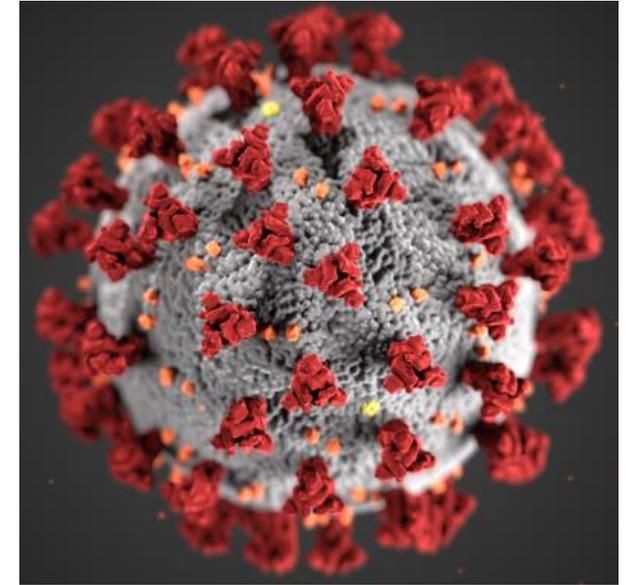


COVID-19 and Maternity Care: Guidance from Italy



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REGIONE AUTONOMA FRIULI VENEZIA GIULIA

ISTITUTO DI RICOVERO e CURA
a carattere scientifico

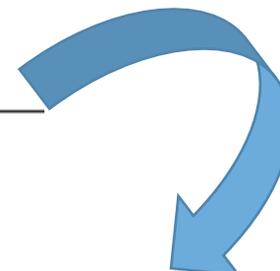
Burlo Garofolo di Trieste



The New Coronavirus, the Current King of China

Stanley A. Plotkin^{1,2}

¹Emeritus Professor of Pediatrics, University of Pennsylvania, Philadelphia, Pennsylvania, USA; and ²Vaxconsult, Doylestown, Pennsylvania, USA



- | | |
|-------------|--|
| December 31 | China reports to WHO a cluster of pneumonia with unknown etiology |
| January 7 | A novel coronavirus identified by Chinese scientists |
| January 20 | First US identified case in Washington State. <i>Omer, Jama, April 6, 2020</i> |
| January 30 | WHO declares global alert |
| March 11 | WHO declares a pandemic |



General characteristics of SARS-CoV-2 infection

- Possibly a **recombinant virus** between the bat coronavirus and an origin-unknown coronavirus

- **Transmission**

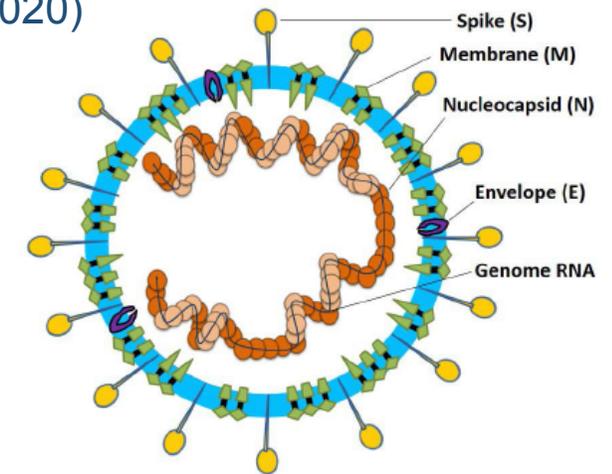
BMJ Best Practice
April 9, 2020
**Coronavirus disease
2019 (COVID-19)**

HOW?

- Animal-human; inter-human
- **Close contact with respiratory droplets**
- SARS-CoV-2 **stable on plastic and stainless steel up to 72 hours** (van Doremalen, NEJM 2020)
- Airborne transmission and faecal-oral transmission not reported, but possible
- The virus binds to the angiotensin-converting enzyme-2 (**ACE2**) receptors
- Reproductive number (R0): 2.2-3.3

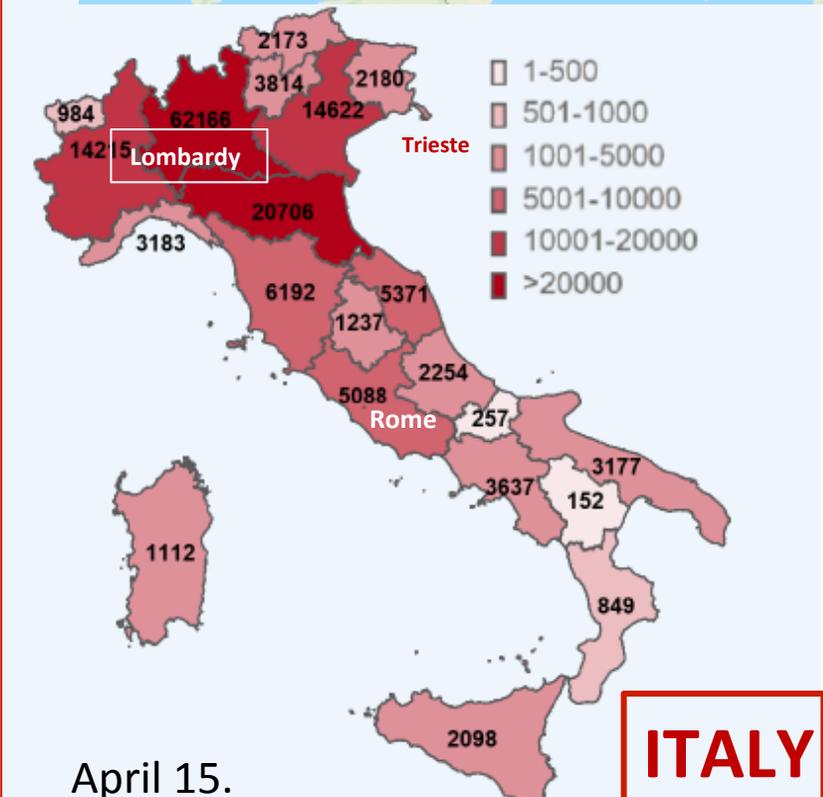
WHEN?

- Viral shedding: 8-20 days after symptoms resolve
- Presymptomatic transmission possible (1-3 days before symptom onset) and from asymptomatic carriers (around 18-31 %)
- Superspreading events
- **Incubation:** 1-14 days (median 5-7 days)



The last 3 months in Italy

- First cases in Italy:
 - IMPORTED: January 30th: 2 Chinese tourists in Rome
 - ITALIAN: February 20th: first identified case in Codogno (Lodi)
- Outbreak in Lombardy
- Since March 11th, restrictive measures by Govt
- On **April 20th** (Source: Istituto Superiore Sanità-ISS):
 - **181,228 cases** (HWs: around 10.5 %)
 - 10.9 % asymptomatic
 - **0-18 years: 1.7 %**
 - **24,114 dead (0-18 years: 2)**
- **It is not just a flu!** (De Giorgio A. Travel Medicine & Inf Dis 2010, April 6)
- All of Italy in lockdown until May 3rd



April 15.

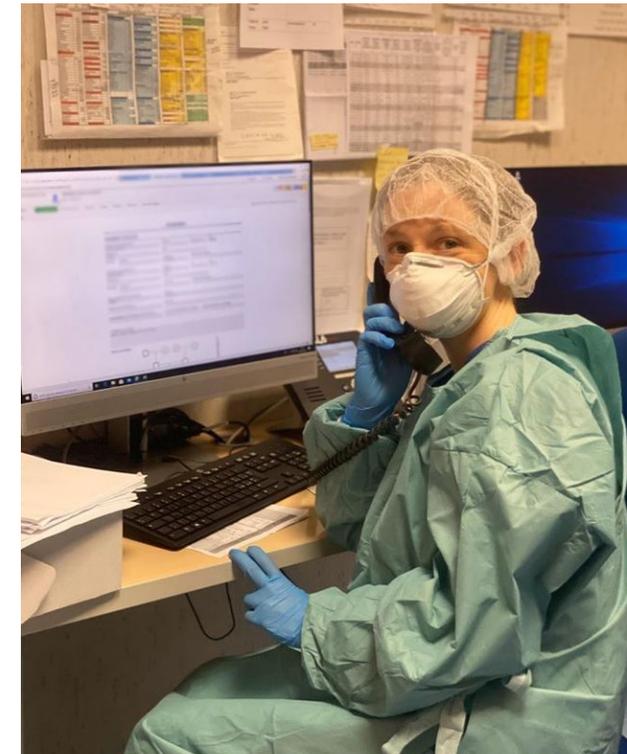
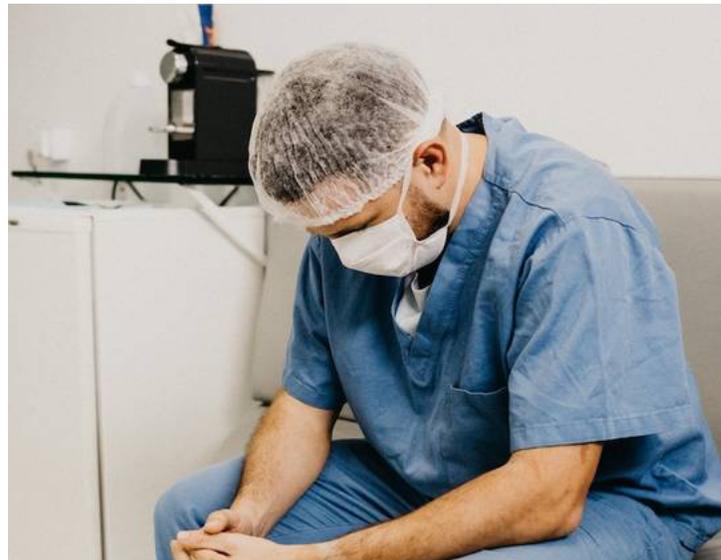
Number of COVID-19 cases per Region

ITALY

COPYRIGHTED



**Health professionals of
the National Health System, Italy**





Piazza Duomo, Milano

COPYRIGHTED



Ponte Rialto, Venice



Trinità dei Monti, Rome

Empty historical cities, lockdown



Coffins transported by the Army to other cities for cremation

Loss of human life and the acknowledgment to Health Professionals for their job and sacrifice



Billboard in Milan

Composition of the nCoV Expert Panel

- Italian Society of Neonatology
- Union of European Neonatal & Perinatal Societies
- Italian Association of the Human Milk Banks (AIBLUD)
- Technical Panel on Breastfeeding of the MOH



GUIDING PRINCIPLES while preparing Italian *ad interim* Indications on COVID-19 and Breastfeeding

- **protection**, as far as possible, of:
 - **breastfeeding**
 - **relationship of the mother-infant dyad** (memory of the previous experience of the 2009 H1N1 influenza outbreak)
- **application of the precautionary principle**
- **balance the PROS & CONS of different options**
- **reference**, as far as possible, to:
 - **current evidence** or
 - **good practice** (in absence of the scientific evidence)



Current Knowledge on the COVID-19 positive Mother

- Transplacental transmission of SARS-CoV-2 not established
- SARS-CoV-2 not detected in amniotic fluid, cord blood, mother's milk
- Antibodies against SARS-CoV-2: plausible presence in mother's milk
- Neonates usually healthy with negative pharyngeal swab

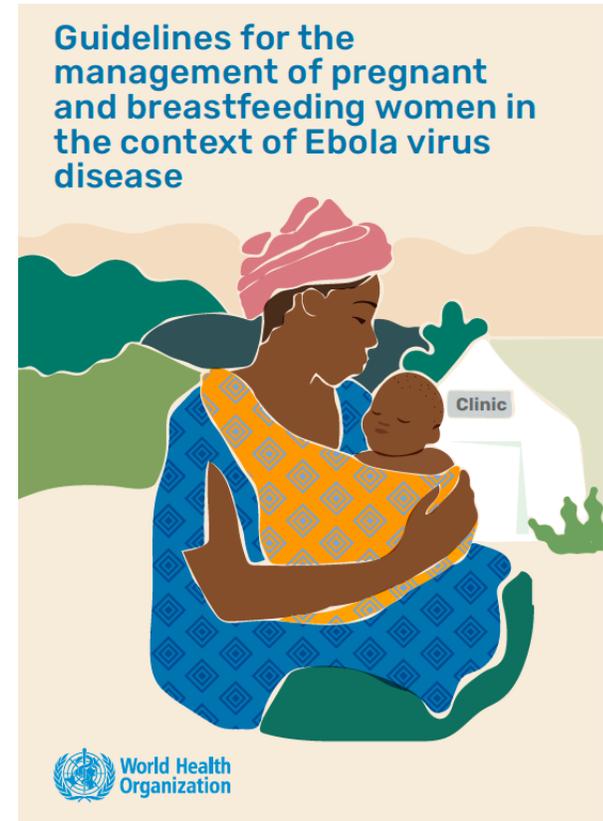


	Time of test (days after symptom onset)	Ebola virus in blood	Blood testing method	Ebola virus in breastmilk	Breastmilk testing method
Symptomatic (acute and convalescent phase)					
Case 1, Uganda [†]	7	Positive	Serum ELISA antigen or RT-PCR, or both	Positive	Culture and RT-PCR
Case 2, Guinea ^{†*}	11	--	--	Positive	RT-PCR
Case 3, Uganda [†]	15	Negative	Serum ELISA antigen or RT-PCR, or both	Positive	Culture and RT-PCR
Case 2, Guinea [†]	19	Positive	RT-PCR	Positive	RT-PCR
Case 2, Guinea [†]	26	Positive	RT-PCR	Positive	RT-PCR
Asymptomatic or mildly symptomatic (no day of symptom onset)					
Case 4, Sierra Leone ^{††}	--	Negative	RT-PCR	Positive	RT-PCR
Case 5, Guinea ^{†‡§}	--	Negative	RT-PCR§	Positive	RT-PCR

*Samples from this patient were measured on three different days. †Samples tested same day. ‡Blood sample was tested 3 days after a breastmilk sample was tested. §Patient was positive for Ebola virus-specific IgG but negative for IgM, indicating past infection.

Table: Laboratory results of Ebola virus detection in blood and breastmilk samples from five women

10 February 2020



COVID-19 is not EBOLA !

Infection prevention and control measures for breastfeeding women in the context of EVD

9. Breastfeeding should be stopped if acute EVD is suspected or confirmed in lactating women or in a breastfeeding child. The child should be separated from the breastfeeding woman and provided a breastmilk substitute as needed.

Recommended

Strong

Very low quality evidence

Italian *ad interim* indications on COVID-19 & Breastfeeding

(28 February 2020: Italian Version 1)
(22 March 2020: Version 2)

Maternal & Child Nutrition

Open Access

Published online April 3, 2020

Riccardo Davanzo et al.

- 3 scenarios
- depending on the health status
of the mother



COVID-19 Mother
Rooming-in at Clinica Mangiagalli
Milan, on March 2020.

Scenario A

Asymptomatic or pauci-symptomatic COVID-19 + mother

<i>Pharyngeal swab for COVID-19 on the MOTHER</i>	<i>Pharyngeal swab for COVID-19 on the NEONATE</i>	<i>Isolation of the MOTHER †</i>	<i>Management of the NEONATE during hospital stay †</i>	<i>Advice on direct breastfeeding</i>	<i>Preventive measures for mother-neonate transmission §</i>
Already done	YES	YES, In an isolated and dedicated area of postpartum ward	In a rooming-in regimen , in an isolated and dedicated area of postpartum ward	YES	YES

Scenario B

Pauci-symptomatic mother under investigation (PUI) for COVID-19

<i>Pharyngeal swab for COVID-19 on the MOTHER</i>	<i>Pharyngeal swab for COVID-19 on the NEONATE</i>	<i>Isolation of the MOTHER †</i>	<i>Management of the NEONATE during hospital stay †</i>	<i>Advice on direct breastfeeding</i>	<i>Preventive measures for mother-neonate transmission §</i>
YES	Only if maternal test is positive	YES, In an isolated and dedicated area of postpartum ward, pending result of the lab test	In a rooming-in regimen , in an isolated and dedicated area of postpartum ward, at least until the result of the lab test	YES	YES

Scenario C. Mother with symptoms and too sick to care for the newborn, COVID-19 positive or under investigation (PUI)

<i>Pharyngeal swab for COVID-19 on the MOTHER</i>	<i>Pharyngeal swab for COVID-19 on the NEONATE</i>	<i>Isolation of the MOTHER †</i>	<i>Management of the NEONATE during hospital stay †</i>	<i>Advice on direct breastfeeding</i>	<i>Preventive measures for mother-neonate transmission §</i>
YES or already done	Only if maternal test is positive	YES, In an isolated and dedicated area of postpartum ward, pending result of the lab test	Neonate isolated and separated from the mother, at least until the result of the lab test. He is placed in a dedicated and isolated area in the Neonatology Unit (if asymptomatic) or in the NICU (if symptomatic; e.g. with respiratory disease)	NO Use of expressed milk. Pasteurization not recommended	YES

What about Skin-to-Skin Contact (SSC)?

- Lack of consensus with Italian Obst-Gyn
- Consequently, a specific comment not included in Italian Indications
- Nevertheless...
 - SSC is suggested by WHO (March 13, 2020)
 - SARS-CoV-2 is not documented in vaginal secretion of COVID-19 positive post-menopausal women (Qiu, Clin Inf Dis 2020)

COVID and the convergence of three crises in Europe

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Lancet Public Health 2020

Published Online

April 3, 2020

[https://doi.org/10.1016/](https://doi.org/10.1016/S2468-2667(20)30078-5)

[S2468-2667\(20\)30078-5](https://doi.org/10.1016/S2468-2667(20)30078-5)

1

Turning first to governance, the ongoing and devastating pandemic is exposing the limits of not only national preparedness and mitigation policies, but also transnational governance systems to organise and administer public goods, such as health-care support.

2

The second crisis is economic; the recession accompanying the coronavirus pandemic will lead to spikes in unemployment and lost income, especially among those countries who are already in precarious positions. A decade of austerity following the 2007–08 financial crisis has had devastating detrimental health and social effects,^{4,5} and has rendered disadvantaged groups even more vulnerable to the socioeconomic impacts of the pandemic. To date, no EU-wide social

3

The pandemic presents a further complication, as funds are being diverted away from refugee services,⁷ and some have blamed migrants for importing disease.⁸

**Current crisis
is expected
to be turned
into an opportunity !**



Some NATIONAL TASKS for the FUTURE, at least in Italy

HEALTH DOMAIN

- National Coordination in Emergencies
- Integration between Ministry of Health (MOH) and Regional Health Authorities (RHA)
- Reinforce NHS (public vs private)
- ICUs
- Telemedicine

ECONOMIC DOMAIN

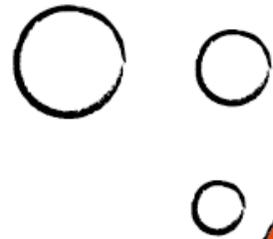
- Reorganize national production of essential goods
- Reverse delocalization

EDUCATION

- Improve efficacy and quality of distance education

BUSINESS & ADMINISTRATION

- Smart working
- Improvement of online services



Thanks!