Supplementary materials

Supplementary table 6: distribution of the population studied, according to the hospital and department of work

Hospital	Paris-APHP - Bichat	172 (15.21%)
	Paris-APHP - Pitié Salpêtrière	449 (39.7%)
	Paris-APHP - Saint Antoine	280 (24.76%)
	Paris-APHP - Tenon	148 (13.09%)
	Paris-APHP - Trousseau	82 (7.25%)
Type of Department	Infectious Diseases	351 (31.03%)
	Intensive Care Unit	355 (31.39%)
	Emergency Department	380 (33.6%)
	Virology laboratory	45 (3.98%)
Hospital - department	Paris-APHP - Bichat – Infectious Diseases	172 (15.21%)
	Paris-APHP - Pitié Salpêtrière Infectious Diseases	49 (4.33%)
	Paris-APHP - Saint Antoine - Infectious Diseases	130 (11.49%)
	Paris-APHP - Pitié Salpêtrière Intensive Care Unit	229 (20.25%)
	Paris-APHP - Saint Antoine - Intensive Care Unit	50 (4.42%)
	Paris-APHP - Tenon - Intensive Care Unit	76 (6.72%)
	Paris-APHP - Pitié Salpêtrière Emergency Department	126 (11.14%)
	Paris-APHP - Saint Antoine - Emergency Department	100 (8.84%)
	Paris-APHP - Tenon – Emergency Department	72 (6.37%)
	Paris-APHP - Trousseau – Emergency Department	82 (7.25%)
	Paris-APHP - Pitié Salpêtrière – Virology laboratory	45 (3.98%)

Supplementary table 7 : Risk factors (multivariate) of laboratory-confirmed SARS-CoV-2 infection at inclusion, before imputation of missing data

Characteristic	OR[1]	95% CI[1]	p-value
Age	0.98	0.94, 1.01	0.20
Sexe			0.43
Male	—	—	
Female	0.74	0.36, 1.61	
Working in a referent hospital for emerging biological risk			0.81
no	—	—	
yes	1.09	0.56, 2.17	
Working department			**<0.001**
Emergency department	—	—	
Infectious diseases department	7.48	3.02, 21.5	
Intensive care unit	1.53	0.55, 4.67	
Professional category			0.32
Physician	—	—	
Medical students	2.13	0.50, 8.71	
Care assistants	1.10	0.34, 3.34	
nurses	1.66	0.70, 4.23	
others	0.52	0.11, 1.86	
Experience in the department ≥12 months			0.28
no	—	—	
yes	1.73	0.66, 5.34	
Experience in the job ≥12 months			0.97
no	—	—	
yes	1.03	0.25, 5.29	
Night shift			0.36
no	—	—	
yes	0.52	0.08, 1.91	
Public transportation use			>0.99
No	—	—	
Yes	1.00	0.51, 1.94	
Smoking status			**0.012**
Past or no smoker	—	—	
Current smoker	0.30	0.09, 0.79	

[1]OR = Odds Ratio, CI = Confidence Interval

Table 8: Risk factors (multivariate) of laboratory-confirmed SARS-CoV-2 infection at M3, before imputation of missing data

Characteristic	OR[1]	95% CI[1]	p-value
Age	0.99	0.97, 1.01	0.42
Sexe			0.40
Male	—	—	
Female	1.23	0.76, 2.05	
Working in a referent hospital for Emerging biological risk			0.34
No	—	—	
Yes	1.23	0.80, 1.90	
Working Department			**0.003**
Virology laboratory	—	—	
Infectious diseases department	4.15	1.11, 27.2	
Intensive care unit	1.85	0.47, 12.4	
Emergency department	4.01	1.03, 26.8	
Professional category			0.19
Senior Physician	—	—	
Medical students	2.40	0.91, 6.21	
Care assistants	0.93	0.47, 1.84	
Nurses	1.34	0.76, 2.41	
Others	0.73	0.32, 1.57	
Experience in the department ≥12 months			0.31
no	—	—	
yes	1.39	0.74, 2.76	
Experience in the job ≥12 months			0.72
no	—	—	
yes	0.86	0.37, 2.05	
Night shift			0.94
no	—	—	
yes	0.98	0.49, 1.83	
Public transportation use			0.49
No	—	—	
yes	1.15	0.77, 1.73	
Smoking status			**<0.001**
Past or no smoker	—	—	
Current smoker	0.38	0.21, 0.66	

[1]OR = Odds Ratio, CI = Confidence Interval

Supplementary table 9 : Risk factors (multivariate) of laboratory-confirmed SARS-CoV-2 infection at month 3 in high-risk healthcare workers, accounting for adherence to personal protective equipment recommendations, before imputation of missing data.

Characteristic	OR[1]	95% CI[1]	p-value
Age	0.99	0.96, 1.02	0.52
Sexe			0.87
Male	—	—	
Female	1.05	0.58, 1.99	
Working in a referent hospital for emerging biological risk			0.57
no	—	—	
yes	1.17	0.68, 2.01	
Working department			**0.006**
Intensive care unit	—	—	
Infectious diseases	3.05	1.53, 6.14	
Emergency department	1.88	0.96, 3.72	
Professional category			0.41
Senior physician	—	—	
Medical students	0.84	0.19, 3.22	
Care assistants	1.22	0.49, 3.04	
Nurses	1.68	0.82, 3.60	
Experience in the department ≥12 months			0.79
no	—	—	
yes	0.91	0.45, 1.95	
Experience in the job ≥12 months			0.44
no	—	—	
yes	1.52	0.53, 4.62	
Night shift			0.89
no	—	—	
yes	0.95	0.44, 1.94	
Public transportation use			0.81
no	—	—	
yes	1.07	0.64, 1.76	
Smoking status			**0.004**
Past or no smoker	—	—	
Current smoker	0.40	0.20, 0.76	
Wear a surgical mask (0 = never 5 = systematically)			0.35
4-5	—	—	
< 4	0.61	0.17, 1.66	

Characteristic	OR[1]	95% CI[1]	p-value
Wear an N95 mask to take nasopharyngeal swabs			0.91
4-5	—	—	
< 4	1.04	0.52, 1.98	
Wear an N95 mask to handle a confirmed COVID-19 case			0.39
4-5	—	—	
< 4	1.31	0.71, 2.40	
If wearing a mask (surgical or N95), change every 4 hr			0.10
4-5	—	—	
< 4	1.59	0.92, 2.74	

[1]OR = Odds Ratio, CI = Confidence Interval

Supplementary table 10 : adherence to PPE recommendations at M0 using a Likert scale from 0-5

		Serological status M0			
label	variable	Negative	Positive	Total	NA
Wear a surgical mask (0 = never 5 = systematically)	0	7 (0.79%)	0 (0%)	7 (0.75%)	0
	1	4 (0.45%)	0 (0%)	4 (0.43%)	0
	2	6 (0.68%)	2 (4.26%)	8 (0.86%)	0
	3	41 (4.62%)	5 (10.64%)	46 (4.93%)	0
	4	170 (19.17%)	13 (27.66%)	183 (19.59%)	0
	5	659 (74.3%)	27 (57.45%)	686 (73.45%)	1
	Total	887 (94.97%)	47 (5.03%)	934 (100%)	2
	NA	112	14	127	1
Wear a surgical mask (0 = never 5 = systematically)	4-5	829 (93.46%)	40 (85.11%)	869 (93.04%)	1
	< 4	58 (6.54%)	7 (14.89%)	65 (6.96%)	0
	Total	887 (94.97%)	47 (5.03%)	934 (100%)	2
	NA	112	14	127	1
Wear an N95 mask to take nasopharyngeal swabs	0	71 (10.57%)	2 (5.88%)	73 (10.34%)	0
	1	7 (1.04%)	0 (0%)	7 (0.99%)	0
	2	22 (3.27%)	2 (5.88%)	24 (3.4%)	0
	3	51 (7.59%)	2 (5.88%)	53 (7.51%)	0
	4	76 (11.31%)	8 (23.53%)	84 (11.9%)	0
	5	445 (66.22%)	20 (58.82%)	465 (65.86%)	0
	Total	672 (95.18%)	34 (4.82%)	706 (100%)	2
	NA	327	27	356	2
Wear an N95 mask to take nasopharyngeal swabs	4-5	521 (77.53%)	28 (82.35%)	549 (77.76%)	0
	< 4	151 (22.47%)	6 (17.65%)	157 (22.24%)	0
	Total	672 (95.18%)	34 (4.82%)	706 (100%)	2
	NA	327	27	356	2
Wear an N95 mask to handle a confirmed COVID-19 case	0	62 (7.95%)	5 (11.63%)	67 (8.14%)	0
	1	31 (3.97%)	2 (4.65%)	33 (4.01%)	0
	2	38 (4.87%)	5 (11.63%)	43 (5.22%)	0
	3	71 (9.1%)	7 (16.28%)	78 (9.48%)	0
	4	84 (10.77%)	1 (2.33%)	85 (10.33%)	0
	5	494 (63.33%)	23 (53.49%)	517 (62.82%)	1
	Total	780 (94.78%)	43 (5.22%)	823 (100%)	2
	NA	219	18	238	1
Wear an N95 mask to handle a confirmed COVID-19 case	4-5	578 (74.1%)	24 (55.81%)	602 (73.15%)	1
	< 4	202 (25.9%)	19 (44.19%)	221 (26.85%)	0
	Total	780 (94.78%)	43 (5.22%)	823 (100%)	2
	NA	219	18	238	1
If wearing a mask (surgical or N95), change every 4 hr	0	63 (7.16%)	2 (4.26%)	65 (7.01%)	0
	1	39 (4.43%)	4 (8.51%)	43 (4.64%)	0
	2	69 (7.84%)	9 (19.15%)	78 (8.41%)	0
	3	139 (15.8%)	10 (21.28%)	149 (16.07%)	0
	4	183 (20.8%)	5 (10.64%)	188 (20.28%)	0
	5	387 (43.98%)	17 (36.17%)	404 (43.58%)	0
	Total	880 (94.93%)	47 (5.07%)	927 (100%)	2
	NA	119	14	135	2
If wearing a mask (surgical or N95), change every 4 hr	4-5	570 (64.77%)	22 (46.81%)	592 (63.86%)	0
	< 4	310 (35.23%)	25 (53.19%)	335 (36.14%)	0
	Total	880 (94.93%)	47 (5.07%)	927 (100%)	2
	NA	119	14	135	2

Supplementary material 11 : power calculation

The purpose of the study was to estimate a proportion of HCW with documented SARS-CoV2 infections at M3 (at the end of the first wave of the pandemics) in a range of services and hospitals with different characteristics. All eligible HCW of participating services were to be solicited, and all those who agree to participate would be included. We included hospitals with different characteristics (referent hospital for emerging biological risk or not, hospital for adults or for children, large or small hospitals), and the main departments involved in the care of COVID patients at the very beginning of the pandemics. We did not have data on the expected proportion of documented SARS CoV2 infections that we will observe. Thus we estimated the precision that can be obtained according to different scenarii (exact confidence intervals, N: numbers included) if we include 400, 600, 800 or 1000 HCW (see table below), and planned to include 1000 HCW to have a good precision on the estimation. We did not use a proportional allocation in each department, and solicited all eligible HCW.

Proportion of HCW with documented SARS-CoV2 infection at M3	95% confidence interval of the proportion if N=400	95% confidence interval of the proportion if N=600	95% confidence interval of the proportion if N=800	95% confidence interval of the proportion if N=1000
5 %	3.1% ; 7.6%	3.4% ; 7.1%	3.6% ; 6.7%	3.7% ; 6.5%
10 %	7.2% ; 13.4%	7.7% ; 12.7%	8.0% ; 12.3%	8.2% ; 12.0%
20 %	16.2% ; 24.3%	16.9% ; 23.4%	17.3% ; 22.9%	17.6% ; 22.6%
50 %	45.0% ; 55.0%	45.9% ; 54.1%	46.5% ; 53.5%	46.9% ; 53.1%
70 %	65.2% ; 74.5%	66.2% ; 73.6%	66.7% ; 73.2%	67.1% ; 72.8%