



# General Practitioners' Practice premises and Risk of Viral Cross-Transmission: A French Observational Multicenter Study

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## Abstract

**Background:** The common areas of general practitioners' practices (eg, reception, secretariat, waiting room, toilets) are places at risk of cross-transmission of viral diseases such as COVID-19, however risk is poorly documented. **Aim:** To evaluate the risks of viral cross-transmission in general practitioners' practices based on the organization of the common areas of the premises. **Design and setting:** Cross-sectional multicenter observational study in randomly selected general practitioners' practices in a French department (Seine-Maritime). The practices were included in 4 strata (1, 2, 3–5, or  $\geq 6$  general practitioners). **Method:** Each practice was visited and a questionnaire describing practice organization, cleaning of the premises, screening of high-risk patients was completed on site and observation of the premises). **Results:** Data collection started in December 2019 and was discontinued due to the national lockdown related to the global SARS-CoV-2 pandemic. Eighty-two practices were analyzed. A hydroalcoholic solution was available in 7.3% of practices and surgical masks in 1.2%. In a majority of waiting rooms, the minimum distance between chairs facing each other was  $>2\text{m}$  (78.0%), but was more frequently 1 m for chairs at  $90^\circ$  (53.7%). Overall, 79.3% of waiting rooms could be properly ventilated and waste bins were present in 23.9% of cases. A cleaning protocol was reported in 39.2% of practices. **Conclusion:** The COVID-19 epidemic allowed the national dissemination of standard precautions. It will be interesting to monitor over the next few years whether the renewed consideration of standard precautions to prevent viral cross-contamination will be maintained over time.

## Keywords

viral cross-contamination, viral respiratory diseases, COVID-19, SARS-CoV-2, general practice

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## How This Fits in

This study aimed to evaluate the risks of cross-transmission of viral diseases in the common areas of the general practitioners' practices (eg, reception, secretariat, waiting room, and toilets). Although the study was discontinued by the national lockdown related to the global SARS-CoV-2 pandemic, under-equipment to fight cross-contamination of viral diseases was obvious for surgical masks, hydroalcoholic solutions, and waste bins; in addition, not all waiting rooms could be properly ventilated. Once standard precautions due to the COVID-19 epidemic have been put in place, it will be necessary to monitor their maintenance over time.

## Introduction

Like any healthcare setting, general practitioners' or specialists' practices are exposed to the risk of cross-transmission

of viral infections.<sup>1</sup> Although they have been rarely studied, common areas of medical practices (eg, reception, secretariat, waiting room, and toilets) are places at risk of cross-transmission of viral diseases such as COVID-19.

When a patient with a respiratory virus infection talks, sneezes or coughs, both droplets and aerosols are produced. Normal breathing on the opposite produces mainly aerosols (more than 99% of particles are  $<5\ \mu\text{m}$  in size).<sup>2</sup> Influenza virus RNA has been reported in the exhaled air of 33% of

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influenza patients.<sup>2</sup> Because of their size, the droplets settle quickly; however, the aerosols which are small in size can remain suspended in the air<sup>3</sup> and be transported at a distance that depends on several parameters such as secretion density and environment.<sup>4</sup> However, transmission is usually considered and a recent meta-analysis reported that a distance >1 m significantly reduced the risk of being contaminated by droplets from a patient infected with COVID-19.<sup>5</sup>

Penetration of the virus into the body occurs through the respiratory tract and the oral, nasal, and ocular mucous membranes.<sup>6-8</sup> Both droplet and airborne modes of transmission remain sensitive to air movement and room ventilation.<sup>9-11</sup> In a room, the risk of cross-contamination increases with the occupancy rate.<sup>12,13</sup>

Cross-contamination after direct or indirect contact with contaminated objects or surfaces is another potential mode of pathogen contamination.<sup>14</sup> Literature suggests that SARS-CoV-2 can survive several hours or days, depending on the conditions, on the fomites, although the related transmission risk remains controversial.<sup>15-19</sup> Nevertheless, the World Health Organization<sup>20</sup> guidelines for COVID-19 consider touching contaminated objects or surfaces and then touching eyes, nose or mouth before cleaning hands is a potential mode of contamination.

The main objective of this study was to evaluate the risks of viral transmission via airborne, droplets or contact in general practitioners' practices according to the organization of the common areas (reception, secretariat, waiting room, and toilets).

## Methods

This was a cross-sectional study performed in randomly selected general practitioners' practices in a French department (Seine-Maritime). Each practice was visited by 2 of the authors and a questionnaire was completed with professionals on site.

The observation unit was the practice. The inclusion criteria of a practice were as follows: location in Seine-Maritime, presence of the practice in September 2019 in the directory of the French Social Security; at least 1 doctor practicing general medicine. Practices were excluded if only doctors with exclusive alternative practices were present (eg, homeopathy, osteopathy, angiology, allergology, acupuncture, or medical expertise). We found 465 practices matching these inclusion criteria.

It was hypothesized that methods of preventing cross-transmission of viruses could vary according to the size of the practice and therefore random sampling was stratified on this parameter to include a sufficient number of large practices. In the absence of quantitative data in the literature on the topic of our study, we arbitrarily decided to include a sample of 100 practices with 4 strata of 25 practices each (1, 2, 3-5, or  $\geq 6$  general practitioners). Using the French

Social Security directory, we identified 465 practices with either 1 (n=254), 2 (n=80), 3-5 (n=105), or  $\geq 6$  (n=26) general practitioners in the practice.

Each practice was contacted in order to verify the inclusion and exclusion criteria and to obtain the agreement of at least 1 physician to participate in the study.

A standardized 4-part questionnaire was used.

- First part: organization of the practice (number of practitioners, mean number of daily consultations for each doctor, minimum, and maximum number of patients per day present in the practice - accompanying persons were not taken into account-, number of waiting rooms, presence of other paramedical or medical professionals, presence of a secretary, and date of construction - or last major renovation- of the practice).
- Second part: cleaning of the premises (frequency of cleaning of high surfaces, use of detergent and/or disinfectant, floor cleaning method, presence of a cleaning procedure).
- Third part: screening of patients at high risk of viral transmission and organization implemented in the practice so that high risk patients do not contaminate other patients.
- Fourth part: observation of the premises (materials of high surfaces, floor materials, wall materials, presence of suspended toilets and/or washbasins, presence of windows for ventilation, available hydroalcoholic solution, available surgical masks, waste disposal, type of soap in the toilets and hand towels in the toilets, distance between chairs in the waiting room, protection of secretaries with a plastic or glass screen, handle-free entrance door, presence of chairs with armrests, rail, children's toys, magazines).

If specialists or paramedical professionals shared the practice, only premises shared with general practitioners were observed. The questionnaire was developed with the help of 2 hygiene practitioners and readjusted after a few visits.

Data analysis was of descriptive nature. We present the results globally and separately for groups defined according to the number of GPs attached to the practice (1, 2, 3-5,  $\geq 6$ ) but due to the small number of practices in each group we did not performed statistical comparisons between groups.

## Results

Data collection began in December 2019 and was discontinued on March 15, 2020 due to national lockdown caused by the global SARS-CoV-2 pandemic. As a result, our data collection was limited to 82 practices instead of 100. Overall, we analyzed data from 14 practices with 1 physician, 19

**Table 1.** General Organization of the Practice.

	All	Number of physicians			
		1	2	3–5	≥6
Status, n (%)	N=80	N=12	N=19	N=26	N=23
Tenant	27 (33.8)	4	6	9	8
Proprietary	53 (66.2)	8	13	17	15
Secretary on site, n (%)	64 (78.0)	2	13	25	23
Other possibilities for doctor's appointment, n (%)	44 (55.7)	14	8	7	15
Internet	23	2	3	5	13
Call center	18	10	4	2	2
Via physician	3	2	1	0	0
Number of physicians, median (min, max)	4 (1, 16)	1 (1, 1)	2 (2, 2)	4 (3, 5)	7 (6, 16)
Number of medical consultation desks, median (min, max)	4 (1, 16)	1 (1, 2)	2 (1, 5)	2 (3, 8)	7 (3, 14)
Number of daily consultation slots per physician, median (min, max)	30 (15, 50)	30 (25, 45)	30 (15, 45)	30 (30, 50)	30 (25, 40)
Maximal number of physicians, median (min, max)	1 (1, 5)	1 (1, 1)	1 (1, 1)	1 (1, 3)	2 (1, 5)
Number of waiting room, median (min, max)	2 (1, 7)	1 (1, 1)	1 (1, 2)	2 (1, 7)	3 (1, 7)
Minimal daily occupation of waiting rooms, median (min, max)	20 (15, 60)	30 (25, 45)	30 (15, 90)	30 (30, 60)	30 (30, 90)
Date of construction or last major renovation of premises, n (%)	N=79	N=11	N=19	N=26	N=23
<15 years	58 (73.4)	9	12	15	22
≥15 years	21 (26.6)	2	7	11	1
Initial use of premises, n (%)	N=82	N=14	N=19	N=26	N=23
Professional	54 (65.8)	7	11	15	21
Residential	28 (34.2)	7	8	11	2
Multidisciplinary health center, n (%)	13 (15.8)	2	1	2	8
Other health care professionals, n (%)	N=82	N=14	N=19	N=26	N=23
0	39 (47.6)	8	13	11	7
1	16 (19.5)	3	3	5	5
2	4 (4.9)	1	0	1	2
≥3	23 (28)	2	3	9	9

with 2 physicians, 26 with 3 to 5 physicians, and 23 with ≥6 physicians. The overall refusal rate was 16.3%.

The number of waiting room increased from 1 to 3 depending on the number of physicians consulting in the practice (Table 1). The median minimum daily occupation of waiting room was fairly constant with 20 to 30 patients, but could be as high as 90 patients in some practices. The presence of a secretary was more common in practices with several physicians (overall, there was a secretary in 78.0% of practices).

The number of daily entrances in the practice increased as expected with the maximum number of physicians and was as high as 560 in practices with ≥6 physicians (Table 2). A hydroalcoholic solution was available in 7.3%, and surgical masks in 1.2% of the practices. There was a plastic or glass screen between secretary and patients in 12.7% of cases.

In a majority of waiting rooms, the minimum distance between chairs was >2 m in most cases (78.0%) of chairs facing each other and always >1 m between chairs at 90° (Table 3). Children's toys were present in 67.1% of waiting rooms. Overall, a window was available for proper ventilation in 79.3% of waiting rooms. A waste bin was present in 23.9% of cases.

There was no washbasin in 12.7% of patient toilets and 36.2% of taps of the washbasins were automatic or self-closing (Table 4). Hand drying facilities were absent in 21.5% of cases or were made of fabric in 13.9%.

Housekeeping was generally performed by a housekeeper (46.4%), a secretary (22.6%) or a private service provider (26.2%) (Table 5). A cleaning protocol was reported in 39.2% of practices.

## Discussion

### Summary

Our study evaluated the application of good practices for the prevention of viral cross-transmission in the common areas of general practitioners' practices. These data were of special interest since they were obtained just before the COVID-19 lockdown and allowed evaluating the degree of preparation of general practitioners for the prevention of the transmission of SARS-CoV-2.

Measures to prevent cross-contamination were present but heterogeneous and all the practices visited had at least one weak point. Different practitioners often shared the same waiting room, thus increasing the concentration of

**Table 2.** Organization of Reception.

	All	Number of physicians			
		1	2	3–5	≥6
Entrance door, n (%)	N=82	N=14	N=19	N=26	N=23
Manual	66 (80.5)	14	17	23	12
Automatic	16 (19.5)	0	2	3	11
Number of daily admissions with manual entrance door (min; max)	15; 245	25; 45	15; 90	30; 250	30; 245
Number of daily admissions with maximal number of consulting physicians, median (min; max)	90 (15; 560)	30 (25; 45)	60 (15; 90)	120 (90;250)	180 (30; 560)
Number of daily admissions with minimal number of consulting physicians, median (min; max)	30 (15; 160)	30 (25; 45)	30 (15; 90)	30 (30; 150)	60 (30; 160)
Interface with secretary, n (%)	N=63	N=2	N=13	N=25	N=23
No	55 (87.3)	2	13	19	21
Glass	8 (12.7)	0	0	6	2
Reception desk of secretary, n (%)	N=63	n=2	n=13	n=25	N=23
Wood/linoleum/glass	58 (92)	2	11	23	22
No	5 (8)	0	2	2	1
	N=82	N=14	N=19	N=26	N=23
Hydroalcoholic solution available, n (%)	6 (7.3)	0	0	5	1
Surgical masks available, n (%)	1 (1.2)	0	0	1	0

patients in the same room and consequently the risk of cross-contamination. In general, the organization of the waiting room was based on social conventions and not on hygiene. For example, in small waiting rooms, chairs were most often face to face, thus increasing the risk of droplet transmission and rarely back to back. Chairs and floor materials and wall coverings were not always suitable for proper cleaning and disinfection, cleaning protocols were rarely available and few information was available regarding their use, toys were available in most practices without adequate cleaning frequency or rotation of toys.<sup>1</sup> Although the risk of indirect contact transmission via the fomites remains controversial for SARS-Cov-2,<sup>16,17</sup> it has been demonstrated for other pathogens such as Rotavirus, which is responsible for seasonal large outbreaks of gastroenteritis, thus justifying that the risk of contact transmission via fomites should be addressed in the GP's practice even if the possibility of SARS-Cov-2 transmission via fomites is still uncertain.

Most importantly, surgical masks were available for patients in only one practice (but without explanatory note for patients). Indeed, the Respiratory Hygiene/Cough Etiquette in Healthcare Settings from the Centers for Disease Control and Prevention<sup>21</sup> recommends the provision of surgical mask with visual alerts instructing patients and their attendants. Hydroalcoholic solutions were rarely available to patients (7.3%) and, when present, there was no instructions for correct use.

Some of these non-compliance issues could be easily resolved. Provision of hydroalcoholic solution, surgical

masks, and waste bins in the waiting room; limitation of the number of chairs allowing a minimum distance between them, use of easy to clean chairs, daily cleaning of high surfaces and children's toys. Most physicians in Seine-Maritime were aware of these recommendations and approved them. However, the limiting factor reported for the provision of hydroalcoholic solution and surgical masks was theft. This problem should be addressed and solved in order to improve masks and hydroalcoholic solution availability.

Other corrective actions are more complex and more expensive, particularly with regard to the architecture of the premises: creation of waiting rooms to limit the number of patients in the same room or provision of water points properly equipped for hand washing.

The recent building of the premises is no guarantee of conformity, as they were generally designed by architects not specialized in the creation of medical premises. Among recent premises in our survey were large medical houses that accommodate a large number of patients. These large practices meet economic and multidisciplinary objectives. Either their size should be limited or an innovative organization of the structure of the medical practice should be considered in order to reduce the risk of cross-transmission. In France, GP's payment depends partly on the practice's quality indicators. Currently, these indicators assess for example computer equipment of the practice and timetable availability. It could be imagined that in the future these quality indicators include criteria regarding cross-transmission prevention at the national level.

**Table 3.** Organization of the Waiting Room.

	All	Number of physicians			
		1	2	3–5	≥6
Floor covering, n (%)	N=82	N=14	N=19	N=26	N=23
Linoleum/tiling with smooth joints	33 (40.2)	3	7	11	12
Parquet/carpet/tiling with porous joints	49 (59.8)	11	12	15	11
Wall covering, n (%)	N=82	N=14	N=19	N=26	N=23
Paint	49 (59.8)	11	11	11	16
Wood/tiling/wallpaper	33 (40.2)	3	8	15	7
Chairs with armrests, n (%)	14 (17.1)	1	1	5	7
Material of chairs, n (%)	N=82	N=14	N=19	N=26	N=23
Plastic/metal	54 (65.9)	13	11	19	11
Fabric/wood/leather	28 (34.1)	1	8	7	12
Minimum distance between chairs facing each other, n (%)	N=82	N=14	N=19	N=26	N=23
≥2 m	64 (78.0)	9	16	19	20
1.5 m	13 (15.9)	5	2	3	3
1 m	5 (6.1)	0	1	4	0
Minimum distance between chairs at 90°, n (%)	N=82	N=14	N=19	N=26	N=23
≥2 m	29 (35.3)	6	4	6	13
1.5 m	9 (11)	2	1	4	2
1 m	44 (53.7)	6	14	16	8
Children's toys, n (%)	55 (67.1)	8	11	20	16
Toy cleaning frequency, n (%)	N=55	N=8	N=11	N=20	N=16
Daily	2 (3.6)	0	0	0	2
3 × per week	2 (3.6)	0	0	2	0
1 or 2 × per week	27 (49.1)	4	7	7	9
Less than 1 × per week	24 (43.7)	4	4	11	5
Possibility of ventilation of the waiting room, n (%)	N=82	N=14	N=19	N=26	N=23
65 (79.3)	12	17	20	16	
Waste bin in the waiting room, n (%)	27 (32.9)	4	9	8	6
Type of waste bin, n (%)	N=27	N=4	N=9	N=8	N=6
Foot	7 (25.9)	0	4	3	0
Manual	7 (25.9)	1	1	4	1
Open	13 (48.1)	3	4	1	5
Table in the waiting room, n (%)	77 (93.9)	14	18	21	21
Magazines at disposal, n (%)	80 (97.6)	14	19	26	23

### Strengths and Limitations

Our observational study, which coincides with the start of the COVID-19 pandemic in France, sheds new light on the risks of transmission of this disease in general practitioners' practices. The stratified random sample design, the low refusal rate (16.3%), the data collection after direct observation of the premises are the main strengths of this descriptive study.

Beyond the current situation of COVID-19 pandemic, our study confirms that general practitioners' practices represent a place at risk of transmission of seasonal viral infections. Annual viral infections have a significant morbimortality and a major cost to society. Therefore, the direct and indirect costs associated with seasonal epidemics

justify the prevention of the risk of transmission, particularly in high-risk settings such as general practitioners' practices.

The description of the medical premises performed prior to national lockdown allowed us to highlight some points that could be improved. These points are emphasized in the recent guidelines for the organization of the general practitioners' practices related to the COVID-19 epidemic.<sup>22</sup> The most important recommendations are as follows: arrangement of chairs in the waiting room in order to prevent the risk of droplet transmission, availability of self-service hydroalcoholic solutions, availability of disposable tissues and garbage cans, removal of unnecessary furniture (ie, high surfaces) and children's toys.<sup>22</sup>

**Table 4.** Organization of Toilets for Patients.

	All	Number of physicians			
		1	2	3–5	≥6
Toilets, n (%)	N=82 79 (96.3)	N=14 12	N=19 18	N=26 26	N=23 23
Type of toilets, n (%)	N=79	2	1	0	0
Floor toilets	58 (73.4)	8	15	24	11
Suspended toilets	21 (26.6)	4	3	2	12
Washbasin, n (%)	N=79	N=12	N=18	N=26	N=23
Floor washbasin	22 (27.8)	2	3	10	7
Suspended washbasin	47 (59.5)	8	10	13	16
No wash basin	10 (12.7)	2	5	3	0
Type of tap, n (%)	N=69	N=10	N=13	N=23	N=23
Simple	44 (63.8)	6	10	17	11
Automatic/self-closing	25 (36.2)	4	3	6	12
Floor coverage, n (%)	N=79	N=12	N=18	N=26	N=23
Tiling with smooth joints	28 (35.4)	3	7	12	6
Tiling with porous joints	51 (64.6)	9	11	14	17
Wall coverage, n (%)	N=79	N=12	N=18	N=26	N=23
Tiling/wallpaper	39 (49.4)	4	9	14	12
Paint	40 (50.6)	8	9	12	11
Product for hand-washing, n (%)	N=79	N=12	N=18	N=26	N=23
Liquid soap	61 (77.2)	8	12	21	20
Solid soap	2 (2.5)	0	0	1	1
No soap	16 (20.3)	4	6	4	2
Hydroalcoholic solution at disposal, n (%)	2 (2.5)	0	2	0	0
Hand drying facilities, n (%)	N=79	N=12	N=16	N=26	N=23
Air/single use	51 (64.6)	8	7	19	17
Fabric	11 (13.9)	0	5	4	2
No	17 (21.5)	4	6	3	4
Waste bin at disposal, n (%)	72 (91.1)	11	12	26	23
Type of waste bin, n (%)	N=72	N=11	N=12	N=26	N=23
Manual	18 (25)	3	5	5	5
Foot/open	54 (75)	8	7	21	18
Baby-changing facilities at disposal, n (%)	N=79 24 (30.4)	N=12 0	N=18 4	N=26 8	N=23 12

Our study has some limitations. It was performed exclusively in the practices of general practitioners in a single French department and generalization to the national level should be cautious. There was a recruitment bias since only voluntary doctors participated in the study. These doctors were probably more interested in medical hygiene issues and possible cross-contamination in their practices. Housekeeping data were declarative, and the frequency of cleaning were probably overestimated. In addition, our data collection took place during the first weeks of the ongoing Covid-19 pandemic. Therefore, we were unable to assess the evolution of GP's procedures with improvement of knowledge regarding SARS-Cov-2 transmission after the first Covid-19 epidemic wave in France. Although it is likely that the GP's practice premises were not altered during this relatively short time span, some procedures such as

making a patient wait for his appointment outside the practice, for example in his car, or developing telemedicine (telemedicine was strongly encouraged in France soon after the pandemic began, with reimbursement through health insurance facilitated), may have alleviated the risk for Covid-19 transmission in the GP's practice. However, it is unlikely that these binding measures, especially waiting outside the practice, will be maintained over time. It is therefore important to reflect now on the necessary adaptations of the premises to reduce the risk of viral transmission.

### Comparison with Existing Literature

Few studies have specifically evaluated the prevention of viral cross-transmission in the common areas of doctors'

**Table 5.** Organization of Housekeeping.

	All	Number of physicians			
		1	2	3–5	≥6
Person performing housekeeping, (%)	N=79	N=11	N=19	N=26	N=23
Secretary	16 (22.6)	1	8	5	2
Housekeeper	37 (46.4)	6	6	15	10
Private service provider	22 (26.2)	1	4	6	11
Physician	3 (3.6)	2	1	0	0
Nurse	1 (1.2)	1	0	0	0
Presence of a cleaning protocol, n (%)	31 (39.2)	1	4	8	18
Type of protocol, n (%)	N=31	N=1	N=4	N=8	N=18
By physicians	7 (22.6)	0	0	2	5
By private service provider	22 (71)	1	4	5	12
By manager	1 (3.2)	0	0	0	1
By secretary	1 (3.2)	0	0	1	0
Frequency of cleaning for tables and exchange surface with secretary, n (%)	N=79	N=11	N=19	N=26	N=23
Daily	47 (59.5)	7	10	16	14
3 × per week	10 (12.7)	2	3	4	1
1–2 × per week	19 (24)	2	6	6	5
<1 × per week	3 (3.8)	0	0	0	3
Frequency of cleaning for door knobs and banister, n (%)	N=79	N=11	N=19	N=26	N=23
Daily	43 (54.5)	4	9	16	14
3 × per week	11 (13.9)	3	4	3	1
1–2 × per week	21 (26.6)	3	6	7	5
<1 × per week	4 (5)	1	0	0	3
Cleaning equipment, n (%)	N=79	N=11	N=19	N=26	N=23
Vacuum cleaner and wet cleaning/automatic	75 (94.9)	10	18	26	21
Broom and wet cleaning	4 (5.1)	1	1	0	2
Type of dishcloth, n (%)	N=79	N=11	N=19	N=26	N=23
Fixed	15 (15.2)	2	3	5	2
Washable/disposable	66 (84.8)	9	16	21	20
Frequency of cleaning with dishcloth, n (%)	N=58	N=5	N=16	N=18	N=19
Daily	35 (60.3)	1	9	11	14
≥1 × per week	21 (36.2)	3	7	7	4
<1 × per week	2 (3.4)	1	0	0	1
Type of product used, n (%)	N=64	N=9	N=14	N=23	N=18
Detergent	24 (37.5)	2	4	8	10
Disinfectant	13 (20.3)	1	2	7	3
Detergent/disinfectant	27 (42.2)	6	8	8	5

practices. Salabert<sup>23</sup> reported that a ventilation system was present in 78% of general practitioners' waiting room, 88% had toilets for patients and 46.4% of the toilets had a washbasin (these rates were 79%, 96%, and 87%, respectively in our study). Bonazzi<sup>24</sup> reported that floor cleaning was performed by vacuuming and then wet cleaning in 13.3% of the cases (87.5% in our study). In 76% of the cases there was a washbasin in the toilets (87% in our study). These slight discrepancies may be due to the inclusion of large practices in our study. Indeed practices with ≥3 doctors always had toilets for patients

and the practices with ≥6 doctors always had a washbasin in their toilets for patients.

### Implications for Practice

Our study began in September 2019 and in March 2020, the SARS-CoV-2 pandemic has brought to the forefront the importance of preventing droplet transmission. The use of hydroalcoholic solution, handwashing several times a day and the use of surgical masks are now usual practices in the general population. In the doctors' practices, the number of

daily consultations has decreased and there are fewer chairs in waiting rooms to avoid viral cross-contamination.<sup>17</sup> However, our study suggests that essential products such as masks and alcoholic hand-rub solution are not sufficiently available in GP's practices.

Overall, our study suggests 3 main areas for improvement strategies. First, it would be particularly useful to develop products that make water-alcohol solutions and masks available to patients, while minimizing the risk of theft. Second, in the medium term, a particular attention should be paid to the organization of the biocleaning of premises, including the training of staff in charge of this biocleaning, as well as to the choice of suitable (virucidal) cleaning products. Third, in the longer term, attention should be paid, when creating new premises, to compliance with a few simple rules in the creation of several waiting rooms, the use of easily cleanable materials, the presence of well-designed water points, in the GP's practice premises. National guidelines on these topics should be made available for GPs.

The major role of GP's as frontline professionals in COVID-19 outbreak control has been highlighted in recent months. Most COVID-19 patients experience mild forms of the disease and are adequately taken care of by their GP. Prevention of COVID-19 in the primary care setting and especially at the GP's practice is therefore of tremendous importance. Our survey may help authorities and field professionals to identify area of improvement to facilitate COVID-19 control in the primary care setting.

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### Declaration of Conflicting Interests

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### Ethical Approval

The work received approval from the Hospital's Ethic Committee for Research

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### Supplemental Material

Supplemental material for this article is available online.

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