



# **Enhancing women's reproductive autonomy - a case for self-administration of DMPA-SC in India**

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## Background

India's Family Planning (FP) 2030 vision prioritises accessibility to a range of contraceptives, including new choices. This aligns with the overarching goal of achieving Universal Health Coverage (UHC). The program acknowledges the significance of addressing the diverse family planning needs of various demographic groups, encompassing vulnerable populations such as adolescents, young people, migrants, and marginalized communities.

The incorporation of Injection Depot MedroxyProgesterone Acetate - Subcutaneous (DMPA-SC) as a self care contraceptive option into India's national Family Planning Programme represents a promising and well-timed timely opportunity. Presently, the available self-care contraceptive options include condoms and oral contraceptive pills as regular contraceptive methods, along with emergency contraceptive pills as an on-demand option.

Adding DMPA-SC, to the basket of self-care options will empower women with greater contraceptive choices and autonomy to fulfill their fertility goals. Introducing DMPA SC as a self-administered method can play a crucial role in addressing the unmet need of contraception among women particularly those from vulnerable communities who encounter numerous barriers to accessing contraceptives. This would mark a significant milestone in supporting both couples and individuals in realizing their reproductive intentions, while also ensuring access to the furthest reaches of the population.

## **A** Comparing DMPA-SC and IM: similarities, distinctions, and advantages

DMPA-SC is a highly effective contraceptive with a similar tolerability profile to DMPA Intramuscular(IM). It is an established hormonal contraceptive option in India and worldwide. DMPA-IM, approved by the United States- Food and Drug Administration (US FDA) in 1992, and included in India's National Family Planning Program in 2017, has a well-established history of use. DMPA- SC possesses the potential for broader acceptance due to its user-friendly administration, requiring minimal training for the user. This attribute makes it easy and convenient for individuals to use it in the privacy of their homes.

When compared to DMPA- IM, the subcutaneous preparation contains 30% less hormonal content, has similar safety features and potential side effects, and maintains a three-month injection frequency. Due to the above mentioned factors, DMPA-SC is also highly suitable for community-based distribution. Like DMPA- IM, the SC preparation provides effective contraception with an efficacy of 99 percent in preventing unintended pregnancy when given correctly and on time ('perfect use'). It remains stable in room temperature (15°C–30°C) and is easy to store at home or in community level facilities. Evidence indicates higher satisfaction rates, with continuation rates reported at 81 percent in the Europe/Asia trials and 69 percent in the Americas at one year (4).



## B Why DMPA-SC for self-injection?



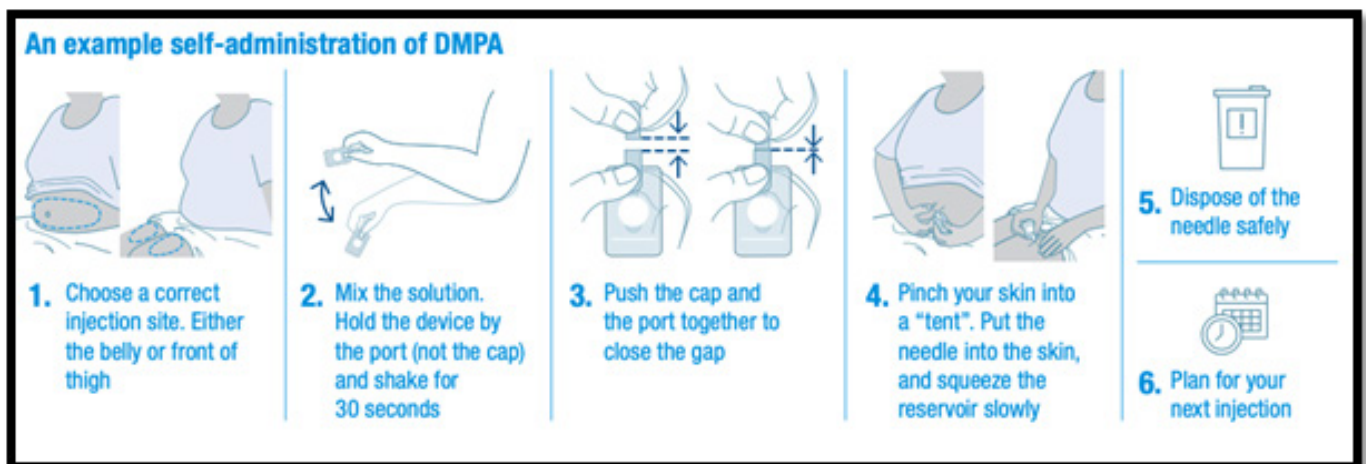
Since 2011, DMPA- SC has offered a self-injection option that plays a vital role in enhancing and diversifying contraceptive choices, promoting self-care practices, and empowering individuals in family planning decisions.

The most widely available DMPA-SC product, marketed as Sayana® Press, and introduced in India in 2023, as Antara- SC, is offered in a convenient format that demands less training. This makes it well-suited for task-sharing strategies, including its administration by frontline health workers, community based distribution, and for self-injection.

Numerous studies have highlighted its advantages. When clients proactively opt for self-injection and receive proper counseling and training in administering DMPA-SC, improvement in access and choice are evident, accompanied by a reduction in dropouts and discontinuation rates.

## C Self-Injection: how-to-use DMPA-SC

DMPA-SC is administered using Uniject™, a pre-filled system with DMPA and a fine needle. It must be shaken, the seal pierced, and then injected. The common injection sites for DMPA-SC are the anterior thigh or anterior abdominal wall.



WHO recommendations on self-care interventions; Self-administration of injectable contraception, 2022 update

## D Global Experiences: Key insights from DMPA-SC implementation

**Global utilization and effectiveness of DMPA-SC:** DMPA-SC is incorporated into the family planning programme of more than 55 countries, with 47 countries offering self injection (see table). Self-injection of DMPA-SC has garnered positive user experiences in numerous countries (6, 9, 12, 14), increasing continuation rates (13) and enabling task-shifting to lower-level healthcare workers [2, 3]. A USAID-supported Ghana study highlighted that provider training in DMPA-SC self-administration enhances family planning access (21). Known for its effectiveness, reversibility, and discretion, DMPA-SC holds significant potential globally, for its usability during breastfeeding and lower unintended pregnancy rates [5]. Additionally, a study conducted in Nepal comparing DMPA-SC with DMPA-IM demonstrated the acceptance and preference for the SC preparation among women, leading to higher continuation rates (7).

### Countries where DMPA SC can be self-administered

Continent /Region	Country	Continent /Region	Country	Continent /Region	Country
North America	USA	Asia-Pacific	Samoa	Africa	Sierra Leone
North America	El Salvador	Asia-Pacific	Kiribati	Africa	Mali
North America	Haiti	Asia-Pacific	Vanuatu	Africa	Togo
Europe	UK	Asia-Pacific	Micronesia	Africa	Benin
Europe	Ukraine	Africa	Tunisia	Africa	Niger
South America	Brazil	Africa	Algeria	Africa	Guinea
South America	Chile	Africa	Ethiopia	Africa	Burundi
South America	Bolivia	Africa	Senegal	Africa	Madagascar
South America	Venezuela	Africa	Uganda	Africa	Nigeria
Asia-Pacific	Pakistan	Africa	Zambia	Africa	Kenya
Asia-Pacific	Bangladesh	Africa	DRC	Africa	Ghana
Asia-Pacific	Iran	Africa	Malawi	Africa	Morocco
Asia-Pacific	Syria	Africa	Mozambique	Africa	Angola
Asia-Pacific	Lebanon	Africa	Cote de Ivoire	Africa	Eswatini
Asia-Pacific	Myanmar	Africa	Burkina Faso	Africa	Cape Verde
Asia-Pacific	Laos	Africa	Liberia		

**Cost-Effectiveness and WHO endorsement:** Incorporating DMPA-SC into national family planning programs has proven to be a cost-effective option.

1. PATH's multi-country study evaluated DMPA-SC delivery costs, across 'facility', 'community', and 'self-injection' approaches. Community-based costs were lowest in Uganda (\$7.69), followed by self-injection in Uganda (\$7.83) and Senegal (\$8.38), while self-injection incurred minimal direct non-medical costs.
2. The cost-effectiveness per averted pregnancy and Disability Adjusted Life Years in Uganda favored self-injection of DMPA SC and projected an annual societal savings of \$84,000.
3. Streamlining training aids could enhance DMPA-SCs cost-effectiveness, estimated at \$15 per averted pregnancy and \$98 per averted maternal deaths (18, 19).
4. World Health Organisation's (WHO) 2022 update on self-care interventions (20) recommends self administration of DMPA-SC, aligning with efforts to promote cost-effective strategies and advancing universal healthcare.

## **E** Anticipated challenges to self-care DMPA-SC

The successful integration of self-care DMPA- SC into various settings comes with foreseen challenges (7,11):

1. Limited awareness about DMPA- SC, self-injection process and over-reliance on health care providers for any medication or injection, may result in hesitation among potential users.
2. Potential opposition by private sector providers due to business concerns and anticipation of infections at the injection site in case of self injection, can lead to misinformation.
3. Introducing a new self-injection method could face resistance due to socio-cultural norms. Lack of autonomy among women and girls can affect their decisions regarding choice of contraception.
4. Perceived side effects and afford ability barriers might deter users.
5. Inconsistent supply and improper training can lead to less uptake and low confidence among users.
6. Lack of regular monitoring and oversight in achieving effectiveness can result in low priority for DMPA-SC as a self care option.

## **F** Strategies for successful implementation

### **1. Creating an enabling environment**

- Need for supportive policy and guidelines on DMPA-SC for self-injection under the Family Planning Programme.
- Communicating the benefits of self injection through localized, user-friendly Information Education Communication (IEC) materials and messages with a special focus on cultural sensitivities.
- Engagement of key stakeholders such as professional bodies, frontline workers, community leaders, and women's groups to actively support the program

### **2. Facilitating self-Injection**

- Develop comprehensive training materials and conduct Training of Trainers for healthcare providers.
- Develop visual aids and guides to ensure women understand the technique of administration.
- Provide information on common side effects, dispel misinformation; and list out when and where to seek medical advice.
- Involve front line workers such as ANMs and ASHAs to ensure effective interpersonal communication as well as address queries.

### 3. Improving access and continuity

- Implement a pre-screening process for eligible candidates and offer counselling for family planning options and concerns.
- Develop a mechanism to provide reminders through mobile applications, short service messages (SMS) or ASHAs and ANMs for injection dates. Provide follow-up support through ANMs and ASHAs or the Health and Wellness Centres (HWC) to monitor adherence.
- Ensure regular supplies are available at closer proximity to communities primarily through primary healthcare facilities (HWCs, Sub-centers, primary health centres) and front-line workers.
- Incorporate DMPA- SC into social marketing channels for wider access.

### 4. Data management and supply efficiency

- In harmony with the existing Health Management Information System (HMIS), institute a system to track the uptake of self-injections, discontinuation rates, and adverse effects. Regularly analyze data and respond to emerging needs.
- Integrate the supply management within the existing Family Planning Logistics Management Information System (FPLMIS) with emphasis on data-driven demand forecasting and supply.
- Ensure uninterrupted supply at all times especially during disruptive situations such as natural disasters and health emergencies like pandemics which overwhelms the health system.

## **G** Conclusion

The integration of DMPA-SC into India's Family Planning Program as a transformative self-administered contraceptive method aligns with India's goal of expanding contraceptive options for women, particularly among underserved communities.

DMPA-SC has gained popularity in various countries due to its ability to boost contraceptive prevalence while ensuring safety. This approach offers numerous benefits such as overcoming barriers to access health facilities, maintaining privacy and autonomy, and ease of use for women.

One of the key advantages of DMPA-SC as a self-administered method is its ability to promote consistent contraceptive use, even in challenging situations such as pandemics or natural disasters. This empowerment of women and couples enables informed family planning decisions and contributes to broader public health objectives. To successfully implement such a program, a collaborative approach involving healthcare providers, non-governmental organizations (NGOs), and community leaders is essential. Building on the foundation of a well-established FP program can facilitate the smooth introduction of DMPA-SC as a self-administered method.

Clear guidelines, effective IEC strategies, regular supplies and supportive mechanisms through frontline healthcare functionaries are critical for a successful and sustainable implementation of DMPA-SC as a self-administered option. This approach holds great promise for advancing the family planning programme and achieving the Sustainable Development Goal (SDG) targets for the country.

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