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# Six-month outcomes after a GP phone call during the first French COVID-19 lockdown (COVIQuest): a cluster randomised trial using medico-administrative databases

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## ABSTRACT

**Objectives** The first COVID-19 lockdown raised concerns about reduced access to primary care, especially for people with chronic diseases particularly at risk in the absence of follow-up. However, the COVIQuest trial, evaluating the impact of a general practitioner (GP) phone call (intervention) to chronic patients with cardiovascular disease (CVD) or mental health disorder (MHD) concluded that the intervention had no effect at 1 month on the rate of self-reported hospitalisations in the CVD subtrial, whereas the intervention group in MHD subtrial might have a higher rate. This second part of the study aimed to describe the 6 month hospitalisation and specialised consultation rates, using the French health data system (*Système National des Données de Santé*). The secondary objective was to describe these rates during the same period in 2019.

**Design** A cluster randomised controlled trial, with clusters being GPs.

**Setting** Primary care, 149 GPs from eight French regions.

**Participants** Patients ≥70 years old with chronic CVD or ≥18 years old with MHD.

**Interventions** A standardised GP-initiated phone call aiming to evaluate patient's need for urgent care (vs usual care for control groups).

**Primary and secondary outcome measures** The occurrence of at least one hospitalisation at end point 31 October 2020 (randomisation 30 April 2020), excluding those starting on 30 April 2020, was measured as planned. Another main outcome was the occurrence of at least one specialised consultation during the same period. These 6 month effects were studied, using a logistic regression model within a generalised estimating equation framework, for each subtrial.

**Results** 4640 patients were included: 3274 cardiovascular (mean age 79.9±7.0 years; 57.8% male) and 1366 psychiatric (53.2±7.0; 36.5%). For both subtrials, the intervention patients were significantly more hospitalised than the control patients, respectively, 17.3% versus 14.9% of CVD patients (OR=1.26 (1.05 to 1.52)); 14.4% versus 10.7% of MHD patients (OR=1.40 (1.00 to 1.96)). During the same period in 2019, the hospitalisation rates were, respectively, 16.3%, 18.2%, 15.8% and 14.8%. The proportions of patients with at least one specialised consultation were not different between the intervention and control groups, respectively, 24.6% versus 24.3% for CVD patients (OR=1.06 (0.85 to 1.32)); 26.5% versus 24.4% for MHD patients (OR=1.15 (0.84 to 1.57)). During the same period in 2019, these rates were, respectively, 22.7%, 24.6%, 28.0% and 25.5%.

**Conclusions** The intervention was associated with higher rates of hospitalisation at 6 months in patients with MHD or CVD. No intervention impact was found in outpatient care. These results are difficult to interpret because of a potential artefact induced by national campaigns promoting medical use during lockdown, overlapping the study inclusion period. This study showed that medico-administrative databases could represent a complementary cost-effective tool to clinical research for long-term and healthcare consumption outcomes.

**Trial registration number** NCT04359875.

## STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ More than 4000 patients have been included in this large multicentre randomised controlled trial.
⇒ Medico-administrative databases used (hospitalisations, consultations and drug deliveries) to assess the effect of the intervention were complete and cost-effective.
⇒ The intervention effect may have been impacted by two circumstances: public national campaigns promoting medical use during lockdown, and the end of the lockdown period which occurred shortly after the beginning of the study.

## INTRODUCTION

The COVID-19 pandemic, which emerged in Europe in January 2020,[1 2] massively affected the healthcare systems worldwide, even calling COVID-19 a syndemic.[3–5] This concept aims to describe how COVID-19 spread with

pre-existing conditions but also how it was driven by larger political, economic and social factors.[3 5 6] From March to May 2020, France was deeply affected by the COVID-19 outbreak and the government settled a strict lockdown from 17 March to 11 May 2020, especially to reduce the critical pressure on hospitals.[7] The lockdown methods, effective in curbing the pandemic and avoiding the saturation point of hospitals, also had adverse effects on the use of healthcare services. In particular, a decrease in the number of consultations with the general practitioner (GP) has been noted, despite a strong activity of teleconsultations, in France[8 9] as in the UK[10] for instance.

For patients suffering from chronic diseases, the restrictive measures implemented have led to a reduction in screening procedures, as well as increasing diagnostic and treatment times.[11] At the same time, unhealthy behaviours appeared, such as a decrease in physical activity, a deterioration in the quality of sleep or an increased time spent on screens.[12] Hence, these governmental measures to protect the population may have had a negative impact on the population's health, especially for patients with chronic conditions, and lead to chronic diseases' decompensations.

The COVIQuest project was thus developed in order to assess the effect of a phone call by a GP or a medical trainee during the first lockdown on the care pathway of chronic patients, namely patients with chronic cardiovascular diseases (CVD) or mental health disorder (MHD). Its method was extensively described.[7] For the primary outcome of the first part of the COVIQuest project, no difference was found in hospital admission 1 month after the phone call for CVD patients. For patients with MHD, the risk difference in hospitalisations revealed a modest but statistically significant higher rate of hospitalisations in the intervention than in the control group. The main limitation of the study was related to missing data, along with using a self-reported and short-term outcome.[7]

Thus, the second part of the COVIQuest project aimed to assess the effect of the GP's phone call on hospitalisation and specialised consultation rates for CVD and MHD patients up to 6 months after the intervention, using the medico-administrative databases from the French National Health Insurance database (*Système National des Données de Santé*, SNDS).[13] The secondary objectives aimed to describe GP consultations, medication consumption and in-hospital and out-hospital mortality over the following 6 month period. In order to assess variations in the care pathway, the 6 month uses of care services during the year 2019 were described.

## METHODS

### Study design

The COVIQuest trial was a randomised 1:1 controlled trial, open-labelled, comparing two parallel groups: an intervention group (GP/medical trainee phone call directly after GP randomisation) to a control group (no GP/medical trainee phone call directly after GP randomisation).[7] Two simultaneous subtrials took place: COVIQuest_CV for patients with CVD and COVIQuest_MH for patients with MHD. The patients ≥70 years old with CVD and ≥18 years old with MHD were included by voluntary GPs from eight French regions. The GPs selected patients according to their inscription on the long-term illness list (*Affection Longue Durée* ALD number 1, 3, 5, 12 and 13).[7] Each subtrial was a cluster randomised trial with GPs being clusters (ie, randomisation units). The randomisation process was extensively described elsewhere.[7] GPs allocated to the intervention group in the COVIQuest_CV subtrial (ie, who called their CVD patients), were allocated to the control group in the COVIQuest_MH subtrial, and vice versa.[7]

As there was no data available to formulate hypothesis regarding sample size, the sample size was based on the minimum number of GPs expected to be recruited and the mean numbers of eligible patients per GP, as previously described.[7]

### Data source

In France, the health system allows all residents to have access to care, thanks to a universal health insurance system. All medico-administrative health data, set up for reimbursement purposes, are collected in the SNDS, including more than 99% of the French population. It contains all information related to healthcare consumptions for outpatient prescriptions and consultations (Health Insurance database), public and private hospital discharges (*Programme de Médicalisation des Systèmes d'Information*, PMSI database) and vital status (provided in a specific table).

The data collection was performed by the National Health Insurance, provider of the SNDS data, by directly matching the COVIQuest patients' clinical data with their SNDS data, using their unique health insurance encrypted number. This number allows to rebuild care pathways.

This trial was authorised by the French Data Protection Board (*Commission Nationale de l'Informatique et des Libertés*, CNIL), under the number MLD/MFI/AR216075 (27 April 2020).

### Participants: patients and GPs

For patients' selection, the clinical database of patients included in COVIQuest was used as a starting point. Patients were then excluded from the study in case of: (1) inclusion in both CVD and MHD groups, according to SNDS data (once in the control group, the other time in the intervention group); (2) absence of SNDS matching; (3) errors in SNDS matching, that is, patients deceased in the SNDS before the date of the phone call and (4) patients hospitalised at the randomisation date (30 April 2020). The patients included in this second part of the COVIQuest study were related to the 149 GPs taking part in the study.[7]

## Outcomes

All outcomes were collected 6 months after the randomisation date, that is, from 30 April 2020 to 31 October 2020.

### Main outcomes

The main outcome of the 6-month analysis of COVIQuest was the occurrence of at least one hospitalisation during the study period, excluding those starting on 30 April 2020. For the CVD patients, only the hospitalisations of more than one night (except for patients dying the first day), for any reason in an acute care unit were considered, given the various motives of 1 day hospitalisation irrelevant for the study aims (eg, dialysis sessions for patients with chronic renal failure). For the MHD patients, in addition, the hospitalisations in the psychiatric ward were also considered.

Another main outcome was the occurrence of at least one MHD or CVD specialised consultation during the study period. All outpatient specialised consultations, including remote consultations, were considered, whether they took place at the healthcare facility or in ambulatory practices.

### Other outcomes

#### *Hospitalisation details*

For all patients, additional details about the first hospitalisation during the period were collected: time to first hospitalisation and length of first stay.

Hospitalisations related to the chronic disease (CVD or MHD) 6 months after randomisation were evaluated. For patients with CVD, the hospitalisations considered were those with a cardiovascular reason (main diagnosis from chapter 9 of the ICD-10 classification). For patients with MHD, the hospitalisations considered were those in the psychiatric ward, along with the ones in acute care unit for suicide attempt (ICD-10 codes X60-X84).

#### *GP consultations*

Consultations with a GP were identified with the same method used for specialised practitioner consultations. These data were raised regarding two independent periods: during the lockdown and within the 6 months following the randomisation. In addition, the time interval between the inclusion and the first consultation was collected.

#### *Medication dispensation*

The prescriptions dispensed by the pharmacy and linked with each chronic disease were identified according to the *Code Identifiant de Présentation* (CIP 13) and the specific Anatomical Therapeutic Chemical (ATC) Classification System. The duration of the drug prescription was defined as the time interval between 30 April 2020, and the date of the last delivery.

#### *Mortality*

The in-hospital and out-hospital mortality rate at 6 months from randomisation was evaluated for each subtrial: COVIQuest_CV and COVIQuest_MH.

#### *Use of care during the year 2019*

The same data about hospitalisations, consultations and drug consumptions were collected for all the patients from 30 April to 31 October 2019.

## Statistical analyses

All statistical analyses were performed independently for each sub-trial (COVIQuest_CV and COVIQuest_MH).

First, a descriptive analysis of the baseline characteristics of the patients included was performed. Quantitative data were presented as means±SD and medians±IQR. Categorical variables were described as counts and frequencies (per cent).

Second, for the main secondary outcome of the COVIQuest trial, that is, having had at least one hospitalisation at 6 months after the phone call, the same method as previously used for hospitalisations at 1 month was implemented.[7] Thus, a marginal approach was used by fitting a logistic regression model within a generalised estimating equation framework. This model accounted for clustering at the GP level. All analyses were adjusted on region (stratification variable), age and sex. Intraclass correlation coefficients were estimated per group by using the analysis of variance estimator.[7] The same approach was used for the outcome 'having had at least one specialised practitioner consultation at 6 months'.

Third, for the other outcomes (ie, having had at least one GP consultation, number of dedicated treatments) as well as the assessment of each outcome during the same period 1 year before (ie, from 30 April 2019 to 31 October 2019), descriptive analyses were performed.

Eventually, the numbers and rates of deaths in each subgroup were reported.

For all tests, the threshold for statistical significance was set to 5%. All analyses were conducted using SAS Enterprise Guide software (SAS Institute, Cary, NC, USA), version available on the National Health Insurance portal at the time of the analyses.

# RESULTS

## Patients' profiles

From the 4724 patients included in COVIQuest, 4640 were retrieved after direct matching with the SNDS data (98.2%): 3274 patients with CVD and 1366 patients with MHD (online supplemental figure 1).

Patients' baseline data were similar in the intervention and control groups. For CVD patients, the median age was 80 years old, predominantly male (57.6% in the intervention group, n=1047/1819; 58.2% in the control group, n=847/1455). For MHD patients, the median age was 53 years, predominantly female (64.0% in the intervention group, n=297/825; 62.7% in the control group, n=202/541) (online supplemental table 1).

## 6-month hospitalisations

For both subtrials, the intervention patients were significantly more hospitalised than the control patients: 17.3%

Table 1 Six-month hospitalisation risk assessment according to the intervention for patients with chronic cardiovascular diseases (COVIQuest_CV) or mental health disorder (COVIQuest_MH)

| | ≥1 hospitalisation, n (%) | | | ICC (95%CI) | |
|---|---|---|---|---|---|
| | Intervention | Control | OR (95%CI)*, p value | Intervention | Control |
| COVIQuest_CV | 315 (17.3) | 217 (14.9) | 1.26 (1.05 to 1.52), 0.013 | 0.000 (–0.011 to 0.017) | 0.001 (–0.013 to 0.021) |
| COVIQuest_MH | 119 (14.4) | 58 (10.7) | 1.40 (1.00 to 1.96), 0.049 | 0.015 (–0.014 to 0.058) | 0.015 (–0.021 to 0.073) |

*Adjustment on region, age and sex.
ICC, intraclass correlation coefficient.

versus 14.9% for CVD patients (OR=1.26 (95% CI 1.05 to 1.52)); 14.4% versus 10.7% for MHD patients (OR=1.40 (95%CI 1.00 to 1.96]) (table 1).

For CVD patients, the median time from randomisation to first hospitalisation was 91 (IQR 51–146) days in the intervention group, versus 101 (47–143) in the control group. The median hospitalisation length of stay was similar between the two groups: 4 (2–9) days with the intervention, 4 (2–8) days without the intervention (online supplemental table 2). For MHD patients, the median time to first hospitalisation was 75 (35–124) days in the intervention group, versus 109 (62–144) in the control group, with similar lengths of stay: median 5 (2–15) days (online supplemental table 2).

In 2019, 16.3% of the intervention CVD patients were hospitalised, and 18.2% of the control patients (online supplemental figure 2). Among the hospitalisations, a cardiac main diagnosis was reported for 35.6% of the intervention patients in 2019 versus 27.0% in 2020, and for 46.1% of the control patients in 2019 versus 30.0% in 2020.

As regarded the MHD patients, in 2019, 15.8% of the intervention patients were hospitalised, and 14.8% of the control patients (online supplemental figure 2).

### 6-month specialised practitioner consultations

For both subtrials, the proportions of patients with at least one specialised consultation at 6 months were not different between the intervention and control groups, respectively, 24.6% versus 24.3% for CVD patients (OR=1.06 (95% CI 0.85 to 1.32)); 26.5% versus 24.4% for MHD patients (OR=1.15 (95% CI 0.84 to 1.57)) (table 2).

The median time intervals to first consultation did not seem clinically different between the groups: 77 (IQR 47–137) days with the intervention versus 83 (41–139) days without for CVD patients; 25 (11–53) days with the intervention versus 22 (6–53) days without for MHD patients (online supplemental table 3).

In 2019, 22.7% of the intervention CVD patients consulted a cardiologist, and 24.6% of the control patients (online supplemental figure 3B). In COVIQuest_MH, 28.0% of the intervention MHD patients consulted a psychiatrist in 2019, and 25.5% of the control patients (online supplemental figure 3B).

### Other outcomes: GP consultations, drug deliveries and mortality

These outcomes are detailed in table 3 and online supplemental table 4. Regarding GP consultation rates and drug consumption, the results seemed similar between intervention and control groups, both for CVD and MHD patients. At 6 months, few patients died, resulting in mortality rates below 2% (table 3).

The rate of GP consultations was similar in 2019 and 2020 between intervention and control patients in both subtrials, whereas the out-of-hospital consumption of drugs seemed higher in 2020 than in 2019, in all groups and subtrials (online supplemental figure 3A and 4).

## DISCUSSION

The COVIQuest study, implemented shortly after the lockdown announcement, tried to assess the impact of a GP phone call to patients with CVD or MHD on hospital admissions at 1 month[7] and the use of care (hospital admissions, specialised consultations, drug consumptions and death) over a 6-month follow-up period after inclusion. Initiatives similar to our intervention emerged

Table 2 Six-month specialised consultation risk assessment according to the intervention for patients with chronic cardiovascular diseases (COVIQuest_CV) or mental health disorder (COVIQuest_MH)

| | ≥1 specialised consultation*, n (%) | | | ICC (95% CI) | |
|---|---|---|---|---|---|
| | Intervention | Control | OR (95% CI)†, p value | Intervention | Control |
| COVIQuest_CV | 447 (24.6) | 353 (24.3) | 1.06 (0.85 to 1.32), 0.597 | 0.075 (0.047 to 0.118) | 0.045 (0.021 to 0.083) |
| COVIQuest_MH | 219 (26.5) | 132 (24.4) | 1.15 (0.84 to 1.57), 0.380 | 0.076 (0.033 to 0.136) | 0.086 (0.032 to 0.166) |

*Cardiology consultation for cardiovascular (CV) patients, psychiatric consultation for mental health (MH) patients.
†Adjustment on region, age and sex.
ICC, intraclass correlation coefficient.

Table 3 Six-month consultations with a general practitioner (GP), drug consumption and mortality of patients with chronic cardiovascular disease (COVIQuest_CV) or mental health disorder (COVIQuest_MH), by group: intervention and control

| | ≥1 GP consultation, n (%) | | Drug consumption* | | | | Mortality, n (%) | |
|---|---|---|---|---|---|---|---|---|
| | | | Intervention | | Control | | | |
| | Intervention | Control | patients, n (%) | Drugs†, n±SD | patients, n (%) | Drugs†, n±SD | Intervention | Control |
| COVIQuest_CV | 1789 (98.4) | 1411 (97.0) | 1791 (98.5) | 17.5±8.3 | 1428 (98.1) | 17.3±8.4 | 29 (1.6) | 26 (1.8) |
| COVIQuest_MH | 745 (90.3) | 492 (90.9) | 699 (84.7) | 14.2±10.4 | 437 (80.8) | 14.3±9.8 | 5 (0.6) | 1 (0.2) |

*At least one pharmacy delivery of drugs related to the chronic disease.
†Number of pharmacy deliveries.
GP, general practicioner.

during lockdowns in 2020 worldwide. For instance, in Italy, psychological support with education to recognise the warning symptoms of psychological decompensation was successfully implemented.[14] However, to the best of our knowledge, no studies assessing long-term outcomes have been conducted in other countries.

Whereas no difference in self-reported hospitalisation rates could be highlighted by the 1-month analysis,[7] a 6-month hospitalisation rate increase was found in the SNDS database for CVD or MHD patients who received a GP-initiated phone call. The difference between the 1-month and 6-month assessment may be due to missing data at 1 month and/or the effect of the public campaigns promoting medical use if required, during and after the lockdown. The 6-month results were the opposite of what was expected since the intervention (in line with public campaigns) was supposed to manage chronic diseases' complications earlier to avoid later hospitalisation. However, the lack of contact with their GP for these vulnerable populations may have resulted in missed opportunity, including necessary hospitalisations. It has been shown that hospitalisations for patients at cardiovascular risk were more complex during the first lockdown.[15] For patients with a mental health condition, such hospitalisations might have prevented more complicated or critical issues such as suicides, psychiatric crises, or substance/drug abuse.[16]

The increase shown in hospitalisation rates for intervention groups can therefore support that the intervention allowed a higher level of care management, allowing a return to prepandemic levels. This may be suggested by the parallel with the same period in 2019, during which both CVD and MHD patients had hospitalisation rates similar to those observed in 2020 in the intervention groups. It should be noted that, among CVD patients, admissions for a cardiac purpose were less frequent in 2020 as compared with 2019, this being explained by the successive COVID-19 waves in France in 2020 and in line with the decrease in hospitalisations for myocardial infarction found in various European countries during the first lockdown.[17] However, the study period started during the last weeks of the first French lockdown, covering a 5—6 months post-lockdown period, when the incidence of hospitalisation for myocardial infarction went back to its prepandemic level.[17] A study performed in Paris during the lockdown also objectified an increase of outpatient cardiac arrests, but with a quick normalisation in the last weeks of April 2020.[18] For MHD patients, a UK study showed an acceleration in mental health referrals just after the lockdown, primarily for psychiatric emergencies.[19] This observation may be due to the development of teleconsultations and the launch of public campaigns to encourage the use of medical care for symptoms unrelated to COVID-19, as proposed by our intervention. Hence, the intervention could have been contaminated by these national campaigns especially for our study population with chronic conditions. Indeed, the number of consultations, medications for the chronic pathology and mortality at 6 months were not significantly different between the groups, suggesting the absence of effect of the intervention on the use of outpatient care. This result may also be associated with the short follow-up period which may have missed delayed effects, such as an increase of indirect mortality due to avoidance and/or stress of the healthcare system during the COVID-19 pandemic. This has been reported in the USA and in Europe,[20 21] especially in CVD patients where mortality increase could have occurred beyond the 6-month period.[22]

Between 2019 and 2020, medication use seemed to increase in all groups. Furthermore, cardiovascular patients (intervention and control) had more visits to their GP in 2020, as did psychiatric patients in the intervention group. Regarding hospitalisations, a decrease of hospital admissions has also been noted in other countries between 2019 and 2020,[23 24] highlighting the impact of the pandemic on secondary care recourse.

This 6-month assessment of the impact of the intervention presented several limitations. First, the intervention effect was impacted by logistical reasons. Due to research regulatory issues, the study started 6 weeks after the lockdown was established, and the Ministry of Health outlined the intervention implemented in our protocol on 8 April 2020. This was 20 days before our study received the necessary regulatory approvals to start, potentially leading to contamination in the control groups. Furthermore, the lockdown period ended 11 days after the beginning of the study, whereas the median time to call intervention patients was 12 days for CVD patients and 7 days for MHD

patients.[7] Consequently, the effect of the intervention could have been minimised. Second, as both intervention and control patients were called at 1 month during our 6-month study period, control patients may have reached intervention patients' care level after this call. Second, the duration of the study was short to evaluate an impact of the intervention on the number of hospitalisations and mortality. Third, the recruitment method, extensively described in the 1-month assessment,[7] could have led to selection bias impacting also the 6-month assessment. Eventually, nuanced insights could potentially have emerged from subgroup analyses, such as those based on the severity of the chronic conditions. However, the number of events, and consequently the study's statistical power, was insufficient for such analyses, and assessing the severity of chronic conditions would have required more temporal distance than the SNDS data allowed.

Nonetheless, this study showed the complementarity of randomised control trials in one hand, and observational real-world data studies in the other hand, each database being the gold standard for a set of variables. Thus, the clinical database could be considered as gold standard regarding the chronic conditions of patients included by the GPs, whereas the SNDS database was gold standard for healthcare services consumption: hospitalisations, consultations, drug deliveries; as all reimbursed care consumption is comprehensively included in the SNDS database. Therefore, using SNDS data helps prevent missing data and classification bias associated with self-reported outcomes and could be preferable in the future. The SNDS database allowed an automated and cost-effective follow-up of over 4000 patients and addressed the questions of the GP phone call impact at 6 months.

Contrary to our primary hypothesis, the results suggest that patients with chronic conditions who were called by their GP were more often hospitalised at 6 months, without any impact on out-of-hospital drug or medical care consumptions. We are unaware of the impact of those hospitalisations on morbidity and mortality of patients with CVD or MHD at a longer term. Beyond our results, these initiatives demonstrated a capacity to implement new inspiring projects in a crisis era.

Maintaining possible contact with primary care for people with chronic CVD or mental health conditions should be encouraged during epidemic periods. Our study demonstrated that a simple phone call with one's GP can be enough to detect complications requiring hospitalisation during lockdown, a finding that has also been supported by other studies.[25–27]

## Conclusion

Our study demonstrated that a GP phone call during the first French COVID-19 lockdown led to an increase of hospitalisations at 6 months for patients with CVD or MHD. The absence of other effects may be due to short time of follow-up and/or contamination by the national health campaigns at the end and after the lockdown, which covered our intervention period. Nevertheless, maintaining contact with primary care for individuals with chronic CVD or mental health conditions should be promoted during epidemic periods. Medico-administrative databases like the SNDS offer cost-effective means of supplementing clinical research data, particularly for assessing long-term outcomes and healthcare utilisation.

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**Contributors** Each author revised the work critically for important intellectual content, gave his/her final approval of the version to be published and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. CD-D, EL and LG-G conceived the objectives and methodology of this part of the research project. EL and AS analysed the data with BG, LG and M-FT. AS, EL and LG-G reported the data. CD-D, BG, LG-G, EL, LG, M-FT and AS participated in the interpretation of the data and critically revised the paper. CD-D is responsible for the overall content as the guarantor.

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**Competing interests** None declared.

**Patient and public involvement** Patients and/or the public were not involved in the design, or conduct, or reporting or dissemination plans of this research.

**Patient consent for publication** Not applicable.

**Ethics approval** This study involves human participants, and the study protocol was approved by the ethics committee of CPP Sud-Mediterranée 3 (no: 2020.04.21ter_ 20.04.17.42325). The French committee for data handling (CNIL) approved the study (no: 920185 dated 30 April 2020). General practitioners (GPs) and medical students were informed of the objectives of the study and their signed commitment was obtained. Oral information and consent of the patients were preferred over written information, in order to adapt and transmit the main messages to the patients population concerned. The GP and the medical student took ownership of the content of the letter of information and delivered the main messages to patients during the first phone-contact. Patients' oral consent was recorded in GP's files. This approach has been validated by an ethics committee.

**Provenance and peer review** Not commissioned; externally peer reviewed.

**Data availability statement** Data may be obtained from a third party and are not publicly available. Data can be made available upon reasonable request to the French Healthcare Insurance, provider of the SNDS data dedicated to the project within a dedicated space on their secured hub, with the support of the project coordinator.

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