

P133

COVIDApp: a health application as an innovative strategy for the management of the COVID-19 pandemic in long-term care facilities

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Background: The COVID-19 pandemic has caused an unprecedented worldwide public health crisis that requires new approaches. COVIDApp is a mobile application for the management of institutionalised individuals in long-term care facilities (LTCF).

Methods: COVIDApp was implemented in 196 care centres in collaboration with 64 primary care teams. Objectives: early detection; self-isolation of suspected cases and rapid diagnosis; remote treatment and monitoring of mild cases; and real-time monitoring of the progression of the infection. The following parameters of COVID-19 were reported daily: signs/symptoms; diagnosis by polymerase chain reaction; absence of symptoms for ≥ 14 days; total deaths; and healthcare workers isolated with suspected COVID-19. The number of centres at risk was also described.

Results: Data were recorded from $\geq 10\,000$ institutionalised individuals and up to 4000 healthcare workers between 1 and 30 April 2020. A rapid increase in suspected cases was seen until Day 6 but decreased during the 2 last weeks (from 1084 to 282 cases). Confirmed cases increased from 419 cases (Day 6) to 1293 cases (Day 22), remaining stable during the last week. Around 49.2% remained asymptomatic ≥ 14 days. A total of 854 (8%) deaths were reported (383 in suspected/confirmed cases). The number of isolated healthcare workers remained high over the 30 days; suspected cases decreased during the last 2 weeks. The number of high-risk LTCF decreased from 9.5% to 1.5% (Figure 1).

Conclusions: COVIDApp could help clinicians to rapidly detect and remotely monitor suspected and confirmed cases of COVID-19 among institutionalised individuals, thus limiting the risk of spreading the virus. The platform shows the progression of infection in real time and can help us to design new monitoring strategies.

P134

SARS-CoV2 pandemic: SARS-CoV2 seroprevalence and impact on HIV suppression in PLWH

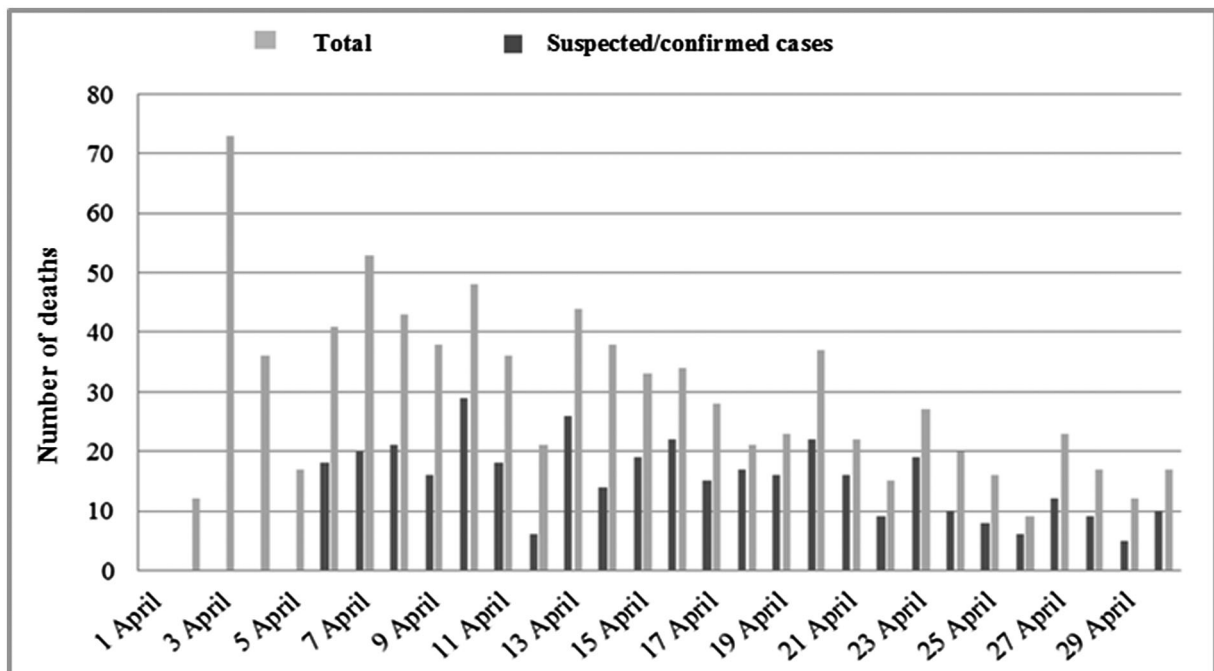
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Background: Lockdown, as a strategy to control SARS-CoV2 pandemic, has been implemented in several countries including Italy. Modena HIV Clinic shut down from 24 February to 4 May 2020. The aim of the present study was to assess the prevalence of SARS-CoV2 positive serology among PLWH and to investigate the impact of the pandemic on HIV virological control in this population.

Materials and methods: SARS-CoV2 serological assays were performed in PLWH attending Modena HIV Clinic after 4 May 2020, as



Abstract P133-Figure 1. Total number of deaths and deaths in suspected/confirmed cases among residents, as reported by long-term care facilities healthcare staff over 30 days.

part of HIV follow-up which includes HIV viral load and CD4 + assessment as well. HIV virological blips were defined as HIV RNA > 40 copies/mL after two consecutive undetectable HIV RNA in previous assays. Serological tests of the general population were obtained from local hospital laboratory. A descriptive analysis was done to address differences between groups: continuous variables were compared using non-parametric analysis (Mann–Whitney), while categorical variables were compared using chi-square test. The level of statistical significance was set for p -value less than 0.05. Multivariate analysis was performed using stepwise logistic regression method.

Results: Until 17 June 2020 a total of 52 072 serological assays were obtained from 30 286 people. Four hundred and ninety-six (1.6%) were performed in PLWH, thus the 28.7% (496/1733) of the whole Modena HIV cohort was tested. SARS-CoV2 serological tests were positive in 1577 people (5.2%), 17 (3.4%) in PLWH and 1560 (5.2%) in HIV-negative people, respectively ($p = 0.072$; chi-square test). Regarding logistic multivariate analysis, age (OR 1.007; 95% CI 1.004 to 1.010; $p < 0.001$) and foreign nationality (OR 1.070; 95% CI 1.181 to 1.591; $p < 0.001$) were the only determinants for being SARS-CoV2 seropositive, while HIV serological status was not associated (OR 0.627, 95% CI 0.385 to 1.021; $p = 0.061$). Virological blips were observed in 3.7% (15/406) of patients in cART. One patient stopped treatment and the remaining had virological blips < 1000 copies/mL (range 41 to 225 copies/mL); none of them was SARS-CoV2 positive.

Conclusions: Our data show no statistically significant difference in SARS-CoV2 seroprevalence between HIV-positive and HIV-negative people. Still, the increase in viral blips is worrisome, as it may reflect decreased adherence to cART or difficult drug supplying due to lockdown.

P135

Prevalence of respiratory virus infections during a SARS-CoV2 epidemic

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Background: On 10 March 2020, the World Health Organization declared a global pandemic due to widespread infection of the novel coronavirus SARS-CoV-2. This epidemic struck while the winter epidemics of respiratory viruses were not yet finished. In order to better understand the aetiologies of influenza-like syndromes in the COVID-19 period, we analysed the samples taken in a hospital screening centre in Paris, France at the very beginning of the epidemic.

Materials and methods: We collected nasopharyngeal swabs from persons attending the outpatient testing unit of St-Antoine University Hospital in Paris from 28 February to 27 March 2020. Real-time polymerase chain reaction (RT-PCR) was performed for SARS-CoV-2 and for the most common respiratory pathogens. Patient characteristics, symptoms at presentation and risk factors were collected. Data were analysed for normality and descriptive statistics were presented as a number (%) for categorical variables and median (interquartile range [IQR]) for continuous variables. Chi-square test was used for categorical variables.

Results: Overall, 707 patients sought medical care. According to the former testing strategy 468 patients (66.2%) qualified for testing by RT-PCR and were included in final analysis. The median (IQR) age was 37 (29 to 50) years and 139 patients (29.7%) were male. The prevalence of SARS-CoV2 was 37.4% and 37 patients (7.9%) were positive for other pathogens, mainly influenza. Two hundred and fifty six patients (54.7%) had negative results. Symptoms such as anosmia, fever and headache were more frequently seen in patients with SARS-CoV2 compared to other pathogens (respectively 26.3% vs 2.7%, $p < 0.00001$; 78.9% vs 64.9%, $p < 0.02$; 45.1% vs 29.7%, $p < 0.002$),

while nasopharyngitis was more common in patients with other viruses (24.3% vs 10.39%, $p < 0.003$). Over the study period, the prevalence of respiratory viruses other than SARS-CoV2 decreased (Week 1: 26.4%, Week 2: 7.3%, Week 3: 1.8%) until it became zero on the fourth week (Table 1).

Abstract P135-Table 1. Viral and bacterial agents detected in patients tested for SARS-CoV-2 infection, Paris, France, 28 February to 27 March 2020 (n = 468)

Pathogens	Patients with pathogen detected, n (%)
SARS-CoV-2	175 (37.4)
Influenza A	6 (1.3)
Influenza B	7 (1.5)
Metapneumovirus	5 (1.1)
Rhinovirus/enterovirus	8 (1.7)
Coronavirus HKU1	3 (0.6)
Adenovirus	2 (0.4)
M. pneumoniae	1 (0.2)
Respiratory syncytial	1 (0.2)
Mixed infections (excluding SARS-CoV-2)	4 (0.9)

Conclusions: Over the period of March 2020 seasonal respiratory viruses quickly disappeared while COVID-19 affected more than a third of people consulting for an influenza-like illness in a hospital screening centre in Paris. The anosmia-fever-headache triad has been found much more frequently in association with SARS-CoV2 than with other respiratory viruses and could be a warning sign in case of a new epidemic.

P136

Prophylactic dose of low-molecular-weight heparin (LMWH) might not be sufficient to mitigate the clinical scenario in patients with COVID-19 and severe pneumonia

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Background: Coronavirus disease 2019 (COVID-19) is commonly complicated with coagulopathy and prophylactic daily low-molecular-weight heparins (LMWHs) are currently recommended in patients hospitalised with COVID-19 pneumonia in order to reduce the incidence to venous thromboembolism (VTE). Aims of the study were to assess the role of LMWH at prophylactic dose on the clinical