

ENGLISH VERSION



Istituto Superiore di Sanità

Rapporto ISS COVID-19 • n. 2/2021

Interim guidance on pregnancy, childbirth, breastfeeding and care of infants (0-2 years) in response to the COVID-19 emergency.

Updating of the Rapporto ISS COVID-19 n. 45/2020

Version of February 5, 2021

Interim guidance on pregnancy, childbirth, breastfeeding and care of infants (0-2 years) in response to the COVID-19 emergency.

Updating of the Rapporto ISS COVID-19 n. 45/2020

Version of February 5, 2021

Angela GIUSTI¹, Francesca ZAMBRI¹, Francesca MARCHETTI¹, Edoardo CORSI¹, Jessica PREZIOSI¹, Letizia SAMPAOLO², Enrica PIZZI², Domenica TARUSCIO³, Paolo SALERNO³, Antonio CHIANTERA⁴, Nicola COLACURCI⁵, Riccardo DAVANZO^{6,7}, Fabio MOSCA⁸, Flavia PETRINI⁹, Luca RAMENGGHI¹⁰, Maria VICARIO¹¹, Alberto VILLANI¹², Elsa VIORA¹³, Federica ZANETTO¹⁴, Elise M. CHAPIN¹⁵ and Serena DONATI²

¹ *Surveillance of Risk Factors and Health Promotion Strategies Division – National Centre for Disease Prevention and Health Promotion, Italian National Institute of Health*

² *Women’s and Developmental Health Division - National Centre for Disease Prevention and Health Promotion, Italian National Institute of Health*

³ *National Centre of Rare Diseases, Italian National Institute of Health*

⁴ *President of the Italian Society of Gynaecology and Obstetrics (SIGO)*

⁵ *President of the Association of Italian University Gynaecologists (AGUI)*

⁶ *President of the Breastfeeding Task Force of the Ministry of Health (TAS)*

⁷ *Italian Society of Neonatology (SIN)*

⁸ *President of the Italian Society of Neonatology (SIN)*

⁹ *President of the Italian Society of Anaesthesia, Analgesia, Resuscitation and Intensive Care (SIAARTI)*

¹⁰ *President of the Italian Society of Perinatal Medicine (SIMP)*

¹¹ *President of the National Federation of the Professional Associations of Midwives (FNOPO)*

¹² *President of the Italian Society of Paediatricians (SIP)*

¹³ *President of the Association of Italian Hospital Obstetricians and Gynaecologists (AOGOI)*

¹⁴ *President of the Cultural Association of Paediatricians (ACP)*

¹⁵ *Baby-Friendly Initiatives, UNICEF Italy*

Istituto Superiore di Sanità

Interim guidance on pregnancy, childbirth, breastfeeding and the care of infants (0-2 years) in response to the COVID-19 emergency. Updating of the Rapporto ISS COVID-19 n. 45/2020. Version of February 5, 2021.

Angela Giusti, Francesca Zambri, Francesca Marchetti, Edoardo Corsi, Jessica Preziosi, Letizia Sampaolo, Enrica Pizzi, Domenica Taruscio, Paolo Salerno, Antonio Chiantera, Nicola Colacurci, Riccardo Davanzo, Fabio Mosca, Flavia Petrini, Luca Ramenghi, Maria Vicario, Alberto Villani, Elsa Viora, Federica Zanetto, Elise M. Chapin, Serena Donati 2020, vi, 24 p. Rapporto ISS COVID-19 n. 2/2021 English version

Since the beginning of the pandemic, in order to respond to the emerging needs for reorganization of the care system, it has become necessary to review the provision of care for pregnant women, new mothers, fathers and babies. Under the initial epidemiological pressure, especially in the most affected areas of the country, the regional health services have defined care pathways based on the organizational and logistical availability. Furthermore, in the initial phase of the COVID-19 epidemic, between January and March 2020, the scientific evidence supporting these decisions was still scarce and not always consistent. Currently the available literature indicates more consistently which clinical-care practices are appropriate to care for women with suspected or confirmed infection with SARS-CoV-2 virus and babies during pregnancy, childbirth and breastfeeding.

For information: angela.giusti@iss.it

Cite this document as follows:

Giusti A, Zambri F, Marchetti F, Corsi E, Preziosi J, Sampaolo L, Pizzi E, Taruscio D, Salerno P, Chiantera A, Colacurci N, Davanzo R, Mosca F, Petrini F, Ramenghi L, Vicario M, Villani A, Viora E, Zanetto F, Chapin EM, Donati S. *Interim guidance on pregnancy, childbirth, breastfeeding and the care of infants (0-2 years) in response to the COVID-19 emergency. Updating of the Rapporto ISS COVID-19 n. 45/2020. Version of February 5, 2021.* Roma: Istituto Superiore di Sanità; 2021. (Rapporto ISS COVID-19 n. 2/2021).

The responsibility for scientific and technical data lies with the authors, who declare that they do not have any conflict of interest.

Editing and graphics: ISS Scientific Communication Unit (Sandra Salinetti and Paola De Castro)

© Istituto Superiore di Sanità 2021
viale Regina Elena, 299 –00161 Roma



Table of contents

Target	ii
Acronyms	ii
Summary of Updates	iii
Introduction	1
Pregnancy.....	3
Care during pregnancy	3
Vertical transmission.....	4
Effects of the infection on the course of pregnancy	5
Prevention of venous thromboembolic events	5
Labour and delivery	7
Presence of a support person of the patient’s choice	7
Admission (<i>triage</i>).....	7
Care during labour	8
Care during delivery.....	8
Place of childbirth	9
Post partum, welcoming the newborn and hospital stay	10
Skin-to-skin contact	10
Keeping mother-infant together and rooming-in	10
Prevention measures	11
For professional staff	11
For women.....	12
Breastfeeding.....	13
Being vaccinated against COVID-19 during pregnancy and while breastfeeding	15
Organisational models for integrated hospital and community services	17
Indications for Hygiene and Public Health services and local case management and contact tracing angles to propose services.....	18
Psychosocial support.....	19
Psychological well-being.....	19
Taking charge of domestic violence.....	19
0-2-year-old children during the pandemic	21
Other communication and scientific activities on the subject of pregnancy, childbirth and breastfeeding	22
In-depth thematic reports	22
Research projects	22
Infographics	23
References	24

Target

The COVID-19 reports are addressed to health workers to help them deal with the pandemic's different aspects. This report is meant for social and health care professionals and decision-makers and is available to the general public, the media and anyone interested in the subject matter.

Acronyms

ACP	<i>Associazione Culturale Pediatri</i> (Cultural Association of Paediatricians)
AGUI	<i>Associazione Ginecologi Universitari Italiani</i> (Association of Italian University Gynaecologists)
AOGOI	<i>Associazione Ostetrici Ginecologi Ospedalieri Italiani</i> (Association of Italian Hospital Gynaecologists and Obstetricians)
FNOPO	<i>Federazione Nazionale degli Ordini della Professione di Ostetrica</i> (National Federation of the Associations of Midwives)
SIAARTI	<i>Società Italiana di Anestesia Analgesia Rianimazione e Terapia Intensiva</i> (Italian Society of Anesthesia Analgesia Resuscitation and Intensive Care)
SIGO	<i>Società Italiana di Ginecologia e Ostetricia</i> (Italian Society of Gynaecology and Obstetrics)
SIMP	<i>Società Italiana di Medicina Perinatale</i> (Italian Society of Perinatal Medicine)
SIN	<i>Società Italiana di Neonatologia</i> (Italian Society of Neonatology)
SIP	<i>Società Italiana di Pediatria</i> (Italian Society of Pediatrics)
WHO	World Health Organization

Summary of updates

The updates made in this version of the *Interim Guidance on Pregnancy, Childbirth, Breastfeeding and the Care of Infants (0-2 years) in Response to the COVID-19 Emergency* are reported below.

Summary of updates	Page
<p>Pregnancy</p> <p>Additional indications:</p> <ul style="list-style-type: none"> ▪ The provision of care must be patient-centred; it must be respectful and ensure a woman's dignity, privacy, and confidentiality, and allow her to make informed choices. The presence of a companion of choice must also be guaranteed throughout pregnancy, childbirth and puerperium. ▪ It is essential to ensure access to antenatal information and classes, including to online meetings. ▪ Pregnant women who have had contact with a person with confirmed SARS-CoV-2 infection should be carefully monitored, considering that asymptomatic subjects may transmit the infection. ▪ Pregnant women with a mild, suspected or confirmed COVID-19 infection should receive care at home in coordination with the Local Health Authorities (LHA) services. Hospitalisation should be reserved for cases of rapidly-worsening clinical conditions or when a hospital cannot be promptly reached. It is always advisable to go to the COVID birth facilities that have been set up in each Region. ▪ Pregnant women should be made aware of maternal and neonatal signs, including signs of worsening COVID-19 symptoms and reduced active foetal movements, which require assistance. They should be advised to go to the hospital or seek assistance as soon as possible in case of any of the following conditions: worsening of the symptoms or signs of obstetric complications (bleeding or loss of vaginal fluid, blurred vision, severe headache, weakness or dizziness, severe abdominal pain, swelling of the face, fingers, toes, intolerance to food or fluids, convulsions, difficulty breathing, reduced foetal movements). ▪ Routine, in-person pre-natal and post-natal visits in hospitals should be postponed if possible, using alternative means of communication for receiving guidance to reduce access to hospitals. Once the isolation period is over, visits can be rescheduled following national and international guidelines and recommendations. ▪ Vaccinations planned during pregnancy (flu and pertussis) are also recommended for COVID-19 positive women. ▪ In cases of lymphocytosis, consider the possibility of a bacterial rather than a viral infection, and make sure antibiotics are used appropriately. ▪ In unstable clinical conditions, pregnant women requiring steroid therapy should be given 40 mg of oral prednisolone once daily or 80 mg of intravenous hydrocortisone twice daily. ▪ In Italy, the Italian Medicines Agency (AIFA) has prepared fact sheets that clearly describe the evidence of efficacy and safety available on drug therapies for COVID-19. The fact sheets are periodically updated and are available on the AIFA website. 	3
<p>Vertical transmission</p> <p>Updated Indications:</p> <ul style="list-style-type: none"> ▪ Vertical transmission of SARS-CoV-2 virus is possible. Even though the evidence is still scarce it is considered a rare event to date. <p>Additional indications:</p> <ul style="list-style-type: none"> ▪ The Italian Obstetric Surveillance System (ItOSS) study found that, during the first wave of the pandemic, between February 25 and July 31, 2020, infants who were not separated from their mothers at birth, roomed-in and received breastmilk had as good outcomes as the infants who were separated from their mothers after birth. 	4

Summary of updates	Page
<p>Effects of COVID-19 infection during pregnancy</p> <p>Additional indications:</p> <ul style="list-style-type: none"> ▪ According to UKOSS data, overweight or obese foreign pregnant women with pre-existing comorbidities (such as diabetes and chronic hypertension), aged >35 years or with socio-economic difficulties, appear to be at greater risk of hospitalisation when affected by the COVID-19 virus. The ItOSS study showed that, during the first wave of the pandemic, women with previous comorbidities (e.g., hypertension), obese women, and women of non-Italian citizenship had a significantly higher risk of developing COVID-19 pneumonia. ▪ The ItOSS study showed that, during the first wave of the pandemic, the average preterm birth rate was 14.4%, with a decrease during the observation period. In the months of February-March, the rate was 17.5%. In July-August, thanks to the identification of asymptomatic women at the time of hospitalisation, the rate fell to 11%. Overall, the majority of preterm births (7.7%) were due to iatrogenic causes, 3.5% to premature rupture of the membranes, and 3.2% to spontaneous onset. The perinatal mortality rate recorded in Lombardy (which reported 59% of cases) did not differ from that recorded in 2019. <p>Updated indications:</p> <ul style="list-style-type: none"> ▪ Currently, there is no evidence of an increased risk of abortion, stillbirth or neonatal death related to maternal COVID-19 infection. The ItOSS study showed that, during the first wave of the pandemic, the stillbirth rate recorded in Lombardy (which reported 53% of cases) did not differ from that recorded in the same period of 2019. ▪ The evidence supporting an increased risk of foetal underdevelopment is not conclusive; today, it is considered a possible event. 	5
<p>Paragraph added Prevention of venous thromboembolic events</p>	5
<p>Presence of a support person of the patient's choice</p> <p>Additional indications</p> <ul style="list-style-type: none"> ▪ This person takes on the role of carer/caregiver in all respects and is not a "visitor". ▪ The ItOSS study found that, during the first wave of the pandemic, 51.9% of mothers were able to have a support person of their choice during labour and delivery. 	7
<p>Care during labour</p> <p>Additional indications:</p> <ul style="list-style-type: none"> ▪ SARS-CoV-2 positivity in asymptomatic women is not in itself an indication for continuous monitoring of foetal heart rate by cardiotocography (CTG). ▪ The ItOSS study showed that, during the first wave of the pandemic, 31.9% of women who had a vaginal delivery received epidural analgesia. ▪ Pharmacological induction of labour, episiotomy or operative vaginal birth to shorten the second stage of labour should be performed if clinically justified and required because of maternal and/or foetal conditions and not because the patient is COVID-19 positive. 	8
<p>Care during delivery</p> <p>Additional indications:</p> <ul style="list-style-type: none"> ▪ A designated team member should regularly update the woman's family members about the woman's medical conditions, with interpreters' help when needed. ▪ The ItOSS study showed that, during the first wave of the pandemic, the rate of caesarean section was 33.7%, in line with national rates. <p>Updated indications:</p> <ul style="list-style-type: none"> ▪ Labour and water births are not recommended in symptomatic women (cough, fever, general malaise) due to the hypothetical risk of transmission via the faeces and because PPE is not waterproof. They are not a contraindicated in asymptomatic and suspected or confirmed SARS-CoV-2 negative women. The individuals assisting the mother giving birth need to wear appropriate PPE. ▪ Late cord clamping (1-3 minutes) is recommended because the known health benefits to mother and infant outweigh any theoretical and undocumented risks. 	8

Summary of updates	Page
<p>Skin-to-skin contact</p> <p>Updated indications:</p> <ul style="list-style-type: none"> ▪ For all newborns, skin-to-skin contact, including kangaroo mother care for preterm and low birth weight infants, is recommended because the health benefits for the infant, including early breastfeeding, overcome the hypothetical risk of transmission. The ItOSS study showed that, during the first wave of the pandemic, only 26.6% of women were able to practise skin-to-skin contact. 	10
<p>Keeping mother-infant together and rooming-in</p> <p>Additional indications:</p> <ul style="list-style-type: none"> ▪ Women with suspected COVID-19 disease should not be separated from their babies, pending the results of a SARS-CoV-2 swab. ▪ If the mother's clinical conditions prevent her from taking care of her baby, another family caregiver should be considered. ▪ If the newborn needs the Neonatal Intensive Care Unit, the mother and father should have no restrictions for visiting their newborns in a dedicated and separate area using prevention measures. 	10
<p>Prevention measures</p> <p>Additional indications: Indications of the ISS Prevention and Control of Infections Working Group have been included. "Interim Guidance on the rational use of protection from SARS-CoV-2 infection in health and socio-health activities (assistance to subjects affected by Covid-19) in the current SARS-COV-2 emergency scenario. 10 May 2020. Rome: Istituto Superiore di Sanità; 2020 (Rapporto ISS COVID-19 no. 2/2020 Rev. 2)".</p> <p>For women</p> <p>Updated indications:</p> <ul style="list-style-type: none"> ▪ Consider using a mask when breastfeeding and when coming into close contact with the baby. <p>Additional indications:</p> <ul style="list-style-type: none"> ▪ Infants and children should not wear masks or other face-coverings due to the risk of suffocation. 	11
<p>Breastfeeding</p> <p>Additional indications:</p> <ul style="list-style-type: none"> ▪ Families should be advised that COVID-19 infection is not a contraindication to breastfeeding. ▪ The ItOSS study showed that, during the first wave of the pandemic, 79.6% of infants received some breastmilk, so were either exclusively or predominantly breastfed, or had complementary feeding. ▪ Hospital facilities or their staff should not promote breastmilk substitutes, baby bottles, teats, soothers, pacifiers in accordance with the International Code of Marketing of Breast-Milk Substitutes and subsequent resolutions of the World Health Assembly. 	13
<p>Added paragraph Being vaccinated against COVID-19 during pregnancy and while breastfeeding</p>	15
<p>Organisational models for integrated hospital and community services</p> <p>Additional indications:</p> <ul style="list-style-type: none"> ▪ Upon discharge, mothers should be given updated information about the network of services available. During pregnancy, childbirth and puerperium, the network providing support to new parents also includes non-healthcare entities, such as trusts, associations, local groups and social services that contribute to health promotion and combating inequalities. ▪ It is important to ensure access to pre- and post-natal information, both individually and in groups, such as pre-natal and postpartum groups, and meetings online. 	17
<p>Added paragraph Indications for Hygiene & Public Health Services and local case management and contact tracing services.</p>	18

Summary of updates	Page
<p>Psychological well-being</p> <p>Additional indications:</p> <ul style="list-style-type: none">▪ Departments should ensure high-quality perinatal bereavement support even during the pandemic, too, by providing adequate care during delivery and postnatally, performing the necessary inquiries and offering appropriate follow-up appointments.	19

Introduction

Starting in the early days of the pandemic, it was clear that the care pathways and support networks for pregnant women, mothers, fathers and newborns needed to be rapidly reviewed and reorganised, because new and urgent problems had emerged that needed to be solved. Between January and March 2020, however, scientific evidence in this regard was still scarce and not always consistent. Indeed, the initial epidemiological pressure caused by the pandemic, especially in the most affected areas of the country, led regional health services to define care paths based on the organisational and logistical availability at that moment. Currently, the available literature indicates that some practices for the clinical care and management of women with suspected or confirmed SARS-CoV-2 virus infection are now well established.

In order to promptly provide useful information for clinical practitioners and decision-makers, the National Centre for Disease Prevention and Health Promotion of the Istituto Superiore di Sanità (ISS, the National Institute of Health in Italy) began curating a selection of resources and literature on pregnancy, childbirth, the puerperium and breastfeeding in February 2020. The PubMed, Scopus, Embase and CINAHL databases were reviewed systematically and daily, including all types of study designs and all publication languages. News from sources available on the web were also critically reviewed. These activities were accompanied by a systematic review of the documents produced by international government agencies, by the scientific societies in the sector on the issue of COVID-19 in pregnancy, childbirth and puerperium. The Italian scientific community of neonatologists, paediatricians, gynaecologists and obstetricians, and anaesthetists (SIN, SIMP, SIP, ACP, SIGO, AGOI, AGUI, SIAARTI and FNOPO) joined the ISS initiative, sharing its methodology and contents and contributing to the dissemination of the weekly ISS updates through their own channels.

The current post-emergency situation allows for the publication of a summary of consolidated indications in a report intended for social and health care professionals and decision-makers.

The COVID-19 reference documents for this Report are those of the main agencies that constantly update the literature, namely the World Health Organization (WHO) and the Royal College of Obstetricians & Gynaecologists together with the Royal College of Midwives, the Royal College of Paediatrics and Child Health, the Royal College of Anaesthetists and the Obstetric Anaesthetists' Association. The Italian epidemiological data of reference are taken from the prospective study of the Italian Obstetric Surveillance System (ItOSS) ¹.

The indications included in this document also derive from national and international guidelines and policies that address the issue of care provided to women during pregnancy, childbirth and puerperium: the ISS-SNLG guidelines in Italian *Linea Guida 20 Gravidanza fisiologica* (Guideline 20 Physiological pregnancy) and *Linea Guida 19 Taglio cesareo: una scelta appropriata e consapevole* (Guideline 19 Caesarean section: an appropriate and conscious choice); the NICE Guidelines (National Institute for Health and Care Excellence) such as the *Clinical Guideline CG62 Antenatal Care for uncomplicated pregnancies* and the guidelines *Intrapartum care* and the *Clinical Guideline CG37. Routine postnatal care of women and their babies*; and the *WHO Recommendations on antenatal care for a positive pregnancy experience*. These indications are addressed to all pregnant women during childbirth and puerperium. The guidelines specifically intended for the management of women with suspected or confirmed SARS-CoV-2 virus infection are highlighted in recognisable paragraphs. As this is a summary document, please refer to the national and international indications on the subject for any specific clinical aspect not covered here. Some

¹ SARS-CoV-2 Infection during Pregnancy: Prospective study of the *Italian Obstetric Surveillance System (ItOSS)*. <https://www.epicentro.iss.it/coronavirus/sars-cov-2-gravidanza-parto-allattamento-studio-prospettico-itoss>

contents regarding Personal Protective Equipment (PPE) refer in part to the Circular of the Ministry of Health dedicated to the subject of this Report.

For the sake of brevity, in this document, the male noun is predominantly used; however, the word refers to all genders and should be understood as referring to both females and males (baby boy, baby girl, male and female professionals).

Pregnancy

Care during pregnancy

- The presence of asymptomatic or paucisymptomatic SARS-CoV-2 virus-positive individuals has been documented among the general population and among pregnant women, many of whom generally have mild or moderate symptoms. The prevalence and clinical manifestations of COVID-19 disease in pregnancy appear to be substantially similar to those of the general population.
- All women, even SARS-CoV-2 positive women, should be enabled to participate in their care choices, in line with the principles of informed consent. The provision of care must be patient-centred; it must be respectful and provided to all women in a manner that maintains their dignity, privacy, and confidentiality, and enables informed choices. The presence of a person chosen by the woman must also be guaranteed throughout the birth process.
- It is essential to ensure access to antenatal information and classes, including to online meetings.
- For low-risk pregnancies, it is recommended to maintain a minimum of 6 face-to-face prenatal visits and, when possible, carry out the check-up, ultrasound and any other diagnostic tests in a single appointment, making sure to involve as few healthcare professionals as possible.
- In the event of at-risk pregnancies, some women may require a greater number of check-ups and multidisciplinary care due to their medical or obstetric conditions, comorbidities or complications. At the end of each appointment, the patient and health care provider should decide whether the following appointment should be face-to-face or remotely.
- Multidisciplinary care should include a preliminary anaesthesiological assessment, which is also an opportunity for providing comprehensive information on the safety of the care pathway and on the types of analgesia offered at delivery.
- An alternative system needs to be set up to see women who are unable to attend in-person appointments for more than three consecutive weeks.
- Before accessing the health services, the women should undergo triage to detect any symptoms suggestive of SARS-CoV-2 virus infection; their household members should be included. Pregnant women who have had contact with a person with confirmed SARS-CoV-2 infection should be carefully monitored, considering that asymptomatic subjects may transmit the infection.
- During pregnancy, keeping appointments for the recommended ultrasound scans is recommended. In case of staff shortage, the recommended order of priority includes the ultrasound for detecting structural anomalies of the foetus, to be carried out between 19 + 0 and 21 + 0 weeks of gestational age and the ultrasound for determining gestational age to be performed in the first trimester, possibly including the evaluation of nuchal translucency for the execution of the screening test.
- Pre-natal services should make arrangements to offer ultrasound scans for the assessment and surveillance of foetal growth during the pandemic, as in the pre-COVID era.

For COVID-19 positive women

- Pregnant women with a mild, suspected or confirmed COVID-19 infection should receive care at home in coordination with the Local Health Authorities (LHA) services. Hospitalisation should be reserved for cases of rapidly-worsening clinical conditions or when a hospital cannot be promptly

reached. It is always advisable to go to the COVID birth facilities that have been set up in each Region.

- Pregnant women should be made aware of maternal and neonatal signs, including signs of worsening COVID-19 symptoms and reduced active foetal movements, which require assistance. They should be advised to go to the hospital or seek assistance as soon as possible in case of any of the following conditions: worsening of the symptoms or signs of obstetric complications (bleeding or loss of vaginal fluid, blurred vision, severe headache, weakness or dizziness, severe abdominal pain, swelling of the face, fingers, toes, intolerance to food or fluids, convulsions, difficulty breathing, reduced foetal movements).
- Routine, in-person pre-natal and post-natal visits in hospitals should be postponed if possible, using alternative means of communication for receiving guidance to reduce access to hospitals. Once the isolation period is over, visits can be rescheduled following national and international guidelines and recommendations.
- Although at present there is no evidence of a causal relationship between COVID-19 and the risk of foetal underdevelopment, a follow-up ultrasound 14 days after recovery from the acute disease diagnosed during pregnancy is recommended.
- Vaccinations planned during pregnancy (flu and pertussis) are also recommended for COVID-19 positive women.
- In cases of lymphocytosis, consider the possibility of a bacterial rather than a viral infection, and make sure antibiotics are used appropriately.
- In unstable clinical conditions, pregnant women requiring steroid therapy should be given 40 mg of oral prednisolone once daily or 80 mg of intravenous hydrocortisone twice daily.
- In Italy, the Italian Medicines Agency (AIFA) has prepared fact sheets that clearly describe the evidence of efficacy and safety available on drug therapies for COVID-19. The fact sheets are periodically updated and are available on the AIFA website.²

Vertical transmission

For COVID-19 positive women

- Vertical transmission of SARS-CoV-2 virus is possible. Even though the evidence is still scarce it is considered a rare event to date.
- The Italian Obstetric Surveillance System (ItOSS) study found that, during the first wave of the pandemic, between February 25 and July 31, 2020, infants who were not separated from their mothers at birth, roomed-in and received breastmilk had as good outcomes as the infants who were separated from their mothers after birth.

² Medicinal products that can be used to treat the COVID-19 disease. <https://www.aifa.gov.it/aggiornamento-sui-farmaci-utilizzabili-per-il-trattamento-della-malattia-covid19> (last access 10.12.2020)

Effects of the infection during pregnancy

For COVID-19 positive women

- Pregnant women do not appear to be at any greater risk than non-pregnant women for severe COVID-19 infection requiring hospitalisation.
- According to UKOSS data, overweight or obese foreign pregnant women with pre-existing comorbidities (such as diabetes and chronic hypertension), aged >35 years or with socio-economic difficulties, appear to be at greater risk of hospitalisation when affected by the COVID-19 virus. The ItOSS study showed that, during the first wave of the pandemic, women with previous comorbidities (e.g., hypertension), obese women, and women of non-Italian citizenship had a significantly higher risk of developing COVID-19 pneumonia.
- Currently, there is no evidence of an increased risk of abortion, stillbirth or neonatal death related to maternal COVID-19 infection. The ItOSS study showed that, during the first wave of the pandemic, the stillbirth rate recorded in Lombardy (which reported 53% of cases) did not differ from that recorded in the same period of 2019.
- There is currently no evidence of teratogenic effects on the foetus.
- The evidence supporting an increased risk of foetal underdevelopment is not conclusive; it is currently considered a possible event.
- The pregnancies of women infected with SARS-CoV-2 appear to be associated with a higher frequency of preterm delivery. The ItOSS study showed that, during the first wave of the pandemic, the average preterm birth rate was 14.4%, with a decrease during the observation period. In the months of February-March, the rate was 17.5%. In July-August, thanks to the identification of asymptomatic women at the time of hospitalisation, the rate fell to 11%. Overall, the majority of preterm births (7.7%) were due to iatrogenic causes, 3.5% to premature rupture of the membranes, and 3.2% to spontaneous onset. The perinatal mortality rate recorded in Lombardy (which reported 59% of cases) did not differ from that recorded in 2019.

Prevention of venous thromboembolic events

- In the event of isolation at home, it is important for patients to maintain proper hydration and practice moderate physical activity.

For COVID-19 positive women

- SARS-CoV-2 infection can be a risk factor for venous thromboembolism (VTE). During pregnancy, especially for women with suspected or confirmed infection, the risk of VTE should be assessed (in-person or remotely).
- Prescribing thromboprophylaxis treatment during pregnancy should be assessed on a case-by-case basis³.
- COVID-19 positive pregnant women who have started thromboprophylaxis therapy should continue treatment until fully recovered from the disease.

³ Royal College of Obstetricians & Gynaecologists. *Reducing the Risk of Venous Thromboembolism during Pregnancy and the Puerperium. Green-top Guideline no. 37a*. London: RCOG; 2015.

- All COVID-19 positive women hospitalised during pregnancy should be offered low-molecular-weight heparin prophylaxis unless delivery is expected within 12 hours.
- In case of severe complications from COVID-19, patients should be treated by a multidisciplinary team. The latter should include an expert in the treatment of VTE during pregnancy, in order to correctly define the dosage of low-molecular-weight heparin to be delivered.
- Low-molecular-weight heparin for at least 10 days after hospital discharge should be prescribed routinely to prevent venous thromboembolism unless there are contraindications for the mother. In case of severe morbidity, consider extending the treatment for up to 6 weeks after delivery.
- Thrombocytopenia is associated with severe COVID-19 disease. Women affected by thrombocytopenia (platelets below $50 \times 10^9/l$) should discontinue aspirin and any other thromboprophylaxis treatment and seek the advice of a haematologist.

Labour and delivery

Presence of a support person of the patient's choice

- All women must be guaranteed the presence of a support person of their choice during labour, childbirth, and hospitalisation. Evidence shows that this makes childbirth a better experience. This person takes on the role of carer/caregiver in all respects and is not a "visitor".
- A single, asymptomatic person may remain with the woman during labour and childbirth, except in the case of general anaesthesia. The ItOSS study found that, during the first wave of the pandemic, 51.9% of mothers were able to have a support person of their choice during labour and delivery.
- A woman entering the maternity ward should be asked if she, or the support person of her choice, has had any signs or symptoms suggestive of COVID-19 (fever, persistent cough, nasal congestion and discharge, difficulty breathing, sore throat, wheezing or sneezing, anosmia or ageusia) in the previous 14 days. If so, and if the support person of her choice is in self-isolation or has had a fever in the last 48 hours, that person cannot access the maternity ward, and the patient has the option of choosing another trusted, asymptomatic person.
- After accessing the hospital, the carer should be given basic, clear instructions on the need to stay by the patient's side without moving around inside the ward/hospital; on the importance of precautionary measures (including the use of PPE, Personal Protective Equipment) to be used during labour, childbirth and hospitalisation; and on what could happen if he/she were asked to accompany the woman to the operating room (e.g. in the case of a caesarean section). This initial discussion is particularly important, given the communication difficulties experienced by staff when wearing PPE.
- Unlike the recommendations for the support person of the woman's choice, the hospital's rules apply to external visitors. Visitor access to the departments dedicated to the management of COVID-19 disease should be minimised.

Admission (*triage*)

For COVID-19 positive women

- Patients should remain at home for as long as possible.
- If unplanned or urgent care is needed, the triage units should offer telephone advice, providing a call-back service if the necessary health care provider is not available at the moment.
- When an in-person check-up and/or hospitalisation is required, local protocols need to be in place to ensure that pregnant women with confirmed or suspected COVID-19 infection are identified as soon as possible and isolated upon arrival at the health facility before proceeding with the pregnancy check-up.
- These protocols must include detailed instructions for providing separate spaces, clean and protected pathways, physical distancing and a limited number of patients in the emergency room waiting room. They must also provide instructions for sanitising the settings and equipment, for using of PPE, both for the pregnant woman and for the staff, and instructions for hospitalisation in the ward, if necessary, and finally provide procedures to be followed in case of complications and/or development of critical conditions.

Care during labour

For COVID-19 positive women

- In the event of a suspected or confirmed infection, a multidisciplinary team should be available to provide care for the pregnant woman, including a gynaecologist, an anaesthetist, a midwife, a neonatologist, a paediatric nurse and an infectious disease specialist.
- The decision on the adoption of a birth position should be subject to the same assessments as those made before COVID-19, taking into account the patient's preferences.
- The observation and assessment of a pregnant woman must be carried out as usual with the addition of the oxygen saturation checks to be made every hour with the aim of keeping it above 94%.
- The indication, timing and methods of foetal heart rate monitoring using cardiotocography (CTG) must be assessed on an individual basis, taking into account gestational age and foetal conditions. SARS-CoV-2 positivity in asymptomatic women is not in itself an indication for continuous monitoring of foetal heart rate by CTG.
- Fluid management requires careful hourly monitoring to avoid the risk of fluid overload which could expose pregnant women with moderate to severe clinical presentations to an increased risk of respiratory distress syndrome.
- Epidural analgesia is not contraindicated in case of SARS-CoV-2 infection and should actually be recommended in order to reduce the use of general anaesthesia if an emergency caesarean section is required. The ItOSS study showed that, during the first wave of the pandemic, 31.9% of women who had a vaginal delivery received epidural analgesia.
- The induction of labour requires assessments on an individual basis, taking into account all possible risks and benefits.
- Pharmacological induction of labour, episiotomy or operative vaginal birth to shorten the second stage of labour should be performed if clinically justified and required because of maternal and/or foetal conditions and not because the patient is COVID-19 positive.

Care during delivery

For COVID-19 positive women

- In the event of a suspected or confirmed infection, a multidisciplinary team including a gynaecologist, an anaesthetist, a midwife, a neonatologist, a paediatric nurse and an infectious disease specialist should be available to assist pregnant women.
- A designated team member should regularly update the woman's family members about the woman's medical conditions, with interpreters' help when needed.
- Where required for clinical reasons, steroids for foetal lung maturation can be administered as usual up to 34 weeks of gestation.
- COVID-19 positivity does not in and of itself constitute an indication for an elective caesarean section. The current indications for vaginal or surgical delivery remain valid. The ItOSS study showed that, during the first wave of the pandemic, the rate of caesarean section was 33.7%, in line with national rates. The mode of delivery should not be affected by the presence of COVID-19 unless the woman's respiratory conditions require her to deliver urgently.

- The choice of delivery method should be discussed with the patient, taking into consideration her preferences and the obstetric and anaesthetic indications, if any.
- Labour and water births are not recommended in symptomatic women (cough, fever, general malaise) due to the hypothetical risk of transmission via the faeces and because PPE is not waterproof. They are not contraindicated in asymptomatic and suspected or confirmed SARS-CoV-2 negative women. The individuals assisting the mother giving birth need to wear appropriate PPE.
- The decision on the adoption of a birth position should be subject to the same assessments as those made in the pre-COVID period, taking into account the patients's preferences.
- Fluid management requires careful hourly monitoring in order to avoid the risk of overload that could expose women with moderate or severe clinical presentations to an increased risk of respiratory distress syndrome.
- Late cord clamping (1-3 minutes) is recommended because the known health benefits to mother and infant outweigh any theoretical and undocumented risks.

Place of childbirth

- The choice of the place of childbirth for COVID-19 negative women is subject to the same assessments as in the pre-COVID period, in the absence of emergency conditions.

For COVID-19 positive women

- Intrapartum services should be equipped with sufficient staff to provide obstetric, anaesthetic and neonatal emergency care if necessary.
- In the event of a suspected or confirmed infection, a multidisciplinary team including a gynaecologist, an anaesthetist, a midwife, a neonatologist, a paediatric nurse and an infectious disease specialist should be available to assist pregnant women.

Post partum, welcoming the newborn and hospital stay

Skin-to-skin contact

For COVID-19 positive women

- For all newborns, skin-to-skin contact, including kangaroo mother care for preterm and low birth weight infants, is recommended because the health benefits for the infant, including early breastfeeding, overcome the hypothetical risk of transmission. The ItOSS study showed that, during the first wave of the pandemic, only 26.6% of women were able to practise skin-to-skin contact.
- During skin-to-skin contact and the first breastfeed in the delivery room, preventative measures for COVID-19 positive cases must be followed.

Keeping mother-infant together and rooming-in

For COVID-19 positive women

- COVID-19 positive mothers and their babies should be enabled to stay together, practice skin-to-skin contact and rooming-in day and night, especially after childbirth and during breastfeeding, except when the mother's or infant's clinical conditions are severe. The ItOSS study showed that, during the first wave of the pandemic, 72.1% of women practiced rooming-in. Management of mother and infant needs to allow the mother to breastfeed as often and for as long as she wishes.
- Women with suspected COVID-19 disease should not be separated from their babies, pending the results of a SARS-CoV-2 swab.
- Separation of mother and newborn must essentially be assessed based on their clinical conditions, on the mother's wishes, and considering the possible consequences that separation would have on their well-being and breastfeeding.
- If the mother's clinical conditions prevent her from taking care of her child, another family caregiver should be considered.
- If the newborn needs the Neonatal Intensive Care Unit, the mother and father should have no restrictions for visiting their newborns in a dedicated and separate area using preventative measures.

Prevention measures

For professional staff

Based on international recommendations, delivery of care in the second and third stages of labour is not currently considered a procedure at risk of generating aerosols.

The following PPE is recommended for healthcare professionals assisting patients during labour:

- water-repellent surgical masks;
- disposable gowns/disposable aprons;
- gloves;
- safety glasses/goggles/visor.

It should be remembered that, as indicated by the ISS⁴, the decision regarding the use of PPE should:

“be guided by the risk assessment for SARS-CoV-2, taking into account the local epidemiological situation, the characteristics of the work environments (e.g., surfaces, cubic capacity, air changes), the times and number of at-risk exposures, the presence of conditions of greater susceptibility of the health care providers, and the local implementation of infection prevention and control programs, in particular adherence to the precautionary principle. In light of the scientific knowledge that sparked a debate about the possibility of transmission of the infection by aerosol (e.g., close-range aerosol transmission) during the care of COVID-19 patients, despite the absence of incontrovertible evidence, it is necessary to apply the precautionary principle and to place greater emphasis on risk prevention. Therefore, where available, and always prioritised according to risk assessment, adopting the principle of maximum caution, provide PPE FFP2 as opposed to surgical masks in procedures without aerosol generation and FFP3 as opposed to FFP2 in procedures at risk of aerosol generation”.

Procedures relating to airway management, such as in the case of general anaesthesia, include: tracheal intubation and extubation, and related procedures such as ventilation, access and aspiration of the upper and lower respiratory tracts. These procedures are unanimously considered to be at risk of generating aerosols.

The following PPE is recommended for healthcare professionals who perform these procedures under general anaesthesia for caesarean section:

- FFP3 masks;
- disposable water-repellent gown / apron;
- gloves;
- safety glasses/goggles/visors.

Additional preventive measures to be adopted:

⁴ ISS Working Group on the Prevention and Control of Infections. *Interim Guidance on the Rational Use of Protection from SARS-COV-2 infection in health and socio-healthcare activities (care for COVID-10 patients) in the Current SARS-COV-2 Emergency. Version of 10 May 2020.* Rome: Istituto Superiore di Sanità; 2020 (Rapporto ISS COVID-19 Report, no. 2/ 2020 Rev. 2).

- always respect physical distancing rules, both with colleagues and with patients. Wash your hands frequently, eat your meals in designated areas, and respect the 2-metre distance between colleagues whenever possible;
- clean all the equipment used, in accordance with recommended procedures;
- use PPE appropriate to the setting and follow the workplace procedures
- wear and remove PPE safely;
- take breaks and stay appropriately hydrated.

For women

Physical distancing measures, as indicated below, should be strictly complied with:

- avoid contact with people who have signs and symptoms suggestive of COVID-19 infection such as fever and persistent or recent cough;
- avoid public transport unless absolutely necessary;
- opt for remote working, when possible;
- avoid meeting friends in public places, especially if indoors;
- avoid getting together with friends and family members who are not household members. Use the telephone, Internet and social media instead;
- use telephone and online services to contact your primary care physician and other essential care services.

For COVID-19 positive women

- Consider using a mask when breastfeeding and when coming into close contact with the baby;
- avoid coughing or sneezing near the baby;
- wash your hands thoroughly before touching the baby and/or before expressing breastmilk (using hand expression or a mechanical pump);
- use a personal mechanical pump to express milk in the hospital;
- when you return home, thoroughly disinfect all surfaces and objects;
- when you return home, adopt the isolation and hygiene measures provided for the COVID-19 positive population, while keeping of mother and baby together;
- infants and children should not wear masks or other face-coverings due to the risk of suffocation.

Breastfeeding

For COVID-19 positive women

- Despite a few cases in which the virus was detected in breastmilk, breastfeeding benefits outnumber the potential risks amply, also in high-income countries.
- Families should be advised that COVID-19 infection is not a contraindication to breastfeeding. At present, the risk associated with breastfeeding is mainly connected to the close contact established with the mother through respiratory droplets. The few cases of babies infected with COVID-19 through horizontal transmission were asymptomatic or paucisymptomatic. However, the consequences of breastfeeding failure and the separation of the mother from the child can be significant.
- All nursing babies, including those with mothers who are SARS-CoV-2 positive, should be fed according to the standards outlined by WHO/UNICEF while applying the necessary infection-control and prevention measures. Mothers are recommended to “hold the child skin-to-skin immediately after birth for at least one hour and are encouraged to understand when the newborn is ready to suckle, offering assistance if necessary.”⁵
- The guidelines to protect, promote and support breastfeeding put forward in the WHO/UNICEF Baby Friendly Hospital Initiative (BFHI) and in the Mother-Friendly Care Initiative are still valid.
- Mothers who cannot start nursing within the first hour after delivery, for example after general anaesthesia or in a very unstable clinical condition, must be offered assistance to start breastfeeding as soon as possible.
- All mothers should have access to psychosocial and practical support from healthcare workers and adequately trained community support groups for beginning or continuing breastfeeding and managing common difficulties.
- Should a mother’s clinical conditions prevent her from taking care of her baby or from continuing to breastfeed, she should be encouraged and assisted to hand-express her breastmilk to feed to her babies safely (in compliance with infection control and prevention measures).
- The ItOSS study showed that, during the first wave of the pandemic, 79.6% of infants received some breastmilk, so were either exclusively or predominantly breastfed, or had complementary feeding.
- Should the mother not be able to breastfeed, the best alternative for newborns and nursing babies, taking into account the mother’s preferences, are the following:
 - Hand-expressed or pumped breastmilk given fresh to the baby by a person free of any COVID-19 signs or symptoms of infection, and with whom the baby is comfortable. This person must comply with prevention measures;
 - Donated breastmilk (in particular for very or moderately preterm newborns);
 - If mother’s or donated breastmilk is not available, consider the use of a formula supplement, making sure that it is correctly and safely prepared.

⁵ Baby-friendly Hospital. Together for Breastfeeding: <https://www.unicef.it/italia-amica-dei-bambini/insieme-per-allattamento/ospedale-amico-bambini/>

- Generally speaking, it is not necessary to wash the breast before nursing or hand-expressing breastmilk. If the mother has accidentally coughed or sneezed on her breast, she can wash it with lukewarm water and soap for at least 20 seconds before nursing.
- If a woman has not started or has stopped breastfeeding, it is always possible to start again at any point in time, should she wish to. In this case, she should be offered support by qualified personnel to initiate or restart breastfeeding after an interruption (relactation).
- Resorting to breastmilk substitutes to replace or supplement breastfeeding (called “topping up”) is unnecessary and should be limited to cases with sound medical reasons or because of the mother’s informed choice. In these cases, it is necessary to offer qualified support in providing a comprehensive breastfeeding assessment.
- Hand-expressed or pumped breastmilk should be used for newborns in the Neonatal Intensive Care Unit.
- Recommendations about sterilising equipment for newborns and babies fed with formula or hand-expressed/pumped breastmilk must be rigorously followed.
- Hospital facilities or their staff should not promote breastmilk substitutes, baby bottles, teats, soothers, pacifiers according to the International Code of Marketing of Breast-Milk Substitutes and subsequent resolutions of the World Health Assembly.
- As in all emergencies, formula donations for breastfed babies (known as “baby formula”) should not be requested or accepted in the COVID-19 pandemic. If necessary, the formula should be supplied after a breastfeeding expert has evaluated the need on a case-by-case basis.

Being vaccinated against COVID-19 during pregnancy and while breastfeeding

The interim guidelines on being vaccinated against COVID-19 during pregnancy and while breastfeeding published by the Italian Obstetric Surveillance System (ItOSS) and coordinated by the Istituto Superiore di Sanità⁶ reflect the information and recommendations issued by the principal international agencies which include the following:

- Pregnant and breastfeeding women were not included in the trials to evaluate the efficacy of the PfizerBioNtech mRNA (Comirnaty), Moderna and AstraZeneca vaccines and therefore, there is no data on the safety and efficacy of those vaccines.
- The studies conducted up to now have neither shown nor suggested the existence of biological mechanisms capable of associating mRNA-based vaccines and engineered adenovirus vaccines with adverse effects in pregnancy. Laboratory tests on animals suggest that these vaccines are risk-free.
- At present, pregnant and breastfeeding women are not a priority target of COVID-19 vaccines, which, to date, have not been routinely recommended for this category of population.
- The data resulting from the ItOSS study – relative to the first wave of the pandemic in Italy – show that pregnant women present a low risk of severe maternal and perinatal complication; pre-existing comorbidities such as hypertension, obesity, and non-Italian citizenship are significantly correlated to a higher risk of severe complications from COVID-19.
- Administering the vaccine should be considered in the case of pregnant women who have a high risk of being exposed to the virus (e.g., healthcare workers and caregivers) and/or of suffering severe COVID-19 complications. Together with the medical personnel assisting them, women in these conditions should evaluate the potential benefits and risks of being vaccinated, and the decision must be taken on a case-by-case basis.
- If a vaccinated woman finds out that she is pregnant immediately after being vaccinated, there is no evidence indicating that the pregnancy should be interrupted.
- If a woman finds out that she is pregnant between receiving the first and second dose of the vaccine, she can postpone the second dose until after the end of her pregnancy, except for subjects at high risk of infection.
- Breastfeeding women can be included in the vaccination schedule, with no need to interrupt nursing.

In consideration of the substantial health benefits for nursing women and their breastfed babies, the WHO reports that:

- The efficacy of vaccines on nursing women is considered to be similar to that on all other adults. However, there is no data on the safety of COVID-19 vaccines in nursing women or on the effect of mRNA-based vaccines on breastfed children. As mRNA-based vaccines do not contain the virus, and the mRNA does not enter the cell nucleus and degrades rapidly, it is biologically and clinically improbable that it can represent a risk for breastfed children.

⁶ Vaccinazione contro il COVID-19 in gravidanza e allattamento “Italian Obstetric Surveillance System (ItOSS) – Istituto Superiore di Sanità. <https://www.epicentro.iss.it/vaccini/covid-19-target-gravidanza-allattamento>

- Based on the above considerations, a nursing woman belonging to a group recommended for vaccination – for example, a healthcare professional – should be administered a vaccine just like all other healthcare professionals.
- Women are advised not to interrupt breastfeeding after the vaccination.

The WHO and national and international Regulators recommend promoting post-marketing surveys on the efficacy and safety of the vaccine over time, the pharmacovigilance activities, and the assessment of the impact of maternal vaccination on breastfed children.

Organisational models for integrated hospital and community services

- Integrated hospital and community services are a key element in provision of care during pre- and post-natal care.
- In light of the need for continuous care and support during pregnancy and postpartum, services should be proactively organised so that the community midwife service (Family Counselling Service), the family paediatrician and the community support groups can promptly take up care of the woman during pregnancy and after being discharged from hospital.
- Upon discharge, mothers should be given updated information about the network of services available. The network providing support to new parents throughout pregnancy, childbirth and puerperium also includes non-healthcare entities, such as trusts, associations, local groups and social services that contribute to health promotion and combating inequalities.
- Obstetric services must be organised to assure the presence of a person chosen by the woman at pregnancy and postpartum check-ups, too. Particular attention should be given to pregnant women in potentially vulnerable situations, such as foreign women having difficulties with the language.
- Women should be encouraged to keep appointments requiring in-person care, while respecting prevention and physical distancing measures.
- It is important to ensure access to pre- and post-natal information, both individually and in groups, such as pre-natal and postpartum groups, and meetings online.
- Healthcare services should adopt teleconferencing (TCF) systems and use them for meetings that do not require in-person interaction. These instruments will need to comply with data protection legislation.
- Women in potentially vulnerable situations (socio-economic, domestic violence, substance abuse, precarious living conditions, asylum-seeking status, and mental distress) must receive timely, continuous and adequate support for their condition.

Indications for Hygiene and Public Health services and local case management and contact tracing angles to propose services

Whenever case and contact management services intake a pregnant woman, a woman who has just given birth or a nursing mother, they can refer to the relevant guidelines for integrated hospital and community services to:

- Continuing to keep the mother-child dyad together, avoiding separating them even if only the mother or only the child is positive.
- Promoting the presence of the father, who is considered a bona fide caregiver.
- Encouraging family reunification when there is a temporary separation (e.g., hospitalisation in the Neonatal Intensive Care Unit).

Psychosocial support

Psychological well-being

- The pandemic has produced an increase in anxiety among the general population and pregnant women who experience a period of uncertainty which could have repercussions on their perinatal mental well-being and health, particularly in connection to:
 - COVID-19 pathologies;
 - social isolation with a consequent drop in the support received from the network of family and friends;
 - possible economic uncertainty;
 - changes in the care offered by the healthcare system and in their patient intake process: for example, moving from in-person interviews to telephone calls or remote contacts; postponing doctor's appointments, failure to ensure the presence of a companion of choice, for example, during check-ups.
- During pre- and post-natal care, support networks are a positive factor in determining health and well-being and combating inequalities. In addition to healthcare services, local associations and groups provide individual in-person or remote video support. At present, group meetings before and after childbirth are held by videoconference.
- At their request, all pregnant women and women who have just given birth should be given support for their psychological well-being and be included in the local services network.
- During intake interviews, health care professionals assisting pregnant women should detect any signs of psychosocial distress by relying on their active listening skills and offer their support if necessary.
- If the professional detects a mental disorder during the woman's pregnancy or after childbirth, he/she should first speak about it to the woman and her family doctor, and subsequently plan a consultation with a specialist.
- Mothers, fathers and caregivers separated from their young children should have access to healthcare personnel and other types of professionals trained in mental health and psychological support.
- Departments should ensure high-quality perinatal bereavement support during the pandemic, too, by providing adequate care during delivery and postnatally, performing the necessary inquiries and offering appropriate follow-up appointments.
- In the promotion of mental health, it is crucial to recognise people's needs and provide them with appropriate support, either remotely or, whenever possible, in person.

Taking charge of domestic violence

- The pandemic has increased the risk of domestic violence. Healthcare services must promptly and adequately intake women or minors suffering abuse through their own regional and hospital networks. The intake process should be performed in compliance with the *National Guidelines for Local Health Centres and Hospitals on providing health and social relief and assistance to female*

victims of violence⁷. Safe houses and anti-violence centres continue to be open during the emergency and offer support and assistance.

Contact numbers and Apps available

- **Domestic Violence Helpline 1522**, an anti-violence and anti-stalking helpline providing assistance and support 24 hours a day.
- **App 1522**, available on IOS and Android, enables women to chat securely with female operators and ask for help and information on their safety without running the additional risk of being heard by their aggressors.
- **“Youpol” App**. Developed by the State Police to report drug dealing and bullying cases, this App was further extended to cover crimes of domestic violence.
- **Anti-violence Centres**. A map of these centres is available on the Prime Minister’s Office of Equal Opportunity’s website.
- **Family Counselling Services**. The map is available on the Ministry of Health’s website.

⁷ Prime Minister’s Decree of 24 November 2017. *Linee guida nazionali per le Aziende sanitarie e le Aziende ospedaliere in tema di soccorso e assistenza socio-sanitaria alle donne vittime di violenza*. http://www.salute.gov.it/portale/news/p3_2_1_1_1.jsp?lingua=italiano&menu=notizie&p=dalministero&id=4565

0-2-year-old children during the pandemic

Scientific evidence currently available indicates that the SARS-CoV-2 infection manifests itself in infants and young children with much less serious clinical conditions than in adults. Consequently, children generally have a favourable prognosis, and the lethality rate is decidedly lower than in adults. Despite children's lower risk and their favourable prognosis, it is important to promote all activities to safeguard infants' and young children's health and wellbeing, since children are subjected to prevention measures, physical distancing and social isolation because of the pandemic.

Nurturing care refers to the comprehensive conditions that ensure children are in good health, are appropriately fed, have responsive parents, early learning opportunities, protection and security.

"Nurturing children" not only means feeding them but also assuring their safety and health, heeding and responding to their needs and interests, encouraging them to explore the environment and interacting with caregivers and the community.

It is essential to support the caregivers' capacity to provide adequate *nurturing care* in a situation in which access to healthcare services, education and social protection may be limited. It is equally necessary to guarantee and strengthen formal support services for newborn babies and infants affected by disabilities or neurodevelopmental disorders as well as for parents and caregivers, especially at primary and community care level.

Parents and caregivers can best provide this care when they have emotional, economic and social security. They must receive support and be enabled to participate in social networks, and their role in their children's lives and care must be promoted and recognised.

The principles of *nurturing care* also apply to the chaotic and ever-changing context of the COVID-19 emergency. More specifically, it is necessary:

- To have an integrated, **holistic approach** to families and children;
- **Re-establish security and routine** as soon as possible, offering early learning programmes, support networks and other family services;
- **Rebuild the social capital** of communities, with a focus on social cohesion and on fostering positive relations between different community components;
- Conduct **research activities** on *nurturing care* in consideration of different cultures and contexts.

In reference to 0-2-yr-old infants, healthcare and social services must assure care and support to parents and caregivers through remote communication; supporting parents during the first years of life can have an enduring effect on children's health and their cognitive and socio-emotional development.

It is necessary to support the continuous delivery of accessible and high-quality educational services for infants in order to enable parents to go back to work while concomitantly offering growth and development opportunities to infants and young children.

Other communication and scientific activities on the subject of pregnancy, childbirth and breastfeeding

During the emergency, the National Disease Prevention Centre and the Health Promotion Department of the ISS developed several communication products to meet emerging needs and launched new research projects. Below is a non-exhaustive list of past and current activities. The updates are published in the “Epicentro” section (the Epidemiology Portal of the ISS) dedicated to “Pregnancy, Childbirth and Breastfeeding”.

The subject of health in different population groups, including pregnant women and children, is dealt with in other ISS COVID-19 Reports, already or currently being published, which can be viewed at <https://www.iss.it/rapporti-covid-19>.

In-depth thematic reports

- Protecting motherhood and COVID-19 infections - 12 March 2020
- COVID-19: Experiencing Childbirth Together. The presence in the hospital of the father or of the person of the woman's choice - 13 May 2020
- Recommendations for breastfeeding during the COVID-19 pandemic, graphics card - 20 April 2020

Research projects

- The SARS-CoV-2 infection in pregnancy: prospective study by the Italian Obstetric Surveillance System (ItOSS), coordinated by ItOSS in cooperation with the Regions.
- Survey on the state-of-the-art of assistance in childbirth in the COVID-19 emergency within the framework of the Italian Network of Baby-friendly Hospitals (Study Covid-Baby-Friendly Network Italy), performed in cooperation with the Italian Committee for UNICEF.
- “Qualitative study on the needs of women and couples during the COVID-19 emergency and the delivery of social and healthcare support in Childbirth services”, conducted in cooperation with ASUGI - Azienda Sanitaria Universitaria Giuliano Isontina.
- Medically assisted procreation and COVID-19: Survey by the PMA National Register.
- COVID Mothers Study: international study on COVID-19 in mothers and children, carried out in cooperation with the Harvard Medical School and the Italian Committee for UNICEF.
- The SARS-CoV-2 infection in pregnancy: prospective study by the Italian Obstetric Surveillance System (ItOSS)
- Study titled “COVID-19 and Perinatal Mental Health”. The impact of COVID-19 on the life experience and emotional state of women in the perinatal period in contact with Family Counselling Services.

Infographics

The infographics were developed in cooperation with the ISS Group's New Coronavirus Communication Department.

- I'm pregnant: how can I protect myself against COVID-19? ([PDF](#) 1.7 Mb - [PNG](#) 605 kb)
- All women, even if they are COVID-19 positive, have the right to give birth safely and to have a positive experience ([PDF](#) 1.9 Mb - [PNG](#) 595 kb)
- Close mother-child contact ([PDF](#) 1.6 Mb - [PNG](#) 514 kb)
- Women with COVID-19 can breastfeed if they want ([PDF](#) 1.8 Mb - [PNG](#) 598 kb)
- If a woman with COVID-19 is too sick to breastfeed, she can be supported in finding an alternate option so that she can give breastmilk to her child ([PDF](#) 1.7 Mb - [PNG](#) 559 kb)

References

- Agenzia Italiana del Farmaco (AIFA). *Farmaci utilizzabili per il trattamento della malattia COVID-19*. Accessibile al seguente link: <https://www.aifa.gov.it/aggiornamento-sui-farmaci-utilizzabili-per-il-trattamento-della-malattia-covid19> [ultimo accesso 10.12.2020]
- Corsi E, Maraschini A, Perrone E, Salvatore MA, D'Aloja P, Donati S; Gruppo di lavoro ItOSS COVID-19. La preparedness dell'Italian obstetric surveillance system in occasione della pandemia da SARS-CoV-2: aspetti metodologici di uno studio di popolazione. *Epidemiologia & Prevenzione* 2020;44(5-6), 81-87. doi: 10.19191/EP20.5-6.S2.089
- Gruppo di Lavoro ISS Prevenzione e Controllo delle Infezioni. *Indicazioni ad interim per un utilizzo razionale delle protezioni per infezione da SARS-COV-2 nelle attività sanitarie e socio-sanitarie (assistenza a soggetti affetti da COVID-19) nell'attuale scenario emergenziale SARS-COV-2. Versione del 10 maggio 2020*. Roma: Istituto Superiore di Sanità. 2020. (Rapporto ISS COVID-19 n. 2/2020Rev. 2).
- Infant Feeding in Emergencies (IFE) Core Group. *L'alimentazione dei lattanti e dei bambini piccoli nelle emergenze. Guida Operativa per il personale di primo soccorso e per i responsabili dei programmi nelle emergenze. Versione 3.0. 2017. Traduzione italiana*.
- Knight M, Bunch K, Vousden N, Morris E, Simpson N, Gale C, O'Brien P, Quigley M, Brocklehurst P, Kurinczuk J; UK Obstetric Surveillance System SARS-CoV-2 Infection in Pregnancy Collaborative Group. Characteristics and outcomes of pregnant women admitted to hospital with confirmed SARS-CoV-2 infection in UK: national population-based cohort study. *BMJ* 2020;369:m2107. doi: 10.1136/bmj.m2107
- Maraschini A, Corsi E, Salvatore MA, Donati S; ItOSS COVID-19 Working Group. Coronavirus and birth in Italy: results of a national population-based cohort study. *Annali dell'Istituto Superiore di Sanità* 2020;56(3):378-89. https://doi.org/10.4415/ANN_20_03_17
- Royal College of Obstetricians and Gynaecologists, The Royal College of Midwives UK, Royal College of Paediatrics and Child Health, Royal College of Anaesthetists & Obstetric Anaesthetists' Association. *Coronavirus (COVID-19) Infection in Pregnancy. Information for healthcare professionals*. Version 12, October, 14, 2020.
- Royal College of Obstetricians and Gynaecologists, The Royal College of Midwives UK, The Society & College of Radiographers & National Health Service. *Framework to assist NHS trusts to reintroduce access for partners, visitors and other supporters of pregnant women in English maternity services*. September 8, 2020.
- University of Birmingham – WHO Collaborating Centre for Women's Health. *COVID-19 in Pregnancy (PregCOV-19LSR)*. <https://www.birmingham.ac.uk/research/who-collaborating-centre/pregcov/index.aspx>
- World Health Organization. *Clinical management of Covid-19. Interim guidance*. Geneva: WHO; 2020.
- World Health Organization. *Frequently asked questions: Breastfeeding and COVID-19 For health care workers*. Geneva: WHO; 2020.
- World Health Organization. *Guideline: protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services*. Geneva: WHO; 2017.
- World Health Organization. *International Code of Marketing of Breast-Milk Substitutes*. World Health Organization, Geneva. Updated 1981. Geneva: WHO; 19+81. https://www.who.int/nutrition/publications/code_english.pdf
- World Health Organization, United Nations Children's Fund, World Bank Group. *Nurturing care for early childhood development: a framework for helping children survive and thrive to transform health and human potential*. Geneva: World Health Organization; 2018. [Traduzione italiana <http://www.natiperleggere.it/wp-content/uploads/2018/10/Nurturing-care-ita-x-sito.pdf>]
- World Health Organization, UNICEF. *Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services: implementing the revised Baby-Friendly Hospital Initiative 2018*. Geneva: World Health Organization and the United Nations Children's Fund (UNICEF); 2018.

Rapporti ISS COVID-19 (ISS COVID-19 Reports)

ISS COVID-19 Reports are mainly addressed to healthcare professionals to cope with different aspects of the COVID pandemic. They provide essential and urgent directions for emergency management and are subject to updates. All reports have an English abstract.

The complete list is available at <https://www.iss.it/rapporti-COVID-19>.

Some reports (highlighted below) are also translated in English and are available at <https://www.iss.it/rapporti-iss-COVID-19-in-english>

2021

1. Fabiani M, Onder G, Boros S, Spuri M, Minelli G, Urdiales AM, Andrianou X, Riccardo F, Del Manso M, Petrone D, Palmieri L, Vescio MF, Bella A, Pezzotti P. *Il case fatality rate dell'infezione SARS-CoV-2 a livello regionale e attraverso le differenti fasi dell'epidemia in Italia. Versione del 20 gennaio 2021*. Roma: Istituto Superiore di Sanità; 2021. (Rapporto ISS COVID-19 n. 1/2021).
2. Giusti A, Zambri F, Marchetti F, Corsi E, Preziosi J, Sampaolo L, Pizzi E, Taruscio D, Salerno P, Chiantera A, Colacurci N, Davanzo R, Mosca F, Petrini F, Ramenghi L, Vicario M, Villani A, Viora E, Zanetto F, Chapin EM, Donati S. *Indicazioni ad interim per gravidanza, parto, allattamento e cura dei piccolissimi di 0-2 anni in risposta all'emergenza COVID-19. Aggiornamento del Rapporto ISS COVID-19 n. 45/2020. Versione 2 febbraio 2021*. Roma: Istituto Superiore di Sanità; 2021. (Rapporto ISS COVID-19 n. 2/2021). Available also in English.
3. Gruppo di lavoro ISS Bioetica COVID-19. *Aspetti di etica nella sperimentazione di vaccini anti-COVID-19. Versione del 18 febbraio 2021*. Roma: Istituto Superiore di Sanità; 2021. (Rapporto ISS COVID-19 n. 3/2021).

2020

1. Gruppo di lavoro ISS Prevenzione e controllo delle Infezioni. *Indicazioni ad interim per l'effettuazione dell'isolamento e della assistenza sanitaria domiciliare nell'attuale contesto COVID-19*. Versione del 24 luglio 2020. Roma: Istituto Superiore di Sanità; 2020 (Rapporto ISS COVID-19, n. 1/2020 Rev.)
2. Gruppo di lavoro ISS Prevenzione e controllo delle Infezioni. *Indicazioni ad interim per un utilizzo razionale delle protezioni per infezione da SARS-CoV-2 nelle attività sanitarie e sociosanitarie (assistenza a soggetti affetti da COVID-19) nell'attuale scenario emergenziale SARS-CoV-2*. Versione del 10 maggio 2020. Roma: Istituto Superiore di Sanità; 2020 (Rapporto ISS COVID-19, n. 2/2020 Rev. 2)
3. Gruppo di lavoro ISS Ambiente e Gestione dei Rifiuti. *Indicazioni ad interim per la gestione dei rifiuti urbani in relazione alla trasmissione dell'infezione da virus SARS-CoV-2*. Versione del 31 maggio 2020. Roma: Istituto Superiore di Sanità; 2020 (Rapporto ISS COVID-19, n. 3/2020 Rev. 2)
4. Gruppo di lavoro ISS Prevenzione e controllo delle Infezioni. *Indicazioni ad interim per la prevenzione e il controllo dell'infezione da SARS-CoV-2 in strutture residenziali sociosanitarie*. Versione del 17 aprile 2020. Roma: Istituto Superiore di Sanità; 2020 (Rapporto ISS COVID-19, n. 4/2020 Rev.) Available also in English.
5. Gruppo di lavoro ISS Ambiente e Qualità dell'aria indoor. *Indicazioni ad per la prevenzione e gestione degli ambienti indoor in relazione alla trasmissione dell'infezione da virus SARS-CoV-2*. Versione del 25 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 5/2020 Rev. 2). Available also in English.
6. Gruppo di lavoro ISS Cause di morte COVID-19. *Procedura per l'esecuzione di riscontri diagnostici in pazienti deceduti con infezione da SARS-CoV-2*. Versione del 23 marzo 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 6/2020).

7. Gruppo di lavoro ISS Biocidi COVID-19 e Gruppo di lavoro ISS Ambiente e Rifiuti COVID-19. *Raccomandazioni per la disinfezione di ambienti esterni e superfici stradali per la prevenzione della trasmissione dell'infezione da SARS-CoV-2*. Versione del 29 marzo 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 7/2020).
8. Osservatorio Nazionale Autismo ISS. *Indicazioni ad interim per un appropriato sostegno delle persone nello spettro autistico nell'attuale scenario emergenziale SARS-CoV-2*. Versione del 30 aprile 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 8/2020 Rev.).
9. Gruppo di Lavoro ISS Ambiente – Rifiuti COVID-19. *Indicazioni ad interim sulla gestione dei fanghi di depurazione per la prevenzione della diffusione del virus SARS-CoV-2*. Versione del 3 aprile 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 9/2020).
10. Gruppo di Lavoro ISS Ambiente-Rifiuti COVID-19. *Indicazioni ad interim su acqua e servizi igienici in relazione alla diffusione del virus SARS-CoV-2*. Versione del 7 aprile 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 10/2020).
11. Gruppo di Lavoro ISS Diagnostica e sorveglianza microbiologica COVID-19: aspetti di analisi molecolare e sierologica *Raccomandazioni per il corretto prelievo, conservazione e analisi sul tampone oro/rino-faringeo per la diagnosi di COVID-19*. Versione del 17 aprile 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 11/2020).
12. Gabbrielli F, Bertinato L, De Filippis G, Bonomini M, Cipolla M. *Indicazioni ad interim per servizi assistenziali di telemedicina durante l'emergenza sanitaria COVID-19*. Versione del 13 aprile 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 12/2020). Available also in English.
13. Gruppo di lavoro ISS Ricerca traslazionale COVID-19. *Raccomandazioni per raccolta, trasporto e conservazione di campioni biologici COVID-19*. Versione del 15 aprile 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 13/2020). Available also in English.
14. Gruppo di lavoro ISS Malattie Rare COVID-19. *Indicazioni ad interim per un appropriato sostegno delle persone con enzimopenia G6PD (favismo) nell'attuale scenario emergenziale SARS-CoV-2*. Versione del 14 aprile 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 14/2020). Available also in English.
15. Gruppo di lavoro ISS Farmaci COVID-19. *Indicazioni relative ai rischi di acquisto online di farmaci per la prevenzione e terapia dell'infezione COVID-19 e alla diffusione sui social network di informazioni false sulle terapie*. Versione del 16 aprile 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 15/2020). Available also in English.
16. Gruppo di lavoro ISS Sanità Pubblica Veterinaria e Sicurezza Alimentare COVID-19. *Animali da compagnia e SARS-CoV-2: cosa occorre sapere, come occorre comportarsi*. Versione del 19 aprile 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 16/2020). Available also in English.
17. Gruppo di lavoro ISS Sanità Pubblica Veterinaria e Sicurezza Alimentare COVID-19. *Indicazioni ad interim sull'igiene degli alimenti durante l'epidemia da virus SARS-CoV-2*. Versione del 19 aprile 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 17/2020). Available also in English.
18. Gruppo di lavoro ISS Ricerca traslazionale COVID-19. *Raccomandazioni per la raccolta e analisi dei dati disaggregati per sesso relativi a incidenza, manifestazioni, risposta alle terapie e outcome dei pazienti COVID-19*. Versione del 26 aprile 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 18/2020). Available also in English.
19. Gruppo di lavoro ISS Biocidi COVID-19. *Raccomandazioni ad interim sui disinfettanti nell'attuale emergenza COVID-19: presidi medico-chirurgici e biocidi*. Versione del 25 aprile 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 19/2020).
20. Gruppo di Lavoro ISS Prevenzione e Controllo delle Infezioni. *Indicazioni ad interim per la sanificazione degli ambienti interni nel contesto sanitario e assistenziale per prevenire la trasmissione di SARS-CoV 2*. Versione del 14 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 20/2020 Rev.).
21. Ricci ML, Rota MC, Scaturro M, Veschetti E, Lucentini L, Bonadonna L, La Mura S. *Guida per la prevenzione della contaminazione da Legionella negli impianti idrici di strutture turistico recettive e altri edifici ad uso civile e*

industriale, non utilizzati durante la pandemia COVID-19. Versione del 3 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 21/2020).

22. Gruppo di lavoro ISS Salute mentale ed emergenza COVID-19 *Indicazioni ad interim per un appropriato supporto degli operatori sanitari e sociosanitari durante lo scenario emergenziale SARS-CoV-2. Versione del 28 maggio. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 22/2020 Rev.) Available also in English.*
23. Gruppo di lavoro ISS Salute mentale ed emergenza COVID-19 *Indicazioni di un programma di intervento dei Dipartimenti di Salute Mentale per la gestione dell'impatto dell'epidemia COVID-19 sulla salute mentale. Versione del 6 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 23/2020).*
24. Gruppo di lavoro ISS Malattie Rare COVID-19. *Indicazioni ad interim per una appropriata gestione dell'iposurrenalismo in età pediatrica nell'attuale scenario emergenziale da infezione da SARS-CoV-2. Versione del 10 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 24/2020). Available also in English.*
25. Gruppo di Lavoro ISS Biocidi COVID-19. *Raccomandazioni ad interim sulla sanificazione di strutture non sanitarie nell'attuale emergenza COVID-19: superfici, ambienti interni e abbigliamento. Versione del 15 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 25/2020)*
26. Gruppo di Lavoro ISS Ambiente e Rifiuti. *Indicazioni ad interim sulla gestione e smaltimento di mascherine e guanti monouso provenienti da utilizzo domestico e non domestico. Versione del 18 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 26/2020)*
27. Ricci ML, Rota MC, Scaturro M, Nardone M, Veschetti E, Lucentini L, Bonadonna L, La Mura S. *Indicazioni per la prevenzione del rischio Legionella nei riuniti odontoiatrici durante la pandemia da COVID-19. Versione del 17 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 27/2020).*
28. Gruppo di Lavoro ISS Test Diagnostici COVID-19 e Gruppo di Lavoro ISS Dispositivi Medici COVID-19. *Dispositivi diagnostici in vitro per COVID-19. Parte 1: normativa e tipologie. Versione del 18 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 28/2020)*
29. Gruppo di lavoro ISS Malattie Rare COVID-19. *Indicazioni ad interim su malattia di Kawasaki e sindrome infiammatoria acuta multisistemica in età pediatrica e adolescenziale nell'attuale scenario emergenziale da infezione da SARS-CoV-2. Versione 21 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 29/2020). Available also in English.*
30. Gruppo di lavoro Salute mentale ed emergenza COVID-19. *Indicazioni sull'intervento telefonico di primo livello per l'informazione personalizzata e l'attivazione dell'empowerment della popolazione nell'emergenza COVID-19. Versione del 14 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 30/2020)*
31. Gruppo di lavoro Salute mentale ed emergenza COVID-19. *Indicazioni ad interim per il supporto psicologico telefonico di secondo livello in ambito sanitario nello scenario emergenziale COVID-19. Versione del 26 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 31/2020)*
32. Gruppo di lavoro ISS Sanità Pubblica Veterinaria e Sicurezza Alimentare COVID-19. *Indicazioni ad interim sul contenimento del contagio da SARS-CoV-2 e sull'igiene degli alimenti nell'ambito della ristorazione e somministrazione di alimenti. Versione del 27 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 32/2020).*
33. Gruppo di Lavoro ISS Ambiente-Rifiuti COVID-19. *Indicazioni sugli impianti di ventilazione/climatizzazione in strutture comunitarie non sanitarie e in ambienti domestici in relazione alla diffusione del virus SARS-CoV-2. Versione del 25 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 33/2020).*
34. Gruppo di Lavoro Bioetica COVID-19. *Sorveglianza territoriale e tutela della salute pubblica: alcuni aspetti etico-giuridici. Versione del 25 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 34/2020). Available also in English.*
35. Gruppo di Lavoro Bioetica COVID-19. *Il Medico di Medicina Generale e la pandemia di COVID-19: alcuni aspetti di etica e di organizzazione. Versione del 25 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 35/2020)*

36. Gruppo di Lavoro ISS Ambiente-Rifiuti COVID-19. *Indicazioni sulle attività di balneazione, in relazione alla diffusione del virus SARS-CoV-2. Versione del 31 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 36/2020).
37. Gruppo di Lavoro ISS Ambiente-Rifiuti COVID-19. *Indicazioni per le piscine, di cui all'Accordo 16/1/2003 tra il Ministro della salute, le Regioni e le Province Autonome di Trento e Bolzano, in relazione alla diffusione del virus SARS-CoV-2. Versione del 31 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 37/2020).
38. Silano M, Bertinato L, Boirivant M, Pocchiari M, Taruscio D, Corazza GR, Troncone R *Indicazioni ad interim per un'adeguata gestione delle persone affette da celiachia nell'attuale scenario emergenziale SARS-CoV-2. Versione del 29 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 38/2020).
39. Gruppo di lavoro ISS Malattie Rare COVID-19 *Censimento dei bisogni (23 marzo - 5 aprile 2020) delle persone con malattie rare in corso di pandemia da SARS-CoV-2. Versione del 30 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 39/2020).
40. Gruppo di Lavoro Bioetica COVID-19. *Comunicazione in emergenza nei reparti COVID-19. Aspetti di etica. Versione del 25 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 40/2020).
41. Gruppo di lavoro ISS Salute mentale ed emergenza COVID-19. *Indicazioni per prendersi cura delle difficoltà e dei bisogni dei familiari di pazienti ricoverati in reparti ospedalieri COVID-19. Versione del 29 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 41/2020).
42. Gruppo di Lavoro ISS Bioetica COVID-19. *Protezione dei dati personali nell'emergenza COVID-19. Versione del 28 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 42/2020).
43. Gruppo di lavoro ISS Salute mentale ed emergenza COVID-19. *Indicazioni ad interim per un appropriato sostegno della salute mentale nei minori di età durante la pandemia COVID-19. Versione del 31 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 43/2020)
44. Gruppo di lavoro ISS Salute mentale ed emergenza COVID-19. *Indicazioni di un programma di intervento per la gestione dell'ansia e della depressione perinatale nell'emergenza e post emergenza COVID-19. Versione del 31 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 44/2020)
45. Giusti A, Zambri F, Marchetti F, Sampaolo L, Taruscio D, Salerno P, Chiantera A, Colacurci N, Davanzo R, Mosca F, Petrini F, Ramenghi L, Vicario M, Villani A, Viora E, Zanetto F, Donati S. *Indicazioni ad interim per gravidanza, parto, allattamento e cura dei piccolissimi 0-2 anni in risposta all'emergenza COVID-19. Versione 31 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020 (Rapporto ISS COVID-19 n. 45/2020)
46. Gruppo di Lavoro ISS Test Diagnostici COVID-19 e Gruppo di Lavoro ISS Dispositivi Medici COVID-19. *Dispositivi diagnostici in vitro per COVID-19. Parte 2: evoluzione del mercato e informazioni per gli stakeholder. Versione del 23 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 46/2020)
47. Gruppo di Lavoro ISS Bioetica COVID-19. *Etica della ricerca durante la pandemia di COVID-19: studi osservazionali e in particolare epidemiologici. Versione del 29 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 47/2020), Available also in English.
48. Gruppo di Lavoro Immunologia COVID-19. *Strategie immunologiche ad interim per la terapia e prevenzione della COVID-19. Versione del 4 giugno 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 48/2020).
49. Gruppo di Lavoro ISS Cause di morte COVID-19, Gruppo di lavoro Sovrintendenza sanitaria centrale – INAIL, ISTAT. *COVID-19: rapporto ad interim su definizione, certificazione e classificazione delle cause di morte. Versione dell'8 giugno 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 49/2020)
50. Perilli R, Grigioni M, Porta M, Cruciani F, Bandello F, Mastropasqua L. *S Contributo dell'innovazione tecnologica alla sicurezza del paziente diabetico da sottoporre ad esame del fondo oculare in tempi di COVID-19. Versione del 31 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 50/2020).
51. Gruppo di Lavoro ISS Farmaci COVID-19. *Integratori alimentari o farmaci? Regolamentazione e raccomandazioni per un uso consapevole in tempo di COVID-19. Versione del 31 maggio 2020.* Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 51/2020)

52. Gruppo di lavoro SISVet-ISS. *Protocollo di gestione dell'emergenza epidemiologica da SARS-CoV-2 nelle strutture veterinarie universitarie. Versione dell'11 giugno 2020*. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 52/2020)
53. Filia A, Urdiales AM, Rota MC. *Guida per la ricerca e gestione dei contatti (contact tracing) dei casi di COVID-19. Versione del 25 giugno 2020*. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 53/2020).
54. Giansanti D, D'Avenio G, Rossi M, Spurio A, Bertinato L, Grigioni M. *Tecnologie a supporto del rilevamento della prossimità: riflessioni per il cittadino, i professionisti e gli stakeholder in era COVID-19. Versione del 31 maggio 2020*. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 54/2020).
55. Cisbani E, Dini V, Grande S, Palma A, Rosi A, Tabocchini MA, Gasparini F, Orlacchio A. *Stato dell'arte sull'impiego della diagnostica per immagini per COVID-19. Versione del 7 luglio 2020*. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 55/2020)
56. Gruppo di lavoro ISS-INAIL. *Focus on: utilizzo professionale dell'ozono anche in riferimento al COVID-19. Versione del 21 luglio 2020*. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 56/2020). Available also in English.
57. Gruppo di lavoro ISS Formazione COVID-19. *Formazione per la preparedness nell'emergenza COVID-19: il case report dell'Istituto Superiore di Sanità. Versione del 31 maggio 2020*. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 57/2020). Available also in English.
58. Gruppo di Lavoro ISS, Ministero della Salute, Ministero dell'Istruzione, INAIL, Fondazione Bruno Kessler, Regione Emilia-Romagna, Regione Veneto, R. *Indicazioni operative per la gestione di casi e focolai di SARS-CoV-2 nelle scuole e nei servizi educativi dell'infanzia. Versione del 28 agosto 2020*. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 58/2020 Rev.). Available also in English.
59. Gruppo di lavoro ISS Bioetica COVID-19. *Supporto digitale al tracciamento dei contatti (contact tracing) in pandemia: considerazioni di etica e di governance. Versione del 17 settembre 2020*. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 59/2020). Available also in English.
60. Gabbrielli F, Capello F, Tozzi AE, Rabbone I, Caruso M, Garioni M, Taruscio D, Bertinato L, Scarpa M. *Indicazioni ad interim per servizi sanitari di telemedicina in pediatria durante e oltre la pandemia COVID-19. Versione del 10 ottobre 2020*. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 60/2020).
61. Tavolo per il monitoraggio e implementazione del Piano Nazionale delle Demenze. *Indicazioni ad interim per un appropriato sostegno alle persone con demenza nell'attuale scenario della pandemia di COVID-19. Versione del 23 ottobre 2020*. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 61/2020).
62. D'Ancona F, Isonne C, Lia L, Urdiales AM, Onder G, Vanacore N, Bellentani MD, Caraglia A, D'Alisera A, Iera J, Sabbatucci M, Spizzichino M, Benini F, Pizzuto M, Scaccabarozzi G, Pucciarelli G. *Indicazioni per la prevenzione delle infezioni da SARS-CoV-2 negli hospice e nelle cure palliative domiciliari. Versione del 15 dicembre 2020*. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19, n. 62/2020). Available also in English.
63. Rota MC, Bellino S, Vescio MF, Del Manso M, Andrianou X, Urdiales AM, Spuri M, Fabiani M, Bella A, Riccardo F, Pezzotti P. *Apertura delle scuole e andamento dei casi confermati di SARS-CoV-2: la situazione in Italia. Versione del 30 dicembre 2020*. Roma: Istituto Superiore di Sanità; 2020. (Rapporto ISS COVID-19 n. 63/2020).