

Documented early circulation of Coronavirus Disease 2019 (COVID-19) in Florida, USA, since February 2020

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ABSTRACT

In this Update, we document the circulation of Coronavirus Disease 2019 (COVID-19) in Florida, USA, since February 2020. On 8th March 2020, a confirmed case of COVID-19 was notified to the Health Authority of Central Tuscany, Florence, Italy. The patient developed symptoms on 3rd March while staying in Miami where he arrived on 12th February. The case returned to Italy on 6th March and was admitted to a local hospital of Florence on 7th March with fever (38.2°C/100.4°F), cough and breathing difficulties. First COVID-19 cases in Florida were confirmed by the Centers for Disease Control and Prevention on 2nd March as imported cases. Therefore, this event documents COVID-19 circulation in Florida at least since mid-February 2020.

Keywords Case Report, COVID-19

On 8th March 2020, a confirmed case of Coronavirus Disease 2019 (COVID-19) was notified to the Health Authority of Central Tuscany, Florence, Italy. The case, an immunocompromised patient in his 50s of Italian nationality, was admitted to a local hospital of Florence on 7th March with fever (38.2°C/100.4°F), cough and breathing difficulties. Nasopharyngeal swab was tested positive for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) by reverse transcription polymerase chain reaction.

At the epidemiological investigation, the patient reported that the first symptoms (i.e. myalgia, fatigue and low-grade fever) began on 3rd March, while he was in Miami (Fig. 1).

The case arrived in Miami International Airport from Rome–Fiumicino International Airport on 12th February 2020. He lived in a friend's house and travelled through Florida until 6th March, when he returned to Florence, through a direct flight Miami–Rome and a connection flight Rome–Florence (Peretola airport).

At the time of the patient's arrival in Miami (12th February 2020), Italy counted three imported cases of COVID-19 and the USA 15 cases [1]. As of 23rd February 2020, cases in the USA increased to 53, of which 36 from the Diamond Princess cruise ship that was docked in Yokohama, Japan [2].

On 2nd March 2020, the Centers for Disease Control and Prevention confirmed Florida's first two cases of COVID-19: A man in his 40s who had traveled to Italy and a woman in her late 30s who contracted the virus while traveling in Iran [3].

As COVID-19 mean incubation period is estimated in 5–6 days (range 2–14 days) [4], the event suggests that the infection occurred in Florida during 19th February–1st March and that the virus was already circulating in the Country, at least since mid-February 2020. The hypothesis that infection occurred during the flights Miami–Rome–Florence is excluded as patient developed symptoms during his stay in Miami, before returning to Italy.

This event also adds evidence to the limited effectiveness of exit or entry screening at airports for initial symptoms, via thermal scanners or similar, to prevent the passage of infected travellers when the pathogen determines a high rate of asymptomatic infections and mild symptoms as COVID-19 [5]. In fact, the patient stated that he went through entry and exit thermal image scanners multiple times with mild symptoms, including low-grade fever, without ever being detected.

According to the International Health Regulation (IHR), the investigation was transmitted to the Italian Ministry of Health that notified the World Health Organization and shared information through the Event Information Site for IHR National Focal Points.

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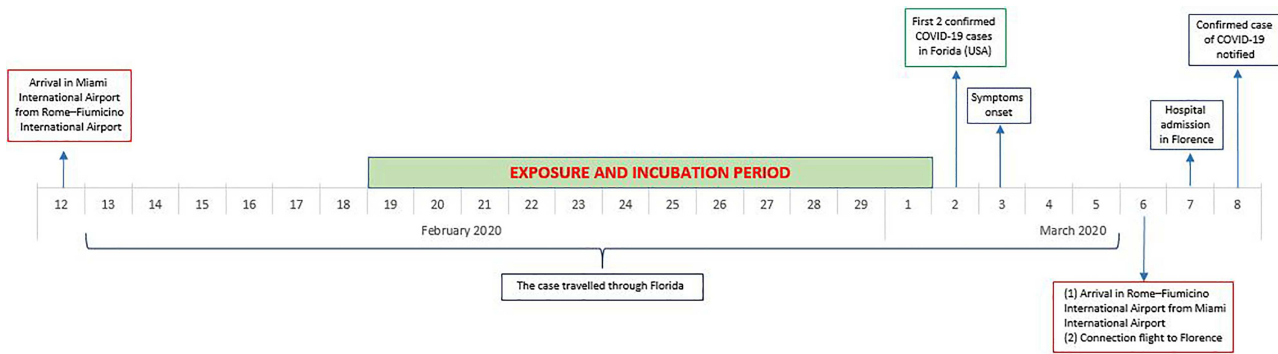


Fig. 1 Timeline of events.

Authors' contributions

A.M. performed the investigation and wrote first draft of the Update; M.L. revised it. All authors reviewed, edited and approved the final version.

Conflict of interest

None declared.

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