

**Covid-19 in obstetrics units:
effectiveness of a screening questionnaire at hospital admission**

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Sutton et al. recently reported on universal testing with nasopharyngeal swabs to detect Sars-Cov-2 infection in 215 women admitted for delivery in New York at the Presbyterian Allen Hospital [1]. They identified 33 affected cases (15.4%), of whom only four had fever or symptoms suggesting Covid-19. These findings suggest that only universal testing can reliably recognize affected women. However, this approach is feasible only in major Western hospitals with in-house efficient lab facilities. Alternative approaches deserve consideration.

Our Hospital, a designated COVID-19 Maternity Hub, is located in Milan, Northern Italy, an area that was particularly hit by Sars-Cov-2 [2]. Since the early phases of the outbreak and in line with local recommendations, we opted for a systematic screening using a specific questionnaire prior to obstetrics admission (Figure 1) [3]. Suspected cases based on this questionnaire underwent a nasopharyngeal swab and were managed as Covid-19 until the result of the test became available. They were admitted in a Covid-19 area and assisted by dedicated and properly protected personnel. Conversely, women with unremarkable questionnaire were managed according to current standards.

To validate this approach, from April 1st to April 9th 2020, we performed the nasopharyngeal swab to all pregnant women requiring hospital admission. One hundred thirty-nine consecutive women were included. Overall, six (4%) were found to be suspected at the screening questionnaire while the remaining 133 (96%) were not. The nasopharyngeal swab was positive in three women (2.2%), two among suspected subjects and one among non-suspected subjects ($p=0.005$). The prevalence of Covid-19 cases among women with unremarkable questionnaire was 0.8% (95% CI: 0.1-4.1%).

Our findings suggest that Milan at the time of this observational study, thanks to early lockdown, was facing a different phase and severity of the outbreak compared to New York [1]. Even if study periods overlap, the rate of positive swabs in the two areas were radically different (2.2% versus 15.6%). The performance of our screening approach might

be less efficient in areas similar to the current New York context where the absolute rate of undetected Covid-19 cases would be markedly higher.

In conclusion, a policy of systematic screening with a specific questionnaire is a manageable, inexpensive and effective tool for obstetrics care, at least in areas where the incidence of Sars-Cov-2 infection is not devastating. However, it is not infallible. If swabs can be processed within a matter of hours, a universal swab policy should be preferred.

References

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Figure Legend

Figure 1: Check-list used to assess possible Covid-19 cases. The English version is presented but translations in nine different languages (including Italian) were available to overcome possible cultural or linguistics misunderstandings. The check-list was adapted from the recently published *ISUOG Interim Guidance on 2019 novel coronavirus infection during pregnancy and puerperium: information for healthcare professionals* [3].



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CHECK-LIST TO DETECT SARS-CoV-2 SYMPTOMATOLOGY AND POSSIBLE CONTACTS WITH INFECTION RISK

NAME and SURNAME **DATE OF BIRTH**

1) Do you have a SARS-CoV-2 positive swab **YES NO**

2) Symptoms: in the last 14 days have you had one of the following symptoms:

- Temperature $\geq 37.5^{\circ}\text{C}$
- Cough
- Sore throat or cold
- Headache
- Diarrhea and/or vomit
- Dyspnea (breathing difficulty) / Tachypnea (increase in respiratory rate)
- Asthenia (weakness) e/o arthromyalgia (muscular pain associated with a joint)
- Anosmia (alteration in the sense of smell)
- Ageusia (alteration in the sense of taste)
- None of the above
- No information available

3) In the last 14 days:

- Have you had a high risk job (laboratory technician, health worker, etc)
- Have you been in close contact with COVID-19 positive people
- Have you lived with a person affected by a flu-like syndrome/pneumonia or with a person in a high risk job (laboratory technician, health worker, etc)
- Have you taken part in meetings that have become outbreaks of flu-like syndrome/pneumonia (≥ 2 affected people)
- None of the above
- No information available

On the basis of anamnestic data (if one or more symptoms/risk factors are present)

SENDING TO AN AREA FOR COVID-19 SUSPECT PATIENTS **YES NO**

Date

Physician's signature

Patient's signature

Da: 1) "ESUOG Interim Evidence on 2019 novel coronavirus infection during pregnancy and peripartum: information for healthcare professionals. Ultrasound Obstet Gynecol. 2020 Mar 11". Modificato; 2) Infezioni da SARS-CoV-2: indicazioni ad internio per gravide-partoriente, postparto-neonato e allattamento. Regione Lombardia Marzo 2020.