Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Obstetric network reorganization during the COVID-19 pandemic: Suggestions from an Italian regional model

Dear Editor,

The outbreak of the COVID-19 pandemic was characterized by its rapid spread [1,2]. Italy was one of the first and most affected countries worldwide. Given that around 20 % of patients need sub-intensive or intensive care, the hospital system had to be reorganized. The obstetric network of our Region was quickly reorganized with a model that guarantees assistance to all pregnant women throughout the Region and identifies differentiated routes according to the level of infectious and obstetric risk.

Of the 11 regional maternity units (one Hub-unit and ten Spoke-units), two were closed and converted into COVID-19 hospitals. The entire regional birth network now consists of 8 Spoke-units, including a maternal Unit, identified as the only birth point for women with COVID-19 positive pregnancy, and one Hub-hospital for high-risk pregnancy with maternal and neonatal intensive care units (COVID-19 and no-COVID-19) (Fig. 1) [3].

To contain the virus diffusion have been used strict organization criteria in the hospital logistic:

- Identify separate entrances and exits, which made it possible to prevent contact between patients affected and not affected.
- Establish local protocols for triage of pregnant women with respiratory symptoms, to test them rapidly, and, depending on the diagnosis, to allocate them to the appropriate cohort.
- Ensure that adequate personal protective equipment for health personnel is available, with the organization of proper supply and distribution, along with appropriate training of all staff at risk of contagion.
- Convert double rooms to single occupancy, expediting discharges, slowing admission rates.

The hospital policy has been modified: visitors are not allowed except for one nominated companion for women giving birth or in labor. Visiting is not permitted for all other inpatients. In the neonatal intensive care unit, only mothers can visit.

The transport among the units of this network is performed via a regional coordinating maternal emergency office. In each maternity, unit areas have been designated for women with known or suspected COVID-19 infection. The maternity triage is critical in this setting. Each facility should consider their appropriate space and staffing needs to prevent transmission of the virus that causes COVID-19. Before the arrival of women that have confirmed COVID-19 or who are under investigation, the transport system should notify the obstetric unit so the facility can make appropriate infection control preparations [4].

The Spoke-Center guarantees periodic prenatal care for COVID-19 women. For all outpatient appointments, including booking visits, antenatal appointments, fetal ultrasound assessment, the presence of partners, or children is not permitted. If women need further evaluation, Hub hospital operators go to the Spoke-Center to perform examinations or make a remote consultancy. Voluntary terminations of pregnancy or miscarriages within 13 weeks are taken care of by the Spoke-hospital, whereas for higher gestational periods, women are referred to the Hub-Center.

SARS-CoV-2 infection is not a contraindication for breastfeeding [5]. We try not to separate mother and infant if the mother can breastfeed and look after her new-born baby. In such cases, the new-born will be nursed in the same room as the mother and will be kept at a 2-meter distance. The breastfeeding provides that the mother respects hand hygiene and the use of the surgical mask during feeding.

Postnatal care provides that a swab from all neonates born to positive or high suspicion pregnant women is obtained. If the mother is unable to take care of his baby or the new-born infant need to be admitted to the neonatal ward, we isolate the baby when possible and swab the baby on day 7. If isolation will not be possible, we swab the baby upon admission and again seven days after. The rationale for this approach is to minimize the risk of spreading the virus in the only third-level neonatal unit of the Marche region.

In puerperium, asymptomatic COVID-19 positive women are discharged two days after delivery. They must comply with the same indications of home self-isolation (Fig. 1). Return to normal social life is expected after two negative nasopharyngeal swabs spaced 24 h apart performed at local COVID centers.

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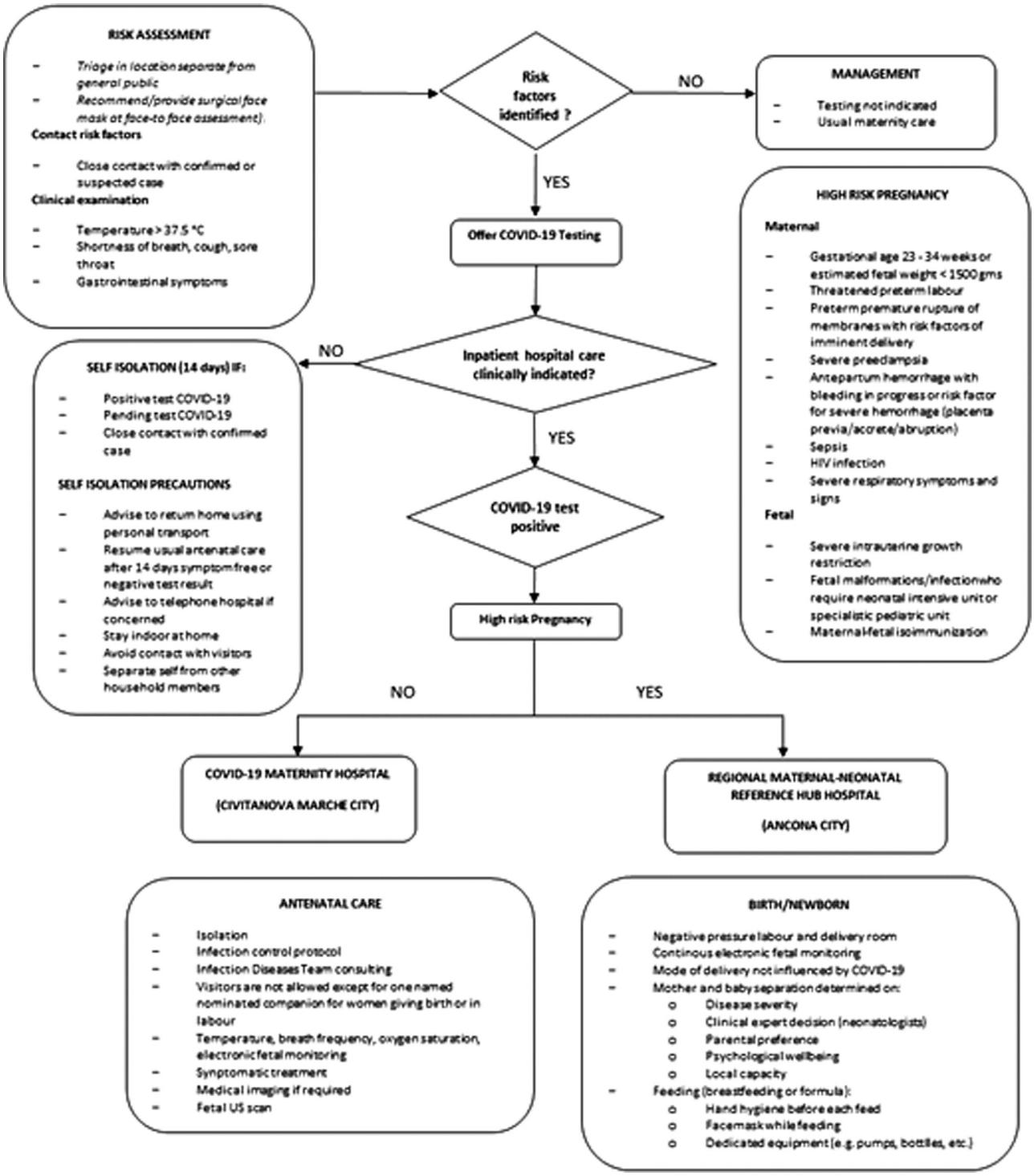

Fig. 1. Flow-chart showing the hospital obstetrical reorganization during the COVID-19 pandemic.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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