

QUALITY OF MATERNAL AND NEONATAL CARE DURING COVID-19 PANDEMIC IN ITALY: PRELIMINARY DATA FROM FRIULI VENEZIA GIULIA REGION - IMAGiNE REGIONAL PROJECT

Qualitat de l'atenció materna i neonatal durant la pandèmia de COVID-19 a Itàlia: dades preliminars de la regió de Friuli-Venezia Giulia - Projecte regional IMAGiNE

Calidad de la atención materna y neonatal durante la pandemia de COVID-19 en Italia: datos preliminares de la región de Friuli Venecia Giulia - Proyecto regional IMAGiNE

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RESUM

La qualitat de l'atenció materna i neonatal (QMNC) es va veure afectada negativament durant la pandèmia de COVID-19. Presentem les dades preliminars del projecte regional IMAGiNE sobre QMNC amb dones que van donar a llum a l'hospital durant la pandèmia de COVID-19 a Itàlia. El projecte va ser creat per implementar els Estàndards de l'OMS per a la salut materna i neonatal a nou sales de maternitat en una regió del nord-est. Les dades van ser recol·lectades de novembre de 2019 a octubre de 2020 a través d'un qüestionari telefònic. 2704 dones van ser entrevistades. La majoria primípara (1388, 51,3%) amb una edat mitjana de 33,5 anys. 1706 dones (63,1%) van donar a llum durant la pandèmia. El part vaginal espontani va ser la modalitat de part més freqüent (1942, 71,8%). 257 (13,2%) dones van rebre episiotomia i 133 (6,8%) maniobra de Kristeller. La privadesa va ser respectada a la majoria dels parts (2610, 96,5%) amb pocs casos d'abús (0,3% verbal/emocional, 0,3% físic). Per a 837 (49,1%) dones, els serveis prenatal es van reorganitzar adequadament durant la pandèmia. En general, el 95% de les dones van reportar una experiència positiva. Els resultats de l'estudi mostren que la majoria de dones estan satisfetes amb l'atenció rebuda. Tot i això, molts aspectes del QMNC no compleixen amb els estàndards de l'OMS. El projecte encara està en curs i publicacions futures documenten el progrés dels indicadors i el procés d'implementació de les recomanacions per millorar la qualitat de l'atenció brindada.

PARAULES CLAU: qualitat de l'atenció; estàndards de l'OMS; COVID-19; part.

ABSTRACT

Access to high quality of maternal and neonatal care (QMNC) was threatened in different settings during COVID-19 pandemic. We aimed at reporting preliminary data from IMAGiNE regional project regarding QMNC around facility-based childbirth during pandemic in Italy. The project is a quality improvement study for the implementation of WHO standards for maternal and newborn health in nine maternity hospitals in a Northeast Region, Italy. Data was collected through a validated telephone interview questionnaire from November 2019-October 2020. A total 2704 women were interviewed. Most of them were primiparous (1388, 51.3%), median age of 33.5 years old (range 18-55). More than a half, 1706 women (63.1%) had birth during COVID-19 pandemic. Spontaneous vaginal birth was the most frequent mode of birth (1942 women, 71.8%) with 257 (13.2%) of women receiving an episiotomy and 133 (6.8%) reporting Kristeller manoeuvre. Privacy was respected in most of births (2610 women, 96.5%) while only few abuse cases were reported (0.3% verbal/emotional, 0.3% physical). For 837 (49.1%) of women antenatal services were adequately reorganized during pandemic. Limitations for companionship was the most frequently reported. Overall, 95% of women reported a positive or very positive experience. Study findings highlights that most women are satisfied with care received however many aspects of the QMNC were substandard according to their perspectives. The project is ongoing and further publications will document possible indicator's trends and implementation level of quality improvement recommendations agreed for each service.

KEY WORDS: quality of care; WHO standards; COVID-19; childbirth.

RESUMEN

La calidad de la atención materna y neonatal (QMNC) se vio afectada negativamente durante la pandemia de COVID-19. Presentamos los datos preliminares del proyecto regional IMAGiNE sobre QMNC con mujeres que dieron a luz en el hospital durante la pandemia de COVID-19 en Italia. El proyecto fue creado para implementar los Estándares de la OMS para la salud materna y neonatal en nueve salas de maternidad en una región del noreste. Los datos fueron recolectados de noviembre de 2019 a octubre de 2020 a través de un cuestionario telefónico. 2704 mujeres fueron entrevistadas. La mayoría primíparas (1388, 51,3%) con una edad media de 33,5 años. 1706 mujeres (63,1%) dieron a luz durante la pandemia. El parto vaginal espontáneo fue la modalidad de parto más frecuente (1942, 71,8%). 257 (13,2%) mujeres recibieron episiotomía y 133 (6,8%) maniobra de Kristeller. La privacidad fue respetada en la mayoría de los partos (2610, 96,5%) con pocos casos de abuso (0,3% verbal/emocional, 0,3% físico). Para 837 (49,1%) mujeres, los servicios prenatales se reorganizaron adecuadamente durante la pandemia. En general, el 95% de las mujeres reportaron una experiencia positiva. Los resultados del estudio muestran que la mayoría de las mujeres están satisfechas con la atención recibida. Sin embargo, muchos aspectos del QMNC no cumplen con los estándares de la OMS. El proyecto aún está en curso y futuras publicaciones documentan el progreso de los indicadores y el proceso de implementación de las recomendaciones para mejorar la calidad de la atención brindada.

PALABRAS CLAVE: calidad de atención; estándares de la OMS; COVID-19; parto.

Qualità della cura materna e neonatale in Italia durante la pandemia COVID-19: Dati preliminari della Regione Friuli Venezia Giulia – Progetto Regionale IMAgINE

RIASSUNTO

La qualità delle cure materno-neonatali (QMNC) è stata negativamente influenzata durante la pandemia COVID-19. Riportiamo i dati preliminari del progetto regionale IMAgINE sulla QMNC relativi a donne che hanno partorito in ospedale durante la pandemia COVID-19 in Italia. Il progetto nasce per implementare gli Standard OMS per la salute materno-neonatale all'interno di nove maternità in una regione del Nord-Est. I dati sono stati raccolti da novembre 2019 ad ottobre 2020 tramite un questionario telefonico. Sono state intervistate 2704 donne. La maggior parte primipare (1388, 51.3%) con un'età media di 33,5 anni. 1706 donne (63.1%) hanno partorito durante la pandemia. Il parto vaginale spontaneo è stata la modalità più frequente di parto (1942, 71.8%). 257 (13.2%) donne hanno ricevuto un'episiotomia e 133 (6.8%) la manovra di Kristeller. La privacy è stata rispettata nella maggior parte dei parti (2610, 96.5%) con pochi casi di abuso (0.3% verbale/emozionale, 0.3% fisico). Per 837 (49.1%) donne i servizi prenatali sono stati adeguatamente riorganizzati durante la pandemia. Nel complesso, il 95% delle donne ha riferito un'esperienza positiva. I risultati dello studio evidenziano come la maggior parte delle donne sia soddisfatta delle cure ricevute. Tuttavia, molti aspetti del QMNC sono al di sotto degli standard OMS. Il progetto è tutt'ora in corso e ulteriori pubblicazioni documenteranno l'andamento degli indicatori e il processo d'implementazione delle raccomandazioni per il miglioramento della qualità delle cure erogate.

PAROLE CHIAVE: qualità della cura; WHO Standards; COVID-19; travaglio e parto.

1. BACKGROUND

Over the last few years, increasing attention has been given to quality of care. Guaranteeing an adequate quality of maternal and newborn care (QMNC) is a key objective of "Health 2020", the strategic document that defines health policies for the 53 state members of the World Health Organization European Region (World Health Organization [WHO], 2013). Several strategies have been developed to support the QMNC improving process and, in 2016, the WHO published the "Standards to improve the quality of maternal and newborn care" (WHO, 2016). Although recommended, their implementation in Italy is limited.

In the current COVID-19 pandemic many authors have reported that access to high QMNC was threatened in different settings (Dell'Utri, et al., 2020; Casadio, et al., 2020; De Curtis, et al., 2021; Zanardo, et al., 2021). There are few studies that have evaluated patients' perspective, i.e., knowledge of their rights, users' opinions on which aspects of QMNC are important to them during the COVID pandemic or before, nor studies that have assessed how user's satisfaction correlate with health process/outcomes.

The WHO Collaborating Center for maternal and child health (WHO CC) of the IRCCS Burlo Garofolo, Trieste, Italy¹ conducted a pilot project in 2016 - 2018 aiming at implementing the WHO Standards to improve QMNC (World Health Organization, 2016) in a tertiary hospital of the Friuli Venezia Giulia (FVG) Region in Italy and used data to develop recommendations for improving care (Lazzerini, et al., 2019; Lazzerini, et al., 2020a; Lazzerini, et al., 2020b). The project attracted the attention of the FVG Region authorities, who decided to support it through making available a service of call-center scaling up of the project to all maternities of the FVG Region in 2019 (The IMAgINE project - Improving Maternal and Newborn carE). We report here preliminary data from IMAgINE regional project regarding the QMNC around facility-based childbirth during COVID-19 pandemic in a northeast region of Italy.

2. METHODS

The project is a quality improvement study for the implementation of WHO standards (WHO, 2016). FVG is a Northeast Region in Italy with nine maternity hospitals (tertiary and secondary level of care) responsible for around 8000 births/year.

Data was collected through a validated telephone interview questionnaire (Lazzerini, 2022) from November 2019 to October 2020. The questionnaire explores mother's point of view around childbirth with questions related to all domains of quality of care, i.e., provision of care, experience of care and availability of human and physical resources. Different strategies for requesting consent to participate have been implemented in the different maternity hospitals (e.g., during last antenatal care visits or during postpartum hospitalization). The consent is further telephonically confirmed at the beginning of the interview. Women under 18 years old, stillbirth or neonatal death, psychiatric problems who may interfere with the telephone interview, women who did not legally recognized their baby, women whose child has been adopted/placed in foster care or that have refused to participate were excluded from this study.

The telephone interview is carried out by properly trained operators from a regional call center. Translated questionnaires are available and interviews are conducted, if necessary, also in the languages Albanian, Croatian, English, French, German, Italian, Spanish, Serbian and Slovenian (languages representing FVG minorities). Data is anonymous and is managed through password-protected folders. The data is recorded, processed, and disseminated anonymously and privacy is guaranteed through methods provided by the current legislation and current operational protocols. For this publication data was analyzed in a descriptive way. Categorical variables were reported as absolute numbers and percentages and continuous data as median and range. The study protocol was approved by the Regional Ethics Committee (N°617/2016, CEUR-2019-Em-022).

¹ Istituto di Ricovero e Cura a Carattere Scientifico (IRCCS) Burlo Garofolo. Institutional Website: <https://www.burlo.trieste.it/>
Reference for IRCCS abbreviation: https://www.salute.gov.it/portale/ministro/p4_5_2_4_2.jsp?lingua=italiano&menu=uffCentrali&label=uffCentrali&id=18

3. RESULTS

During the study period a total 2704 women were interviewed, representing 50.1% of the total of eligible women in the nine maternity hospitals. Most women were primiparous 1388 (51.3%) with a median age of 33.5 years old (range 18-55); immigrants responded for 21.4% of the respondents. Spontaneous vaginal birth was the most frequent mode of birth (1942 women, 71.8%). Of the total sample, 1706 women (63.1%) had birth during COVID-19 pandemic (after March 2020, Italy). Characteristics of the interview respondents are reported on Table 1.

Table 1. Characteristics of the interview respondents from FVG Region Italy (November 2019 to October 2020).

Indicators	n (%)	
Characteristics	N= 2704	
Age (median, range)	33,5 years	(18 - 55)
Immigrant	569	(21.4%)
Primiparous	1388	(51.3%)
Multiple pregnancy	43	(1.6%)
Employed (full time)	1492	(55.2%)
Bachelor's degree or higher	1120	(45.1%)
NICU admission	157	(5.8%)
Mode of birth		
Spontaneous vaginal	1942	(71.8%)
Operative	224	(8.3%)
Caesarean section	538	(19.9%)

Abbreviation: NICU = neonatal intensive care unit

Regarding provision of care, restrictions to free movements during labour were reported by 124 of the 2367 women who laboured (5.2%) and 1378 (58.0%) received pain control. Of the 1942 women with a spontaneous vaginal birth, 257 women (13.2%) received an episiotomy, and 133 women (6.8%) reported a fundal pressure (Kristeller manoeuvre). Overall, skin to skin and rooming-in were frequent practices reported by 2307 (85.3%) and 2314 (85.5%) of women, respectively. Table 2 presents provision of care indicators.

Table 2. Provision of care indicators of women who had a facility birth in FVG Region Italy (November 2019 to October 2020).

Indicator	n (%)	
During labour	N = 2367	
Restrictions to free movements	124	(5.2%)
Offered / received pain control	1378	(58.0%)
Eat and drink	2106	(88.7%)
During spontaneous vaginal birth	N = 1942	
Free birth position	1789	(92.2%)
Episiotomy	257	(13.2%)
Fundal pressure (Kristeller manoeuvre)	133	(6.8%)
Post-partum	N = 2704	
Skin to skin	2307	(85.3%)
Breastfeeding support	1961	(72.5%)
Rooming-in	2314	(85.5%)
Exclusive breastfeeding	2160	(79.8%)

Table 3 presents findings of experience of care indicators and respect to birth rights. A half of women (1330, 49.5%) reported that the health worker in charge for their care introduced themselves. The women privacy was respected in most births (2610 women, 96.5%) while only a minority of women reported abuses (0.3% verbal/emotional and 0.3% physical).

Table 3. Experience of care indicators and respect to birth rights of women who had a facility birth in FVG Region Italy (November 2019 to October 2020).

Indicators	n (%)
Birth rights (always/often)	N= 2704
Health worker introduced themselves	1330 (49.5%)
Privacy respected	2610 (96.5%)
Adequately involved in the decision-making process	2478 (91.6%)
Treated with dignity and respect	2586 (95.6%)
Suffered abuse (verbal/emotional)	7 (0.3%)
Suffered abuse (physical)	8 (0.3%)

Key findings of the 1706 (63.1%) women who had a birth during the COVID-19 pandemic in Italy (after March 2020) are reported on Table 4. The majority (93.7%) had never / almost never experienced difficulties during routine antenatal checks and 837 women, almost a half of them (49.1%), reported reorganization of services during pregnancy (using video, phone communication tools). Among 1339 women who reported limitations due to COVID-19 pandemic (78.5%), the absence of companionship during hospitalization, during labour and during post-partum were the most frequent limitations reported with 71.3%, 21.7% and 9.8% respectively.

Table 4. Care indicators of women who had a facility birth during COVID-19 pandemic in FVG Region Italy (March 2020 to October 2020).

Indicators	n (%)
Care indicators	N= 1706
Reorganization of services during pregnancy (video/phone)	837 (49.1%)
Difficulties during routine antenatal checks (never/almost never)	1598 (93.7%)
Barriers accessing facilities (never/almost never)	1508 (88.4%)
Enough numbers of health workers	1555 (91.2%)
Hospital rooms adequately reorganized	1489 (87.3%)
Visiting hours for partners (good)	375 (22.0%)
Limitations due to COVID-19 pandemic	1339 (78.5%)

Figure 1 presents women overall experience regarding the care received during hospitalization. Of the 2704 interviewed women 95.0% reported a positive or very positive experience; 3.0% judged it as negative and only 1.0% as very negative.

Figure 1. Overall experience of women who had a facility birth in FVG Region Italy (November 2019 to October 2020) (N=2704).

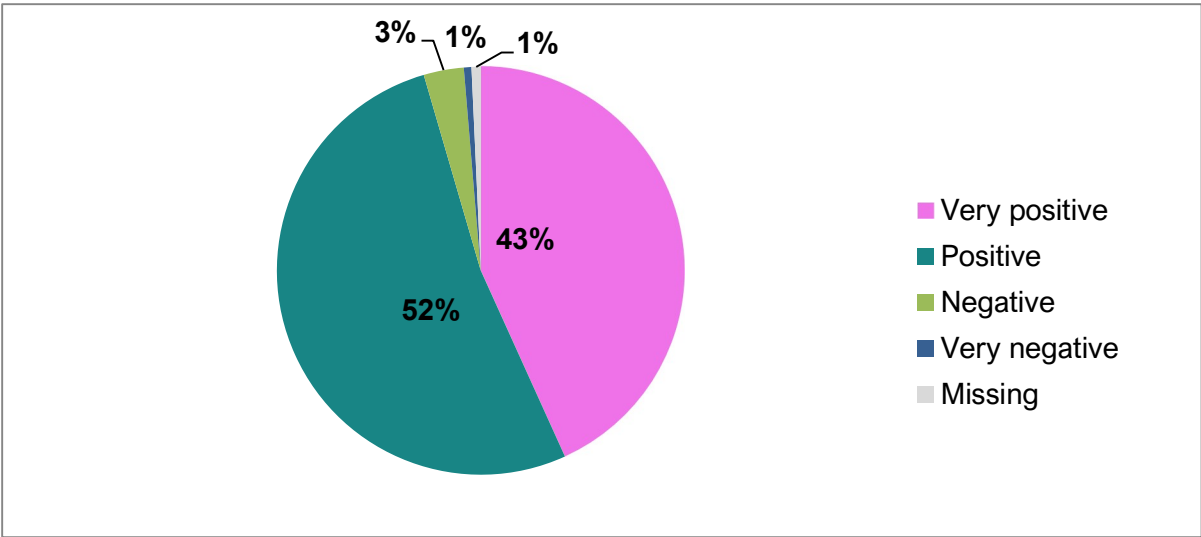
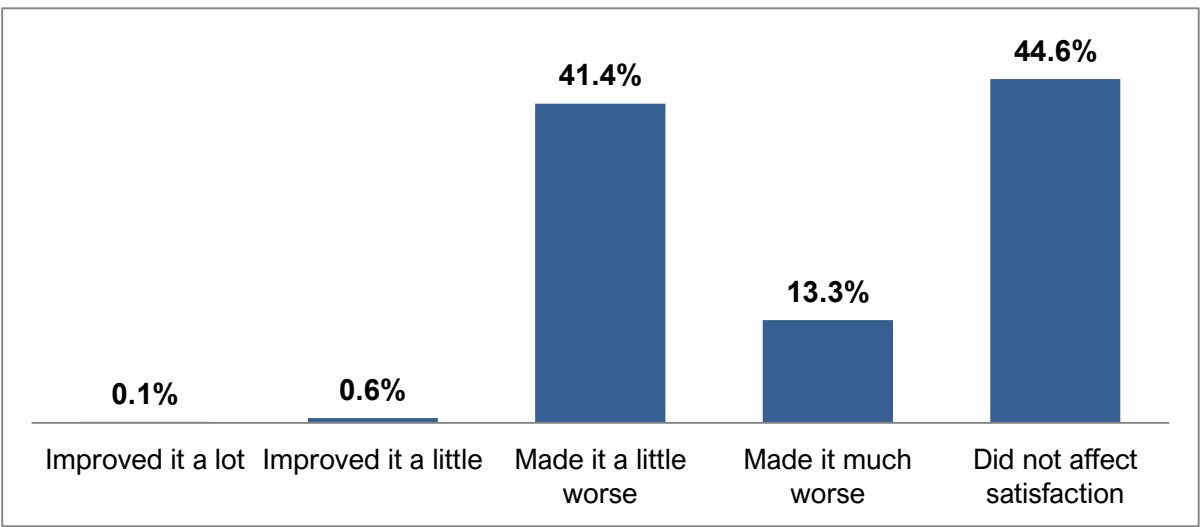


Figure 2 reports the effect of COVID-19 limitations on women satisfaction for the 1706 women who gave birth during the pandemic. While 957 (44.6%) reported that COVID-19 limitations have not affected their satisfaction at all, for 178 (13.3%) of women COVID-19 limitations made their experience “much worse”.

Figure 2. Limitations due to COVID-19 affecting women satisfaction during facility-based childbirth in FVG Region Italy (November 2019 to October 2020) (N=1706).



4. SUMMARY, DISCUSSION AND FINAL MESSAGES

This study investigated mother's perceptions of the QMNC around childbirth in nine maternity hospitals in Italy during November 2019 to October 2020, most of the sample included had a birth during the first year of the COVID-19 pandemic, using a validated telephone interview survey based on WHO Standards (WHO, 2016). Study findings highlights that most women are satisfied with care received, 95% very positive or positive. However, many aspects of the QMNC - especially those related to experience of care – needed improvements or were substandard according to mothers' perspectives.

The most reported limitation related to COVID-19 pandemic was the absence of a companion of choice during labour, birth, and post-partum. These limitations negatively affected satisfaction of more than a half of women (54.7%). Other authors had reported negative effects on the QMNC during childbirth especially in the early phases of the COVID-19 pandemic (Ceulemans, et al., 2020; Ravaldi, et al., 2020; Chmielewska, et al, 2021). International and national organizations or agencies have promoted women-centered care during the pandemic (WHO, 2020; International Confederation of Midwives [ICM], 2020; Giusti, et al., 2021) but further studies are needed to investigate in what extent those recommendations were implemented within other Italian regions and countries.

A strength of the study was the use of a standardized validated questionnaire based on the WHO Standards (WHO, 2016). The IMAGiNE Regional Project is ongoing and regularly made available its findings for each maternity hospital of the FVG Region. In each maternity hospital three groups of health professionals (obstetrics, neonatal and management) actively identified priority indicators and developed SMART recommendations (Doran, 1981) for quality improvement using a participatory approach with the support of WHO CC of IRCCS Burlo Garofolo.

This approach has facilitated discussion among decision makers from different areas and the identification of possible solutions for QMNC improvement in each setting. Further publications will document the QMNC at regional level, with possible trends in the indicators, and the level of implementation of quality improvement recommendations.

ACKNOWLEDGEMENTS

A special thanks to the IMAGiNE Friuli Venezia Giulia Study Group for their contribute to this project and support for data collection.

IMAGiNE Friuli Venezia Giulia Study Group:

Institute for Maternal and Child Health - IRCCS Burlo Garofolo, Trieste, Italy - Livia Bicego, Jenny Bua, Giuseppa Verardi, Elisabetta Danielli, Laura Travan, Maria Piazza, Gioia Marotta, Giulia Hervatich, Martina De Belli, Donatella Fontanot, Silvana Schreiber, Maddalena Ermacora, Chiara Pavan, Stefano Bembich.

Latisana Hospital, ASUFC, Latisana, Italy – Anna Michelutti, Valeria Pace, Monica Ghirello, Debora Pecile, Maria Antonietta Tedeschi, Daniela Donà, Elisabetta Miorin, Francesca Saretta, Enrico Scarpis.

San Antonio Abate - Tomezzo Hospital, ASUFC, Tolmezzo, Italy - Cristina Fabiani, Cristina Gressani, Erica Pizzocchero, Emanuela Tassotti, Martina Varutti.

San Antonio – San Daniele del Friuli Hospital, ASUFC, San Daniele, Italy - Lucia Pecci, Silvia Tamigi, Elena Goi, Romina Romano.

Santa Maria della Misericordia Hospital, ASUFC P.O. Udine, Italy - Simona Not, Giulia Lazzara, Cecilia Luttmann, Francesca Azzanutto, Dafne Birarda, Giorgia Bonetti, Alina Buttazzoni, Giulia Causero, Stefania Coren, Beatrice De Colle, Mara De Crignis, Romina Delle Vedove, Lilla Ferrara, Silvia Maria Fornasiero, Veronica Furlani, Daniela Gallina, Flavia Carola Gancitano, Chiara Gus, Maddalena Macorigli, Elisa Nazzi, Luna Pascoli, Rossana Pasqualini, Carla Pittini, Michela Purino, Martina Romanin, Monica Rotolo, Patrizia Tornincasa, Lorenza Driul, Assunta Bassetti, Marta Angelini, Citossi Alessandra, Jessica Fasan.

Santa Maria degli Angeli Hospital, ASFO, Pordenone, Italy - Manfrida Maria Marica, Erika Poletto, Maria Maddalena Casarotto, Cristina Realmuto, Valentina Monforte, Giada Casetta, Maria Teresa Dei Tos, Lucia Cristiano.

San Polo Hospital, Monfalcone, Italy - Matilde Medini, Chiara Tordini, Veronica Dagri, Elena De Nardi, Sara Battistin, Noemi Filipaz, Danica Dragovic, Maria Chiara Calligaris, Boschian Bailo Pierino, Roberta Giornelli, Anna Della Vedova.

San Vito al Tagliamento Hospital, Azienda Sanitaria Friuli Occidentale (ASFO), Pordenone, Italy –Martina Schincariol, Ilenia Sirna, Serena Boraso, Antonietta Bravo, Alessandra Azzariti, Valentina Moretti.

Policlinico San Giorgio, Pordenone Italy - Veronika Pernter, Lorena Baruzzo, Maccor Stefania, Rozana Tercolo, Alice De Luca, Anna Trevisan, Giada Martini, Augusta Janes, Raffaella Pin, Ilenia Pizziol, Alesia Gagno, Francesca Venier, Elide Pascuttini, Fabiana Rosa, Amedeo La Diega.

This article should be cited as:

PESSA VALENTE, E., COVI, B., MARIANI, I., BARTELLONI, A., LAZZERINI, M., IMAGiNE Friuli Venezia Giulia Study Group. (2022). “Quality of maternal and neonatal care during COVID-19 pandemic in Italy: preliminary data from Friuli Venezia Giulia Region - IMAGiNE Regional Project”.

Revista (Con)textos, 10 (1): 1-11.

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