

# Determinants of Hospitalization Refusal of COVID-19 Patients in Treatment Centers in Conakry, Coyah, Dubreka, and Kindia March-December 2020

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**Abstract:** Detection, notification, investigation, and treatment are the most effective public health measures in disease management. The objective of the present study was to identify the determinants of COVID-19 patients' refusal to go to epidemiological treatment centers for their care. This was a descriptive cross-sectional study on a sample of COVID-19 patients. Data analysis was done with Epi-info software. The opinions were grouped into themes and analyzed by triangulation. A total of 73/218 patients were surveyed (33.5% participation rate). Among them 38.36% were from Matam and 20.55% from Matoto. The probability of hospitalization after refusal was higher in women than in men (OR = 5.6 CI (1.3-23.4) and P-value = 0.023). And that of being hospitalized after refusal was lower in the under 40s (OR = 0.18 CI (0.05-0.7) and P-value = 0.023). These differences are statistically significant. The reasons for refusal were denial of the disease, the quality of the offer and the stigma: I am not sick, they confused the results, I was lied to for the test, the stigma, the lack of support from the family, the time to waiting for results, self-medication, ETC. This study made it possible to describe the determinants of the refusal of COVID-19 cases to accept CT-Epi care. A study combining refusals and hospitalized ones would be necessary.

**Keywords:** Determinants, COVID-19, Refusal, CT-Epi, Hospitalization

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## 1. Introduction

Since mid-December 2019, the world has been informed of the occurrence of cases of the disease caused by SARS-Cov-2 (COVID-19) from Wuhan a province in China [1]. By July 10, 2020, 12,268,630 cases of COVID-19 were detected, 6,740,124 cured cases and 554,924 deaths related to this

disease have been reported [2]. In West Africa, the situation is different: 7,547; 2348 and 1003 respectively in Senegal, Mali and Burkina Faso [5]. At the same time, Guinea recorded 5,969 confirmed cases, 4,732 recovered and 37 deaths [3]. In the health districts of Conakry and the interior of the country, the epidemiological situation was as follows: Ratoma 1939, Matoto 1573, Dixinn 675, Matam 498, Kaloum 403 (for the city of Conakry alone, Coyah 308,

Dubreka 157 [4]. All COVID-19 patients are freely treated in the Epidemiological Treatment Centers (CT-EPI). Despite these provisions, 4% refused to go there for treatment. This study was to identify the determinants of the refusal of COVID-19 cases to go to treatment centers for their care in Guinea [5].

At the beginning of the pandemic, misconceptions invaded the population, discussions between scientists on therapeutic schemes, stigmatization, funeral management, unreliability of rapid tests and contradictory results created feelings of fear and refusal to treatment and even hospitalization [6]. Faced with the increasing number of cases of refusal of hospitalization on the one hand and the weakness of hospitalization capacities on the other, Burkina Faso has opted for a program of follow-up of patients at home [5]. Any health measure is potentially a source of restriction of individual freedom [6].

Quarantine, isolation, and hospitalization are common epidemic management measures that are very restrictive but can also restrict individual freedom, which is often mandatory [7]. In the constant concern for the health security of patients and professionals, it is necessary to reconcile the respect of individual rights and liberties with the public health imperatives relating in particular to the rules of hospitalization. This requirement is based on the legislative and regulatory texts of the Ministry of Health, [8]. It is necessary to protect public health by limiting the spread of the disease, and to guarantee the respect of patients' rights [9]. The refusal of hospitalization is a right but does not promote the effective control of the disease COVID 19, but the main question is why COVID 19 patients would refuse hospitalization? Indeed, the lack of trust between patients and health systems is real and is manifested by many aspects including the fear of being hospitalized [10]. In New York,

patients interviewed explained their refusal of hospitalization by the lack of trust in their health care system [11]. Studies carried out in other aspects of care have shown similar reasons for refusal, such as the crisis of trust between patients and health care personnel, safety, lack of reliable information, but also sometimes separation from the family and false rumors. Similar reasons were found in other aspects of pandemic control. Reluctance to the COVID-19 vaccine in Kenya was high: 36.5%. Factors associated with vaccine reluctance included: rural areas, perceived difficulty in complying with government regulations on COVID-19 prevention, lack of perceived risk of COVID-19 infection, concerns about vaccine safety and efficacy, and religious and cultural reasons [12]. Another study in Qatar found the most common determinants affecting vaccination intention include vaccine efficacy, vaccine side effects, distrust of health care, religious beliefs, and trust in information sources. In addition, vaccination intentions are influenced by demographic factors such as age, gender, education, and region [13]. To address these issues, a public media verification system needs to be put in place. The community and authorities need to strengthen their social support system and fight stigma [14]. The objective of this study was to identify the determinants of refusal of COVID-19 cases to come to treatment centers for care in Guinea.

## 2. Methodology

The study was carried out in the health districts of Dixinn, Kaloum Matam, Matoto and Ratoma for the city of Conakry and in the health districts of Coyah, Dubreka and Kindia. This was a descriptive cross-sectional study. Data were collected over nine days through individual face-to-face or telephone interviews and group discussions.



**Figure 1.** Zone d'étude: communes de Conakry Dixinn, Kaloum, Matam, Matoto et Ratoma et districts sanitaires de Coyah, Dubreka et Kindia.

The study population consisted of patients who refused to go to CTEpi and those who were reluctant before going. A pre-tested data collection form and semi-structured interviews were used for data collection. We used the Kobo-collect software through experienced interviewers to collect the data in the field. The COVID-19 database of the ANSS (National Agency for the health security was used for data collection and this allowed the selection of participants.

The sample size (n) was calculated using the Raosoft sample size calculator [15]. The Raosoft sample size calculator is based on the conventional formula below:

$$n = Z^2 \times P \times Q / d^2$$

Where:

Z = is the confidence level of the study; P = is the proportion of the care device of good quality; Q = is the complement of P (1-P); d = is the precision of the study.

With a margin of error of 5%, a confidence level of 95%, the value of Z is equal to 1.96.

The degree of precision is estimated to be 0.05 when  $\alpha = 5\%$ . As the proportion P of patients who refused to go to the epidemiological treatment centers was not known, we applied the WHO principles (P= 50% and Q = 50%).

The sample size calculated for the survey was 207. To account for possible misfill of the questionnaire during data collection, the initially calculated sample size was increased by 5%. With this adjustment, the retained sample size is 218.

However, given the sensitivity of the question, we only surveyed based on patient availability. For this study, we could only survey 73 patients.

The variables studied were those socio-demographic and those linked to the determinants of refusal or reluctance. La participation à l'étude était libre et volontaire, sous

anonymat, sans contrainte aucune dans la confidentialité.

Participation in the study was free and voluntary, anonymously, with no restrictions on confidentiality. The data analysis was quantitative and qualitative. All the interviews were recorded on tablets, a database was generated. Quant aux focus groupes, trois (3) discussions de groupe ont été menées. Les groupes étaient constitués de femmes et d'hommes dont l'âge variait de 24 à 39 ans, de 35 à 59 ans et de 28 à 45 ans respectivement pour le 1<sup>er</sup> groupe, le 2<sup>e</sup> groupe et le 3<sup>e</sup> groupe.

As for the focus groups, three (3) group discussions were conducted. The groups were made up of women and men whose ages ranged from 24 to 39, 35 to 59, and 28 to 45 respectively for the 1st group, the 2nd group and the 3rd group. The information was transcribed, codified, grouped by theme and analyzed by triangulation. The study was sponsored by the Ministry of Health with support from WHO.

### 3. Results

Table 1. Distribution of samples of refusal cases by health district.

| Districts | Number of refusals | Weights districts / commune | Number to be surveyed/district Number of people /districts |
|-----------|--------------------|-----------------------------|--|
| Dixinn    | 45                 | 14%                         | 31   |
| Kaloum    | 13                 | 4%                          | 9  |
| Matam     | 69                 | 22%                         | 47   |
| Matoto    | 91                 | 29%                         | 62   |
| Ratoma    | 70                 | 22%                         | 48   |
| Dubreka   | 8                  | 3%                          | 5  |
| Coyah     | 17                 | 5%                          | 12   |
| Kindia    | 6                  | 2%                          | 4  |
| TOTAL     | 319                | 100                         | 218  |

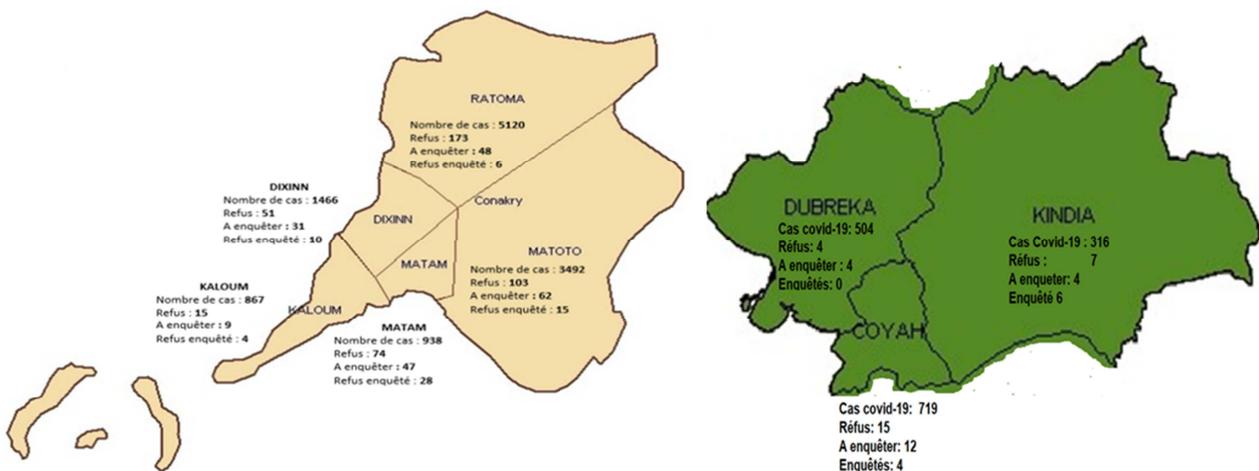


Figure 2. Study zone: communes de Kaloum, Dixinn, Matam, Matoto et Ratoma in addition to Coyah, Kindia et Dubreka.

A total of 73 respondents were surveyed out of 218 predicted by sample size. The respondents fall into two categories: 62 out of 73 represented a categorical refusal to be hospitalized, ie 84.93% against 11 of 73 that is 15.07% those who accepted hospitalization after a refusal.

Sociodemographic Characteristics: Men (45) were the most numerous to answer the questionnaire. The sex ratio men / women is 1.6.

The average age is 34 years with a standard deviation of more or less equal to 12, 26 years. The extremes are 19 and 71.

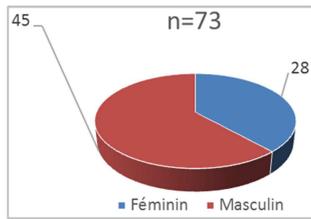


Figure 3. Distribution of participants by sex.

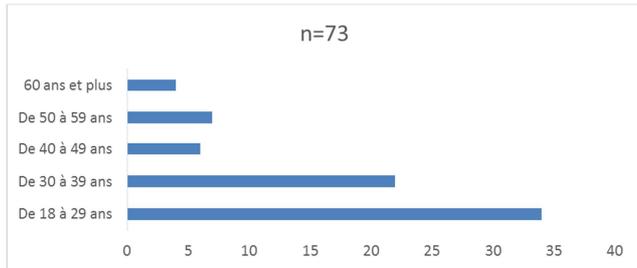


Figure 4. Distribution of participants by age group. Causes of refusal

mentioned by respondents: Different reasons were given by respondents for refusing treatment in the CT-Epi. among these reasons we have:

1. Absence of signs (I am not sick) cited by 39 respondents to justify,
2. Lack of confidence in the results, 27 of the respondents gave the following statements: “I don't think it catches young people) (Lack of confidence in the results from the test, they confused the results, Bad information in the data bases, I was lied to for the test,”
3. Stigmatization by the community,
4. Lack of support from the family,
5. The waiting time for the results to be returned and the treatment at the CT-Epi.,
6. Self-medication, it was mentioned as a reason for refusal, and
7. The obligation to take the test especially for drivers and apprentices.

Table 2. Analysis of types of refusal in relation with socio-demographic characteristics.

| Characteristics                        | Type of refusal              |               | Level of confidence 95% |      |        | X <sup>2</sup> | p-value |
|--|------------------------------|---------------|-------------------------|------|--------|----------------|---------|
|  | Refusal then hospitalization | Total refusal | OR                      | IC   |        |                |         |
| <b>Sociodemographic</b>                |                              |               |                         |      |        |                |         |
| Sex                                    |                              |               |                         |      |        |                |         |
| Feminine                               | 8                            | 20            | 5,60                    | 1,34 | 23,39  | 4,87           | 0,02    |
| Masculine                              | 3                            | 42            |                         |      |        |                |         |
| Age range                              |                              |               |                         |      |        |                |         |
| Less than 40 Years                     | 5                            | 51            | 0,17                    | 0,04 | 0,6961 | 5,17           | 0,023   |
| 40 years and more                      | 6                            | 11            |                         |      |        |                |         |
| Deadline                               |                              |               |                         |      |        |                |         |
| 2 days                                 | 5                            | 29            | 0,94                    | 0,26 | 3,43   | 0,000          | 1,000   |
| More than two days                     | 6                            | 33            |                         |      |        |                |         |
| Level of education                     |                              |               |                         |      |        |                |         |
| Not schooled or primary                | 5                            | 12            | 3,47                    | 0,90 | 13,30  | 2,25           | 0,134   |
| Junior high school                     | 6                            | 50            |                         |      |        |                |         |
| Motive of the test                     |                              |               |                         |      |        |                |         |
| Volunteer                              | 4                            | 15            | 1,79                    | 0,46 | 6,96   | 0,22           | 0,63    |
| Trip or other                          | 7                            | 47            |                         |      |        |                |         |
| Professional category                  |                              |               |                         |      |        |                |         |
| Civil servant                          | 5                            | 22            | 1,51                    | 0,41 | 5,53   | 0,08           | 0,77    |
| Worker                                 | 6                            | 40            |                         |      |        |                |         |
| Belief in the existence of the disease |                              |               |                         |      |        |                |         |
| No the disease does not exist          | 3                            | 14            | 1,28                    | 0,30 | 5,50   | 0,000          | 1,00    |
| Yes the disease exists                 | 8                            | 48            |                         |      |        |                |         |
| Distance from home to CT-épi           |                              |               |                         |      |        |                |         |
| Up to 5 km                             | 6                            | 47            | 0,4                     | 0,1  | 1,4    | 1,2            | 0,3     |
| More than 5 km                         | 5                            | 15            |                         |      |        |                |         |

According to gender, 62 people participated in the study, 42 of whom were women and 20 men.

Concerning the level of education, it appears from this table that among 62 participants, 12 have never been to school and 60 have reached at least the secondary level and no one went to university.

Regarding the population's belief in the existence of the disease, 48 people acknowledged the existence of the disease and only 14 denied the existence of the disease.

#### 4. Discussion

Of the 73 respondents 38.36% were from Matam and

20.55% from Matoto. The reasons which motivated the decision to refuse treatment were: I am not sick; I do not think it catches young people; they confused the results; Stigma; lack of support from the family; the waiting time for the results to be delivered; poor care; self-medication; the obligation to take the test; 24.66% mentioned discrimination. On statistical analysis: the total refusal is greater among men than among women. The probability of hospitalization after refusal is higher in women than men (OR = 5.6 CI (1.3-23.4) and P-value = 0.023). Due to the organization of our community, men are more independent in their decision-making than women.

About 26% (19/73) of respondents mentioned a family

problem. Total refusal is more frequent among respondents under the age of 40. The probability of being hospitalized after a refusal is lower among respondents aged less than 40 years (OR = 0.18 CI (0.05-0.7) and P-value = 0.023). Awareness campaigns stress the vulnerability of older people, while young people can also have serious forms. These differences are all statistically significant with a degree of confidence of 95%. There are differences between the total refusal and the refusal then hospitalization according to certain characteristics such as the level of education, the delay in rendering the laboratory result, the reason for test, occupational category, distance from home to CT-epi and belief in the disease. These differences are not statistically significant with a 95% confidence level. However, one should be wary of drawing a conclusion with these results because it only concerns cases of refusal and reluctance to hospitalization. A study combining refusal cases and hospitalized cases would help understand these differences. The planned sample was not fully collected, and the collection time was insufficient. It would be necessary to create associations of the cured to strengthen communication and surveillance on COVID-19; to uphold the standards of professional conduct and ethics in the practice of the health profession.

## 5. Conclusions

This study made it possible to describe the determinants of the refusal to accept treatment with CT-Epi. Communication is essential. A study combining the opinion of refusals and those hospitalized would be necessary.

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