

Panel Presentation:

Innovations in Contraceptive Packaging to Drive Supply Chain Efficiencies and Commodity Security

International Conference on Family Planning 2022
PATTAYA CITY, THAILAND



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**USAID GLOBAL HEALTH
SUPPLY CHAIN PROGRAM**
Procurement and Supply Management

Panelists



**Ayman
Abdelmohsen**
UNFPA

Facilitator



Ashley Smith
USAID

How Contraceptive
Packaging Impacts Supply
Chains and Product
Availability



Morgan Simon
GHSC-PSM

The Path to Greener Donor
Procurements through
Contraceptive Packaging
Improvements



Jens Rasmussen
Missionpharma

Supplier Efficiencies
Generated by Packaging
Harmonization of
Medroxyprogesterone
Acetate (MPA-IM) Injectable
Contraceptive

How Contraceptive Packaging Impacts Supply Chains and Product Availability



Ashley Smith, Senior Strategic Procurement Advisor
Global Health Bureau, Office of Population and Reproductive
Health, Commodity Security and Logistics Division



Outline

- Introduction
- Background
- Methodology
- Results
- Recommendations

Why does contraceptive packaging matter?

Product packaging is important for contraceptive security



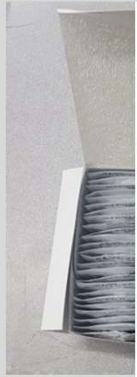
The Six Rights of Logistics

The **RIGHT** goods
in the **RIGHT** quantities
in the **RIGHT** condition
delivered...
to the **RIGHT** place
at the **RIGHT** time
for the **RIGHT** cost.

- Product labeling
- Co-packaging
- Quality integrity
- Product waste
- Plastic and cardboard waste

Source: The Logistics Handbook: A Practical Guide for the Supply Chain Management of Health Commodities

Why does contraceptive packaging matter?



Packaging is important at every supply chain level

Global supply chain

Manufacturing, global procurement,
international delivery and warehousing



Export cartons on pallets

In-country supply chains

In-country storage and distribution,
picking/packing at warehouses
Management at service delivery points



Inner boxes or saleable units



Dispensing unit

Background Goals

Updating the packaging presentation for contraceptive products can:



- Improve coordination among the global community



- Reduce the cost of contraceptive products



- Improve commodity security through increased flexibility



- Decrease environmental impact and waste

Methodology

A team effort between USAID, UNFPA, GHSC-PSM



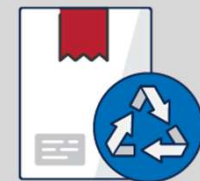
Desk Study

Conducted desk study to document where UNFPA and USAID packaging specifications align and diverge and to identify rationale for current packaging specifications across key contraceptive products. Conducted interview with key suppliers to understand manufacturing capabilities and constraints.



Case Studies

Conducted case studies in Mozambique, Rwanda, Zambia, and Zimbabwe to understand impact of packaging configurations on in-country supply chains across key contraceptive products.

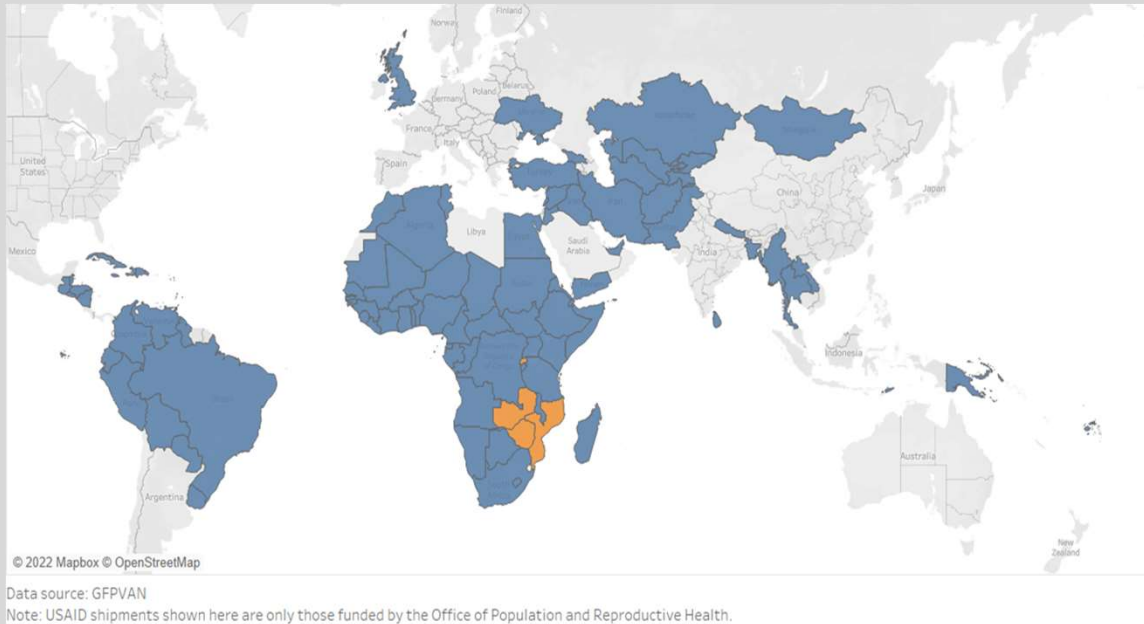


Green Packaging Innovations

Explored opportunities for innovations in greener packaging and reduction of environmental impact with focus on MPA-IM.

Methodology

Country selection driven by country procurement volumes and product variety



Mozambique, Rwanda, Zambia, and Zimbabwe were visited in 2018 for country case studies

Methodology

Product selection



- Male Condoms
- Female Condoms
- Medroxyprogesterone Acetate Intramuscular Injection (MPA-IM)
- Personal Lubricants
- Combined Oral Contraceptive Pills
- Contraceptive Implants
- Intrauterine Devices (Copper T)

Male Condoms

Packaging differences between USAID and UNFPA



Female Condoms

Packaging in large quantities



Export Carton



Dispensing Unit

MPA-IM

Packaging differences between USAID and UNFPA; not bundled



2 intermediary boxes per export carton



4 safety boxes per export carton



12x200 syringes per intermediary box



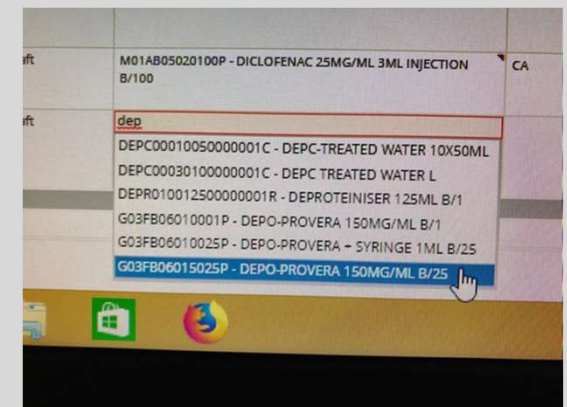
40x25 vials per intermediary box

Results

Case studies

Key challenges identified by in-country stakeholders

- Saleable unit sizes inconsistent with facility-level ordering
- Labeling inconsistencies among box levels leads to confusion
- Miscommunication of stock availability due to multiple SKUs for one product



Injectables (Depo-Provera):
Rwanda eLMIS

Results

Male condoms challenges and preferences

Stakeholders experienced confusion with multiple packaging configurations.

“Sometimes there is confusion when picking and packing. Staff can take a pack [inner box] of 144 pieces thinking it is a pack [inner box] of 100 pieces.” – Rwanda

“The challenge is in terms of stock management: Pharmacists may be required to maintain two stock cards to manage various sizes [of packaging].” – Rwanda

“[Inner boxes of] 100 is better because it is easier to count. Health centers order by individual pieces and it is easier to adjust orders to [inner] boxes of 100 [pieces].” - Rwanda

Stakeholders expressed a preference for inner boxes of 100 pieces

- Ensure consistency in packaging among major procurers.
- Preference for inner boxes of 100 pieces because they are easier to count.
- Consider option of pillow packs of 10 pieces each

Results

Female condoms challenges and preferences



- Stakeholders experienced challenges with the large quantity of sachets contained in the export carton.
- Stakeholders expressed a preference for quantities of 100 sachets or less per export carton or inner box.
- Stockouts of female condoms were observed in service delivery points.

Results

MPA-IM challenges

Picking/packing vials and syringes
in equal quantities



Safety boxes separated at warehouse;
unavailable at facilities



Results

MPA-IM preferences

Stakeholders expressed a preference for the co-packaged product consisting of a smaller number of vials and syringes of equal quantity packaged together.

“Sometimes [we] distribute Depot without syringes. When this happens, the health facility calls and we transfer later. It would be better to have the Depot and syringe in the same box [dispensing unit]. It is better for the provider to take one kit to the client without any confusion.”
– Rwanda

“It is better to go with one packaging configuration where syringes are co-packaged. It is very resource intensive to look at each individual order to ensure syringes were ordered. Safety boxes are also appreciated at the facilities.” – Zambia

“It is a problem when vials and syringes are unbundled because they must be kept separately in the system. It is better to package syringes and vials together in the same inner box.” – Zimbabwe

Recommendations

- Male condoms: USAID and UNFPA catalogs offer the same export carton of 3,000 pieces and inner boxes of 100 pieces

Implemented in 2020

- Female condoms: USAID and UNFPA offer export cartons with quantities <1,000 pieces

Implemented in 2020

- MPA-IM: Remove the safety box; order separately
Safety boxes available separately in USAID catalog

- MPA-IM: package in co-packaged presentation, with a preference for packaging the vial and syringe in the same dispensing unit

New smaller bundle to be introduced in 2023



The Path to Greener Donor Procurements through Contraceptive Packaging Improvements



Morgan Simon, GHSC-PSM

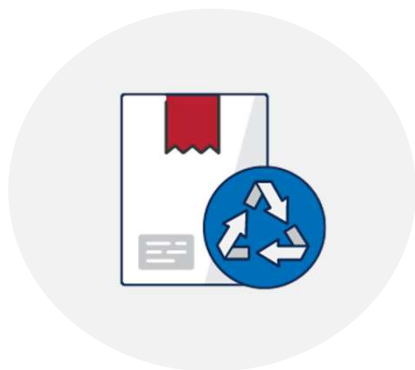
What is green packaging?



What is green packaging?

Packaging plays a critical role in almost **EVERY** industry, **EVERY** sector and **EVERY** supply chain.

In the pharmaceutical industry, packaging is essential to maintain the quality of the product. Packaging protects the product not only from physical damage but also from biological degradation.



Green packaging initiatives may include:

- | | |
|-----------------|---|
| RE duce | Reduce the volume of packaging materials |
| RE use | Reuse of secondary and tertiary packaging materials |
| RE cycle | Use of recycled materials |

How can we measure green packaging?

Green packaging can be measured against the following metrics:



- Carbon footprint (CO₂) emissions
- Solid waste generation
- FSC certified cardboard boxes or equivalent use
- Water use and pollution
- Recycled post-consumer materials use
- Electricity use

Methodology



- Investigate best practices in green packaging across key contraceptive product categories procured by USAID and UNFPA and develop recommended changes to secondary and/or tertiary packaging
- Ensure recommendations would not negatively impact product quality.
- Assess the environmental impact of various MPA-IM packaging options, including impact feasibility assessment and/or cost benefit analysis for each recommendation.

We identified 5 key packaging improvements to achieve supply chain efficiencies on the path to greener procurement

5 key packaging improvements



- Remove plastic straps from export carton
- Remove plastic liners and Styrofoam from export carton
- Remove logos from export carton
- Separate safety box from MPA-IM co-package
- Develop and introduce 20-vial MPA-IM bundle

Removal of plastic straps from export cartons

Environmental Savings

- Elimination of 11,008 kg of plastic
- Elimination of 156,307 kg of CO2 emission
- Elimination of 385,264 Kwh

Cost Savings

- Estimated total annual savings of \$17,766

Additional Benefits

- Minimize damage to export cartons.



*Estimated Savings based on FY22 USAID and UNFPA procurement volumes.

Removal of plastic liners and Styrofoam from export carton

Environmental Savings

- Elimination of 872 kg of plastic
- Elimination of 12,389 kg of CO2 emission
- Elimination of 30,535 Kwh



Cost Savings

- Estimated total annual savings of \$3,847

Additional Benefits

- Less than 1% incident rate due to water damage.

*Estimated Savings based on FY22 USAID and UNFPA procurement volumes.

Removal of logos from export cartons

Environmental Savings

- Elimination of 47g of vinyl
- Minimizes release of ink, glue and sticker residue into the environment

Cost Savings

- Estimated total annual savings of \$940

Additional Benefits

- Enhanced fungibility of product to more effectively respond to emergency requests

*Estimated Savings based on FY22 USAID and UNFPA procurement volumes.

Separate safety box from MPA-IM co-package

Additional Benefits

- Facilitates in-country distribution of safety box separately
- Facilitates opportunity for local procurement of safety box
- Harmonization of SKUs between USAID and UNFPA



Supplier Efficiencies Generated by Packaging Harmonization of Medroxyprogesterone Acetate (MPA-IM) Injectable Contraceptive



Jens Rasmussen, Missionpharma

About Missionpharma

In numbers



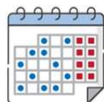
110

Million USD in revenue



5

locations



1975

Commencing business



2012

part of Toyota Tsusho Corporation, CFAO group
and Eurapharma

About Missionpharma

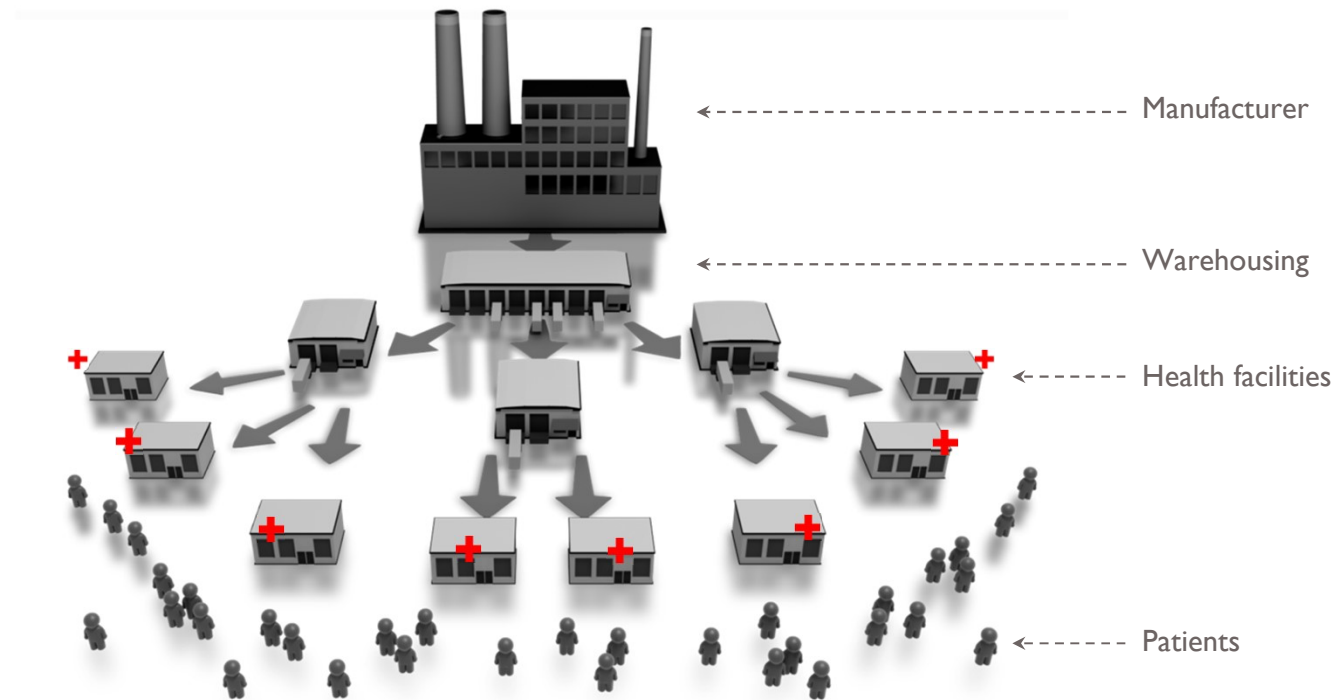
About



Missionpharma is a global supplier of generic pharmaceuticals, medical devices, hospital equipment and health kits to public and private institutions, international development organisations and UN entities.

Missionpharma has worked with MPA for 10 years.

What can we do?



What has been done?

Results



- A survey among USAID/UNFPA beneficiaries was conducted in 2021/2022
- Preferences were weighed against optimization and environmental considerations
- We started working on optimal solutions
- Harmonizing packaging between USAID and UNFPA
- Reducing wastage and at the same time meeting end-user preferences

2-fold challenge

Bulk

500 vials and 500 syringes in a box



Single Vial Presentation

1 vial and 1 syringe in a unit carton



Volume comparison

Bulk

23,040 vials per pallet
9,000 vials if co-packaged with syringes



Single Vial Presentation

4,000 vials per pallet



20 vial bundle



20 vial bundle



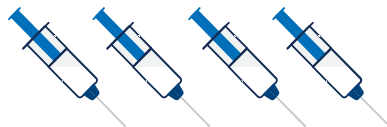
- 20 vials of MPA-IM
- 20 syringes, 1 ml
- 1 leaflet (instructions of use)

Bundle reach

3-monthly injection



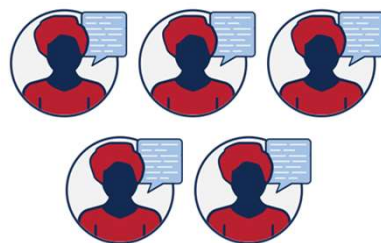
x 4 per year



1 bundle of 20 vials



protects 5 women per year



- 20 vials of MPA-IM
- 20 syringes, 1 ml
- 1 leaflet (instructions of use)

Volume comparison

Bulk

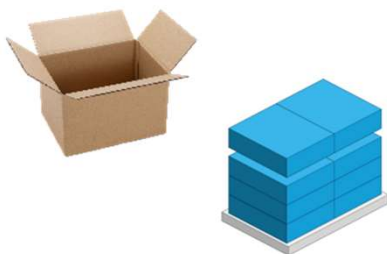
Single Vial Presentation

20 Vial Bundle

23,040 vials per pallet

4,000 vials per pallet

7,200 vials per pallet



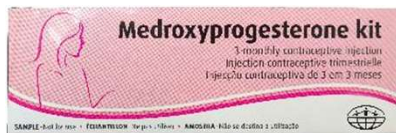
What we do to make MPA deliveries as green as possible



- The manufacturer / MP is ISO 14001 certified
- 50% of total electricity needs in our Indian warehouses is covered by solar power energy
- Packaging is optimized to minimize volumes and optimize container loading
- USAID / UNFPA consolidate all orders for vials and syringes with significant savings
- Possibility to hold stock due to harmonization in packaging requirements from USAID and UNFPA
- Customers are encouraged to choose sea shipments instead of air shipments
- We minimize use of straps, labels and plastic foil

Conclusion

Harmonization of requirements from USAID and UNFPA towards 20 vial bundle has resulted in:



- Reduction of total shipping volume by 40%
- Reduction of secondary packaging material by 70%
- Meeting end-user preferences / fungibility
- Reducing wastage and incineration of expired products
- Suppliers to stock MPA and thereby reduce the need for air shipments

Last mile distribution

In pictures





Questions?



Thank you!

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The USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project is funded under USAID Contract No. AID-OAA-I-15-0004. GHSC-PSM connects technical solutions and proven commercial processes to promote efficient and cost-effective health supply chains worldwide. Our goal is to ensure uninterrupted supplies of health commodities to save lives and create a healthier future for all. The project purchases and delivers health commodities, offers comprehensive technical assistance to strengthen national supply chain systems, and provides global supply chain leadership. For more information, visit ghsupplychain.org.

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