

## 8.A. Oral session: Preparedness and surveillance of Covid-19

### COVID-19 serological testing for Healthcare Workers in Lombardy, Italy

Gabriele Del Castillo

*G Del Castillo<sup>1</sup>, A Castrofino<sup>1</sup>, F Grosso<sup>1</sup>, A Barone<sup>3</sup>, L Crottogini<sup>2</sup>, C Toso<sup>2</sup>, L Pellegrinelli<sup>1</sup>, E Pariani<sup>1</sup>, S Castaldi<sup>1</sup>, D Cereda<sup>2</sup>*

<sup>1</sup>Department of Biomedical Sciences for Health, University of Milan, Milan, Italy

<sup>2</sup>DG Welfare, Regione Lombardia, Milan, Italy

<sup>3</sup>Welfare Division, ARIA spa, Milan, Italy

Contact: gabriele.delcastillo@unimi.it

#### Issue:

COVID-19 pandemic began in Italy on February 20th, 2020. Since the beginning of the emergency Healthcare Workers' (HCWs) involvement was prominent, mainly due to direct assistance to COVID-19 patients. Therefore, we implemented a prevention policy for HCW screening through serological and RT-PCR testing.

#### Description of the problem:

HCW screening for SARS-CoV-2 infection is essential for prevention and control of the pandemic. Lombardy's Healthcare authorities settled a screening process for HCWs divided into three steps: 1) body temperature assessment at the beginning and the end of work shift, if fever > 37.5 °C was present the HCW was sent back home and a nasopharyngeal swab was performed; 2) progressive recruitment for serological testing; 3) on those positive to IgG a nasopharyngeal swab was performed and tested for viral RNA by RT-PCR.

#### Results:

Among 79185 HCW tested, 9589 (12%) were positive on serological IgG testing. Of the 9589 positive a nasopharyngeal swab was performed on 6884. Of these 358 (5%) tested positive and the remaining 6526 (95%) negative to RT-PCR. We calculated a Positive Predictive Value of 5.2%. The rate of positive serological tests for each Healthcare facility varied between 0% and 78%. Five percent of all facilities, belonging to Brescia, Bergamo and Cremona area, reported a positivity rate higher than 40% in HCWs. A second cluster (18% of all facilities), involving the same geographical area, reported a rate between 20% and 40%, whereas the remaining facilities (76%) of the region a rate <20%.

#### Lessons:

Serological IgG testing can be, if followed by immediate nasopharyngeal swab testing, a valid screening intervention on asymptomatic HCWs especially in a high infection prevalence setting.

#### Key messages:

- Serological IgG testing can be, if followed by immediate nasopharyngeal swab testing, a valid screening intervention on asymptomatic HCWs.
- Infection prevention in HCW may benefit from a screening campaign especially in high prevalence settings.