

ACTIVE SEARCH TO RETRIEVE LOST-TO FOLLOW-UP HCV PATIENTS (RELINK-C STRATEGY): HEALTH AND ECONOMIC VALUE

Joan Martínez-Campreciós^{1,2}; Raquel Domínguez-Hernández³; Cristina Marcos-Fosch¹; Ariadna Rando-Segura^{4,5}; Mar Riveiro-Barciela^{1,6}; Francisco Rodríguez-Frías^{6,7,8}; Miguel Ángel Casado³; Rafael Esteban^{1,6}; Maria Buti^{1,6}

¹ Liver Unit, Internal Medicine Department, Hospital Universitari Vall d'Hebron, Barcelona, Spain; ² Medicine department, Universitat Autònoma de Barcelona, Bellaterra, Spain; ³ Pharmacoeconomics & Outcomes Research Iberia (PORIB), Madrid, Spain; ⁴ Department of Microbiology, Hospital Universitari Vall d'Hebron, Barcelona, Spain; ⁵ Department of Microbiology, Universitat Autònoma de Barcelona, Bellaterra, Spain; ⁶ CIBERehd, Instituto Carlos III, Barcelona, Spain; ⁷ Biochemistry Department, Clinical Laboratories Hospital Universitari Vall d'Hebron, Barcelona, Spain; ⁸ Liver Pathology Unit, Biochemistry and Microbiology Departments, Hospital Universitari Vall d'Hebron, Barcelona, Spain

BACKGROUND

Spain is on track to eliminate Hepatitis C (HCV) infection by 2030 after treating more than 140,000 chronic infected individuals in the last six years mostly since the implementation of the Spanish national plan for hepatitis C in response to the highly effective direct-acting antiviral (DAAs) [1]. This public health challenge is leading physicians and authorities to design new strategies in order to increase the diagnosis of unknown HCV cases and to retrieve untreated or lost-to-follow-up (LTFU) patients.

METHODS

Search and retrieval

- The ReLink-C strategy is based on a retrospective search conducted from January to December 2019 to find HCV-RNA+ve cases from the central laboratory department of the Barcelona north health area (450,000 inhabitants). Then, a review of medical records was carried out to find out previously detected viremic patients that were not linked to care.
- After the search, unlinked patients with available contact information were deemed eligible for retrieval and were contacted by phone with a maximum of five attempts to offer them an appointment.
- Then, a re-evaluation of the HCV status (HCV RNA determination) and assessment of fibrosis including HBV and HIV screening were conducted (Figure 1).
- DAAs therapy was offered to those eligible for HCV therapy.

Figure 1. Steps for HCV patients retrieval



HCV, Hepatitis C virus; LTFU, lost-to-follow-up; DAA, direct-acting antiviral

Economic evaluation

- The cost of ReLink-C strategy was estimated adding the cost of the healthcare resources for HCV linkage to care and HCV diagnosis [2], as well as the costs related to the hours allocated to the search and medical evaluation [3] (Table 1).
- The lifetime health and economic outcomes of ReLink-C strategy compared with non-intervention were estimated using a Markov model previously published [4] including only direct cost relative disease management. This model included all candidates to HCV therapy with available contact information.
- The results showed the number of decompensated cirrhosis cases, hepatocellular carcinoma, liver transplantation and mortality avoided, as well as the costs associated with liver complications management.

Table 1. Diagnostic and search unitary costs

Resources	Costs	References
Diagnostic tests*	€173	[3]
Evaluación Fibrosis†	€159	
Visit (First)	€171	
Visit (Second)	€80	
Medical cost/hour‡	€26	
		Estimated

*Diagnostic test included: blood count; basic hemostasis, basic biochemistry, P24 antigen (HIV serology), anti-HBs and anti-HBc antigen, HCV viral load, HCV genotype; † Only two patient were performed; ‡ Calculated from the average annual gross remuneration of a medical specialist (€54,590)

AIM

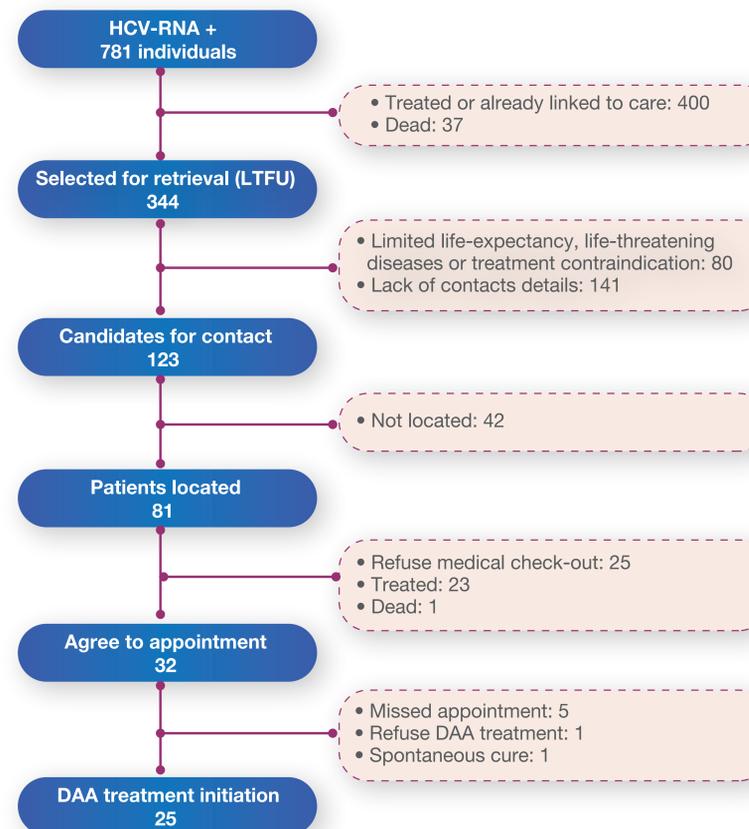
The aim of this study was to retrieve LTFU HCV viremic patients who could benefit from treatment (ReLink-C strategy) and to perform an economic evaluation to assess its effectiveness and economic value.

RESULTS

Search and retrieval

- During the period of study, 781 individuals with HCV RNA detectable were found of which, 344 (44%) were LTFU and of those, 123 were candidates for contacting.
- A total of 81 (66%) patients were located, 27 (33%) attending to appointment and finally 25 (31%) patients were treated (Figure 2).

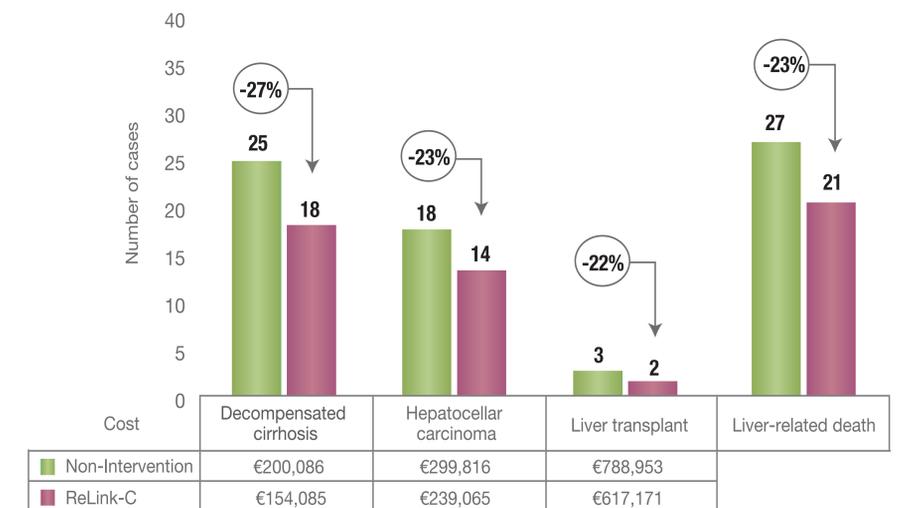
Figure 2. Flowchart of the ReLink-C strategy



Economic evaluation

- The investment associated to ReLink-C strategy was €13,876 (€11,521 associated to 90 hours of search and €2,356 to diagnosis).
- In the Markov model 98 RNA-HCVve+ patients were included (123 candidates for contact excluding 23 already treated, 1 death and 1 spontaneous cure). The ReLink-C strategy showed that treating 25 patients with DAAs vs no patients treated in non-intervention reduced mortality and liver complications generating €278,534 savings associated to its management (Figure 3).

Figure 3. Number of cases of liver complications, mortality and costs projected lifetime



REFERENCES

- [1] Strategic plan for tackling hepatitis C in the Spanish national health system. Available from: <https://www.mscbs.gob.es>
- [2] Official prices of the Catalan Institute of Health
- [3] Informe de salarios médicos: España. Medscape 2018. Available from: <https://espanol.medscape.com>
- [4] Turnes J et al. Gastroenterol Hepatol. 2017 Health

CONCLUSION

- The ReLink-C strategy allowed selecting for contact 123 HCV patients among 344 LTFU selected for retrieval.
- Eighty-one (66%) among the lost were located and 32 accepted to attend a medical visit. At the end, a third of those contacted were treated and cured.
- The health economic evaluation of the ReLink-C strategy showed to be cost-effective.

The International Liver Congress™ 2021, 23-26 June



Study funded by Gilead Sciences