

## Patients with chronic hepatitis C virus infection are at high risk of being lost to follow-up. Focused interventions can increase linkage to care

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### To the editor,

Hepatitis C virus (HCV) infection is one of the major causes of chronic liver diseases worldwide(1). The main challenge in HCV treatment today is the identification of undiagnosed and untreated patients (2-4). The World Health Organization (WHO) guidelines recommend treating all infected patients, with no exception. Therefore, global goals were drafted; these include a 90% reduction of new contaminations, a 65% reduction in mortality due to HCV and a treatment rate of 80% in chronic infected HCV patients. These goals have to be achieved by 2030(5, 6). The first aim of this work was to study the prevalence of patients who became lost to follow-up before HCV eradication was achieved and to identify risk factors associated with this phenomenon. The second goal was to reach out to lost to follow-up patients in order to identify risk factors for this behavior and try to restore linkage to care. This study was performed in a tertiary liver unit at Ghent University Hospital. All patients who ever visited the outpatient clinic for HCV infection between 2000 and 2017 were eligible. In total 427 patients could be identified with HCV infection. First, demographic and clinical data were retrieved from the electronic patient files. We focused on successful eradication and occurrence of lost to follow-up. Risk factors for lost to follow-up were searched for using univariate and multivariate analysis. Second, patients lost to follow-up were contacted by phone in order to inquire about their further HCV-related medical history using a standardized flowchart. Ninety-three patients (21.8%) were lost to follow-up. Statistical analysis showed that patients who inject drugs (PWID) and patients who received no treatment had a higher risk to become lost to follow-up (OR=2.225; p=0.003; 95% CI:1.319-3.854 and OR=2.177; p=0.016; 95% CI:1.153-3.894, respectively). Only 34 patients (36.6%) of the 93 lost to follow-up patients could be reached. Ten patients (10.8%) had received treatment in another hospital. The other 24 patients (25.8%) were not in follow-up and did not receive treatment. The main reason to interrupt follow-up and refuse treatment was anxiety for side effects of the therapy in the interferon era. Nine patients (9.7%) were interested in obtaining more information about the new treatment with direct-acting antivirals (DAA's). Eight patients (8.6%) were already cured during their follow-up in our center, in the time gap between data acquisition

Table 1. — Risk factors linked to loss to follow-up

	Odds Ratio	p-value	95% Confidence interval
People who inject drugs	2.255	0.003	1.319-3.854
No treatment for HCV infection	2.117	0.016	1.153-3.894
>1 former treatment for HCV infection	0.215	<0.001	0.094-0.491

and analysis. Fifty-nine patients (63.4%) were not available for contact. Of these, 18 patients (19.4%) were deceased, 27 patients (29.0%) had no contact details and 14 patients (15.1%) never answered the phone.

Patients with chronic HCV infection had a high risk to get lost to follow up in the pre-DAA era. Main risk factors are PWID and being untreated after a first medical contact. Focused patients recall actions by phoning patients, or the primary physician can increase linkage to care and results in more patients being treated for HCV infection.

### Conflict of interest

No conflict of interest regarding this study.

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