

Effects of the Coronavirus Disease 2019 (COVID-19) Lockdown on the Use of Contraceptives and Ovulation Inductors in France

Noémie Roland, MD, MPH, Jérôme Drouin, David Desplas, François Cuenot, PhD, Rosemary Dray-Spira, MD, PhD, Alain Weill, MD, PhD, and Mahmoud Zureik, MD, PhD

INTRODUCTION

In France, more than 2,650,750 confirmed cases of coronavirus disease 2019 (COVID-19) and 65,000 deaths had been reported as of January 5, 2021. French authorities decided to impose a national lockdown from March 17 to May 11, 2020.¹ French people were not allowed to leave their homes unless necessary, but health structures and pharmacies remained open although focusing on pandemic management. We examined the use of oral contraceptives (OC), emergency contraception, levonorgestrel-releasing intrauterine devices (LNG-IUDs), and ovulation inductors in France during lockdown and 1 month after. We hypothesized that this period could have had a deleterious effect on reproductive health care access.

METHODS

We analyzed data from the National Health Data System, which provides information on health insurance claims for 99.5% of the population living in France. This database includes individual information

on outpatient medical care and drugs. The French lockdown began on March 17, 2020, and was lifted starting on May 11, 2020. We screened all pharmacies' dispensations between January 1, 2018, and June 7 in 2018, 2019, and 2020. Numbers of OC, emergency contraception, LNG-IUD, and ovulation inductor dispensations were measured every week and compared with the numbers of dispensations expected in 2020 without lockdown, on the basis of 2018 and 2019 usage and taking into account the annual trend.

RESULTS

Oral contraceptive dispensation increased during the first 2 weeks of lockdown compared with the expected consumption (+46.7% and +15.5%, respectively) and then decreased from March 31 to May 11, 2020 (Appendices 1 and 2, available online at <http://links.lww.com/AOG/C187>). Compared with previous years, use of emergency contraception fell during lockdown; we thus estimated that 38,429 French women did not take emergency contraception during lockdown.

Similar patterns were observed for LNG-IUDs, with 21,250 fewer LNG-IUDs dispensed than expected (to a maximum of -73% between April 6 and April 12, 2020). Use of ovulation inductors fell sharply during the entire lockdown period. It is estimated that 44,510 women did not benefit from ovulation inductors during lockdown compared with previous years (Fig. 1).

One month after lockdown began to end, numbers of dispensations remained lower, albeit to a lesser extent. More than 11,000 women did not take emergency contraception as expected, 1,807 did not use LNG-IUDs, and 17,431 did not benefit from ovulation inductors.

From the EPI-PHARE, a scientific cooperation between The French National Health Insurance Fund (CNAM) and the French National Agency for Medicines and Health Products Safety (ANSM).

Each author has confirmed compliance with the journal's requirements for authorship.

Corresponding author: Noémie Roland, MD, MPH, EPI-PHARE, Saint-Denis, France; email: noemie.roland@ansm.sante.fr.

Financial Disclosure

The authors did not report any potential conflicts of interest.

© 2021 The Author(s). Published by Wolters Kluwer Health, Inc. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

ISSN: 0029-7844/21

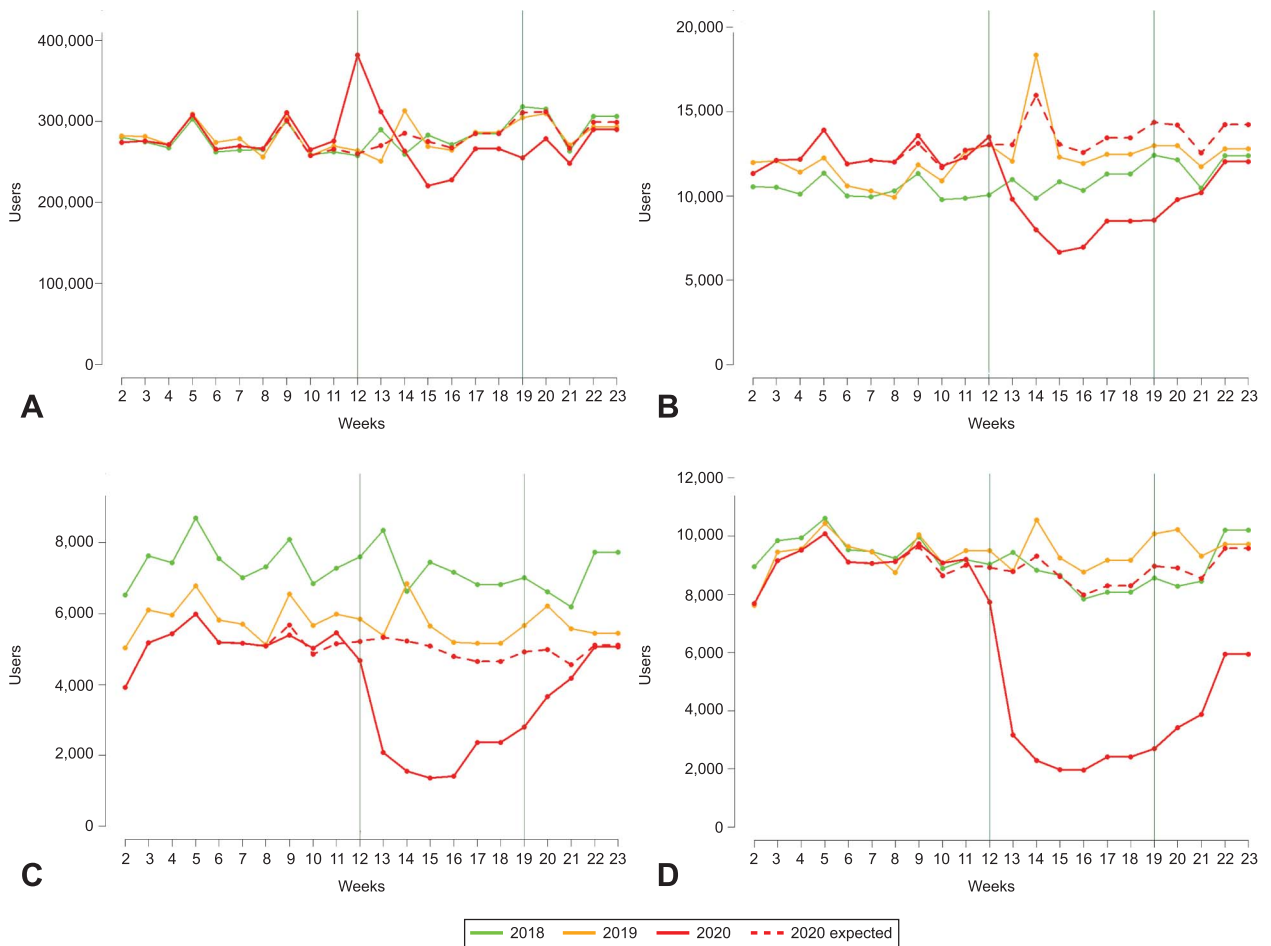


Fig. 1. Observed and expected numbers of oral contraceptive (A), emergency contraception (B), levonorgestrel-releasing intrauterine device (C), and ovulation inducer (D) users during the first 23 weeks of 2018, 2019, and 2020 in France. Vertical lines delimit the French lockdown period.

Roland. *Hormonal Medication Use During French Lockdown. Obstet Gynecol* 2021.

DISCUSSION

Numbers of OC prescriptions increased more than expected during the first 2 weeks of lockdown, then decreased until the end of lockdown. Use of emergency contraception, LNG-IUDs, and ovulation inducers decreased more substantially than expected during lockdown and after, to a final negative balance. At the beginning of lockdown, the surge in OC consumption was likely due to stockpiling behaviors and to the exceptional authorization given by French authorities to pharmacists to dispense expired prescriptions.²

Even if lockdown might have had a negative effect on sexual activity,³ and even though pharmacies remained open and emergency contraception was available, unplanned pregnancies may be more likely to happen given the decrease in emergency contraception and OC use, and access to safe abortion care is more complicated during the pandemic.⁴ The reduced access

to long-acting contraception, such as LNG-IUDs, could have the same consequences. To meet a potentially rising abortion need, the French government has taken emergency measures by extending the legal ambulatory medical abortion time limit.⁵

Finally, ovulation inducer dispensations decreased, probably due to postponement of elective fertility treatment. In France, neonates conceived using assisted reproductive technology represent about 3% of the total live-birth rate each year.⁶ Having prompt access to a postpandemic restart of infertility treatments would help to reduce the deleterious effect of the lockdown on couples with infertility.

Our study showed that lockdown substantially affected hormonal medication use. The major concerns are with medications that require the intervention of a health care professional (LNG-IUDs, ovulation inducers, abortion if no access to emergency contraception). Continued monitoring in 2020 is essential to explore the

long-term effect of the lockdown on reproductive health in France.

REFERENCES

1. Salje H, Tran Kiem C, Lefrancq N, Courtejoie N, Bosetti P, Paireau J, et al. Estimating the burden of SARS-CoV-2 in France [published erratum appears in *Science* 2020;368(6498)]. *Science* 2020;369:208–11. doi: 10.1126/science.abc3517.
2. Arrêté du 14 Mars 2020 portant diverses mesures relatives à la lutte contre la propagation du virus covid-19. Accessed July 2, 2020. <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000041722917&categorieLien=id>
3. Li W, Li G, Xin C, Wang Y, Yang S. Challenges in the practice of sexual medicine in the time of COVID-19 in China. *J Sex Med* 2020;17:1225–8. doi: 10.1016/j.jsxm.2020.04.380
4. Bayefsky MJ, Bartz D, Watson KL. Abortion during the Covid-19 pandemic—ensuring access to an essential health service. *N Engl J Med* 2020;382:e47. doi: 10.1056/NEJMp2008006
5. Arrêté du 14 Avril 2020 complétant l'arrêté du 23 Mars 2020 prescrivant les mesures d'organisation et de fonctionnement du système de santé nécessaires pour faire face à l'épidémie de covid-19 dans le cadre de l'état d'urgence sanitaire. Accessed July 2, 2020. <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000041798289&categorieLien=id>
6. de La Rochebrochard E, Troude P, Bailly E, Guibert J, Bouyer J. What are the chances of having a child during or after IVF treatment? A retrospective cohort study in France [in French]. *BEH* 2011;23–24:274–7.

(*Obstet Gynecol* 2021;137:415–417)
DOI: 10.1097/AOG.0000000000004281

PEER REVIEW HISTORY

Received August 4, 2020. Received in revised form October 17, 2020. Accepted October 23, 2020. Peer reviews and author correspondence are available at <http://links.lww.com/AOG/C188>.

Submitting a Clinical Trial? Register Your Trial in a Public Trials Registry

Obstetrics & Gynecology complies with the International Committee of Medical Journal Editors (ICMJE) requirement that clinical trials be registered in a public trials registry at or before the time of first patient enrollment in order to be considered for publication.

Clinical trials that are not prospectively registered will be editorially rejected without peer review.

For more information, see the journal's Instructions for Authors, online at <http://edmgr.ovid.com/ong/accounts/authors.pdf>.

rev 2/2019