**A MISSED OPPORTUNITY TO LIMIT COVID-19 SPREAD: HOW 6 MONTHS OF RELAXATION OF CONFINEMENT MEASURES DRAMATICALLY INCREASED THE NUMBER OF INFECTIONS AND THE SEROPREVALENCE IN THE GENERAL POPULATION IN A PREVIOUSLY LOW INCIDENCE AREA**

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Dear Sir

Recently, we published data from an ongoing study in the Journal of Medical Virology (1) on the seroprevalence of anti-SARS-CoV-2 antibodies among healthy blood donors in the Foggia province, a low incidence area in Apulia in South-Eastern Italy.

At that time (the so-termed “first wave” period), as of June 8, 1162 cases had been diagnosed in Foggia in three months (the first case occurring on March 1, 2020), with an incidence of 187 cases per 100,000 inhabitants (5);we detected a low seroprevalence of 0.9% in a series of healthy blood donors.

As we continued our study, the concerning nature of the most recent results prompted us to write this report.

Due to the alarmingly rapid spread of COVID-19, Italy experienced very restricted containment measures for 69 days from March 9 to May 19, 2020. These included strict mobility limitations, the shutdown of schools and universities, suspension of sports events, mandatory use of masks, social distancing, massive identification and isolation of infected cases and their contacts, nationwide suspension of all non-essential business, and implementation of smart working.

The intended effects of this strict lockdown were surely obtained, as the outbreak was promptly stemmed in the whole country and, in particular, in the Foggia area, as can be seen in Table 1. The number of new cases reported dropped from 521 in April to 99 in May and 17 in June, a direct result of the containment measures that were subsequently dramatically alleviated.

Starting from September and with more evidence in October, a rapid spread in newly diagnosed infections was observed, which correlated with a gradual increase in seroprevalence rate. This observed phenomenon could have several explanations.

It is generally accepted that reducing mobility is the most effective measure to reduce transmission rates. Relaxation of mobility reductions occurred in the summer (holiday) season, mainly due to the heavy economic consequences that the loss of tourism could cause in a country with a strong tourist vocation like Italy.

As a consequence, several people traveled for vacation through regions with different prevalence rates, which undoubtedly facilitated the spread of the virus nationwide. The South of Italy, although an attractive area of the country with heavy seaside tourism, was not heavily affected by COVID-19 during the first wave, which made it an even more desirable holiday destination. But one can argue that hosting individuals from heavily affected regions caused a wide circulation of the virus.

Furthermore, the decreased number of new infections induced an unfounded optimism that there may not be a second wave of COVID-19, which along with incautious declarations by some scientists regarding a loss of pathogenicity of the virus, favored a loss of adherence to preventive measures. These had devastating effects in touristic areas and especially among young people.

Gathering on the beaches, crowded pubs, and discotheques were quite common during the apparently “COVID-free” summer.

Even in a low-incidence area like the Foggia province, the increase in new COVID-19 cases in August and September was evident, but this was taken lightly by the authorities. The reopening of schools in September was possibly the hardest blow. Scholars in a classroom are probably not at risk if proper distancing is guaranteed. But public transport and methods of access to the schools were not organized. In particular public transport should be considered risky because of the difficulties in maintaining social distancing — the presence of touchpoints like handrails and enclosed spaces facilitate the easy spread of the virus. This surely contributed to the increase in the number of infections among young individuals that are often asymptomatic but contagious nonetheless, mainly causing outbreaks in family clusters.

The consequences of these political decisions are clearly depicted in the numbers we present here: up to 2527 cases in October and 8175 in November.

Although vaccination campaigns have started, several months will be needed to immunize the majority of the population.

Restrictions are hard to tolerate and the deleterious economic consequences are evident. But we have also seen that a strong intervention with heavy measures almost blocked nationwide diffusion of the virus but also the dramatic consequences of alleviating these restrictions and lack of social planning, which nullified previous efforts and results obtained from the lockdown.

The current system of on-again/off-again curbs has failed to prevent the spread of coronavirus while new and more aggressive viral variants are circulating. Italy probably needs to adopt stricter lockdown measures in the whole country.

We strongly hope that health authorities will learn from the recent experience: an old Italian byword claims that the pitiful doctor makes the sore worse. We should not repeat mistakes.

RELATIONSHIP BETWEEN THE NUMBER OF NEW COVID 19 DIAGNOSIS (cases) AND SEROPREVALENCE OF ANTI-SARS-COV-2 ANTIBODIES AMONG HEALTHY BLOOD DONORS

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Apr may jun jul aug sep oct nov

Cases 521 99 17 15 195 545 2527 8175

Seroprev 1% 0.9% 1.1% 1% 1.1% 1.6% 6.7% 10.7%

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Table 1: Relationship between the number of new COVID-19 diagnosis (cases) and seroprevalence of anti-SARS-CoV2 antibodies among healthy blood donors.

RFERENCES:

Task force COVID-19 del Dipartimento Malattie Infettive e Servizio di Informatica, Istituto Superiore di Sanità. Epidemia COVID-19, Aggiornamento nazionale: 2 dicembre 2020e 2020https://www.epicentro.iss.it/coronavirus/bollettino/Bollettino-sorveglianza-integrata-COVID-19\_2-dicembre-2020.pdf

Viner RM, Bonell C, Drake L*, et al*

Reopening schools during the COVID-19 pandemic: governments must balance the uncertainty and risks of reopening schools against the clear harms associated with prolonged closure

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WHY SCHOOLS PROBABLY AREN’T COVID HOTSPOTS Dyani Lewis Nature | Vol 587 | 5 November 2020 17