

Supply Chain Working Group

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Co-chair



DCVMN
Developing Countries Vaccine
Manufacturers Network



Background

- DCVMN members agreed at 2018 AGM to focus attention on the vaccine supply chain
- GAVI announcement that GS1 barcoding on the secondary packaging will be a requirement by Dec 2021 for vaccine tenders backed by GAVI financing and issued by UNICEF triggered

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Objective (1)

Identify and resolve challenges and share information

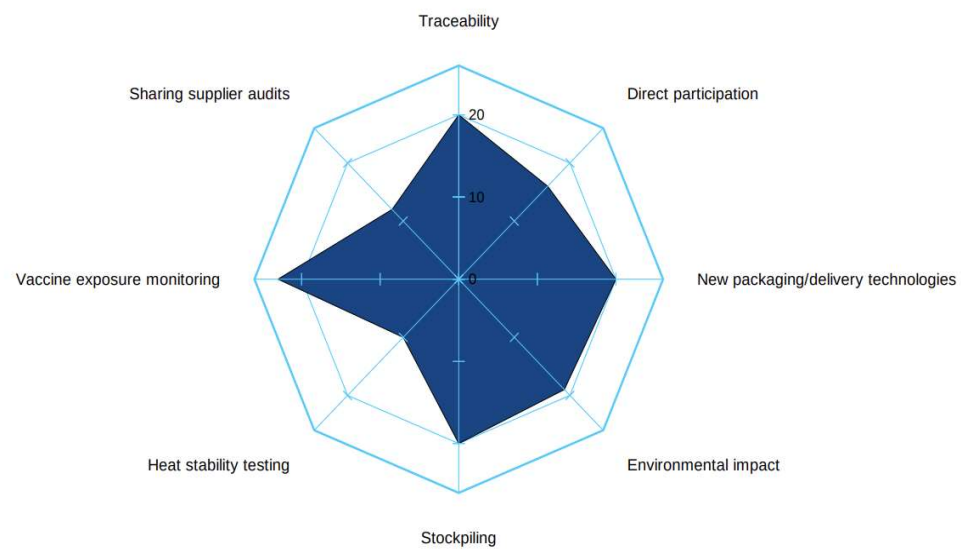
- Where manufacturers can impact positively the vaccine supply chain in countries to make it more responsive and resilient for improved supply security
- Where manufacturers can effectively work together to promote and enhance innovations in strengthening the vaccine supply chain

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Objective (2)



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Objective (2)

Three areas selected for development;

- Traceability**: directly linked to data quality
- Stockpiling**: for current epidemic prevention vaccines
- New packaging technologies**: relevance to developing countries

Publication: Roadmap for strengthening the vaccine supply chain in emerging countries; manufacturers perspective, Vaccine X, 2020 Jun 9;5: 100067

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Deliverable (1)

In Nov 2020, a DCVMN call for EOI to set up **traceability pilots** on primary and secondary packaging was announced. Six companies implemented traceability pilots till Jun 2022

- Primary: Biofarma (COVID-19), Biological E (COVID-19)
- Secondary: Inovax(HPV), CNBG(JE), Bharat (TCV, Polio, RV), Sinergium

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Primary
Packaging



Secondary
Packaging



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Deliverable (2)

In Mar 2021, **vaccine stockpiling** workshop was virtually held

- EuBiologics: Oral cholera vaccine
- Bio Manguinhos/Fiocruz: Yellow fever
- Serum Institute of India: MenA vaccine
- PT Biofarma: Poliovirus vaccine
- Bharat Biotech: Buffer stockpiling

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Deliverable (3)

In 2022, workshop on innovative packaging technologies was held

- Liquid plastic container: EuBiologics (OCV), Serum Institute of India (RV)
- Compact plastic auto-disable devices(cPAD): Biofarma
- Vaccine Innovation Prioritization Strategy(VIPs): Microarray patches, heat stable/controlled temperature chain qualified liquid formulations, barcoding on primary packaging

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Plastic
Container



cPAD

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Case Study



Euvichol (Glass Vial)



Euvichol-Plus (Plastic Tube)

Game Changer

- **Almost 30% reduction in volume, more than 50% reduction in weight**
- **Advantages in storage, transportation and wastage management**
- **23% pricing reduction offered to UNICEF**
- **Administration much more convenient**

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Deliverable (4)

In 2022, integration of **warehouse management systems (WMS)**, traceability from raw materials to final product, established

- To improve efficiency and inventory management of warehouse operations through intelligent data collection

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Outcome

Completion of traceability pilots with full assessment of experiences and lessons learnt

- Dissemination of reports, journal article
- Further progress in barcoding of primary packaging

Sharing experiences with members regarding stockpiling and new packaging technologies

- Dissemination of reports, journal article
- Support for new packaging technologies for members to adopt explored in the future

Warehouse track-and trace management systems to support pilots ongoing

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