DMPA-SC LAN Virtual Discussion

Topic: Waste management challenges around introducing DMPA-SC for self-injection

Date: October 31, 2018

Time: 4:00pm – 5:30pm East Africa Time, EAT; 9:00 – 10:30 am US Eastern
Today’s speakers

Jane Feinberg
JSI Center for Health Logistics/DMPA-SC Access Collaborative
• Moderator

Dr. Victoria Masembe
Waste Management Expert (Uganda)
• Healthcare waste management systems

Dr. Laila Akhlaghi
JSI Center for Health Logistics
• Self-injection waste context

Dr. Leunora Okubasu
DMPA-SC Access Collaborative
• Household disposal options

Dr. Bagrey Ngwira
University of Malawi
• Malawi disposal experience
Guidance on setting up Health Care Waste Management systems

Dr. Victoria Masembe
Uganda
Rationale

- To achieve sustainable HCWM improvements at national scale, governments need to make deliberate effort to actively intervene.
- Specifically required to describe changes needed to achieve desired impact.
- Positions taken are described in a national health care waste management policy.
- The policy is intended to drive decision making.
Global guiding principles (WHO)

- The “polluter pays”
- The “precautionary” principle
- The “duty of care”
- The “proximity” principle
- The “prior informed consent principle”
- The “WHO core principles for managing health care waste”
International agreements

- Stockholm Convention: international environmental treaty, signed in 2001 and effective from May 2004
- International Solid Waste Association (ISWA) policy: treatment of organic waste and minimization of use of materials
What should policies address?

- Data needs
- Setting a national budget
- Setting individual institution budgets
- Putting in place systems that will ensure that the regulations are fully complied
- Classification of waste according to category of risk, warning against risks
- Rationalizing practices
- Specifying essential waste management commodities
Desirable improvements

- Continuous improvement of standards for health-care waste management
- Assessment of technical competence
- Creating a system of awareness raising
- Create a national system of training
- Ensuring full supply of waste management commodities
- Streamlining treatment disposal systems
Guidance on injection use

- Single use injection devices
- Given only when necessary
- Administered by skilled health worker
- Segregate waste according to category of risk
- Dispose of immediately after use (without recapping) in a proper sharps container
- Single handed recapping (when critical)
- Do not keep potentially infectious waste for long
- Recommend a disposal method
Collection systems countries are trying out

- Collection on demand
- Mail back
- Scheduled collection
- Community collection and drop off
- Take back to product provider
- Take to nearest health facility or community health worker
- Kiosk collection
Final disposal methods

- Disposal in pit
- Incineration
- Autoclaving and recycling
- Burning and burial
Challenges

- Compliance with policy recommendations
- Resource allocation
- Lack of suitable technologies within working environments
Self injectors

- Double as patients and health workers
- Lack guidance on appropriate containers for sharps waste disposal
- May not know what to do in case a sharps container is not available
- Guidance on where and where not to dispose of the waste
Countries that choose less than optimal technology will incur health, environment, economic and social costs.

Countries that choose appropriate technology will incur some financial costs.
Questions and comments?
Self-injection waste context

Dr. Laila Akhlaghi
JSI Center for Health Logistics
What is the magnitude of healthcare waste associated with self-injection of DMPA-SC?

- Per WHO, household level or home treatment is a minor source of health-care waste.
- At household level, the amount of DMPA-SC waste is minimal: max 4 units per year per user.
- Other self-administered injectable medicines, such as insulin, likely produce much more sharps waste.

Analysis: JSI

DMPA-SC could *reduce* the waste management burden at the facility and community levels, compared to DMPA-IM.

DMPA-SC produces less waste than DMPA-IM, reducing cost and simplifying waste handling:

- DMPA-SC produces 70% less waste by volume than DMPA-IM + SoloShot syringe
- DMPA-SC takes up less space in safety boxes, requiring fewer safety boxes for the same number of injections, and lowering costs associated with disposal supplies
- No glass vial disposal challenges associated with DMPA-SC
- Reduced risk of environmental contamination since the Uniject device’s plastic reservoir can be incinerated
Comments and questions?
Household disposal options

Dr. Leunora Okubasu
An informal survey yielded little guidance on household level needle disposal for insulin users in the countries we surveyed

- Burkina Faso, Kenya, Madagascar, Senegal, and Uganda - diabetes and pharmaceutical associations asked about sharps disposal guidance for insulin users

- No standard guidelines or policies on home management of used needles at household level

- Disposal suggestions depend on the provider and context, and include:
  - Burn
  - Bury
  - Throw in pit latrine
  - Dispose (protected in a container) with general household waste
  - Store in a container and return to facility
## Self-injector disposal options and considerations

<table>
<thead>
<tr>
<th>Disposal Method</th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
</table>
| Pit latrine (not composting toilet)  | • Accessible in rural areas  
• Removes from circulation immediately  
• Private                                                                 | • Unavailable in urban areas  
• Environmental concerns                                                                               |
| Burning                              | • Many households especially in rural areas burn their garbage  
• Private (if the client is the trash burner)                                                        | • Temperature may not be high enough to fully destroy needle  
• Environmental concerns                                                                                   |
| Disposal with household garbage     | • Urban households may have garbage collection services                                     | • Questionable waste handling practices  
• Spent units may end up in landfills accessible to people and animals                                    |
| Burying                              | • Many units can be buried                                                                  | • Requires availability of land  
• May be accidentally excavated or exposed by runoff during rainy seasons  
• Labor intensive                                                                                         |
| Safe storage, then dropoff or collection for final disposal | • Use of a puncture-proof container protects the client and household members from needle sticks | • Requires safe storage of used unit first  
• Client or health system must source an appropriate puncture-proof container  
• Dropoff or collection options all have cost implications                                                  |
Comments and questions?
DMPA-SC Self-Injection Waste Management in Malawi

Dr. Bagrey Ngwira
October 31, 2018
12-month randomized-controlled trial in Malawi

• 731 women presenting at six MoH clinics or to community health workers (HSAs) in Mangochi District

• Randomized to receive DMPA-SC administered by a provider or be trained to self-inject DMPA-SC to compare continuation rates

• Providers were trained to instruct women to dispose of used DMPA-SC
  ➢ By first putting the unit in a puncture-proof container with a lid for safe transport
  ➢ And then throwing the unit out into the pit latrine, or they could give it to a health worker to be put in a safety box at a clinic.
Disposal of DMPA-SC during Malawi RCT

• Information on disposal of DMPA-SC collected during RCT
• Over 91% disposed of used DMPA-SC in pit latrines, which increased over time
• At 3 months, 4% took used DMPA-SC to the clinic or gave it to a CHW, and 2% put it into the trash, all of which decreased over time

Qualitative sub-study of self-injectors and providers

- Semi-structured interviews
- 30 randomly selected women enrolled in the self-administered group
- 12 randomly selected providers stratified by provider type (6 CBPs and 6 HSAs) who trained clients to self-inject DMPASC during the trial

Qualitative Results

• All providers reported instructing clients to dispose of used DMPA-SC in pit latrine
• Almost half of providers said they told clients they could burn used DMPA-SC, and a few said to put used DMPA-SC in a bottle before disposing of it in the pit latrine
• All clients reported disposing of used DMPA-SC in pit latrines
• A few said they first put it in a plastic bottle before disposing of it in the pit latrine
• Clients most commonly chose their disposal location to keep used DMPA-SC away from children and prevent injury to children or others

“[I disposed of them] In the toilet...I knew that if I disposed them in a bin, children would find them or somebody would step on them.”
Malawi Injection Safety Policy – Not inclusive of Self-Injection

Provision of Safe Injection

• *All injection providers shall not give injection in the absence of safe injection equipment (one syringe and needle in a sterile, sealed/undamaged pack) per patient*
  - The injection providers shall dispose injection equipment into a safety box immediately after use

Reference: MoH, Government of Malawi, Infection Prevention and Control Policy
Qualitative Study: *Waste disposal practices among self-injectors in Mangochi District, Malawi*

- **Goal:** To collect information on waste management during the DMPA-SC rollout in Mangochi District to inform the national rollout

- **Objectives:**
  - To assess acceptability of disposal of used DMPA-SC in a puncture-proof container with a lid and transferring the waste back to their health care provider, and
  - To explore how these new waste management procedures are being implemented in both community and clinic contexts

- **Methods:** Semi-structured interviews with ~60 self-injecting clients
Questions?

Bagrey Ngwira: bagreyngwira@gmail.com
Holly Burke: hburke@fhi360.org
Today’s Discussants

Jane Feinberg
JSI Center for Health Logistics/DMPA-SC Access Collaborative
- Moderator

Dr. Victoria Masembe
Waste Management Expert (Uganda)
- Healthcare waste management

Dr. Laila Akhlaghi
JSI Center for Health Logistics
- Self-injection waste context

Dr. Leunora Okubasu
DMPA-SC Access Collaborative
- Household disposal options

Dr. Bagrey Ngwira
University of Malawi
- Malawi disposal experience
Some relevant resources


LAN Next Steps

• An online platform for the LAN will be launched in early November. Instructions on how to register and a link to a recording on how to get started on the online platform will be communicated in the coming days.

• LAN will Host a 30 min virtual walkthrough of the LAN site. Details to be communicated.

• DMPA-SC LAN at ICFP in Kigali (Rwanda): Come to the PATH booth(#27-28) or the PATH side event/reception (The A, B, C, and DMPA-SC of expanding contraceptive access and options: Wednesday, November 14, 2018 7:00 – 9:00 pm) to learn more about the online platform- side event is in MH 2.
THANK YOU