

# Acceptability of the Delegation of Tasks by PLHIV for the Treatment of Hepatitis C by General Physicians in Public Health Facilities in the Centre Region of Cameroon in 2022

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DOI: <https://doi.org/10.51244/IJRSI.2024.1109024>

Received: 23 August 2024; Accepted: 02 September 2024; Published: 30 September 2024

## SUMMARY

**Introduction:** Viral Hepatitis C is a public health problem that affects approximately 58 million people worldwide. In 2021, its prevalence in Cameroon was 1.1% in the general population and some small biased studies indicate a range of 0 to 7.2% in the Cameroonian population infected with HIV.

**Methods:** The general objective of this study was to evaluate the acceptability of task delegation for the treatment of Hepatitis C within HIV care services by general practitioners in public health facilities in the region. of the center involved in the DEHEP-C project in 2022. This was a cross-sectional study of HIV patients cared for in 05 public health facilities in the said region comprising two components, one descriptive and the other analytical. The results were presented with a 95% confidence interval, odds ratios (crude and adjusted) and significance with value  $P < 0.05$ .

**Results:** 510 patients were included, the general satisfaction of PLHIV with the services offered by the FOSAs in the study was 75%. The acceptability of the delegation of tasks for the treatment of Hepatitis C within HIV care services by general practitioners by the respondents was 89%. Factors such as residing in a rural area (aOR = 1.63 95% CI = 1.40 – 3.78 ;  $p < 0.01$  ), being a regular patient in a 4th category FOSA (aOR = 1.59 95% CI = 1.43 – 3.47 ;  $p < 0.01$  ), following 3<sup>rd</sup> line treatment (aOR = 0.27 95% CI = 0.10 – 0.69;  $p < 0.01$  ) turned out to be significant factors of the acceptability of task delegation.

**Conclusion:** The majority of PLHIV interviewed during this study were in favor of the delegation of tasks for the treatment of Hepatitis C by general practitioners in patients infected with HIV within the CTA or UPEC of the Central region.

**Keywords:** Evaluation, Use, Management, Hepatitis C, General physicians, HIV

## RESUME

**Introduction :** L'Hépatite virale C est un problème de santé publique qui touche environ 58 millions de personnes dans le monde. En 2021, sa prévalence au Cameroun était de 1,1% dans la population générale et quelques petites études biaisées indiquent une fourchette de 0 à 7,2 % dans la population camerounaise infectée par le VIH.

**Méthodes :** La présente étude avait pour objectif général d'évaluer l'acceptabilité de la délégation de tâches pour le traitement de l'Hépatite C au sein des services de prise en charge du VIH par les médecins généralistes

dans les formations sanitaires publiques de la région du centre impliquées dans le projet DEHEP-C en 2022. Il s'agissait d'une étude transversale auprès des patients atteints du VIH pris en charge dans 05 Formations Sanitaires (FOSA) publiques de ladite région comportant deux volets dont un descriptif et l'autre analytique. Les résultats ont été présentés avec un intervalle de confiance à 95%, des rapports de cotes (brut et ajusté) et une significativité avec valeur  $P < 0,05$ .

**Résultats :** 510 patients ont été inclus, la satisfaction générale des PVVIH vis-à-vis des services offerts par les FOSA de l'étude était de 75%. L'acceptabilité de la délégation de tâches pour le traitement de l'Hépatite C au sein des services de prise en charge du VIH par les médecins généralistes par les enquêtés était de 89%. Des facteurs tels que résider en milieu rural (aOR = 1,63 IC95% = 1,40 – 3,78 ;  $p < 0.01$ ), être un patient régulier dans une FOSA de 4<sup>ème</sup> catégorie (aOR = 1,59 IC95% = 1,43 – 3,47;  $p < 0.01$ ), suivre un traitement de la 3<sup>ème</sup> ligne (aOR = 0,27 IC95% = 0,10 – 0,69 ;  $p < 0.01$ ) se sont révélés être des facteurs significatifs de l'acceptabilité de la délégation des tâches.

**Conclusion :** La majorité des PVVIH interrogés au cours de cette étude était pour la délégation de tâches pour le traitement de l'Hépatite C par les médecins généralistes chez les patients infectés par le VIH au sein des Centres de Traitement Agréés ou Unité de Prise en charge de la région du Centre.

**Mots clés :** Evaluation, Utilisation, Prise en charge, Hépatite C, Médecin généraliste, VIH

## INTRODUCTION

Viral Hepatitis C (HCV) constitutes a major public health problem worldwide and particularly in sub-Saharan countries due to its genetic diversity, its chronicity and the cost of treatment [1, 2] . An estimated 58 million people worldwide (with 1.5 million new infections/year) live with chronic Hepatitis C infection, which carries a risk of progression to liver fibrosis, Cirrhosis and Hepatocellular Carcinoma. (CHC) [3] . Studies suggest that the prevalence of HCV in Cameroon is low (around 1.1%) with many disparities depending on the regions and the age of the participants [3]. For example, the prevalence is approximately 7.6% in the 55-59 age group [3]. In 2019, the World Health Organization (WHO) estimates that around 290,000 people died from Hepatitis C [1]. Concerning risk groups, we find: pregnant women, blood donors, healthcare workers, patients on hemodialysis and homozygous sickle cell patients [3]. Similar to other Ribonucleic Acid (RNA) viruses, HCV has a high rate of genetic variability generated by its high mutation rate and the actions of evolutionary forces over time [1]. In patients with chronic Hepatitis C virus (HCV), treatment is based on the administration of direct-acting antivirals [4] .

Patients co-infected with Hepatitis C and HIV more often develop progressive liver disease, as evidenced by the higher incidence of cirrhosis, hepatocellular carcinoma, and liver-related mortality [5, 6] . Therefore, in this study, priority is given to HIV-infected people for early diagnosis of HCV and subsequent linkage to Hepatitis C treatment. Integrating HCV-related services into the national program HIV AIDS control in Cameroon is expected to be effective, as HIV co-infected patients are more likely to receive medical care than the HCV mono-infected population due to increased national coverage levels of antiretrovirals [7] .

The treatment of Hepatitis C in Cameroon is expensive and carried out by hepato-gastroenterologist specialists. The insufficiency of this staff to monitor all these patients sometimes leads to discouragement and abandonment of patients for their follow-up. Therefore we asked ourselves the question of knowing what is the capacity of public health facilities in the central region to care for patients co-infected with HIV and Hepatitis C? To answer this question, the main objective was to evaluate the acceptability of the delegation of tasks by PLHIV for the treatment of Hepatitis C by general practitioners in public health facilities in the Central region in 2022 . Specifically, we first evaluated the usefulness of the services offered by the HIV care services in the target FOSA, then we evaluated the acceptability of the delegation of tasks in the care of HCV. within HIV care services and finally we identified the factors associated with the acceptability of the delegation of tasks in HCV care within HIV care services among PLHIV.

## Main Objective

Evaluate the acceptability of task delegation by PLHIV for the treatment of Hepatitis C by general practitioners in public health facilities in the Central region in 2022.

## Specific Objectives

1. Evaluate the use of services offered for HIV care in the target health facilities among PLHIV;
2. Determine the acceptance rate of task delegation for HCV treatment within HIV care services among HIV-infected patients by general practitioners;
3. To identify factors associated with the acceptability of task delegation for HCV treatment within HIV care services among HIV-infected patients by general practitioners.

## METHODOLOGY

### Study design

This was a two-part cross-sectional study including a descriptive part and an analytical part in a hospital setting targeting beneficiaries of HIV care services in 05 public health facilities in the Center region from December 2021 to July 2022. The descriptive part aimed to evaluate the use of HIV care services and the acceptability of the test and the delegation of tasks with regard to the management of Hepatitis C in the service. HIV care of the Health Facility (HF). In the analytical component, the aim was to determine the factors associated with the acceptability of the delegation of tasks in the management of HCV within HIV care services for People Living with HIV (PLHIV).

**Study population:** The descriptive part was carried out in 05 public FOSAs in the Central region of Cameroon selected from the 11 Health Facilities (HF) of the “Demonstration of the feasibility of treating chronic hepatitis C in HIV co-infected patients on antiretroviral therapy in the Central Region of Cameroon (DEHEP-C)” project. The data for this component were collected by a questionnaire administered face-to-face to PLHIV benefiting from services offered by UPEC or CTA.

**Sampling and sample size:** We carried out sampling by convenience and by quota where a questionnaire was administered to regular PLHIV at the FOSA. As part of the DEHEP-C project via its financing, we have set ourselves the goal of investigating at least **500** patients to be able to satisfy the challenges of the said project. This size was distributed between the FOSA according to the total number of PLHIV received during the year 2021 within the FOSA care service.

**Data analysis:** The analysis of data from the data questionnaires was carried out using Epi Info software version 7.2.2.6 and MS Excel 2013 and the results were presented with 95% confidence intervals (CI). The fixed effect is presented as odds ratios (OR) a 95% CI and a P value  $<0.05$  were used to indicate the significance of the results.

**Ethical consideration:** Ethical approval was obtained from the Regional Committee for Ethics and Research in Human Sciences of the Central region. We also obtained approval from the regional delegation of public health of the Center, the Heads of target Health Districts services as well as that of the target health facilities.

## RESULTS

### Characteristics of study participants

510 patients were included in this study, the sample consisted mainly of female subjects (326/510) or 63.92%. The most represented age group was that between 21 and 34 years old (154/510) or 30.20%. Most of the participants had a job (249/510) or 48.82%. 254 participants out of 510, or 49.80%, are married, and 219 subjects have a level of primary education, or 42.94%. 74.31% of our study population were patients in line 1 and 323 participants lived in an urban area, a percentage of 63.33%.

## Use of HIV services

99% of the patients recruited (507/510) are satisfied with the treatment proposed, 63.53% (324/510) of them wait 30 minutes to more than an hour before meeting a consultant and almost 35% of patients surveyed prefer to confide in a nurse in case of concerns and for 90% of patients, these complaints are taken into consideration.

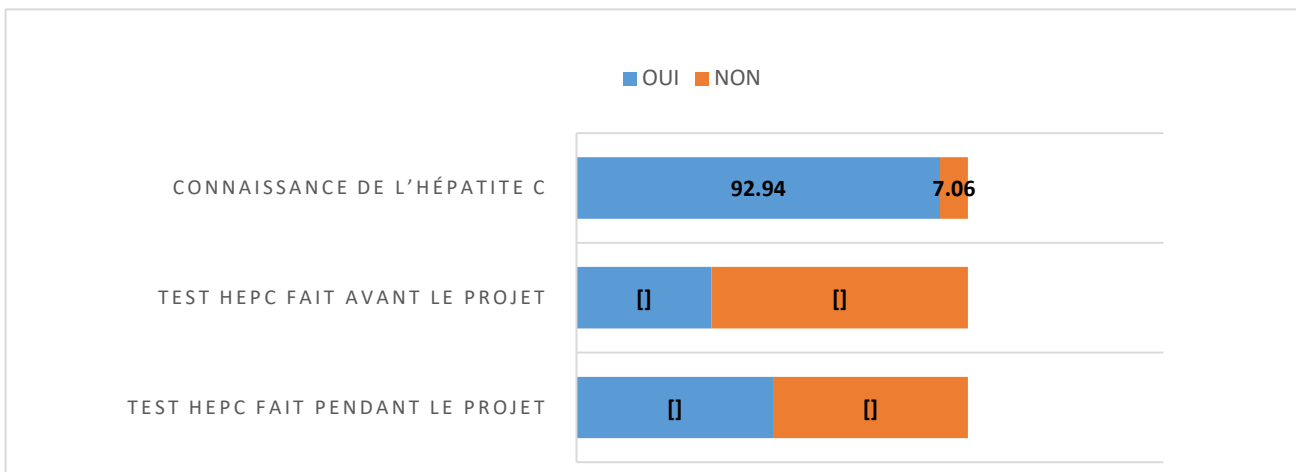
**Table 1:** Distribution of PLHIV according to satisfaction with treatment, waiting time and trusted staff

Variables and Modalities	Frequency (N=510)	Percentage (%)	95% CI
<b>Treatment satisfaction</b>			
Dissatisfied	3	0.59	0.20 - 1.72
Satisfied	<b>507</b>	99.41	98.28 - 99.80
<b>Waiting time for consultation</b>			
Less than 15 minutes	7	1.37	0.67 - 2.81
15-30 minutes	179	35.10	31.08 - 39.34
30 minutes-1 hours	<b>202</b>	39.61	35.46 - 43.92
>1 hour	122	23.92	20.42 - 27.81
<b>Who resolves your complaints?</b>			
Doctor	136	26.67	23.01 - 30.67
Nurse)	<b>177</b>	34.71	30.70 - 38.94
Person	36	7.06	5.14 - 9.62
APS	161	31.57	27.69 - 35.73
<b>Consideration of these complaints</b>			
No	44	9.22	6.52 - 11.43
Yes	<b>430</b>	90.78	88.57 - 93.48
<b>TOTAL</b>	<b>474</b>		

## Acceptability of the test and delegation of tasks with regard to the management of Hepatitis C

### Acceptability of the test

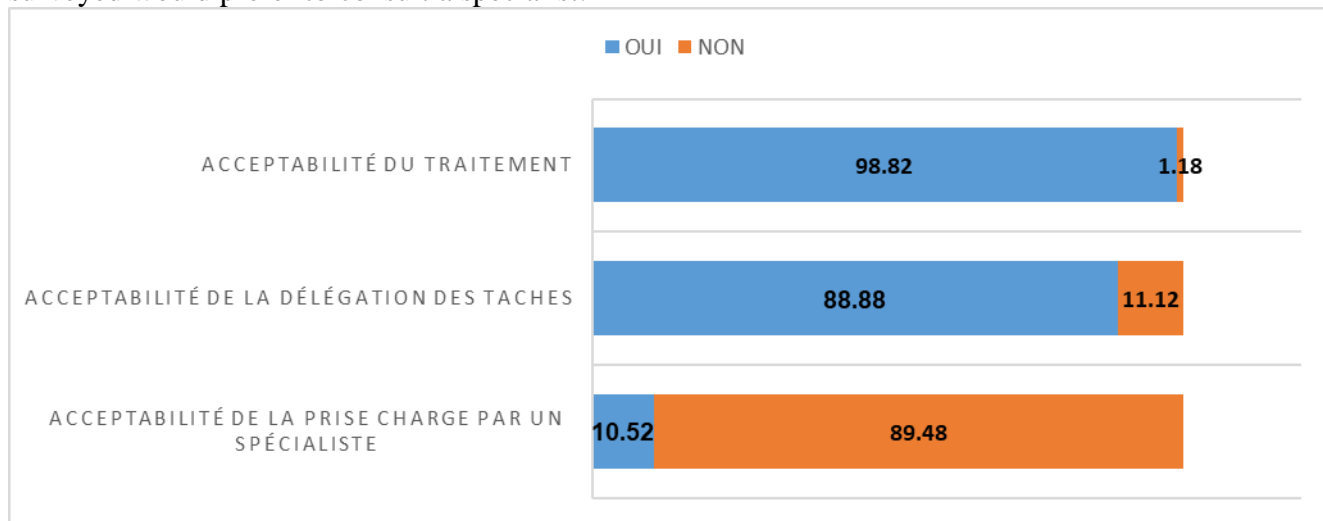
93% of participants have already heard of Hepatitis C and most of them say that the safest way to cure is follow-up in hospital. 176/510 patients had already had to take the HCV screening test before the project and 256 among the 510 (50.20%) respondents agreed to do it again or to do it for the first time compared to 254 who refused.



**Figure 2: Distribution of knowledge of Hepatitis C and acceptability of HCV testing.**

**Acceptability of delegation of tasks with regard to the management of Hepatitis C**

98.82% (504/510) of patients recruited are ready to undergo treatment in the event that the HCV screening test turns out to be positive; 89% (448/504) of our study population agree with the delegation of tasks for the treatment of Hepatitis C within HIV care services by non-specialized personnel; 10.52% (53/504) of patients surveyed would prefer to consult a specialist.



**Figure 3: distribution of acceptability of treatment and delegation of tasks to general practitioners.**

**Factors associated with the acceptability of delegation of tasks in the management of HCV within HIV care services among PLHIV.**

We noted that the factors associated with the acceptability of the delegation of tasks for the treatment of Hepatitis C within HIV care services among PLHIV by non-specialists are:

- Living in a rural area
- Be a regular patient in a 4<sup>th</sup> Category Health Facility
- Third line treatment

**Table 2: associated factors**

Modality	GOLD	IC	P-value
Living in a rural area	0.274	0.10 - 0.69	0.006

Be a regular patient in a 4 <sup>th</sup> category FOSA	1,633	1.40 - 3.78	0.002
3 <sup>rd</sup> line treatment	1,597	1.43 - 3.47	0.004

## DISCUSSION

### Use of HIV services

Regarding waiting time, most (324/510) patients wait between 30 minutes and more than an hour to be consulted. In a study conducted in Congo in 2016 on prolonged waiting times at medical consultation services, it was found that 20% of patients surveyed waited more than 30 minutes before being consulted [8]. This result can be explained by the fact that in our case the number of consultants is lower than the number of expected patients. Furthermore, this result can be explained by the fact that there is no exact time for appointments, which means that the morning rush causes waiting times longer than normal (22 minutes).

### Satisfaction of PLHIV with HIV care services

At the end of this study, we found that 75% (381/510) of respondents said they were satisfied with the quality of the HIV care process. A study carried out in Tanzania in 2011 assessing patient satisfaction with HIV care services showed that 94.7% of respondents were satisfied with the care provided by the staff, a result higher than that of our study [9]. Another study conducted in Burkina Faso in 2014 on the satisfaction of AIDS patients cared for in a health district showed that just 58.4% of respondents were satisfied with the services offered, which is much lower than the result we found. as part of our study [10]. These percentages remain satisfactory overall and are the result of the desire of states and the WHO to improve HIV care for several decades now.

### Knowledge of Hepatitis C and acceptability of HCV testing

From the present study, it appears that 474 participants out of the 510 recruited (92.94%) had already heard of Hepatitis C while 7% of the same sample claimed not to have heard of it. Regarding the means of cure, 32.65% did not know of any means of cure for Hepatitis C and 20.20% said that it was an incurable disease so more than 50% of our respondents were not aware. current treatment for Hepatitis C. In Togo in 2020, a study relating to the evaluation of knowledge on viral Hepatitis C in a Hospital Center in Lomé revealed that 22% of respondents had not heard of of Hepatitis C a result much higher than ours. Such a difference may be due to the educational talk sessions that are given every morning to PLHIV at the different sites of our study. This same study showed that 51% of those questioned did not know that there is a treatment for HCV, a result similar to that which we found, this can be explained by the poor communication around this treatment and by the rarity of this pathology in the community in general [11].

Regarding test acceptability, 50.20% of participants agreed to be tested for anti-HCV antibodies using rapid tests. A "Test N' Treat" study for the elimination of Hepatitis C conducted in Egypt in 2016 as part of a community demonstration project showed an acceptability of the test of 86% [12]. Another study carried out in France among patients from sub-Saharan Africa instead showed a test acceptability rate of 61% [13]. In the two studies mentioned above, the percentage of acceptability of the HCV test remains higher than that which we found. This may be the result of our participants' lack of time because more than 50% of those who refused the test said they did not have the time to devote to us for this test.

### Acceptability of treatment and delegation of tasks to general practitioners

Asked whether patients would accept HCV treatment if the test was positive, 98% of the 510 patients surveyed said "YES". A similar result was found in the context of a study conducted on the acceptability of HCV treatment among drug users in Canada. They found that 80% of participants accepted HCV treatment [14]. Such high percentages are better understood with the advent of awareness, media coverage of health facts and patients are increasingly aware of the burden of HCV disease within their group.

The vast majority of our sample are for the delegation of tasks in the management of Hepatitis C by general practitioners within UPEC or CTA, which allows us to say that our research hypothesis was true. 88.88% of respondents agree with this delegation compared to only 11.12% who do not. This can be explained by the fact that most of them are already satisfied with the efforts made for HIV care. In addition, the absence of specialists in rural localities, the long distance between rural areas and metropolises, the high cost of specialized consultation and time constraints are realities in our context which largely favor this choice. The proof is that only 10% of those who are against task delegation feel able to see a specialist in the event of a positive test for follow-up.

### **Factors associated with the acceptability of delegation of tasks to general practitioners**

At the end of this study, we noted that residing in a rural area, being a regular patient in a 4th category FOSA, following third-line treatment were the factors associated with the acceptability of the delegation of tasks to general practitioners.

The positive association between the acceptability of delegation of tasks and the rural area of residence may be due to the fact that in rural areas the number of specialist doctors (hepato-gastroenterologists in our case) is very small, leaving these areas to come to town to meet a specialist can prove difficult for local residents. The cost of a specialist consultation may be beyond the means of residents living in rural areas.

There is also a positive association between belonging to a 4th category health facility and the acceptability of the delegation. This may be due to the composition of our sample, which included 04 District Hospital out of the 05 Health Facilities chosen for the study. In addition, in FOSAs in this category, the active line is generally low, which leads to better proximity between staff and patients compared to those in the 2<sup>nd</sup> category health facility where the active line is much larger.

The negative association between the acceptability of task delegation and following 3rd line treatment may be explained by the fact that many patients in this line of treatment are not satisfied with the HIV care services provided. by the FOSA.

Even if the positive association observed between the acceptability of task delegation and patient satisfaction with HIV care services is not significant, it is understandable. If the patient is comfortable in managing his HIV disease, there is a good chance that he will accept treatment from his usual doctor.

## **CONCLUSION**

The general objective of this research project was the acceptability of the delegation of tasks by PLHIV for the treatment of Hepatitis C by general practitioners in public health facilities in the Center region in 2022 as part of the DEHEP-C project. It appears that the general satisfaction of PLHIV with the services offered by the Health Facilities in the study is 75%. The acceptability of the delegation of HIV care tasks for the treatment of Hepatitis C by general practitioners by the respondents was 89%. Factors such as residing in a rural area, being a regular patient in a 4th category FOSA, following third-line treatment were found to be significant factors in the acceptability of task delegation after logistic regression. with two models.

An improvement in HIV care services and an effective delegation of tasks in the management of Hepatitis C by general practitioners within the CTA and UPEC will address the problem of the insufficient number of specialists and the high cost. care and will help avoid the displacement of rural populations. Alongside this delegation, education of this risk group remains necessary for better knowledge of Hepatitis C and better acceptability of the screening test.

- **What we know about this subject:** specialized management of Hepatitis C in the HIV population is expensive and can be difficult for low-income patients, under the supervision of a doctor specialist, a general practitioner can fulfill certain functions in the management of Hepatitis C, hence our study.
- **Conflicts of interest:** None
- **Contribution of the authors:**

**Design:** Gile Loïc Kongne Choupo, Charles Kouanfack , Armelle Viviane Ngomba , Emilienne Ebouki , **Data collection:** Gile Loïc Kongne Choupo, Aphrodite Olive Paola Dimalla . **Analysis and interpretation of data:** Gile Loïc Kongne Choupo, Charles Kouanfack , Armelle Viviane Ngomba , Emilienne Ebouki , Aphrodite Olive Paola Dimalla . **Editing of the manuscript:** Gile Loïc Kongne Choupo, Charles Kouanfack , Armelle Viviane Ngomba , Emilienne Ebouki , Aphrodite Olive Paola Dimalla , Guy Roger Nsenga Djapa and Siméon Pierre Choukem . **All authors read and approved the final draft for publication.**

### • Limitations and strengths

The main strengths of our study were the presence of the DEHEP-C project which facilitated the implementation of our study, the presence of funding which allowed us to scrupulously respect the indications of the protocol. The main limitations of our study are that it only took place in 05 health facilities in the Central region and it only concerned public health facilities and we didn't explore some demographic factors such as socioeconomic, status, access to healthcare resources, and individual health literacy.

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