

Introduction of DMPA-SC and Self-injection (AI) in the City of Conakry (Guinea) in Time of COVID-19 in 2021

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Abstract: *Context:* The maternal mortality rate in Guinea remains high at 550/100,000 live births. Contraceptive prevalence is still low with 11% for women in union, unmet need was 22% with a fertility rate of 4.8. With this in mind, the DMPA-SC was introduced in Guinea in 2018 and then scaled up to 2020. The objective was to study the supply of DMPA-SC and AI services in the health districts of Conakry in the time of COVID-19. *Methods:* This was a descriptive, cross-sectional, prospective recruitment study, from March 1 to November 30, 2021 in public health facilities and from June 1 to November 30, 2021 in private health facilities; it involved new users of DMPA SC and AI in these facilities, the review and validation of FP data from the facilities, and post-training follow-up was carried out by telephone or in person. The data were collected in a whatsapp platform and processed using Excel software. *Results:* We counted 2279 new users, including 1474 for DMPA-SC and 271 DMPA-SC AI in 28 public health facilities and 383 DMPA-SC and 151 DMPA-SC AI in 30 private clinics. The practice of self-injection was more dominant in private clinics (70%) than in public facilities (36%). *Conclusion:* Private clinics appear to be an opportunity to increase contraceptive prevalence in Guinea.

Keywords: Introduction, DMPA-SC, Self-injection Conakry, COVID-19

1. Introduction

Subcutaneous DMPA is a general designation used to describe an injectable contraceptive administered under the skin.

Manufactured by Pfizer Inc, Sayana Press is the brand name under which the subcutaneous DMPA product is now offered in most countries; this <all-in-one> product, combines the contraceptive drug and needle into a single device [1]. The name self-injection is related to the fact that the woman administers the product in her body without the help of health providers.

In Guinea, maternal mortality remains high at 550/100,000 live births, contraceptive prevalence remains low at 11% for women in union, and unmet need is 22% with

a fertility rate of 4.8 [2]. The subcutaneous formulation of medroxyprogesterone acetate delay injection (DMPA-SC) is one such option to expand the spectrum of contraceptive choices [3]. DMPA-SC combines the features of an injectable contraceptive with technology that facilitates task-sharing, delivery to health workers, and self-injection by women. Other advantages include ease of use during breastfeeding, ease of administration, and extremely low levels of unintended pregnancy [4]. Given its ease of administration, DMPA-SC lends itself to delegation of tasks to lower-level health workers [5, 6]. And to self-injection, which has yielded positive user experiences in seven countries where it has been tested [4, 7, 8]. And an increase

in user compliance [9]. Based on this observation, we conducted a study on the introduction of DMPA-SC and AI in the public and private health district of the city of Conakry in the time of COVID-19 in 2021.

2. Materials and Methods

In the five (5) communal health directorates (DCS) of the city of Conakry (Matam, Ratoma, Dixinn, Kaloum, Matoto), we selected 28 public health facilities, including eleven (11) in Ratoma, six (06) in Matoto, three (03) in Matam, four (04) in Dixinn and four (04) in Kaloum, and 30 private health facilities, including 17 in Ratoma, nine (9) in Matoto, three (03) in Matam and one (1) in Dixinn.

This was a descriptive cross-sectional study with prospective recruitment, conducted in 28 public health facilities from March 1 to November 30, 2021, i.e., a period of nine (9) months, and in 30 private health facilities from June 1 to November 30, 2021, i.e., a period of six (6) months, in the five (5) DCSs of Conakry. It consisted of the orientation of trainers on the DMPA-SC and AI, the reinforcement of their skills in virtual and face-to-face situations and the providers coming from the health facilities (public and private), the provision of sites with contraceptive products including DMPA-SC, the provision of training kits and management tools, integration of private clinics/NGOs, review and validation of FP data from public and private facilities, post-training follow-up and supervision were carried out by telephone or face-to-face, implementation of the WhatsApp platform for experience sharing and data feedback. Women opting for self-injection were asked to practice injection on the small sandbag prepared for this purpose, she is said to be competent on the anatomical model when she successfully demonstrates the five critical injection steps of the observation checklist, omitting any of these five steps could lead to ineffective injection. The steps were (a)

select the appropriate injection site (b) mix the solution by shaking vigorously, (c) push the needle guard and port together to activate the device, (d) pinch the skin to form a <tent>, and (e) slowly squeeze the reservoir to inject the contraceptive; they were also given a small notebook with instructions and a reinjection schedule with the reinjection date marked to take home. The study variables were: the number of new DMPA-SC users and the number of new DMPA-SC AI users,

Recruitment was comprehensive. Data were collected in the 58 public and private health facilities using a standardized survey form and a reporting form that took into account the different variables,

Our data were analyzed using Excel software.

Post-training follow-up was conducted by the master trainers either by telephone during the period of sanitary restrictions or in person during the period of sanitary relief at the study sites.

3. Results

For this study, 400 providers were trained, 25 master trainers were oriented, and only one post-training follow-up took place.

Overall, 2,279 new users, including 1,474 for DMPA-SC and 271 DMPA-SC AI in 28 public health facilities (Figure 1) and 383 DMPA-SC and 151 DMPA-SC AI in 30 private clinics (Figure 2) were identified.

Number of DMPA-SC Users= 1474

Number of DMPA-SC users= 271

Number of sites by commune:

a. Ratoma= 11

b. Matoto= 6

c. Matam= 3

d. Dixinn= 4

e. Kaloum= 4

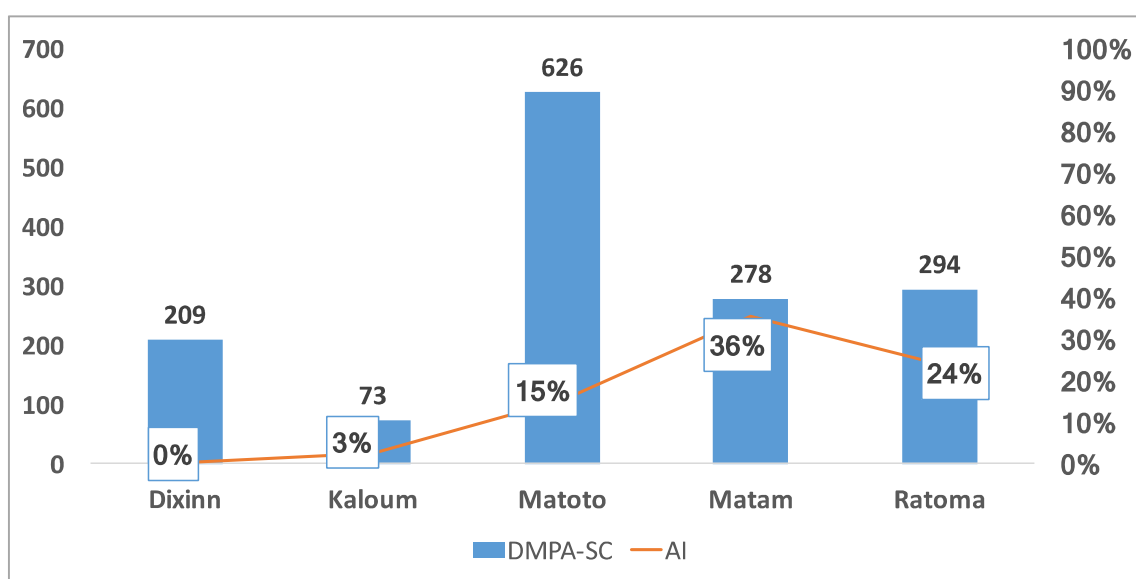


Figure 1. New DMPA-SC and AI Users, by DCS, (March - November 2021) (n=28 public facilities).

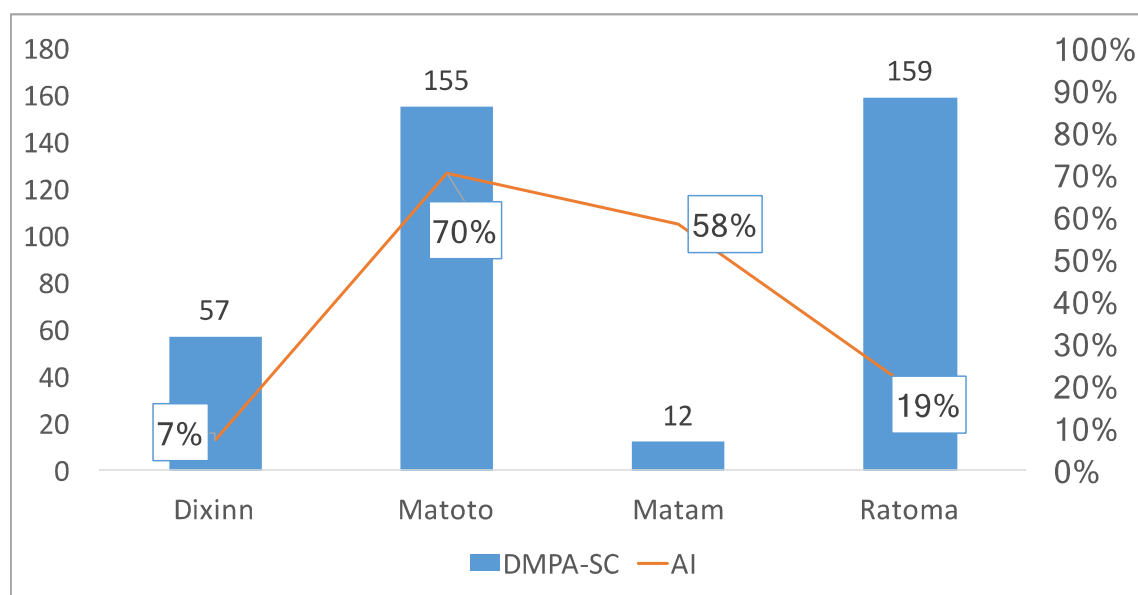


Figure 2. New DMPA-SC and AI Users by DCS (n=30 private clinics) (June 1 - November 30, 2021).

Number of DMPA-SC Users= 383

Number of DMPA-SC AI Users= 151

Number of sites per commune

a. Ratoma= 17

b. Matoto= 09

c. Matam= 03

d. Dixinn= 01

4. Discussion

In this study, we did not follow up with our clients because of COVID-19, so we limited the only contact with new DMPA SC and self-injection users. Home visits or visits to the family planning unit at scheduled times were not carried out, telephone calls were made but did not guarantee follow-up of the method, her experience of self-injection, her desire to continue or not to self-inject.

Socio-demographic aspects and gestational history and the degree of satisfaction of the client were not addressed.

During the period of our study, 1,474 doses of DMPA-SC were administered in the five DCSs of the city of Conakry at the time of its introduction, a dose that remains insufficient given the population of its five communes. Tishina Okegbe et al [10] in Benin reported 11,000 doses of medroxyprogesterone acetate when it was introduced under the skin, this low dose in our study is related to the COVID-19 pandemic, which restricts mobilization and the awareness campaign. Looking at the number of DMPA SC- AI performed by the five public and private DCS; the public commune of Matoto recorded the highest number of new users 626 cases, the lowest number was found in the commune of Kaloum 73 cases this is easily understood because the commune of Kaloum constitutes the administrative center of the country, it is populated in the morning and the population withdraws in the evening; In the private facilities, the commune of Ratoma had the highest number of new users 159 cases and the

commune of Matam the lowest number 12 cases. This higher number of new users per place in our study in Covid time 19, can be explained by the ease of use, its reversibility and its effectiveness in protecting against unwanted pregnancies; this observation in our study was similar in the study by Keith B et al [4].

With respect to self-injection (SI), the commune of Matam recorded the highest rate of 36% and the commune of Dixinn did not record any cases of self-injection in the public communal departments. This aspect of the question can be explained in part by the fear of certain clients, as reported in the study by Michée Katz et al [11].

In this municipality, however, there are four facilities and 209 doses of DMPA-SC were administered. This finding could be explained in part by the small number of master trainers and providers trained to teach women how to self-inject; As for the self-injection curve, it is similar in both public and private facilities; in the public health facilities, we did not record the provision of ATI services in the commune of Dixinn; the peak was observed in the commune of Matam (36%); in the private facilities, the commune of Dixinn recorded 7% of ATIs; the highest percentage was found in the commune of Matoto (70%); This high rate of self-injection in our study is linked to the ease of use of the product and to the restriction measure, which led many of our women to self-inject, but also to the fact that private facilities seem to be a place of confidentiality par excellence; our results were lower than those reported by Jean T et al. in Kinshasa. 3% (640) [7]. This difference could be explained by the size of the study population.

The growth curve of self-injection (AI) in the public formations was more observed in the communal direction of Matam 36% (Figure 1) than in the other communal directions; in the private formations the growth curve of AI was more observed in the communal direction of Matoto 70% (Figure 2) than in the other directions. The decline in the AI curve began

at 24% in the public health facility and 19% in the private health facilities.

5. Conclusion

This study demonstrated the feasibility of family planning, particularly the SC-IA DMPA, in public and private health facilities in Covid time. The integration of private facilities is an opportunity to increase contraceptive prevalence and thus reduce unmet need for FP. The integration of private facilities is an opportunity to increase contraceptive prevalence and thus reduce the unmet need for FP.

Ethical Approval and Consent to Participate in the Study

Ethical approval was obtained from the Faculty of Health Sciences and Technology of the University of Conakry. Informed consent was obtained from the clients after they had been provided with adequate information about the purpose of the study, the potential risks and benefits of participating, and the clients' rights were respected at all stages of the study, as well as confidentiality.

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