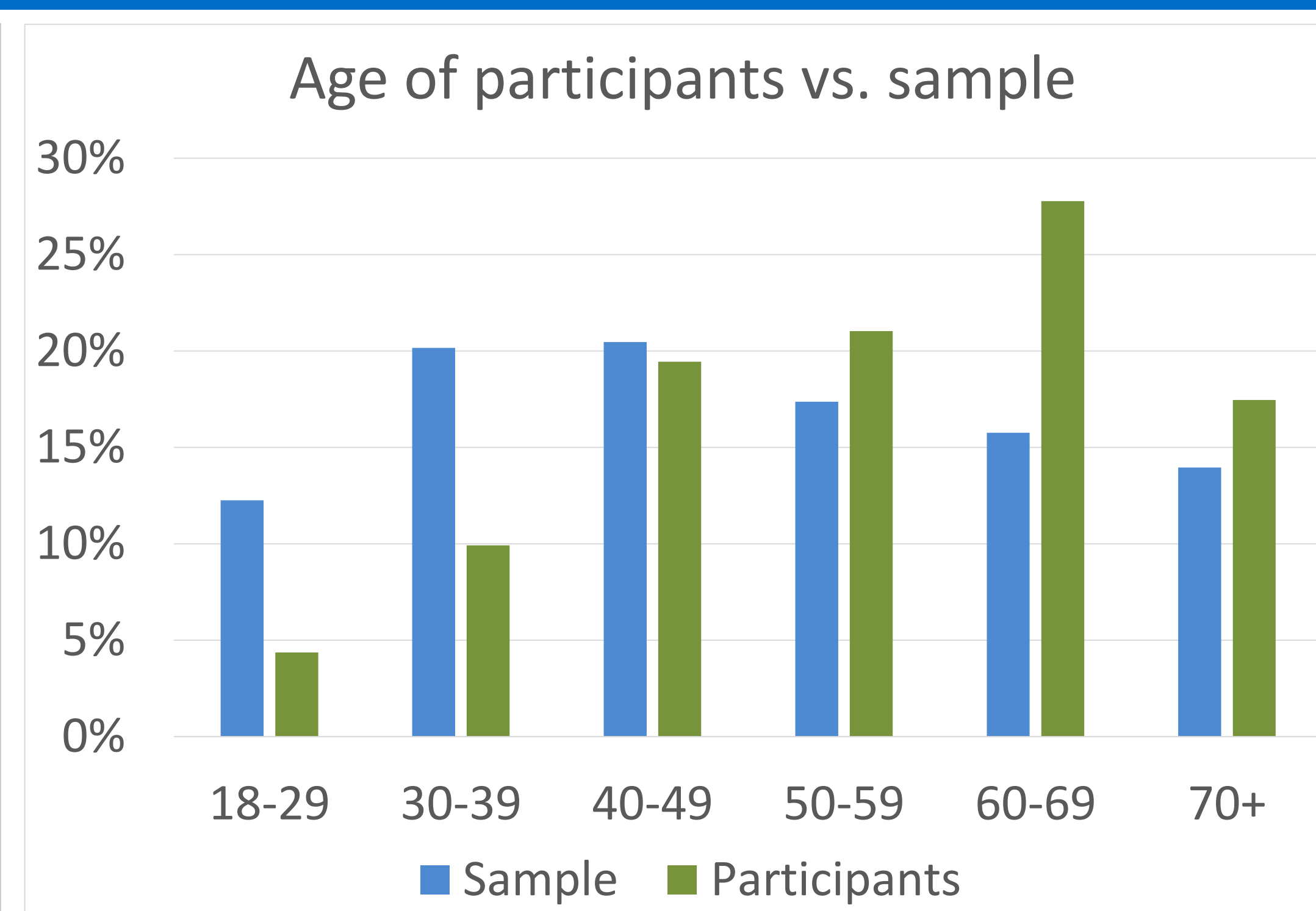


Figure 1: Flowchart of participation



Figures 2 and 3: Age and sex distribution among participants and the representative sample of the general population in Stara Zagora

Demographical information of the 252 participants (12.6%)		
Age	Mean	56 years
	Range	18-95 years
Sex	Women	59.9% (n=151)
	Men	40.1% (n=101)
Ethnicity	Bulgarian	98.8% (n=248)
	Roma	0.8% (n=2)
	Other	0.4% (n=1)
Highest level of education	Elementary education	0.4% (n=1)
	Primary education	4.4% (n=11)
	Secondary education	48.4% (n=122)
	Higher education	46.8% (n=118)

Table 1: Participant characteristics (N=252)

Prevalence

- Three persons tested reactive to anti-HCV
- Two of those were confirmed HCV PCR positive
- One was HCV PCR negative and immunoblot negative
- Anti-HCV prevalence: 0.8%
- Chronic HCV prevalence: 0.8%

Lessons learned

- Planning and preparation of the prevalence survey took longer than expected
- Research into sampling frame and data protection regulations needed in due time
- Recruitment only by invitation letter proved to be insufficient, in particular for men and younger age groups
- Study flow and procedures should be integrated, as much as possible, in existing structures and practices in study site

Conclusions

There was a low response rate, in particular among men and younger age groups. More and different efforts are needed to reach these groups, e.g. by recruitment via telephone or household visit, other incentives, or a reserve sample. The HCV prevalence among survey participants was found to be low (0.8%), as expected in this low-risk general population sample.

Lessons learned from this pilot will be implemented in the overall SPHERE-C protocol, and this work will support best practices for conducting surveys and contribute to reliable data on the HCV epidemiology.

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