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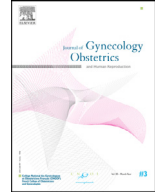
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Original Article

Impact of the COVID-19 pandemic and the emergency measures on abortion care taken during this period in a French region (Provence Alpes Côte d'Azur)



Mallaury Vitabile^{a,1,*}, Steve Nauleau^b, Geneviève Vedrine^b, Olivier Bernard^b,
Florence Bretelle^c, Aubert Agostini^c

^a APHM – Assistance publique – Hôpitaux de Marseille, France

^b Department of Studies and Observation, Agence régionale de santé PACA (Regional Health Agency), Marseille, France

^c Department of Obstetrics, Gynecology and Reproductive Medicine, Pôle Femmes Parents Enfants, AP-HM La Conception University Hospital, 147 bd Baïlle, Marseille 13005, France

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ABSTRACT

Introduction: On March 17, 2020, the first mandatory national lockdown was implemented in France, followed by an adaptation of health services to ensure access to abortion care. The objective of this study is to evaluate the impact of COVID-19 and the emergency measures on abortion care taken during this period in the Provence Alpes Côte d'Azur region (PACA) in France.

Materials and methods: This retrospective study was based on the health insurance information system national database (SNDS), which included all women who had an abortion between January 1, 2019 and December 31, 2020 in the PACA region. We compared the total number of abortions, the distribution (surgical abortion, medical abortion (MA) at home (MAH) or in a clinic between 2019 and 2020 and the use of teleconsultation (TC) in 2020.

Results: The total number of abortions in the PACA region decreased by 3.5% between 2019 and 2020. The rate of MA was higher in 2020 than in 2019 [17,489/22,444 (79.3%) vs. 17,042/22,354 (74.5%) ($P < 0.0001$)]. The rate of MAH was higher in 2020 than in 2019 [(8,177/17,489 (46.8%) vs. 7,264/17,042 (42.6%) ($P < 0.0001$)]. TC was used in 96 MAH in 2020.

Conclusion: A decrease in the number of abortions in the PACA region was observed in 2020. There was an increase in MA, mainly MAH, allowing easier and more adapted access to the health situation. TC was poorly used.

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Key Points

What is already known on this topic?

During the COVID pandemic restrictions, France introduced new measures to maintain access to abortion. Impact of these restrictions and new measures needed to be done.

What this study adds?

Access to abortion was maintained with an increase of home abortion rate.

How this study might affect research, practice or policy?

Introduction of new measure concerning abortion access may reduce impact of COVID pandemic restrictions

Introduction

On December 31, 2019, the World Health Organization (WHO) was alerted to the emergence of a cluster of 'pneumonia' cases in Wuhan, Hubei province, China [1]. The number of cases increased and spread throughout the world. On March 11, 2020, the coronavirus disease pandemic was declared a public health emergency of international concern by the WHO [2,3]. On March 17, 2020, the first mandatory national lockdown was announced in France [4]. This first lockdown continued until May 11, 2020 [5]. Following this first lockdown and in the face of an increase in the number of COVID19 cases,

* Corresponding author.

E-mail address: mallaury_84@hotmail.fr (V. Mallaury).

¹ mallaury.vitabile.ap-hm.fr

a second lockdown was implemented from October 30 to December 15, 2020 [6].

Hospitals had to reorganise their activities because of the epidemic. Non-emergency medical and surgical activities were cancelled and postponed, and only essential activities were maintained [7]. New units dedicated to COVID were created, and a large number of medical staff members were mobilised at the expense of other services. The adaptation of health services to ensure access to abortion care is diverse in European countries [8,9]. In France, emergency measures have been taken since the decree was implemented on April 14, 2020 [10]. Medical abortion (MA) at home (MAH) was allowed for up to nine weeks of gestation (WG). Moreover, the practice of telemedicine for MA consultations, with free and anonymous dispensing of the necessary medicines by pharmacies, was recommended for MAH. These emergency measures were subsequently suspended on July 10, 2020 [11], with return to original practices. They were reintroduced on November 7, 2020 during the second lockdown [12].

This study aimed to evaluate the impact of COVID-19 and the emergency measures taken on abortion care during this period in the French region of Provence Alpes Côte d'Azur (PACA).

Methods

This retrospective study was based on the health insurance information system national database (SNDS) from January 1, 2019 to December 31, 2020 in the PACA region.

Data were extracted from the SNDS for the PACA region for 2019 and 2020. The SNDS prospectively collects medical reimbursement for patients affiliated with the general insurance regimen and other regimens. Healthcare consumption data, such as reimbursed medicines (CIP codes), medical devices, biology tests, medical procedures (CCAM codes) and auxiliary care (e.g. nursing care, physiotherapy and medical transports), are tracked in the database. The dates of completion for a medical procedure and the dates of prescription and delivery for reimbursed medicines are specified. Owing to the connection with the French hospital discharge database (PMSI), all public and private hospital stays are available for the patients in the sample, along with the details of diagnoses related to each stay (ICD10 codes), medical procedures (CCAM codes), length of stay and months of hospital discharge. The supplementary dataset includes the following basic demographic information: gender, age, department of residence and special coverage. The SNDS covers more than 85% of the population [13].

Patient selection

Women who had an abortion between January 1, 2019 and December 31, 2020 in the PACA region were included in the study through the SNDS using specific codes. (Supplemental Material)

Abortions included surgical abortions (SA), which require hospitalisation for a few hours, MAH (taking medication at home) or medical abortion in the clinic (MAC), which requires hospitalisation for a few hours after intake of misoprostol.

For each patient, we looked for complications requiring hospitalisation within two months of abortion.

The following were reported for each patient: age, date of abortion, method used (SA or MA), place of abortion for MA (MAH or MAC) and use of teleconsultation (TC) for MAH. The rate of failure and complications requiring hospital stay were also reported.

We compared the total number of monthly abortions and distribution (SA, MAH and MAC) between 2019 and 2020. The rate of failure, the complications requiring hospital stay and the distribution of the number of abortions by age were also compared.

Between January 1, 2019 and December 31, 2020, there were two periods with emergency measures for MAH (MAH up to 9 WG, delivery of drugs by a practitioner, midwife or pharmacist to a patient and

teleconsultation): from April 14, 2020 to July 10, 2020 and from November 7, 2020 to December 31, 2020 [10]. Outside the periods of emergency measures, MA was authorised up to 9 WG for MAC and 7 WG for MAH [11].

Statistics

The qualitative variables were reported as means with standard deviations and the quantitative variables as rates and percentages. The comparison for quantitative variables was conducted using the chi-square test or Fisher's test, whichever is necessary. A p value < 0.05 was considered statistically significant.

Ethics

Access to the national database of SNDS was obtained through a user agreement signed between the Technical Agency for Information on Hospitalisation and the Regional Health Agency of PACA in accordance with the provisions of the National Commission for Information Technology and Civil Liberties (<https://www.atih.sante.fr/acces-aux-donnees-pour-les-etablissements-de-sante-les-chercheurs-et-les-institutionnels>); declaration of conformity MR005 registered at the National Commission for Information Technology and Civil Liberties). The data from the PMSI are anonymised and can be reused for research purposes. Under French law, no ethical approval or institutional review board approval is necessary for analyses of national databases. For the current study, no informed consent was necessary because all data were anonymous.

Results

Between January 1, 2019 and December 30, 2020, the total number of patients included in the study was 22,854 in 2019 and 22,044 in 2020 (-3.54%). This decrease was observed in May (-28.66%), June (-14.84%), July (-5.24%) and October 2020 (-8.77%) (Table 1).

No difference was found in the annual distribution of patient age groups between 2019 and 2020, but a difference in the distribution was observed in January, May, June and July between 2019 and 2020. In May, June and July, there was a decrease in the number of abortions among women aged less than 20 years (Table 2).

The rate of MA was higher in 2020 than in 2019 [17,489/22,444 (79.3%) vs. 17,042/22,354 (74.5%) (P < 0.0001)]. The rate of MAH relative to the total abortion rate (SA and MA) increased from April to

Table 1
Difference in abortion between 2019 and 2020.

	2019	2020	Différence 2020-2019	%
JANUARY	2199	2283	84	+3,82
FEBRUARY	1865	1811	-54	-2,90
MARCH	1948	2087	139	+7,14
APRIL	1835	1892	57	+3,11
MAY	2041	1456	-585	-28,66
JUNE	1860	1584	-276	-14,84
JULY	2002	1897	-105	-5,24
AUGUST	1706	1675	-31	-1,82
SEPTEMBER	1733	1852	119	+6,87
OCTOBER	1972	1799	-173	-8,77
NOVEMBER	1810	1889	79	+4,36
DECEMBRE	1883	1819	-64	-3,40
Total	22854	22044	-810	-3,54

1st Lockdown (March 17, 2020 – May 11, 2020) and 2nd Lockdown (October 30, 2020 – December 15, 2020)

--- Introduction of emergency measures from April 14, 2020 to July 10, 2020

--- Reintroduction of emergency measures the 07 number 2020

Table 2
Distribution of abortion by age and month in 2019 and 2020.

	<20years		20-30 years		30-40 years		>40years		P
	2019	2020	2019	2020	2019	2020	2019	2020	
JANUARY	199 (9%)	213 (9%)	949 (43%)	1073 (47%)	881 (40%)	839 (37%)	170 (8%)	158 (7%)	0.05
FEBRUARY	170 (9%)	162 (9%)	861 (46%)	878 (48%)	702 (38%)	628 (35%)	132 (7%)	143 (8%)	0.25
MARCH	151 (8%)	163 (8%)	882 (45%)	991 (47%)	768 (39%)	804 (39%)	147 (8%)	129 (6%)	0.26
APRIL	178 (10%)	167 (9%)	823 (45%)	850 (45%)	702 (38%)	744 (39%)	132 (7%)	131 (7%)	0.77
MAY	193 (9%)	84 (6%)	910 (45%)	609 (42%)	791 (39%)	628 (43%)	147 (7%)	135 (9%)	Inf 0.0001
JUNE	160 (9%)	104 (7%)	822 (44%)	670 (42%)	732 (39%)	661 (42%)	146 (8%)	149 (9%)	0.03
JULY	198 (10%)	155 (8%)	950 (47%)	864 (46%)	686 (34%)	745 (39%)	168 (8%)	133 (7%)	0.005
AUGUST	156 (9%)	137 (8%)	804 (47%)	733 (44%)	613 (36%)	671 (40%)	133 (8%)	134 (8%)	0.08
SEPTEMBER	160 (9%)	153 (8%)	773 (45%)	829 (45%)	667 (38%)	719 (39%)	133 (8%)	151 (8%)	0.74
OCTOBER	151 (8%)	155 (9%)	895 (45%)	821 (46%)	770 (39%)	694 (39%)	156 (8%)	129 (7%)	0.61
NOVEMBER	154 (9%)	166 (9%)	820 (45%)	868 (46%)	702 (39%)	719 (38%)	134 (7%)	136 (7%)	0.95
DECEMBER	155 (8%)	148 (8%)	858 (46%)	817 (45%)	744 (40%)	730 (40%)	126 (7%)	124 (7%)	0.97
Total	2025 (9%)	1807 (8%)	10347 (45%)	10003 (45%)	8758 (38%)	8582 (39%)	1724 (8%)	1652 (7%)	0.07

1st Lockdown (March 17, 2020 – May 11, 2020) and 2nd Lockdown (October 30, 2020 – December 15, 2020)

— Introduction of emergency measures from April 14, 2020 to July 10, 2020

— Reintroduction of emergency measures the 07 number 2020

July and from September to November 2020 compared to 2019 (Table 3, Fig. 1).

In MA, the annual rate of MAH was higher in 2020 than in 2019 [(8,177/17,489 (46.8%) vs. 7,264/17,042 (42.6%) (P < 0.0001)]. The rate of MAH relative to the total MA rate (MAH and MAC) increased from April to July and from September to November 2020 compared to 2019 (Table 3, Fig. 1).

The rate of hospitalisation for failure or complication following MA in 2020 was similar to that in 2019 [(536/17,189 (3.1%) vs. 481/17,042 (2.8%) (p: 0.117)]. The rate of hospitalisation for failure or complication following MAH was higher in 2020 than in 2019 [(418/8,177 (5.1%) vs. 310/7,264 (4.3%) (p: 0.018)]. The number of MAH performed through TC was 96 in 2020.

Discussion

The total number of abortions in the PACA region decreased by 3.5% between 2019 and 2020. This decrease was most pronounced in May, June, July and October 2020. May, June and July were the last

month of the first lockdown and the two months following the lockdown, respectively. October was the month before the second lockdown. In 2020, there was an increase in the rate of MA compared to the rate of SA. This increase occurred early in the first lockdown and persisted until the end of the year. Similarly, the rate of MAH relative to the total number of MA was higher in 2020 than in 2019. This increase occurred early in the lockdown and persisted until the end of the year, except in August 2020.

The first lockdown was implemented from March 17, 2020 to May 11, 2020. A state of health emergency was put in place on April 14, 2020, and it involved the following emergency measures for MAH: MAH up to 9 GW, dispensing of medication by a doctor, midwife or pharmacist to a patient and teleconsultation [14]. These emergency measures were taken to preserve access to abortion and to limit patient movement, the need for hospital care and the need for abortion. The state of health emergency was suspended on July 30, 2020, indicating the cessation of the emergency measures for abortion and the return to traditional recommendations (i.e. MAH up to 7 GW, delivery of medicines by a doctor or midwife to a patient and

Table 3
Distribution of abortion by method and month in 2019 and 2020.

	MAH*		MAC**		SA***		P ¹	P ²
	2019	2020	2019	2020	2019	2020		
JANUARY	681 (31%)	736 (32%)	915 (42%)	978 (43%)	603 (27%)	569 (25%)	0.06	0.87
FEBRUARY	547 (29%)	570 (31%)	820 (44%)	747 (41%)	498 (27%)	494 (27%)	0.69	0.08
MARCH	641 (33%)	644 (31%)	813 (42%)	906 (43%)	494 (25%)	537 (26%)	0.79	0.16
APRIL	596 (32%)	756 (40%)	831 (45%)	775 (41%)	408 (22%)	361 (19%)	0.02	0.00001
MAY	688 (34%)	615 (42%)	837 (41%)	580 (40%)	516 (25%)	261 (18%)	inf 0,00001	0.001
JUNE	579 (31%)	648 (41%)	768 (41%)	673 (42%)	513 (28%)	263 (17%)	inf 0,00001	0.002
JULY	575 (29%)	710 (37%)	912 (46%)	847 (45%)	515 (26%)	340 (18%)	inf 0,00001	0.0001
AUGUST	553 (32%)	616 (37%)	712 (42%)	724 (43%)	441 (26%)	335 (20%)	inf 0,00001	0.247
SEPTEMBER	502 (29%)	688 (37%)	741 (43%)	786 (42%)	490 (28%)	378 (20%)	inf 0,00001	0.001
OCTOBER	634 (32%)	672 (37%)	872 (44%)	776 (43%)	466 (24%)	351 (20%)	0.002	0.02
NOVEMBER	614 (34%)	782 (41%)	766 (42%)	758 (40%)	430 (24%)	349 (18%)	inf 0,00001	0.0007
DECEMBER	654 (35%)	740 (41%)	791 (42%)	762 (42%)	438 (23%)	317 (17%)	inf 0,00001	0.03
Total	7264 (32%)	8177 (37%)	9778 (43%)	9312 (42%)	5812 (25%)	4555 (21%)	inf 0,00001	inf 0,00001

1st Lockdown (March 17, 2020 – May 11, 2020) and 2nd Lockdown (October 30, 2020 – December 15, 2020)

— Introduction of emergency measures from April 14, 2020 to July 10, 2020

— Reintroduction of emergency measures the 07 number 2020

MAH* : Medical abortion at home

MAC** : Medical abortion in a clinic.

SA*** surgical abortion

P¹ MA Rates (MAH and MAC) vs total abortion rates (MA and SA)

P² MAH rates vs MA rates (MAH and MAC)

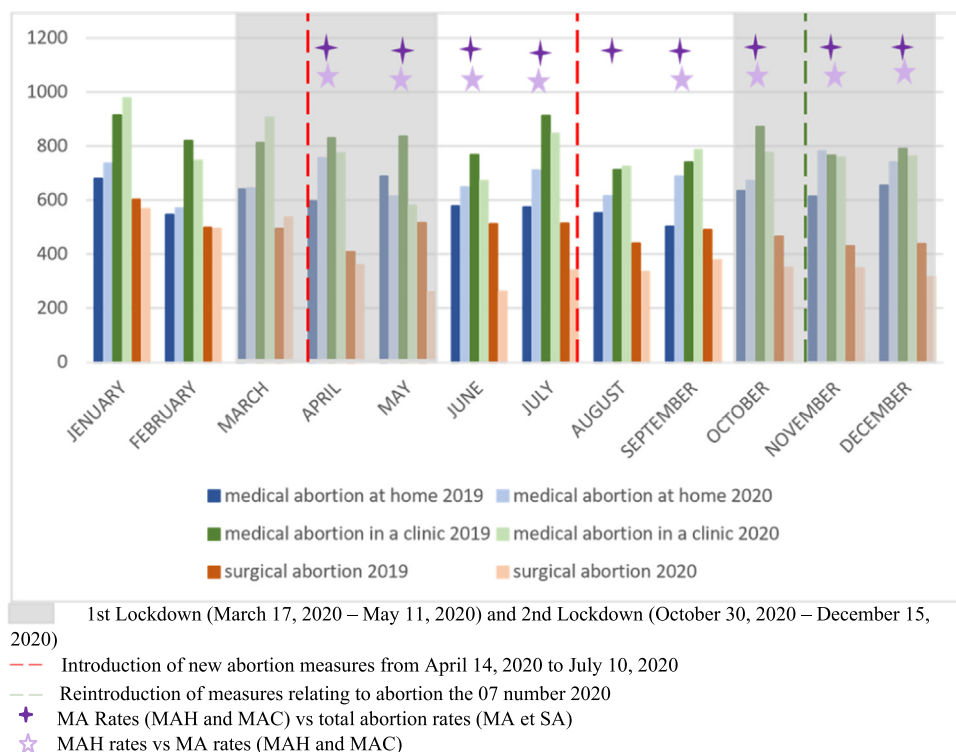


Fig. 1. Monthly distribution of abortion in 2019 and 2020

- 1st Lockdown (March 17, 2020 – May 11, 2020) and 2nd Lockdown (October 30, 2020 – December 15, 2020)
- Introduction of emergency measures from April 14, 2020 to July 10, 2020
- Reintroduction of emergency measures the 07 number 2020
- MA Rates (MAH and MAC) vs total abortion rates (MA et SA)
- MAH rates vs MA rates (MAH and MAC)

cessation of teleconsultations). A state of health emergency was again implemented on November 7, 2020, enforcing emergency measures for MAH. These emergency measures were adopted definitively and became the final recommendation on April 21, 2021 [15]. However, given the health situation and the habits taken by practitioners and midwives, the emergency measures for MAH continued to be applied from July 30 to November 7, 2020.

The decline in the number of abortions in the PACA region is comparable to national figures [16,17]. Unfortunately, there is no tool to evaluate whether the decline in the number of abortions during the last month of the first lockdown and the following two months was secondary to difficulty accessing abortion. This decline in the number of abortions occurred two months after the first lockdown. Conversely, there was an overall decrease in the number of conceptions during this period [18,17]. Thus, the decrease in the number of abortions could partly be due to an overall decrease in the number of conceptions [17]. This decrease in the number of abortions mainly concerned young women aged less than 20 years. This may be because access to abortion is particularly difficult for this population. As this decrease was only for the last month of the first lockdown and the following two months, it could be related to the conditions of confinement limiting the situations at risk of unwanted pregnancy in women aged less than 20 years [19]. Many studies have reported a decrease in the frequency of sexual intercourse during the COVID-19 pandemic [20] and in the quality of sexual life [21]. In addition, there were fewer at-risk sexual behaviours as a result of confinement [22] and thus fewer unexpected pregnancies [23].

The practice of teleconsultation was poorly used in the PACA region, with only 96 abortions carried out through teleconsultation in 2020, even though practitioners were motivated to conduct teleconsultation [16,24,25]. This result is consistent with the national data, with only 728 abortions through teleconsultation conducted in

2020 in France [16]. The main causes are a lack of a general organisation that facilitates access to abortion through teleconsultation for patients and the practice of abortion through teleconsultation by practitioners, as conducted in Scotland and England [25–28].

The analysis showed no differences in the rate of complications requiring hospitalisation between 2019 and 2020 for MA. The rate of hospitalisation for failure or complication of MAH was higher in 2020. This is probably due to the term increase of up to 9 WG for emergency MAH without appropriate training in analgesic management or bleeding by practitioners who, until then, had only taken care of MAH up to 7 WG.

This study has several limitations. Some information was not reported in the database, such as the gestational age of the patients who had an abortion. Thus, we could not examine whether the average term of abortion was modified to indicate the possible difficulty of access to abortion, as mentioned in other studies [29]. Moreover, we were unable to differentiate the SA rate under local anaesthesia from the SA rate under general anaesthesia. SA under local anaesthesia decreases hospitalisation and care time, thus limiting the risk of COVID-19 infection.

Conclusion

In 2020, there was a decrease in the number of abortions in the PACA region, similar to the national level. No evidence was found to assess whether this decline was secondary to difficulty accessing abortion. However, in the months when this decline was significant, the main impact on women aged less than 20 years and the data on the overall pregnancy rate over the same period were in favour of a decrease in the risk of unwanted pregnancies. In 2020, there was an increase in MA, mainly MAH, which allowed easier and more adapted access to the health situation. Unfortunately, the practice of

teleconsultation was poorly used, and efforts must be made to develop this tool.

Supplementary materials

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.jogoh.2022.102478.

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