

UNICEF Vaccine Planning & Forecasting

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11 April 2019, Tbilisi, Georgia



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Learning Network for
Countries in Transition

OUTLINE

- ❑ UNICEF Forecasting Exercise
- ❑ Key Resources

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UNICEF has over 30 years of experience in procuring vaccines and vaccine related supplies on behalf of partners from around 100 countries

2018

Vaccines: US\$ 1.45 billion

2.35 billion doses

2,628 shipments

Full Schedule

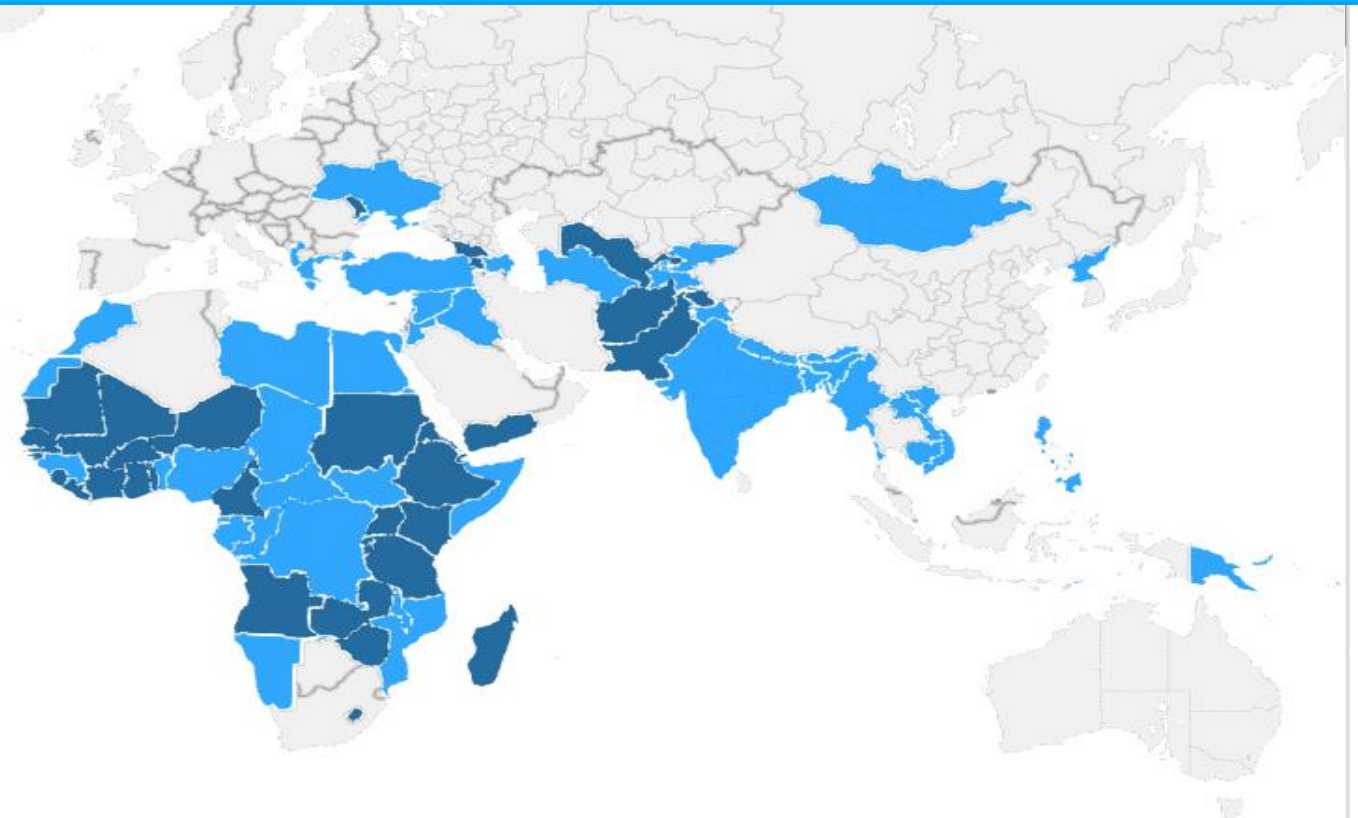
Partial Schedule

2018 Forecast Target Countries

Vaccines

BCG, DTP, TT/Td, OPV, HepB, YF, Penta, MCV, Meningococcal, PCV, IPV, HPV, JE, OCV, Rota, TCV, Hep A, Rabies

Safe Injection Equipment
Cold Chain Equipment

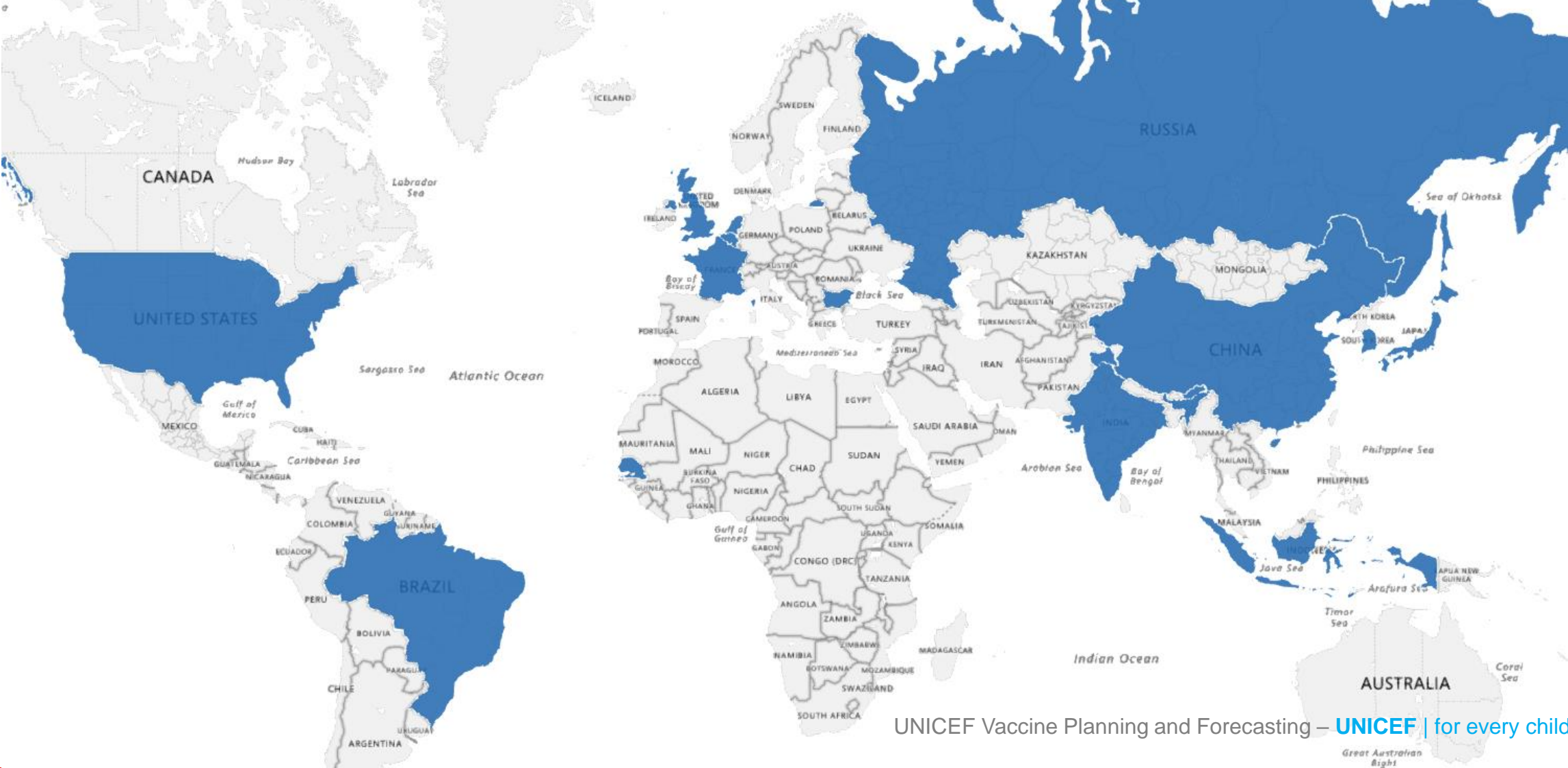


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This map does not reflect a position by UNICEF on the legal status of any country or territory or the delimitation of any frontiers.

Diversified Portfolio of Vaccine Manufacturers

UNICEF procures over 50 per cent of doses from developing countries

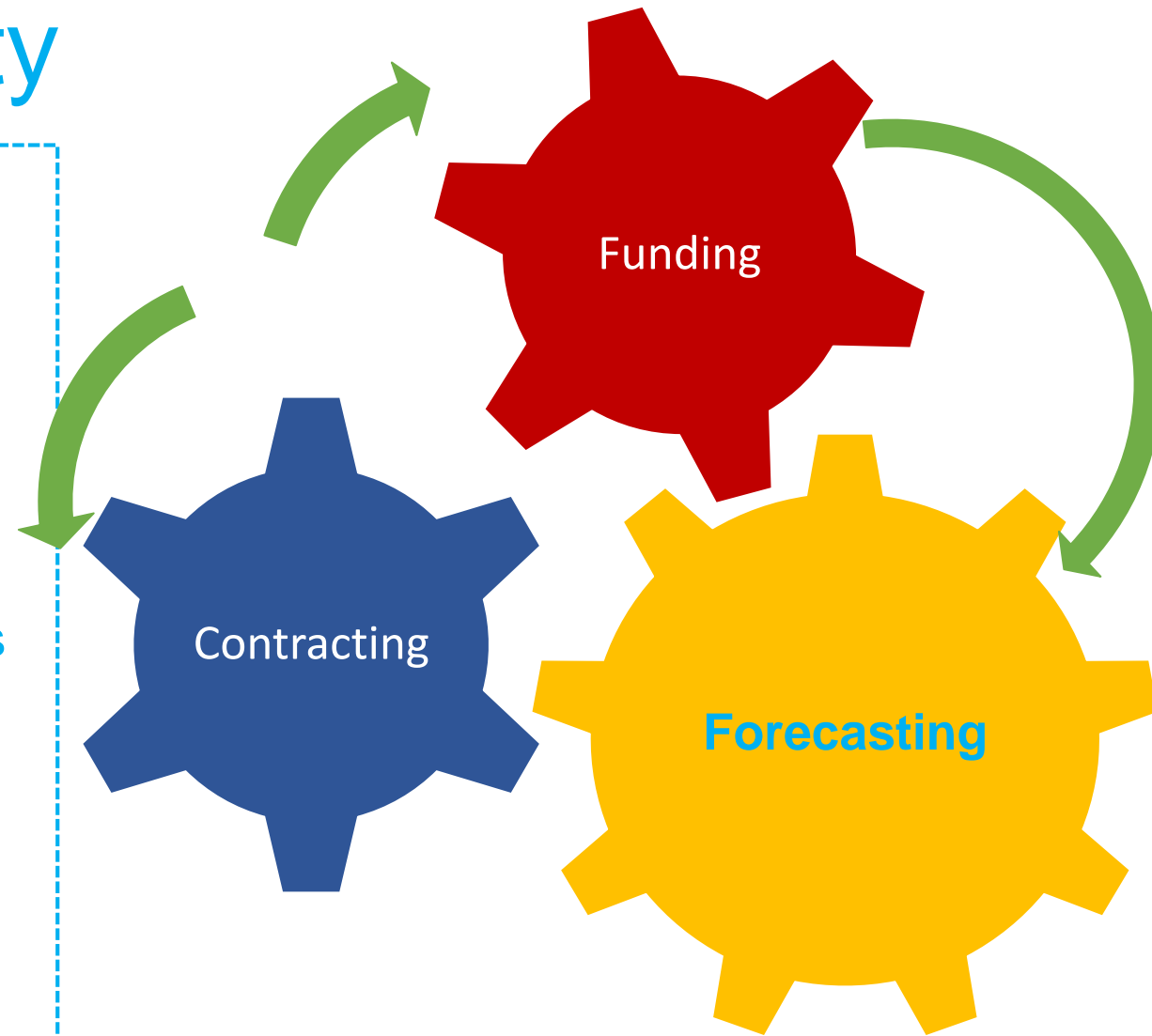


UNICEF's procurement is focused on achieving Vaccine Security

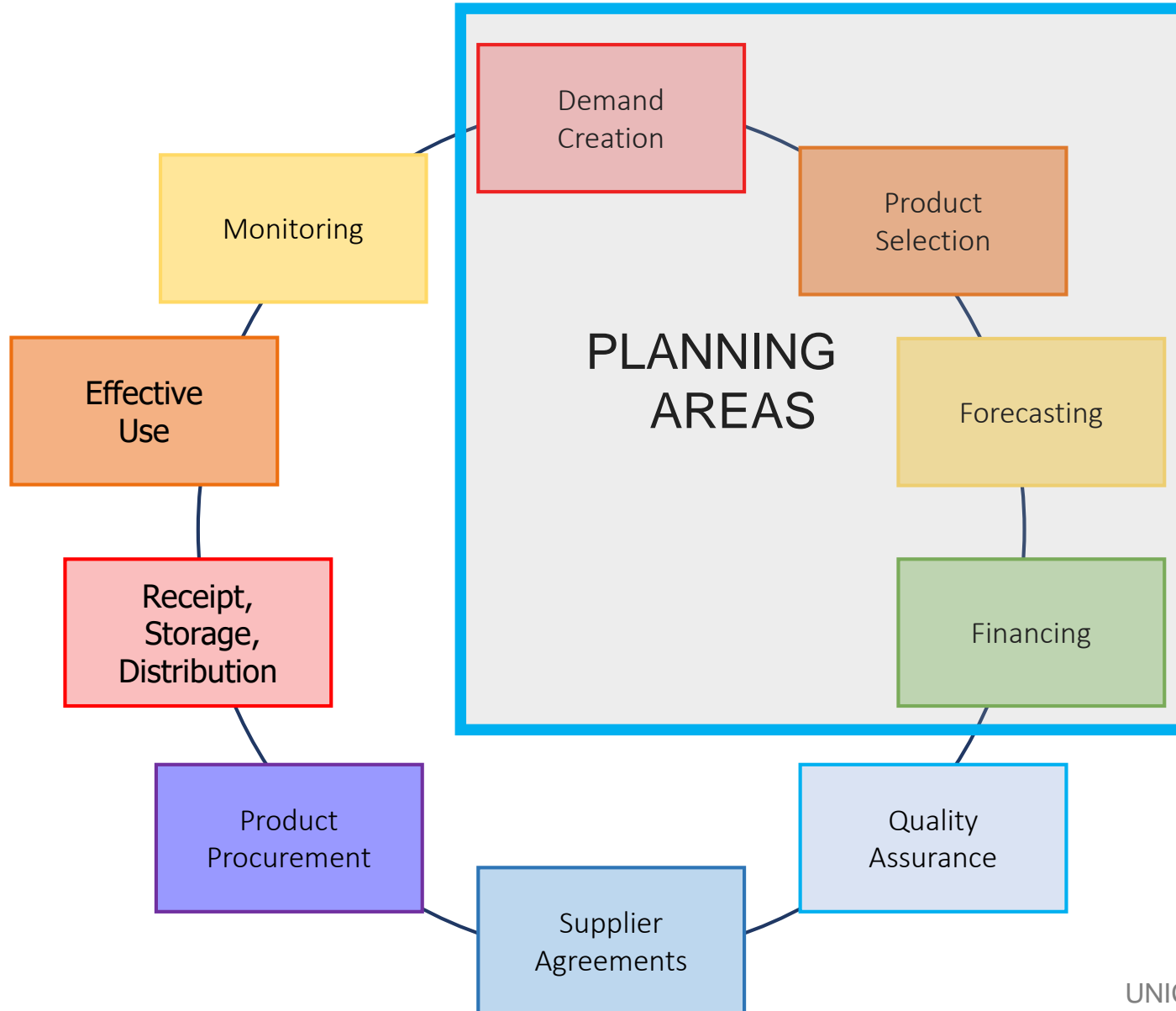
Vaccine Security: The sustained, uninterrupted supply of affordable vaccines of assured quality through available funding, accurate forecasting & appropriate contracting

UNICEF implements a Vaccine Security approach:

- To achieve value for money & access to vaccines for children in need
- To secure healthy markets
- To ensure quality of vaccines



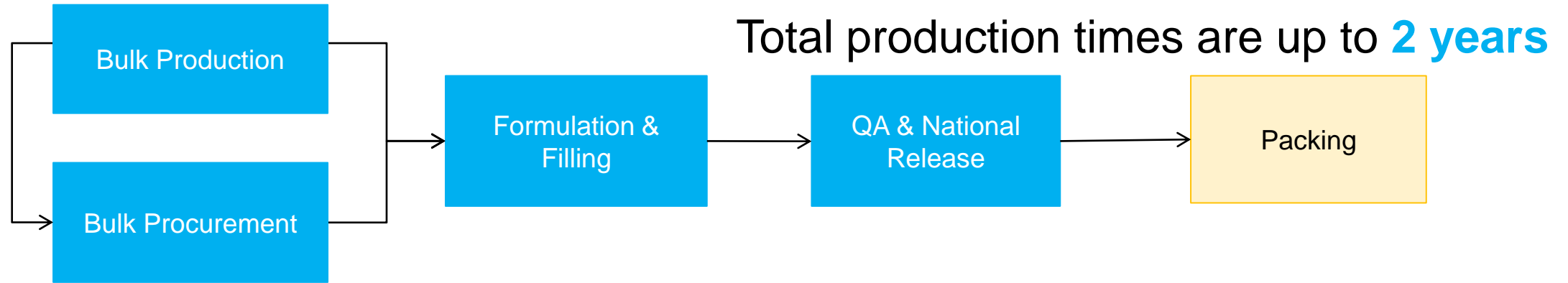
Planning: Key Element in the Supply Chain



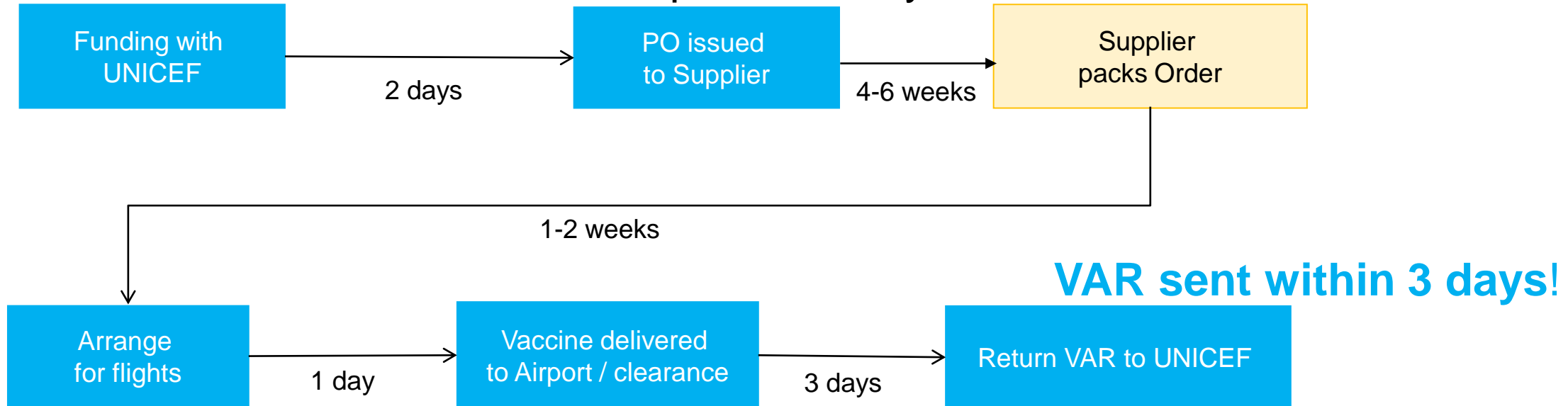
Supply planning not only focuses on commodities and financing, but must also take into consideration the **capacity** and **context** of a country. It must **consider the whole supply chain**:

- In-country infrastructure & distribution network
- Cold Storage Capacity
- Parallel products – integrated campaigns
- Routine and Campaign activities
- Mode of shipment
- Vaccine lead times

Planning → Critical to Ensure Sustained & Uninterrupted Supply of Vaccines & Avoid Stockouts!



Plan for at least **3 months** from funds receipt to delivery

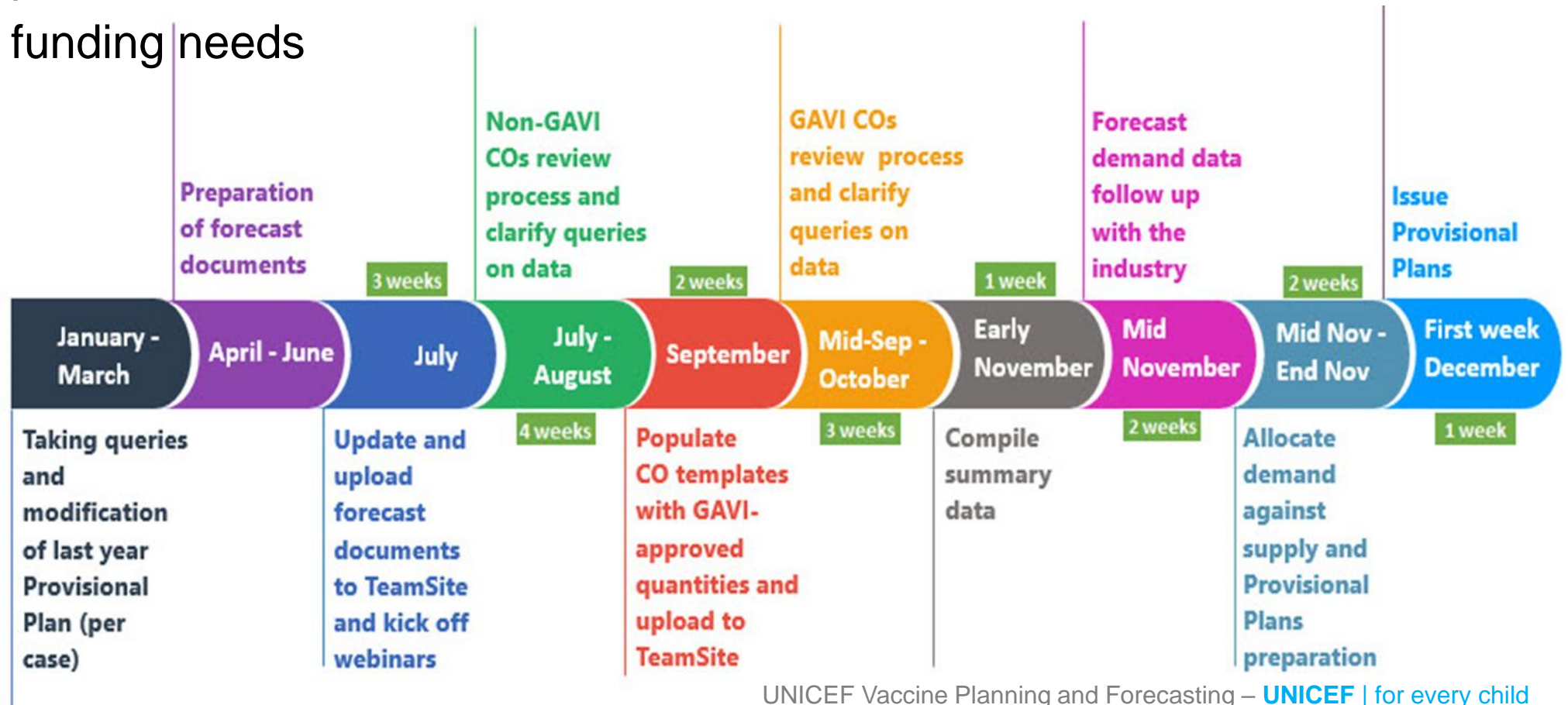


UNICEF Annual Immunization and Malaria Forecast

Integrated part of Country Immunisation Programmes → Effective Vaccine Management

Forecasting is the foundation for all elements of **Vaccine Security**:

- Basis for production at manufacturers
- Basis for funding needs



UNICEF Forecast → More than Demand Generation

- ❑ UNICEF shares intelligence on:
 - vaccine market **constraints**
 - **new product** presentations
 - upcoming **tenders**
 - novel and **future vaccines**

- ❑ Countries share:
 - **Regulatory** requirements
 - **Stock out** information

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FORECAST for Products such as VACCINES, AUTO-DISABLE SYRINGES, SAFETY BOXES & DEWORMING TABLETS for 2019-2023

PLEASE REFER TO THE GUIDELINES IF YOU REQUIRE ANY CLARIFICATIONS.

RETURN TO: Supply Division, Copenhagen
 ATTN: Planning and Forecasting Unit
 EMAIL: sd.vcp@unicef.org

SUBMITTED BY (REPRESENTATIVE'S NAME):
 REVIEWED BY (PROGRAM STAFF'S NAME & EMAIL):
 REVIEWED BY (SUPPLY STAFF'S NAME & EMAIL):

COUNTRY: Select country
 DATE:
 TEMPLATE VERSION: 3

1. TOTAL PROGRAMMATIC REQUIREMENT 2019

Total Country Population:

Please Indicate if Forecast was developed in consultation with ICC: If no, please indicate why below:

Please Indicate if Forecast is integrated in National Plans: If no, please indicate why below:

Please indicate if country specific documents are required for vaccine import: If yes, please list them below:

What is the current regulatory requirement of the national regulatory authority (NRA) for WHO-pre qualified vaccines?

In the coming year of this forecast, are there on-going discussions to change or will there be a change in the regulatory requirement for WHO-pre qualified vaccines?

| Products: ROUTINE activities | Target Age Group | | Target Population | Estimated Coverage 2019 (%) | No. of Doses/Individual per person | Estimated Months 2019 (x) | Total no. of doses/Individual | Normal Buffer Stock Qty | Current Stock | |
|------------------------------|------------------|----|-------------------|-----------------------------|------------------------------------|---------------------------|-------------------------------|-------------------------|---------------|--------------------------------|
| | From | To | | | | | | | Qty | no per stock date (DD/MM/YYYY) |
| Select a Product | | | | | | | | | | |
| Select a Product | | | | | | | | | | |
| Select a Product | | | | | | | | | | |
| Select a Product | | | | | | | | | | |

| Total no. of AD-syringes | Total no. of reconst. syringes | Total no. of safety boxes |
|--------------------------|--------------------------------|---------------------------|
| | | |
| | | |
| | | |

| Devices |
|-----------------------|
| BCG AD Syringe, 0.5ml |
| Select a Product |
| Select a Product |
| Select a Product |

Review Form Forecast



Population Figures



Stock Figures



Wastage



Coverage



Programme Targets

UNICEF Engagement in the Region

Moldova

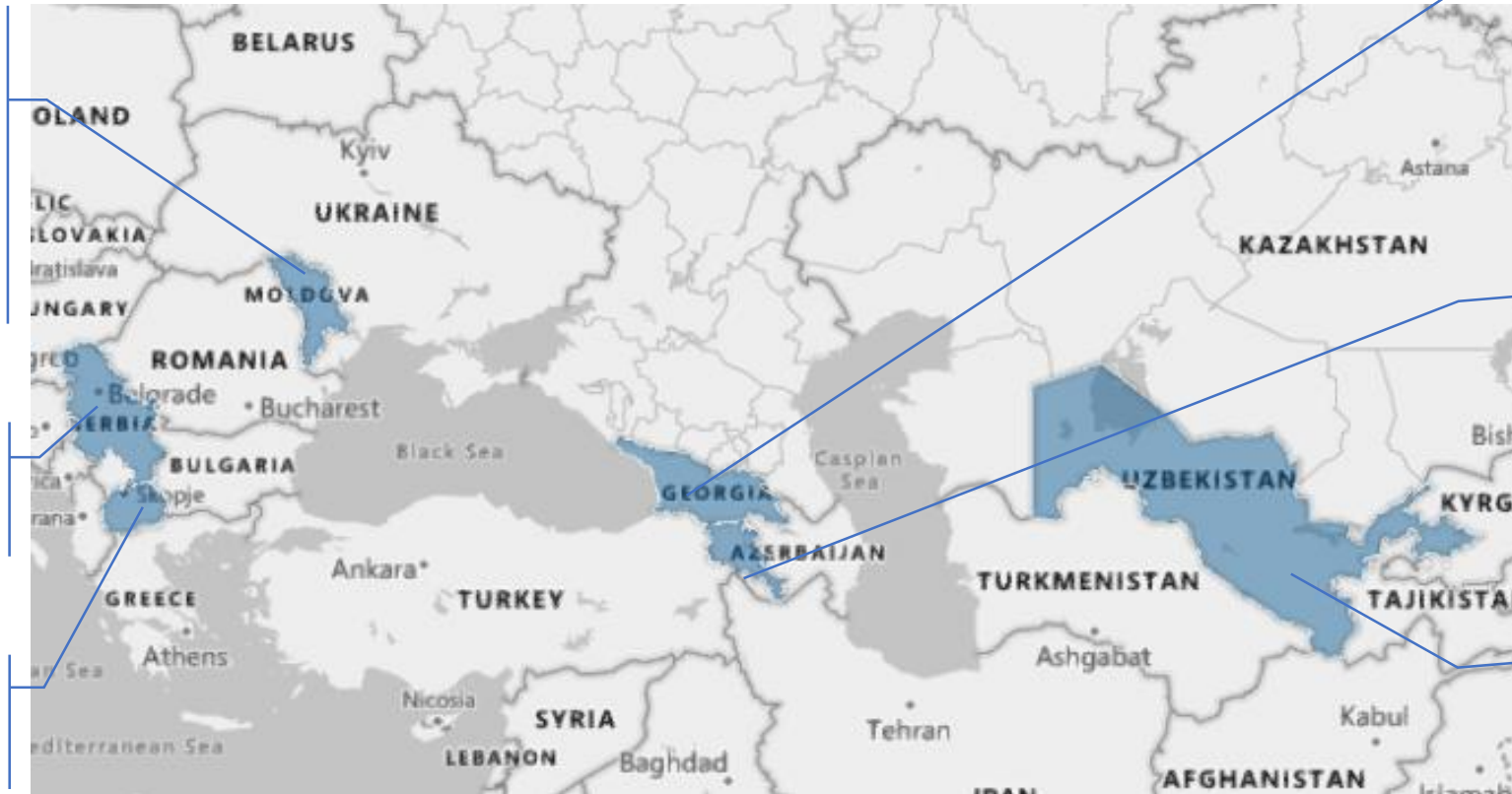
- Routine immunization procurement
- VPPEF/VPPN
- Annual Forecasting
- Post-Transition Gavi Support

Serbia

- VPPEF/VPPN

North Macedonia

- VPPEF/VPPN



Georgia

- Routine immunization procurement
- VPPEF/VPPN
- Annual Forecasting

Armenia

- Routine immunization procurement
- VPPEF/VPPN
- Annual Forecasting

Uzbekistan

- Routine immunization procurement
- VPPEF/VPPN
- Annual Forecasting
- Gavi TCA support



KEY RESOURCES

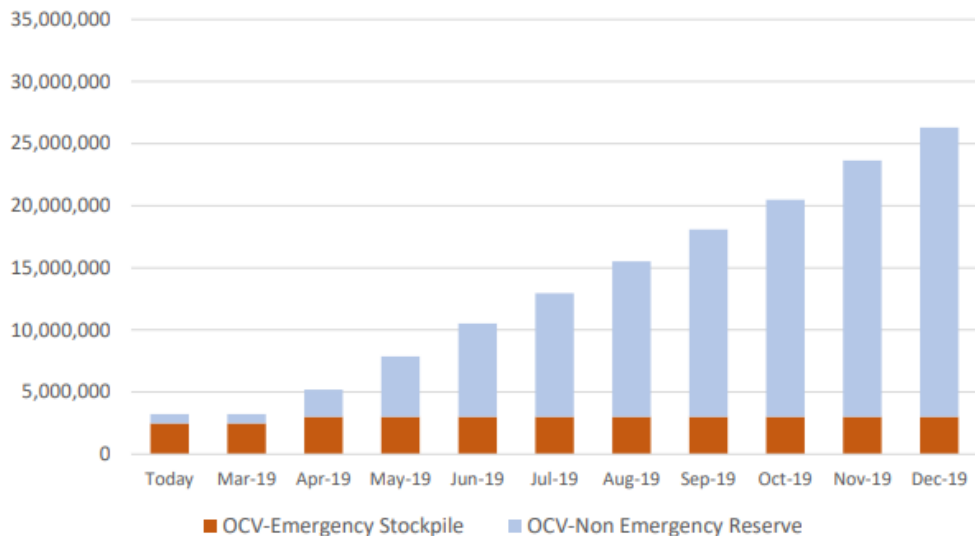
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Emergency - Visibility on Stockpile Levels: Vaccines in Constrained Supply

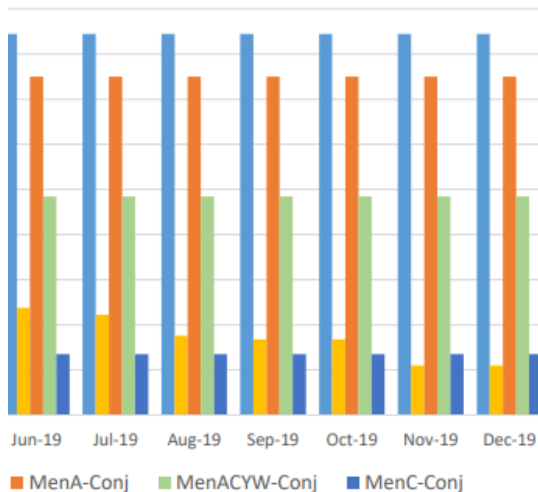
2019 Cholera Emergency Stockpile

Monday, 25 March 2019



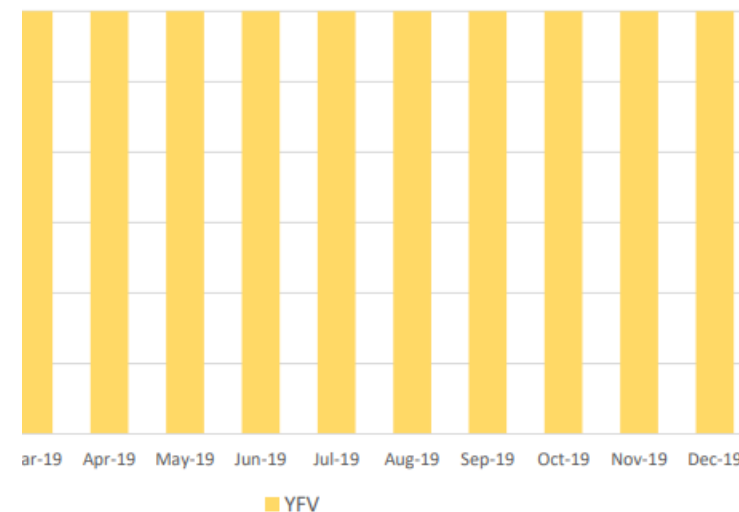
Cholera Emergency Stockpile

Monday, 25 March 2019



2019 Yellow Fever Emergency Stockpile

Monday, 25 March 2019



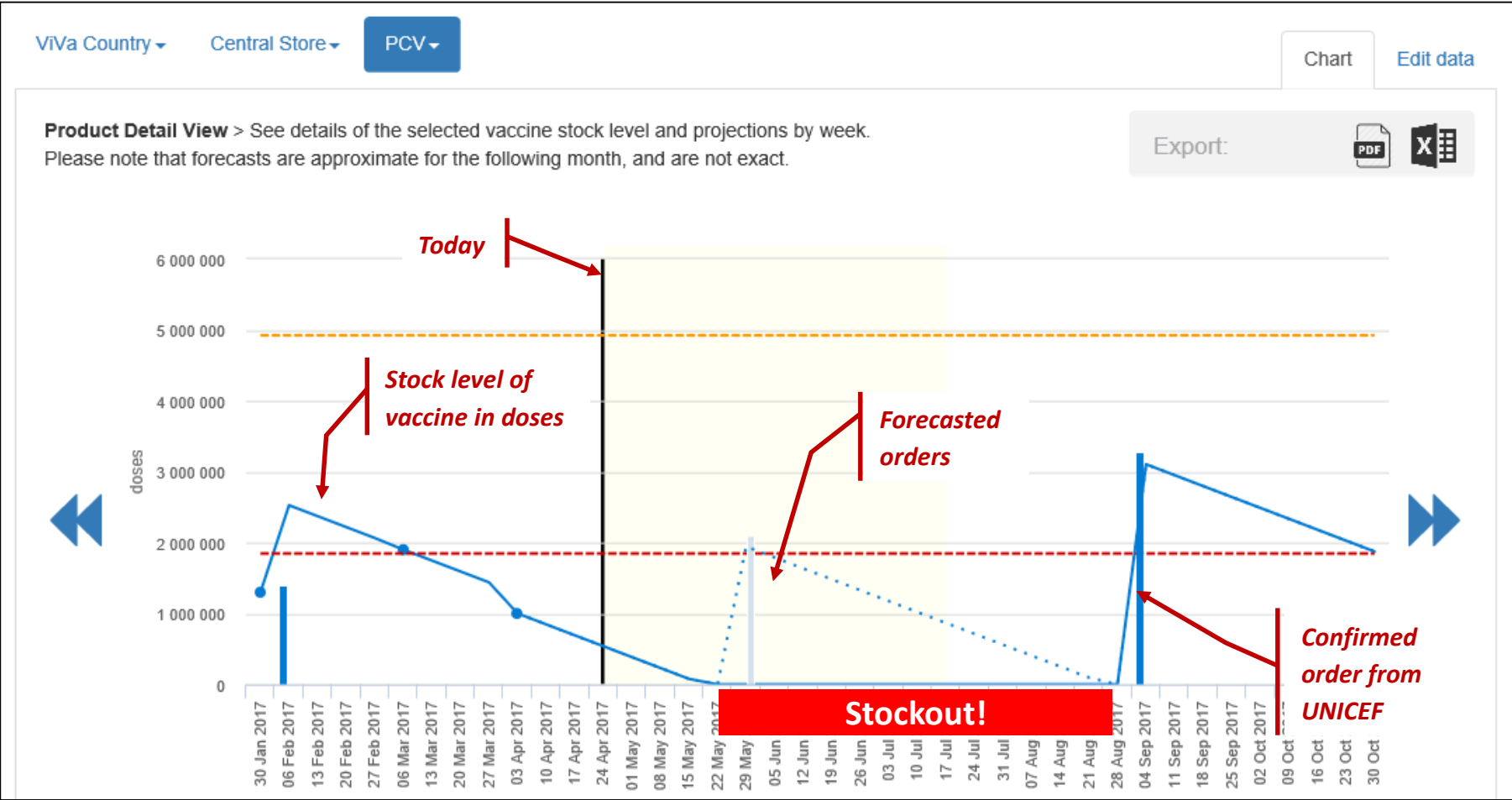
| Vaccine type | Presentation | Quantity available (doses) | Expiry date | WHO PQ | Cold Chain volume (sec.packaging) (cm3/dose) | Shipment costs * |
|-----------------------------------|--------------|----------------------------|-------------|--------|----------------------------------------------|------------------|
| OCV -1 dose | Plastic tube | 2,229,950 | N/A | Yes | 7.8 | \$0.060 |
| OCV -1 dose | Glass vial | 990,040 | N/A | Yes | 16.8 | \$0.129 |
| Total current availability | | 3,219,990 | | | | |

| Quantity available (doses) | Expiry date | WHO PQ | Cold Chain volume (sec.packaging) (cm3/dose) | Shipment costs * |
|----------------------------|-------------|--------|----------------------------------------------|------------------|
| 1,410 | Dec.2019 | No | 2.50 | \$0.040 |
| 2,910 | Sep.2020 | No | 2.50 | \$0.040 |
| 4,320 | | | | |
| 6,000 | Sep.2019 | No | 3.20 | \$0.031 |
| 6,500 | Nov.2019 | No | 3.20 | \$0.031 |
| 6,500 | Mar.2020 | No | 3.20 | \$0.031 |
| 19,000 | | | | |

| Presentation | Quantity available (doses) | Expiry date | WHO PQ | Cold Chain volume (sec.packaging) (cm3/dose) | Shipment costs * |
|---------------------|----------------------------|-------------|--------|----------------------------------------------|------------------|
| dose vial | 6,000,000 | N/A | Yes | 1.4 - 2.96 | \$0.043 |
| availability | 6,000,000 | | | | |

cost per dose based on simulated order

ViVa is a free online tool that shows current stock levels and future stock projections, including confirmed and forecasted orders from UNICEF. ViVa helps countries to see if their stock levels are sufficient before the next order arrives, and whether additional funding is needed to confirm an order.



For more information: contact viva@unicef.org
ViVa website <https://www.vivaplatform.org/en/Footer/About-ViVa>

Key Market Updates

PRODUCT MENU FOR VACCINES SUPPLIED BY UNICEF FOR GAVI, THE VACCINE ALLIANCE

Inactivated Polio Vaccine
Supply Update - May 2018

This note provides an update on inactivated poliovirus vaccine (IPV) supply and demand supply is sufficient to meet demand for rough UNICEF. It details information on catch up immunization for 35 countries; and its outlook on the market's medium-

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Human Papillomavirus Vaccine
Supply & Demand Update - June 2018

This update provides information on human papillomavirus vaccine, including concerns of self-funding against constrained supply programme design.

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Inactivated Polio Vaccine:
Supply Update

UNICEF Supply Division
May 2018

Human Papillomavirus
Vaccine Supply and
Demand Update

UNICEF Supply Division
June 2018

ment over 2013-2017 reached 94% for countries supported by (16%) for self-financing middle-early demand projections for Gavi-ach 63.2 million doses over 2013-18. The World Health Organization countries delayed full scale HPV other competing health priorities, ly. Consequently, HPV vaccine a lower materialized demand. support full-scale national HPV This substantially increased HPV by 2018. Gavi had approved an accedes. It anticipates additional ac plan for 2018-2021 seeks to HPV.' ent to meet the increased needs, CEI encourages manufacturers to supply through 2019 will affect C demand through UNICEF. different country income levels. Cs considering HPV introduction, sustain HPV coverage once they ment. arrangements (LTA) to supply food, and recently extended both pliers to further secure supply for

ause cancer. Nearly all cases of the second most common form 2022. UN, New York, July 2017. S, Geneva, June 2016.

| Presentation | Number of awarded manufactures | Storage space (cm ³ /dose) | | VVM | Product availability | | | Projected Weighted Average Price per Dose | | | |
|-----------------|--------------------------------|---------------------------------------|-------------------|----------|----------------------|-----------------------|-----------------------|-------------------------------------------|----------|----------|----------------|
| | | Vaccine | Diluent | | 2018 | 2019 | 2020 | 2018 | 2019 | 2020 | |
| 1 ds | 6 | 10.3 - 16.8 | - | VVM14 | Yes | Supply exceeds demand | Supply exceeds demand | Supply exceeds demand | \$1.08 | \$1.05 | Pending tender |
| 10 ds | 4 | 2.1 - 4.4 | - | VVM14 | Yes | Supply exceeds demand | Supply exceeds demand | Supply exceeds demand | \$0.74 | \$0.69 | Pending tender |
| 1 ds | 1 | 15.0 | - | VVM30 | Yes | Limited supply | Limited supply | Limited supply | \$4.50 | | Pending tender |
| 2 ds | 1 | 4.8 | - | VVM30 | Yes | Limited supply | Limited supply | Limited supply | \$4.60 | | Pending tender |
| 1 ds | 1 | 15.7 | - | VVM7 | Yes | Limited supply | Limited supply | Limited supply | \$2.80 | | Pending tender |
| 5 ds | 1 | 4.0 | - | VVM7 | Yes | Limited supply | Limited supply | Limited supply | \$1.90 | | Pending tender |
| 10 ds | 1 | 2.46 | - | VVM7 | Yes | Limited supply | Limited supply | Limited supply | €0.75 | | Pending tender |
| 10 ds + diluent | 1 | 2.60 | 3.11 | VVM30 | Yes | Supply exceeds demand | Supply exceeds demand | Supply exceeds demand | \$0.69 | | Pending tender |
| 10 ds + diluent | 1 | 2.10 | 3.11 | VVM30 | Yes | Supply exceeds demand | Supply exceeds demand | Supply exceeds demand | \$0.52 | | Pending tender |
| 1 ds | 2 | 11 - 16.8 | - | VVM30 | Yes | Needs planning | Needs planning | Needs planning | \$1.84 | | Pending tender |
| 1 ds | 1 | 7.85 | - | VVM30 | Yes | Needs planning | Needs planning | Needs planning | \$1.25 | | Pending tender |
| 2 ds | 1 | 4.84 | - | VVM30 | Yes | Needs planning | Needs planning | Needs planning | \$3.05 | \$3.05 | \$3.05 |
| 4 ds | 1 | 4.84 | - | VVM30 | Yes | Needs planning | Needs planning | Needs planning | \$3.05 | \$3.05 | \$3.05 |
| 1 ds | 1 | 12.01 | - | VVM30 | Yes | Needs planning | Needs planning | Needs planning | \$3.30 | \$3.30 | \$3.30 |
| 4 ds | 1 | 3.00 | - | VVM30 | Yes | Needs planning | Needs planning | Needs planning | \$2.95 | \$2.95 | \$2.95 |
| 1 ds | 1 | 17.33 | - | VVM14 | Yes | Limited supply | Limited supply | Limited supply | €1.88 | €1.88 | €1.88 |
| | | | | | | \$1.8000* | | | | | |
| | | \$3.6000* | \$3.5000-\$3.6000 | \$3.5000 | \$3.5000 | \$2.9500 | \$2.9500 | \$2.9500 | \$2.9500 | \$2.9500 | |
| | | | | | | \$2.2500 | \$2.2500 | \$1.9700 | \$1.9600 | \$1.9500 | \$1.9400 |

23 Year of Tender

2017

2018

2019

2020

2021

child

vision

ember

Anti-tetanus Serum...
(Human) Rabies Vaccine

+ 2019 Q1

Visit UNICEF's website on market updates:
<https://www.unicef.org/supply/>

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Price Transparency

Visit UNICEF's webpage on vaccine price data: https://www.unicef.org/supply/index_102225.html

UNICEF Price data overview

Background: UNICEF procures key essential and strategic products for children. To provide greater transparency, UNICEF publishes historic, current, and future awarded prices for some essential and strategic products. UNICEF lists prices based on its mandate, commercial terms, and long standing relationship with industry. All prices are in US Dollar. Euro prices are converted at the UN-official rate of exchange published by <https://treasury.un.org>

Information disclosure policy: Ref. UNICEF Executive Board document E/ICEF/2009/15 (the 'Accountability Report'): UNICEF makes reliable and timely information available about existing conditions, decisions, and actions related to the organization's activities, in an accessible, visible, and understandable manner, unless deemed confidential. UNICEF makes public its international procurement solicitation notices and awarded contracts. UNICEF publishes the information on UNICEF Supply Division's website and the UN Global Marketplace. UNICEF Supply Division's website also provides procurement data by vendor, country, amount, and type of services/goods.

For further questions or additional information, please contact: supply@unicef.org stating subject matter "Price Transparency"

REMEMBER: Refresh browser page to reset filters if needed... See Arrow BOTTOM RIGHT

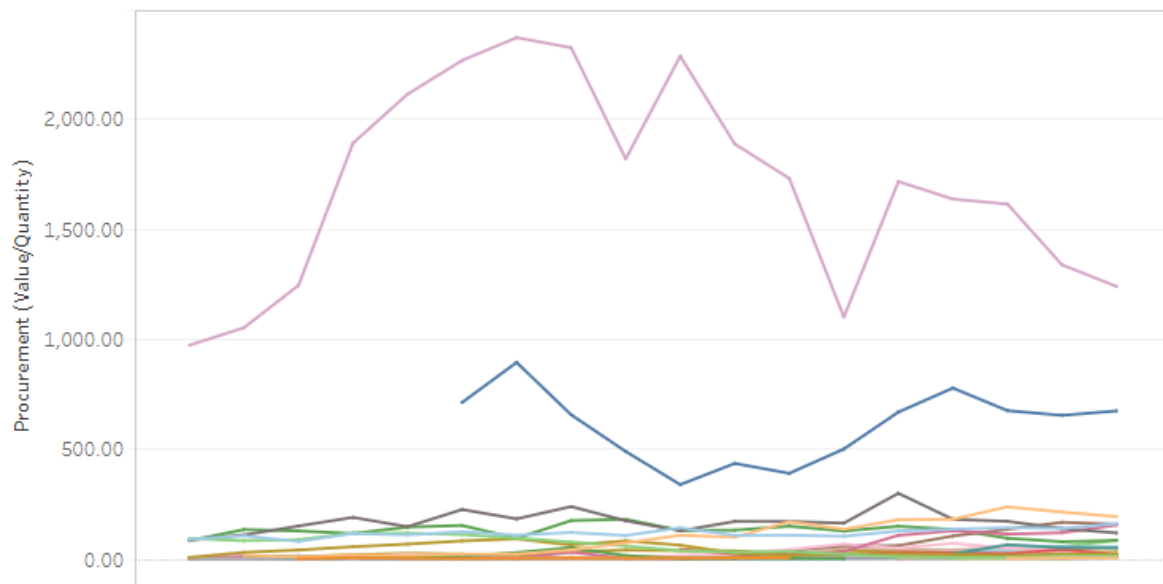
SELECT CATEGORY

Cold Chain Equipment
Mosquito Nets
Nutrition
Safe Injection Equipment
Vaccines

Historical procurement

Hover over a line to see more information

INTRODUCTION: The figure below provides an overview of UNICEF's historical procurement prices and volumes it contracts through suppliers. To see more information, hover the cursor over the lines to see information per product details, value or volume.



SELECT FILTERS

Change the historical procurement perspective. Select volume or value.

- Historical Procurement (Quantity)
- Historical Procurement (Value)

Filter historical procurement for individual products. Select one or more products in the dropdown menu.

Product Name: (All)

Filter historical procurement for selected timeperiods

2000 ————— 2020

Source: supply.unicef.org

News ▾

Emergencies ▾

Immunization, Vaccines and Biologicals

MI4A: Vaccine Purchase Data

Access the MI4A / V3P database here



MI4A/V3P vaccine purchase database
1.1mb, 482kb



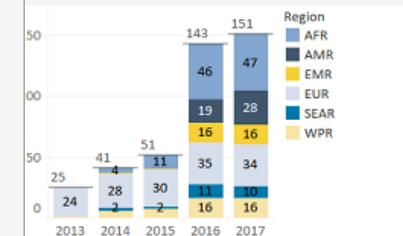
The MI4A/V3P vaccine purchase database

contains information on vaccine prices, volumes, manufacturers, procurement modalities, contract length and more as reported by over 150 countries.

Interpreting MI4A / V3P data

How to interpret the data: factors to consider when comparing vaccine price data
1.1mb, 273kb

Countries reporting price data, 2013-2017



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Networking, Knowledge Exchange & Peer Learning

- UNICEF Launched online forum (<http://www.vppnetwork.org/>) to support peer-to-peer exchange... The **Vaccine Procurement Practitioners Network** (VPPN)
- UNICEF is working with partners (Gavi, BMGF, R4D) to integrate within knowledge sharing platform for Gavi transitioning countries
- Regional/sub-regional **VPPEFs**



UNICEF SD Projects – Some new initiatives

- Vaccine procurement **assessment toolbox** → standardized methodology governments can use to assess national vaccine procurement processes
- Vaccine procurement **e-learning course** → Under development
 - Collaboration with partners
 - Piloting/feedback from partners (incl. government counterparts) on the ground

THANK YOU



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