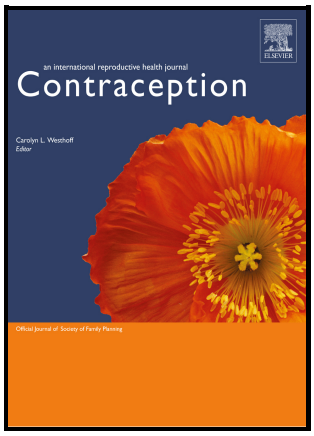
Patient's experience and satisfaction with self-administered subcutaneous depot medroxyprogesterone acetate use during the first year of COVID-19



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PII: S0010-7824(23)00070-7

DOI: https://doi.org/10.1016/j.contraception.2023.110008

Reference: CON110008

To appear in: *Contraception*

Received date: 8 November 2022
Revised date: 3 March 2023
Accepted date: 10 March 2023

Please cite this article as: Tiffany Joyce Smith, Talia K Urdanigo, Nandini Shroff and Susan E Rubin, Patient's experience and satisfaction with self-administered subcutaneous depot medroxyprogesterone acetate use during the first year of COVID-19, *Contraception*, (2023) doi:https://doi.org/10.1016/j.contraception.2023.110008

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Declarations of interest: none

Word count abstract: 265

Word count manuscript: 2,847

Abstract

Objectives: Self-administered subcutaneous (SC) depot medroxyprogesterone acetate (DMPA) can improve contraception access by eliminating the visit at a health center for administration.

For the patients at our New York City health centers who were offered a switch to self-administered DMPA-SC at the onset of the coronavirus disease 2019 (COVID-19) pandemic, we sought to understand their experience of choosing to switch, their experience accessing and using the method, and their method satisfaction.

Study design: Individual interview study of 22 patients using intramuscular DMPA prior to the start of the pandemic and who had a telehealth visit to discuss a switch to self-administered DMPA-SC and received a prescription for DMPA-SC during the first months of COVID-19. We used a grounded theory analysis approach.

Results: Respondents viewed switching to self-administered DMPA-SC as a decision they had to make if they wanted to continue DMPA during the pandemic. Most respondents experienced logistical challenges acquiring the DMPA-SC from the pharmacy. Issues around convenience were important to respondents, however what respondents found convenient varied. Despite all this, respondents appreciated having the option of DMPA-SC and felt it to be overall empowering.

Conclusions: This study exploring patients' experience with self-administered DMPA-SC during the initial year of the COVID-19 pandemic found that, notwithstanding initial hesitation about self-administered injections and logistical challenges around getting the SC formulation, many found the experience of trying self-administered DMPA-SC to be empowering and appreciated having this DMPA option. Thus, self-administered DMPA-SC should be included in clinicians' routine contraception counseling and provision, insurance companies need to cover DMPA-SC without need for prior authorization, and pharmacies should consistently stock DMPA-SC.

Keywords: Contraception; Depot medroxyprogesterone acetate (DMPA); Injectable; Self-administration; Self-injection; Subcutaneous DMPA; Qualitative research; Interview

Implications: Self-administered DMPA-SC is an acceptable contraception option that provides an opportunity to maintain contraception access while eliminating need for an in-person visit. Thus, self-administered DMPA-SC should be included in clinicians' routine contraception counseling and provision, insurance companies need to cover this contraceptive without need for prior authorization, and pharmacies should consistently stock DMPA-SC.

1. Introduction:

Depot medroxyprogesterone acetate (DMPA), a progestin injectable contraceptive method, is administered every three months with either an intramuscular (IM) or subcutaneous (SC) formulation. While both formulations are equally effective, DMPA-SC uses a smaller shorter needle which facilitates patients' self-administration [1, 2]. As compared to clinician-administered DMPA-IM, self-administered DMPA-SC is associated with increased contraceptive access and autonomy while yielding similar or higher continuation rates and satisfaction [3, 4]. Professional medical organizations have recently updated their recommendations to support self-administration of DMPA-SC [2, 5]. Yet there is limited literature on implementation, continuation, and patient experience with DMPA-SC in the United States [1, 6].

With the onset of the COVID-19 pandemic, access to full scope contraception and in-person office visits were disrupted [7, 8]. Starting mid-March 2020, New York City (NYC) was the epicenter of the COVID-19 pandemic in the United States[9]. At that time our organization, The Institute for Family Health ("The Institute"), a large primary care federally qualified health center (FQHC) network with sites in NYC and counties north of NYC, markedly cut back on in person office visits. In the spring of 2020 approximately 80% of medical visits at The Institute took place via telehealth not in person, four of the Institute's smaller sites in NYC temporarily shut down, while five larger sites remained open with limited in person visit hours. In an effort to facilitate continued DMPA access for Institute patients given the limited access to in person visits, and to minimize COVID-19 exposure risk with travel, from April through August 2020 Institute staff offered all Institute patients who were due for DMPA-IM a telehealth visit to discuss switching to self-administered DMPA-SC. Prior to the pandemic, Institute clinicians rarely offered patients DMPA-SC due to frequent lack of insurance coverage or need for prior

authorization for this method. In July 2020, for the first time DMPA-SC was included on the New York State (NYS) Medicaid formulary, mandating coverage of both DMPA-IM and DMPA-SC by all NYS Medicaid Managed Care plans at least through the duration of the pandemic.

In this manuscript we describe the results from in-depth interviews conducted with Institute patients who had a telehealth visit to discuss self-administered DMPA-SC and received a DMPA-SC prescription to better understand their experience of choosing to switch, of accessing and using the method, and their satisfaction with the method.

2. Methods:

2.1 Population:

Between December 2019 and March 2020, 784 NYC Institute patients received DMPA-IM at an Institute site. From April through August 2020, due to limited access to in person office visits and COVID-19 risk from travel, Institute staff attempted to offer all patients who were due for DMPA-IM a telehealth visit to discuss switching to DMPA-SC. Of the 371 people we reached, 87 had a telehealth visit where a family physician discussed switching to self-administered DMPA-SC, electronically prescribed it for those interested, and offered a follow-up telehealth visit to support patients' first self-administered DMPA-SC. After that telehealth visit patients were electronically sent a patient information sheet about self-administration of DMPA-SC (https://www.reproductiveaccess.org/resource/depo-subq-user-guide/). Very few people scheduled a follow-up telehealth visit for clinician support on their first self-administration. When prescribing DMPA-SC the clinician did not contact the patient's pharmacy to ascertain if the DMPA-SC formulation was in stock.

2.2 Recruitment and data collection:

We recruited from the 87 patients who, between April and September 2020, had a telehealth visit to discuss and received a DMPA-SC prescription and were 18 years or older. We recruited patients either through MyChart, the EPIC electronic medical record secure messaging system or phone outreach. Those who had MyChart were sent up to three messages inviting them to be

interviewed. Non-responders received up to two phone calls. Patients without MyChart received up to three phone calls. We recruited until we reached data saturation [10].

Author TS conducted all the interviews via phone. Interviews lasted between 15 to 35 minutes, were recorded and transcribed. TS collected verbal consent immediately prior to the interview. Respondents did not receive any reimbursement for their participation. This study was approved by the IRB at The Institute for Family Health.

2.3 Interview guide development:

Our semi-structured interview guide was developed after reviewing the literature and in collaboration with a researcher who recently conducted a similar study [1]. After piloting, the final interview guide explored patients' decision-making process around switching to self-administered DMPA-SC; their experiences with the switch to DMPA-SC; and their satisfaction with the method. We also explored agency which was operationalized as a patient's perceived sense of independence, control, empowerment, and safety in their contraceptive choice.

2.4 Analysis team and process:

The analysis team consisted of authors TS, a MPH with interest in reproductive health; TKU, a family medicine resident and SER, a family medicine clinician and reproductive health researcher. We used a modified grounded theory approach to our analysis where we used inductive reasoning with the concepts and categories emerging from the data [11]. The entire team individually read all the transcripts, then met and developed a preliminary code book. The team then individually re-read all the transcripts, applied the initial codes, and met again to refine the codebook. The refined codebook and transcripts were then uploaded to Dedoose, a qualitative software tool. Two team members reread the transcripts and applied the refined codes in Dedoose. The entire team met again to review the coding. The team resolved all discrepancies using a team-based consensus process.

3. Results:

3.1 Participants

Between June and October 2021, of the 87 eligible patients, we interviewed 22 people. Twelve more agreed to participate but we were unable to schedule them for an interview, ten declined to participate, and we were unable to contact 43. Interviews were conducted at minimum 13 months after respondents expressed interest in DMPA-SC (four potential injection cycles). Table 1 describes demographic characteristics of the 22 patients interviewed. Of note, six never tried DMPA-SC, five did one self-administered DMPA-SC, four self-administered two times, and seven self-administered more than two times

3.2 Themes

3.2.1 Decision making: limited options and doing their part during COVID-19

Uniformly respondents did not view initiation of DMPA-SC as a choice. Most expressed that it was a decision they felt they had to make if they wanted to continue DMPA during the pandemic. As this respondent said, “injecting myself was not something that I chose, it was something that had to happen based on the circumstances [COVID-19]” (31yo, used DMPA-SC more than two times and still using it at time of interview). Another stated that “because the clinic was closed and there was no other way that I was going to get birth control” (23yo, never tried DMPA-SC, using an alternative method at time of interview) they considered switching to DMPA-SC.

Respondents also cited not wanting to “bother” health center staff with administering DMPA as they felt clinical staff had more important work to do. “Due to COVID, you know I’d rather doctors take care of someone else instead of them giving me birth control. You know I don’t want to waste anybody's time…I want them to focus on the pandemic, instead of me getting birth control. I think that's the least of their worries…There’s a whole pandemic, but I need birth control! …if I can do my part of something so minute, by going to the pharmacist, that's the least of, you know, my worries" (37yo, never tried DMPA-SC, using DMPA-IM at time of interview)

3.2.2 Self-administration: fears and concerns

Almost all respondents reported an initial fear of needles or fear of injecting outside of the medical setting. Those respondents who worked in a medical setting themselves or had family

members that worked in a medical setting did not cite an initial fear of needles and overall felt more comfortable with the idea of self-administered injections.

Although most respondents were initially hesitant about doing the self-administered injection, those that actually tried the SC formulation described few challenges in terms of logistics of self-administration. A few wished they had more precise anatomical information about where to place the needle and questioned why they were administering the DMPA-SC in a different location than the DMPA-IM formulation.

3.2.3 Logistical barriers: acquiring DMPA-SC

Approximately two thirds of respondents experienced some logistical challenge acquiring the DMPA-SC from the pharmacy. Insurance coverage issues were by far the most frequent logistical challenge cited. Many also mentioned challenges with the medication not being stocked by their pharmacy. A few respondents mentioned that they perceived the needle dispensed at the pharmacy to be larger than what they anticipated; that it seemed to be the same size needle as that used for the DMPA-IM. In addition, three respondents perceived they were given the incorrect needle and/or formulation for home administration. As compared to those who tried the SC formulation, those who never tried the SC formulation appear to have experienced more logistical challenges in accessing the SC formulation. Two respondents who could not initially get insurance coverage for DMPA-SC ultimately found online birth control sites; one of these people accessed DMPA-SC through an online provider, the other switched to oral contraceptive pills.

3.2.4 Convenience: varied perceptions

Issues around convenience were important to respondents, however what respondents found convenient varied. Respondents' proximity and sense of connection to their health center mattered a lot. Some found it more convenient to access DMPA at their health center because they could easily travel to the health center, knew the medication was available, they were confident it was administered correctly, that the date administered was documented, and that they would be told when the next dose was due. This respondent switched back to getting DMPA in the office because “the difference is that I still have to go to the office for them to put it in and

I still have to go to the pharmacy to pick it up… Whereas if I'm in the office I can do everything right then and there." (39yo, used DMPA-SC more than two times, using DMPA-IM at time of interview).

A minority of respondents felt using DMPA-SC was more convenient. They appreciated not having to travel to and wait at the health center, that they could administer the medication on their own time frame at home, and they felt less exposed to COVID-19 risk. "I don't have to go up to the clinic and you know it's something that's just 1,2,3. Now, I'm comfortable in my home. I pick up my medicine from the pharmacy. I come home, wash my hands, do step by step how the physician showed me, and it's just something easy" (31yo, used DMPA-SC more then two times and still using it at time of interview).

3.2.5 Overall impressions: empowerment

Notwithstanding respondents' initial sense of lack of choice in switching to DMPA-SC, logistical challenges around getting the SC formulation, and switching back to in-office DMPA, many found the experience of trying DMPA-SC to be empowering on the whole. "Cause like after the first time I'm like oh man I hope I don't have to do this again. But after the first time it was definitely more gratifying as far as, okay, I can actually do this, just like put your big girl pants on and get it done…You feel more capable, you know." (37yo, used DMPA-SC twice, using an alternative method at time of interview).

The person quoted earlier who switched to DMPA-SC "based on the circumstances," later said "I think it does make me feel empowered to be able to do this myself. [COVID-19] was honestly an absolutely crazy situation. And I think a lot of people aren't prepared to admit how destabilizing [COVID-19] was so it's hard to describe my experiences during COVID and the quarantine as empowering but looking at things as a whole I do. I'm very happy and thankful that I learned to inject [DMPA] by myself, and I do not need to go to the clinic, every time, every three months for, you know, a procedure that takes seconds…It was challenging, and I was nervous about it, but I got used to it. And now I find it empowering that I don't have to go to the clinic, every time I need this very small procedure." (31yo, used DMPA-SC more than two times, still using it at time of interview).

Some others found simply having the option of more contraception choices to be empowering. This respondent "feel[s] like women should have a choice if they – especially during the pandemic – it was a really good option to have for women" (21yo, used DMPA-SC more than 2 times, using DMPA-IM at time of interview). Another respondent felt that with DMPA-SC "...that I had an option, I wasn't being forced to go in. I wasn't being forced to withdraw myself from the medication, but I was empowered because I had choices or options." (49yo, used DMPA-SC once, using DMPA-IM at time of interview)

4. Discussion:

This is one of the few studies exploring U.S. patients' experience with self-administered DMPA-SC during the initial year of the COVID-19 pandemic. In our sample we found that, despite feeling that they had no choice but to switch to self-administered DMPA-SC if they wanted to continue DMPA, once respondents were able to access the SC formulation, they appreciated having another way to access DMPA both during COVID-19 and if they could not make it to the health center. Offering self-administered DMPA-SC provided an opportunity to maintain contraception access while eliminating the barrier of an in-person visit with a healthcare provider. Notwithstanding initial hesitation or fear about self-administered injections, logistical challenges around getting the SC formulation, and switching back to in-office DMPA, a number of respondents found the experience of trying self-administered DMPA-SC to be empowering.

Despite the NYS Medicaid coverage mandate for DMPA-SC starting in July 2020, the majority of our respondents still experienced logistical challenges at the pharmacy actually obtaining the SC formulation. The challenge primarily had to do with insurance coverage but also with stocking issues; some may have received incorrectly sized needles and/or formulation. Patients in other states have cited similar logistical challenges [12]. Since SC is a relatively uncommon way of administering DMPA, we may need efforts to educate pharmacists about this different formulation and needle size. Once more individuals use DMPA-SC, pharmacies may be more willing to keep this formulation in stock.

A few of our respondents voiced concern about differences in injection site between the IM and SC formulations. Interestingly, none of these respondents reached out to their clinician for clarification. Moreover, none of these respondents accepted their clinician's offer to have a telehealth visit for their initial self-administration. This finding of patients having some concerns yet not reaching out to their clinicians nor asking to schedule a visit warrants further investigation. In addition to modifying our written information, another way to preemptively address these concerns could be a patient education video reiterating the administration differences between the IM and SC formulations, and how and where to self-administer DMPA-SC.

Initially we were surprised that fewer respondents found self-administered DMPA-SC more convenient than coming into the office for administration. But on reflection of the barriers cited in the previous paragraphs as well as others that respondents mentioned such as geographic proximity to the health center, knowing that in office the administration date was documented and date for next dose would be communicated, it's understandable that those with access to health centers might prefer receiving their DMPA in the health center. Additionally, as a safety net FQHC network no one is turned away or denied care at The Institute due to insurance issues. This was not some respondent's experience at the pharmacy.

Our study has several limitations. The small number of respondents relative to the number of patients receiving DMPA at The Institute underscores that the respondents are not representative of our population. Moreover, our provision of DMPA-SC began before mandated NYS Medicaid coverage of DMPA-SC, so more of our patients may have experienced logistical challenges accessing DMPA-SC at their pharmacies as compared to people starting on DMPA-SC after the insurance mandate was implemented. Lastly, our study explored DMPA-SC use during the initial part of the pandemic when there was severely limited access to in person appointments and high rates of COVID-19 in NYC. It is important to re-examine this issue as we have passed the peak of the pandemic both in places with average access to in person medical visits and in places with continued limited access to in person medical visits.

Despite these limitations, our study adds to the literature around patients' experience with self-administered DMPA-SC. We found that while people were initially reluctant to try self-administered DMPA-SC, once they tried it, the method was acceptable to many. As others have found, this method may play an important role in providing access to DMPA, especially for those who may have difficulty getting to a medical facility [13]. Given continued challenges in accessing contraception care in the United States [8, 14], in order to maintain reproductive autonomy and choice, insurance companies should continue to cover DMPA-SC without need for prior authorization, providers and staff should continue to offer this method to patients, and pharmacies should consistently stock DMPA-SC.

Acknowledgements: We thank Dr Linda Prine for her assistance in formulating this project and in advocating for insurance coverage of DMPA-SC. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. However, Dr Rubin and Ms Smith's salary was supported by grant funding from the New York City Department of Health and Mental Hygiene, New York, NY.

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Table 1: Demographic characteristics of respondents who described their experience and satisfaction with self-administered subcutaneous depot medroxyprogesterone acetate use in New York City during 2020, the first year of COVID-19

		All (N = 22)
Age (years)	18-24	5
	25-29	3
	30-34	5
	35 - 39	7

	40-44	0
	45+	2
Number of times self-administered DMPA-SC*	zero	6
	one	5
	two	4
	more than two	7
Contraception at time of interview	DMPA-SC	6
	DMPA-IM	11
	No method	2
	Oral contraceptive pill	1
	Implantable contraceptive	1
	Partner got a vasectomy	1

* Interviews were conducted at minimum 13 months after patient expressed interested in DMPA-SC (four injection cycles)