


Telemedicine as an alternative way to access abortion in Italy and characteristics of requests during the COVID-19 pandemic

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ABSTRACT

Introduction Induced abortion is legal in Italy but with restrictions. The online abortion provider Women on Web (WoW) serves as an alternative way to access abortion. The COVID-19 pandemic has affected sexual and reproductive health worldwide. Italy was one of the first countries hit by the pandemic and imposed strict lockdown measures. We aimed to understand why women requested WoW abortion in Italy and how this was affected by the pandemic.

Methods We conducted an observational study analysing requests made to WoW before and during the pandemic. We analysed 778 requests for medical abortion from Italy between 1 March 2019 to 30 November 2020 and compared the characteristics of requests submitted before and during the pandemic. We also performed subgroup analysis on teenagers and COVID-19-specific requests.

Results There was an increase in requests during the COVID-19 pandemic compared with the previous year (12% in the first 9 months). The most common reasons for requesting a telemedicine abortion through WoW were privacy-related (40.9%); however, this shifted to COVID-19-specific (50.3%) reasons during the pandemic. Requests from teenagers (n=61) were more frequently made at later gestational stages (p=0.003), had a higher prevalence of rape (p=0.003) as the cause of unwanted pregnancies, and exhibited less access to healthcare services compared with adult women.

Conclusions There was an increase in total demand for self-managed abortion during the pandemic and reasons for requesting an abortion changed, shifting from privacy-related to COVID-19-specific reasons. This study also highlighted the uniquely vulnerable situation of teenagers with unwanted pregnancies seeking self-managed abortion.

Key messages

- Telemedicine serves as an alternative means of accessing abortion in Italy outside the formal health sector.
- There was an increase in requests for telemedicine abortion during the pandemic and reasons for requesting one shifted from privacy-related to COVID-19-specific reasons.
- Teenagers requesting telemedicine abortion represent a specifically vulnerable group.

INTRODUCTION

The COVID-19 pandemic has affected sexual and reproductive health access globally.¹ Italy was one of the first countries affected, with multiple restrictions imposed to limit transmission such as curfews and travel bans.² In Italy abortion is legal up to 90 days of pregnancy. In 2018, around 76 000 abortions were reported and 20.8% were medical abortions.³ However, there are several restrictions that limit access to abortion in Italy, such as an obligatory waiting period of 7 days, a recommendation for medical abortion to be performed as an inpatient 3-day procedure, as well as the widespread prevalence of conscientious objection.^{4,5} In response to the pandemic, the Italian Ministry of Health approved new guidelines to allow medical abortion without hospitalisation in August 2020.⁶ Additionally, since December 2020 there has been an agreement between the state and individual regions regarding the provision of telemedicine in general but no specific recommendation concerning abortion.⁷ Since then it has been up to the

individual regions to implement telemedicine in the abortion services but to our knowledge this has not yet been done. This is in contrast to some other European countries such as France, Germany and Great Britain that offered telemedicine for medical abortion within the formal healthcare system in response to the pandemic.^{18 9}

Women on Web (WoW) is an online medical abortion provision service. Launched in 2006, WoW service has been shown to be effective, safe and acceptable.^{10 11} Previous studies have shown an increase in the frequency of requests made to WoW during the pandemic from countries where telemedicine abortion is not offered by the formal health system.¹²

We conducted an observational study to estimate the need and characteristics of requests from Italy for medical abortion through telemedicine before and during the COVID-19 pandemic. Data from requests to WoW were analysed and compared with the same time period the previous year. We also did a subgroup analysis on teenagers using the WoW service. It is known that 15% of all unsafe abortions worldwide take place among adolescent girls and that they often lack information about abortion services and are more likely to delay care-seeking.^{13–15} Here, we sought to further understand the experiences of teenagers requesting telemedicine abortion, a topic which to date has not been studied.

METHODS

Women requesting medical abortion through WoW are asked to complete an online consultation with information on their current health status, and any previous

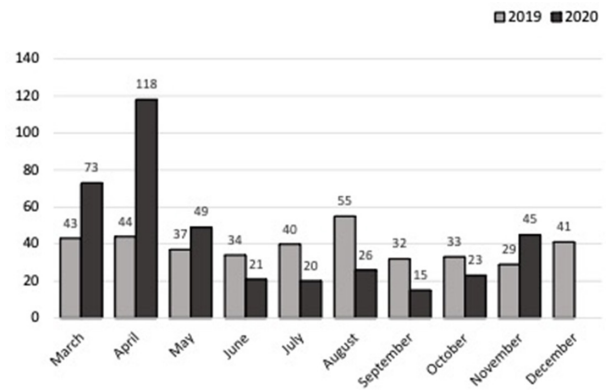


Figure 1 Number of requests made to Women on Web (WoW) in Italy by month (data for December 2020 not available).

and current pregnancy. They also select reasons for needing an abortion and reasons for contacting WoW – all of which are questions with predefined answers and multiple answers are accepted. The consultation is reviewed by a doctor and if deemed eligible for medical abortion (no contraindications to the treatment and estimated gestation up to 10+0 weeks) a package of mifepristone and misoprostol is sent by mail to the woman as well as instructions on how to use the medications and potential complications. An online help-desk is available for support before, during and after the abortion. Women can also be advised on local clinics with abortion services. Women either make a donation to the service (70–120 euros) or, if not affordable, the service is donated to them.¹⁶

We retrieved anonymised data from all requests made to WoW from Italy from 1 March 2019 to

Table 1 Background data

Parameter	Total* (n=778)	Pre-COVID-19** (n=347)	COVID-19*** (n=390)	P value
Median (IQR, Range)	30 (12, 12–51)	29 (12, 16–46)	30 (12.25, 12–51)	0.672
Age (years)				
≤18	7.8% (61)	6.1% (21)	9.5% (37)	0.084
19–29	40.6% (316)	44.1% (153)	38.7% (151)	0.139
30–40	42.5% (331)	44.1% (143)	43.8% (171)	0.47
41+	9.0% (70)	8.6% (30)	7.9% (31)	0.732
Gravidity				
1	35.8% (224)	37.7% (107)	35.4% (110)	0.559
2+	64.2% (401)	62.3% (177)	64.6% (201)	
Parity				
0	42.8% (304)	45.8% (147)	40.1% (142)	0.136
1+	57.2% (406)	54.2% (174)	59.9% (212)	
Previous abortion				
Yes	35.0% (240)	33.4% (103)	35.9% (124)	0.793
No	65.0% (445)	66.6% (205)	64.1% (221)	

All data are given as a percentage (n) except for age, which is stated as median (IQR, range).

*March–December 2019, March–November 2020; **March–November 2019; ***March–November 2020.

Table 2 Characteristics of the current pregnancy

Characteristic	Total* (n=778)	Pre-COVID-19** (n=347)	COVID-19*** (n=390)	P value
Gestational age (weeks)				
<7	31.5% (245)	31.7% (110)	30.3% (118)	0.672
7–10	68.5% (533)	68.3% (237)	69.7% (272)	
Ultrasound				
Yes	24.7% (192)	28.0% (97)	22.3% (87)	0.077
No	75.3% (586)	72.0% (250)	77.7% (303)	
Access to hospital				
Yes	86.1% (670)	88.8% (308)	83.8% (327)	0.054
No	13.9% (108)	11.2% (39)	16.2% (63)	
Blood type knowledge				
Yes	70.7% (550)	73.5% (255)	68.2% (266)	0.116
No	29.3% (228)	26.5% (92)	31.8% (124)	
Pregnancy test				
No, but I did an ultrasound and I am pregnant	4.5% (35)	5.2% (18)	3.8% (15)	0.38
No, I did not do a pregnancy test	6.2% (48)	5.2% (18)	7.7% (30)	0.169
Yes, and I am pregnant	89.3% (695)	89.6% (311)	88.5% (345)	0.614
Cause of pregnancy				
I did not use contraceptives	52.2% (400)	52.7% (183)	50.7% (194)	0.417
I wanted a pregnancy at first but my situation changed	0.3% (2)	0.0% (0)	0.3% (1)	1
I was raped	3.4% (26)	2.9% (10)	3.9% (15)	0.47
The contraceptives I used did not work	44.1% (338)	43.2% (150)	45.2% (173)	0.757
Reason for abortion (multiple answers accepted)				
I have no money to raise a child	38.7% (296)	36.5% (125)	41.3% (158)	0.211
I want to finish school	13.9% (106)	14.0% (48)	14.6% (56)	0.838
I am too young	17.8% (136)	16.4% (56)	19.6% (75)	0.273
I just cannot have a child at this point in my life	66.4% (507)	66.7% (228)	66.8% (256)	0.985
I am ill	0.7% (5)	0.9% (3)	0.5% (2)	0.561
I am too old	4.3% (33)	3.8% (13)	4.7% (18)	0.557
My family is complete	18.7% (143)	16.7% (57)	20.6% (79)	0.181
My partner does not want a child	1% (8)	0.3% (1)	1.8% (7)	0.073
Company during abortion				
Yes	92.8% (722)	91.9% (319)	93.6% (365)	0.384
No	7.2% (56)	8.1% (28)	6.4% (25)	
Request status				
Cancelled	73.0% (568)	69.2% (240)	77.2% (301)	0.014
Delivered	27.0% (210)	30.8% (107)	22.8% (89)	

All data are given as a percentage (n).

*March–December 2019, March–November 2020; **March–November 2019; ***March–November 2020.

31 December 2019 and from 1 March 2020 to 30 November 2020. A total of 815 requests were made, and when duplicates and requests for contraceptives were removed, 778 requests remained for further analysis. We choose this time period to reflect requests before and during the COVID-19 pandemic.

All data were analysed in total and in the following three primary subgroups: *pre-COVID-19* (defined as

requests made from March 2019–November 2019), *COVID-19* (March 2020–November 2020) and requests made by *teenagers* (≤ 18 years old).

Comparisons with total requests pre-COVID-19 were calculated using data from March 2019–November 2019 in order to correspond to the months for which data were available for the COVID-19 time period. This accounts for monthly variations in

response characteristics. To gain a more robust understanding of requests made in relation to the pandemic, additional analysis was performed on requests in which women specifically identified COVID-19 as one of their reasons for contacting WoW; these are hereafter referred to as 'COVID-19-specific requests'.

Statistical analysis

We compared the responses among the following subgroups: *pre-COVID-19* versus *COVID-19*; *teenagers* versus *all others*, and *COVID-19-specific requests* versus *all others*. Scalar variables (age) were compared using Levine's test for equal variances followed by a two-sided t-test of independent samples. The frequency of nominal responses was compared using Chi-square analyses and Fisher's exact test for sample sizes below five respondents.

Patient and public involvement statement

This public policy analysis does not involve patients or the public in the design, conduct, reporting, or dissemination plans of this work. However, the service that WoW provides is designed to address the priorities and experiences of people who access the service. Thus, the research questions were informed by the needs of people who rely on WoW to access abortion.

Ethics approval

The study was approved by the Regional Ethics Committee, Karolinska Institutet (Dnr 2009/2072-31/2 and Dnr 2020/05406).

RESULTS

We observed a 12.4% increase in the number of requests made in the 9 months for which data were reported during the pandemic versus those used for comparison in 2019 (390 vs 347, respectively). [Figure 1](#) shows the difference in WoW requests made during each month of the pre-COVID-19 and COVID-19 time periods. There is a sharp increase in requests made during March and April 2020 (73 and 118, respectively) compared with the corresponding months in 2019 (43 and 44, respectively).

Background data

The mean age for women requesting the service was 30 (range 12–51) years and 7.8% (n=61) of the requests were made by teenagers (≤ 18 years old). For 35.8% (n=224) of users this was their first pregnancy and 42.8% (n=304) were nulliparous. Some 35% (n=240) of the women had had at least one previous abortion ([table 1](#)). We saw no significant differences in demographic data between women requesting telemedicine abortion through WoW in the pre-COVID-19 time period compared with COVID-19.

Current pregnancy

Women were able to state their gestational length as either <7 weeks or 7–10 weeks (stating >10 weeks

gives them no option to continue the consultation). Most women (68.5%, n=533) stated their gestational length as 7–10 weeks ([table 2](#)). About one-quarter of the women (24.7%, n=192) had an ultrasound to confirm gestational length. Respondents who identified COVID-19 as a reason for seeking a telemedicine abortion were significantly more likely ($p=0.022$) to not have had an ultrasound to confirm their pregnancy than all the other women (data available on request).

Women were asked to state their reasons for requesting an abortion ([table 2](#)). Women who requested telemedicine abortion because of COVID-19 selected 'I have no money to raise a child' as a reason for abortion more often than all the other women ($p=0.0001$) (data available on request). The request status varied between pre-COVID-19 and COVID-19 respondents, with delivered medical abortion occurring less frequently during 2020 (22.8%, n=89) than 2019 (30.8%, n=107) ($p=0.014$).

Access to healthcare and abortion-related services

During COVID-19 more women responded that they did not have an ultrasound because they '(could) not get to a clinic because of distance or lack of transportation' and were 'unsure where to get one' compared with before COVID-19 ($p=0.0001$ and 0.004 , respectively) ([table 3](#)). The differences in selection of these two answers were even more significant among women who identified COVID-19 as one of their reasons for using telemedicine abortion ($p=0.0001$ and 0.0001 , respectively). Women with COVID-19-specific requests also more often cited 'I cannot afford one' as a reason for not having an ultrasound ($p=0.022$) (data available on request). The most common causes for contacting WoW in 2019 were privacy-related: 'I would rather keep my abortion private' (41.4%, n=140) and 'I need to keep my abortion a secret from my partner or family' (46.2%, n=156). There was a significant decrease in the frequency of these answers during the pandemic to 33.2% (n=128, $p=0.034$) and 36.0% (n=139, $p=0.01$), respectively; instead the most common answer was 'Because of coronavirus' (50.3%, n=194). Similarly, fewer women in the COVID-19-specific request subgroup responded that they desired to keep their abortion a secret than all the other women ($p=0.012$) (data available on request).

Characteristics of requests from teenagers

Requests from teenagers were made at later gestations compared with adult women (85.9%, n=52, $p=0.003$) (online supplemental table 1). Teenagers had not received an ultrasound at the highest rate of all subgroups (86.9% n=53, $p=0.029$). Further reflecting their difficulty in navigating the relevant healthcare pathways for abortion, teenagers reported having significantly less access to a hospital ($p=0.0001$) and less frequently had knowledge of their blood type ($p=0.0001$). Teenagers were also significantly less likely to have taken a pregnancy test to

Table 3 Reasons given for not having an ultrasound and for using Women on Web (WoW)

Reason	Total* (n=778)	Pre-COVID-19** (n=347)	COVID-19*** (n=390)	P value
Reason for no ultrasound (multiple answers accepted)				
I cannot afford one	36.0% (215)	37.8% (98)	34.4% (105)	0.689
I cannot get to a clinic because of lack of transportation	10.7% (64)	5.4% (14)	15.4% (47)	0.0001
I did not know that I needed one	4.4% (26)	4.2% (11)	3.9% (12)	0.942
I am afraid my partner or other people will find out	32.2% (192)	33.2% (86)	30.8% (94)	0.83
I just did not have time to do it	10.1% (60)	10.8% (28)	9.8% (30)	0.85
I am unsure where to get one	3.4% (20)	1.2% (3)	5.6% (17)	0.004
I thought I did not need one as I am sure I am pregnant and I know how long I have been pregnant	32.5% (194)	34.0% (88)	32.1% (98)	0.942
Reason for using Women on Web (WoW) (multiple answers accepted)				
^a It is hard for me to access abortion because of...				
^b I prefer to access abortion through WoW because...				
^a Coronavirus	25.4% (194)	NA	50.3% (194)	NA
^a Legal restrictions	11.9% (91)	13.0% (44)	10.6% (41)	0.358
^a Cost	12.8% (98)	13.6% (46)	12.4% (48)	0.7
^a Stigma	8.1% (62)	7.4% (25)	9.1% (35)	0.381
^a Distance	9.6% (73)	7.7% (26)	11.1% (43)	0.1
^a Childcare	16.5% (126)	19.8% (67)	13.2% (51)	0.021
^a Work or school commitments	15.6% (119)	17.5% (59)	13.5% (52)	0.164
^a I need to keep my abortion a secret from my partner or family	40.9% (312)	46.2% (156)	36.0% (139)	0.01
^a My partner is abusive	4.1% (31)	3.8% (13)	4.4% (17)	0.674
^a Protestors	12.3% (94)	9.8% (33)	14.2% (55)	0.055
^b I would rather take care of my own abortion	33.0% (252)	37.0% (125)	29.5% (114)	0.049
^b Abortion pills are not available in my country	5.9% (45)	5.6% (19)	6.0% (23)	0.805
^b I would be more comfortable at home	35.6% (272)	37.0% (125)	33.2% (128)	0.361
^b I would rather have my partner or friend with me during the process	19.7% (150)	18.9% (64)	20.2% (78)	0.593
^b I would rather keep my abortion private	37.0% (282)	41.4% (140)	33.2% (128)	0.034
^b I find it empowering	7.5% (57)	7.7% (26)	7.5% (29)	0.977
^a I am an undocumented immigrant	6.0% (46)	4.7% (16)	7.8% (30)	0.084
Other reason	1.7% (13)	2.7% (9)	0.8% ³	0.051

All data are given as a percentage of responses (n).

*March–December 2019, March–November 2020; **March–November 2019; ***March–November 2020.

NA, not applicable.

confirm their pregnancy than women in other age groups ($p=0.0001$).

Significantly fewer teenagers cited 'I did not use contraception' as the cause of pregnancy (35%, $n=21$, $p=0.006$); however, significantly more teenagers selected 'I was raped' as the reason (10%, $n=6$, $p=0.003$). As reasons given for abortion, teenagers responded more often with 'I have no money to raise a child', 'I want to finish school' and 'I am too young', and significantly less often responded with 'My family is complete' ($p=0.032$, 0.0001, 0.0001 and 0.0001, respectively). Teenagers more frequently selected 'I cannot afford one', 'I cannot get to a clinic to get one because of lack of transportation' and 'I am afraid my partner or other people will find out' as reasons for not having an ultrasound ($p=0.002$, 0.004, 0.006, respectively) (online supplemental table 2). Teenagers more frequently responded to the question on limited access to abortion with '...because of legal restrictions',

'...because of cost', '...because of work or school commitments', '...because I need to keep my abortion a secret from my partner or family' and 'I prefer to access abortion through Women on Web because I would rather have my partner or friend with me during the process' ($p=0.043$, 0.0001, 0.0001, 0.0001, 0.002 and 0.002, respectively). Stratifying the teenager group between pre-COVID-19 and COVID-19 time periods resulted in small group sizes ($n=21$ and $n=37$, respectively); thus, we did not perform any comparison of responses from teenagers before and during the pandemic due to low statistical power.

DISCUSSION

This study on requests for telemedicine abortion in Italy shows that there is a demand for self-managed abortion and that this drastically increased from March to May of 2020, corresponding to the national lockdown imposed in Italy from 9 March 2020 to 18 May

2020. This observation is in agreement with previous analysis on demand for self-managed abortion in Italy and other countries that did not offer telemedicine abortion during the first months of the pandemic.^{12 17} In this study, using data from the first 9 months of the COVID-19 pandemic, we saw an immediate increase in the volume of requests made to WoW; however, this trend subsided during subsequent months. Whether this was because of a decrease in unwanted pregnancies or a restoration in access to abortion services is not clear from this study.

We observed that the most common reasons for contacting WoW were privacy-related, implicating some level of stigma; however, this was less pronounced for requests made during the COVID-19 pandemic and even less so for COVID-19-specific requests. We can also see that requests from women with COVID-19-specific requests showed signs of financial hardship both in the reasons for needing an abortion and not being able to access ultrasound.

Ultrasound is not mandatory for an early medical abortion but it is still part of many clinical protocols and most women seemed to believe that they would have needed or preferred to have an ultrasound. Nevertheless, two-thirds of the women indicated that despite this they did not have an ultrasound.¹⁸ In a recent study on telemedicine abortion in Scotland, 53% of the women stated that they regarded ultrasound as an unimportant part of abortion services.¹⁹ On implementation of telemedicine in the formal health sector, it is important to identify the needs and preference for ultrasound examination for each individual requesting a self-managed abortion.

Notably, more women during COVID-19 and with COVID-19-specific requests cancelled their request and were not delivered abortion medications through WoW than prior to the pandemic. This could reflect changes in medical recommendations, such as allowance of home treatment with misoprostol through the formal health sector in August 2020, and general recommendations such as stay-at-home orders. Women also perhaps faced more uncertainty in navigating the formal healthcare system during lockdown such that women made the requests to WoW in addition to pursuing other alternatives to access abortion.

Requests from teenagers suggests a more vulnerable situation with pregnancies at later gestations, higher prevalence of rape, economic and social difficulties and stigma, and lower utilisation of healthcare services such as pregnancy tests and ultrasounds. Similar results were seen in a study of German women requesting abortion through WoW.²⁰ The current Italian legislation requires parental consent for teenagers seeking abortion, but with the possible exception where a tutelary judge can instead authorise the abortion.^{1 21} This may pose a barrier to the service and may cause teenagers to instead request self-managed abortion. In this study, teenagers more often reported legal

restrictions as a reason for not having access to abortion; this could imply that teenagers are less informed about their legal rights compared with adult women or reflect legislation on parental consent. They also more often stated the need for privacy from their partner/family and their preference to have a friend or partner with them during the abortion; this may indicate that privacy from family is especially important for teenagers requesting an abortion in Italy, further complicating the need for parental consent.

Strengths and limitations

The strengths of this study are that it is the first one examining requests for self-managed abortion in Italy and also the first study comparing specific reasons for requesting self-managed abortion before and during the COVID-19-pandemic. Since women could specify if limited access to abortion was because of 'coronavirus' we could see that half of the requests during the time period investigated were in part because of the pandemic. Limitations of the study are that we relied on self-reported data and we lacked follow-up data both for women who received medications and who cancelled their requests. This is also the first study to analyse the characteristics and motivating factors for teenagers requesting telemedicine abortion, which is an important step towards understanding the unique experiences and needs of this vulnerable group.²²

CONCLUSIONS

This study highlights barriers to abortion in a high-income country where abortion is legal. There was an increase in total demand for self-managed abortion during the pandemic, and the reasons for requesting an abortion changed, shifting from privacy-related to COVID-19-specific reasons. The findings are in line with previous studies that support the World Health Organization recommendation for increasing access to induced abortion through telemedicine especially during the pandemic.²³ This study also highlights the specifically vulnerable situation for teenagers with unwanted pregnancies seeking self-managed abortion. This should be evaluated further in future studies on larger populations and in different settings.

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Contributors KB, KG-D and RG designed the study. RG supplied the data. HV performed the statistical analysis. MP interpreted the data in the Italian setting and had input on the

manuscript writing. KB and HV wrote the initial manuscript draft. KG-D was the guarantor of the study.

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Competing interests HV has received grants/contracts from Fulbright Sweden and University of Washington. MP has received support for attending meetings/travelling from ExcelGyn and is on the International Advisory Board for ExcelGyn. KG-D has received consulting fees from Bayer, MSD, Gedeon Richter, Mithra, Exeltis, MedinCell, Cirql, Natural Cycles, Exelgyn, Campus Pharma and HRA-Pharma. KG-D has received payments or honoraria for lectures etc. from Bayer, MSD, Gedeon Richter, Mithra, Exeltis, Exelgyn and Campus Pharma. KG-D participates in advisory boards/data and safety monitoring boards (DSMB) for Gedeon Richter and Bayer. KG-D has unpaid board memberships and similar for the International Federation of Gynecology and Obstetrics (FIGO), the World Health Organization (WHO) Department of Sexual and Reproductive Health and Research (SRH) and Human Reproduction Programme (HRP), the European Society of Contraception and Reproductive Health (ESC), the International Federation for Professionals in Abortion and Contraception (FIAPAC) and the Faculty of Sexual & Reproductive Healthcare (FSRH)/Royal College of Obstetricians & Gynaecologists in the UK. RG is the founder of Women on Web (WoW).

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

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REFERENCES

- Bateson DJ, Lohr PA, Norman WV, *et al.* The impact of COVID-19 on contraception and abortion care policy and practice: experiences from selected countries. *BMJ Sex Reprod Health* 2020;46:241–3.
- Prezioso C, Pietropaolo V. COVID-19: update of the Italian situation. *J Neurovirol* 2020;26:834–7.
- Md S. *Relazione del Ministro DELLA salute dulla attuazione DELLA Legge contenente norme per La tutela sociale DELLA maternità E per l'interruzione volontaria di gravidanza (Legge 194/78)*, 2018. https://www.salute.gov.it/imgs/C_17_publicazioni_2924_allegato.pdf
- Bo M, Zotti CM, Charrier L. Conscientious objection and waiting time for voluntary abortion in Italy. *Eur J Contracept Reprod Health Care* 2015;20:272–82.
- Minerva F. Conscientious objection in Italy. *J Med Ethics* 2015;41:170–3.
- Md S. OGGETTO: Aggiornamento delle “Linee di indirizzo sulla interruzione volontaria di gravidanza con mifepristone e prostaglandine”, 2020. Available: <https://www.trovanorme.salute.gov.it/norme/renderNormsanPdf?anno=2020&codLeg=75683&parte=1%20&serie=null>
- PdCd M. La Conferenza Permanente per I Rapporti tra lo Stato. *Le Regioni e Le Province Autonome Di Trento e Di Bolzano* 2020 <http://www.statoregioni.it/media/3221/p-3-csr-rep-n-215-17dic2020.pdf>
- Gibelin K, Agostini A, Marcot M, *et al.* COVID-19 impact in abortions’ practice, a regional French evaluation. *J Gynecol Obstet Hum Reprod* 2021;50:102038.
- Moreau C, Shankar M, Glasier A, *et al.* Abortion regulation in Europe in the era of COVID-19: a spectrum of policy responses. *BMJ Sex Reprod Health* 2020:bmjsrh-2020-200724.
- Nortén H, Ilozumba O, Wilkinson J, *et al.* 10-year evaluation of the use of medical abortion through telemedicine: a retrospective cohort study. *BJOG* 2021. doi:10.1111/1471-0528.16765. [Epub ahead of print: 21 May 2021].
- Endler M, Lavelanet A, Cleeve A, *et al.* Telemedicine for medical abortion: a systematic review. *BJOG* 2019;126:1094–102.
- Aiken ARA, Starling JE, Gomperts R, *et al.* Demand for self-managed online telemedicine abortion in eight European countries during the COVID-19 pandemic: a regression discontinuity analysis. *BMJ Sex Reprod Health* 2021:bmjsrh-2020-200880.
- Shah IH, Ahman E. Unsafe abortion differentials in 2008 by age and developing country region: high burden among young women. *Reprod Health Matters* 2012;20:169–73.
- Espinoza C, Samandari G, Andersen K. Abortion knowledge, attitudes and experiences among adolescent girls: a review of the literature. *Sex Reprod Health Matters* 2020;28:1744225.
- Assifi AR, Kang M, Sullivan EA, *et al.* Abortion care pathways and service provision for adolescents in high-income countries: a qualitative synthesis of the evidence. *PLoS One* 2020;15:e0242015.
- WomenonWeb. I need an abortion. Available: <https://www.womenonweb.org/en/i-need-an-abortion>
- Aiken ARA, Starling JE, Gomperts R, *et al.* Demand for self-managed online telemedicine abortion in the United States during the coronavirus disease 2019 (COVID-19) pandemic. *Obstet Gynecol* 2020;136:835–7.
- World Health Organization (WHO). *Safe abortion: technical and policy guidance for health systems*. 2012. 2nd edn. Geneva: WHO, 2012.
- Reynolds-Wright JJ, Johnstone A, McCabe K, *et al.* Telemedicine medical abortion at home under 12 weeks’ gestation: a prospective observational cohort study during the COVID-19 pandemic. *BMJ Sex Reprod Health* 2021:bmjsrh-2020-200976.
- Killinger K, Günther S, Gomperts R, *et al.* Why women choose abortion through telemedicine outside the formal health sector in Germany: a mixed-methods study. *BMJ Sex Reprod Health* 2020:bmjsrh-2020-200789.
- The legalization of abortion: Law 194 of the Italian Republic, 1978, 1978. Available: <https://www.ieb-eib.org/ancien-site/pdf/loi-italie-avortement-anglais.pdf>
- Starrs AM, Ezeh AC, Barker G, *et al.* Accelerate progress—sexual and reproductive health and rights for all: report of the Guttmacher-Lancet Commission. *Lancet* 2018;391:2642–92.
- World Health Organization (WHO). *Maintaining essential health services: operational guidance for the COVID-19 context: interim guidance, 1 June 2020*. Geneva: WHO, 2020. [WHO/2019-nCoV/essential_health_services/2020.2](https://www.who.int/publications/m/item/WHO/2019-nCoV/essential_health_services/2020.2)

Supplementary Table 1: Current pregnancy – teenagers vs. all other age groups

	Teenagers (n=61)	Not Teenagers (n=717)	P Value
	% (n)		
Gest. Age			
< 7 weeks	14.8% (9)	33% (236)	0.003
7-10 weeks	85.2% (52)	67% (481)	
Ultrasound			
Yes	13.1% (8)	25.7% (184)	0.029
No	86.9% (53)	74.3% (533)	
Access to hospital			
Yes	70.5% (43)	87.4% (627)	0.0001
No	29.5% (18)	12.6% (90)	
Blood type knowledge			
Yes	39.3% (24)	73.4% (526)	0.0001
No	60.7% (37)	26.6% (191)	
Pregnancy test			
No, but I did an ultrasound and I am pregnant	0% (0)	4.9% (35)	0.102
No, I did not do a pregnancy test	21.3% (13)	4.9% (35)	0.0001
Yes, and I am pregnant	78.7% (48)	90.2% (647)	0.005
Cause of Pregnancy			
I did not use contraceptives	35% (21)	53.7% (379)	0.006
I wanted a pregnancy at first but my situation changed	0% (0)	0.3% (2)	1
I was raped	10% (6)	2.8% (20)	0.003
The contraceptives I used did not work	55% (33)	43.2% (305)	0.08
Reason for Abortion (multiple answers accepted)			
I have no money to raise a child	50.8% (31)	34% (265)	0.032
I want to finish school	78.7% (48)	8.1% (58)	0.0001
I am too young	85.2% (52)	11.7% (84)	0.0001
I just cannot have a child at this point in my life	57.4% (35)	65.8% (472)	0.183
I am ill	0% (0)	0.7% (5)	1
I am too old	0% (0)	4.6% (33)	0.101
My family is complete	0% (0)	19.9% (143)	0.0001
My partner does not want a child	0% (0)	1.1% (8)	1
Company during abortion			
Yes	95.1% (58)	92.6% (664)	0.612
No	4.9% (3)	7.4% (53)	
Request status			
Cancelled	90.2% (55)	66.5% (477)	0.006
Delivered	9.8% (6)	33.5% (240)	

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No	4.9% (3)	7.4% (53)	
Request status			
Cancelled	90.2% (55)	66.5% (477)	0.006
Delivered	9.8% (6)	33.5% (240)	

Supplementary Table 2: Reason for not having and ultrasound and for using Women on Web – teenagers vs. all other age groups

	Teenagers (n=61)	Not Teenagers (n=717)	P Value
	% (n)		
Reason for no ultrasound (multiple answers accepted)			
I cannot afford one	44.3% (27)	26.2% (188)	0.002
I cannot get to a clinic because of lack of transportation	18% (11)	7.4% (53)	0.004
I did not know that I needed one	3.3% (2)	3.3% (24)	1
I am afraid my partner or other people will find out	39.3% (24)	23.4% (168)	0.006
I just did not have time to do it	4.9% (3)	7.9% (57)	0.615
I am unsure where to get one	4.9% (3)	2.4% (17)	0.202
I thought I did not need one as I am sure I am pregnant and I know how long I have been pregnant	23% (14)	25.1% (180)	0.709
Reason for using Women on Web			
^a It is hard for me to access abortion because of...			
^b I prefer to access abortion through WoW because... (multiple answers accepted)			
^a Coronavirus	24.6% (15)	25% (179)	0.948
^a Legal restrictions	19.7% (12)	11% (79)	0.043
^a Cost	6.6% (4)	8.1% (58)	0.81
^a Stigma	29.5% (18)	11.2% (80)	0.0001
^a Distance	8.2% (5)	9.5% (68)	1
^a Childcare	1.6% (1)	17.4% (125)	0.0001
^a Work or school commitments	31.1% (19)	13.9% (100)	0.0001
^a I need to keep my abortion a secret from my partner or family	59% (36)	38.5% (276)	0.002
^a My partner is abusive	3.3% (2)	4% (29)	1
^a Protestors	11.5% (7)	12.1% (87)	0.88
^b I would rather take care my own abortion	39.3% (24)	31.8% (228)	0.277
^b Abortion pills are not available in my country	8.2% (5)	5.6% (40)	0.388
^b I would be more comfortable at home	37.8% (23)	34.7% (249)	0.64
^b I would rather have my partner or friend with me during the process	34.4% (21)	18% (129)	0.002
^b I would rather keep my abortion private	44.2% (27)	35.6% (255)	0.175
^b I find it empowering	9.8% (6)	7.1% (51)	0.433
^a I am an undocumented immigrant	1.6% (1)	6.3% (45)	0.25
Other reason	0% (0)	1.8% (13)	0.614

