

Centre	Category	Product	Market Shortcomings*							Composite severity of all current market shortcomings**	Opportunity for Intervention***		Current Strategy / Intervention
			Availability	Affordability	Competition	Quality	Acceptability / Adaptability	Delivery	Funding Security		Current	Next 4 years	
Vaccines	Routine Vaccines	<a href="#">Bivalent Oral Polio Vaccine (bOPV)</a>	●	●	●	●	●	●	●	●	Med	High	While ample competition for finished product, diversification of bulk is not secured for the future - working to maximise bulk producers and adjust number of fillers to ensure sustainability while preparing for future withdrawal earliest 2025. Encouraging countries to expand their supplier base to secure diverse sources of supply. Working with programme and suppliers to adjust to needs and financing availability.
		<a href="#">Inactivated Polio Vaccine (IPV)</a>	●	●	●	●	●	●	●	●	Med	High	The prequalification of 2 new products in 2020 has meant that the supplier base has now improved 5 suppliers with sufficient capacity to meet demand. Working with programme to prioritise introduction of the second dose of IPV into countries EPI schedule. The introduction of the 2 new products have improved the affordability of IPV.
		<a href="#">Bacillus Calmette-Guérin (BCG) Vaccine</a>	●	●	●	●	●	●	●	●	Med	Med	2020 supply outlook and beyond was moderate to fragile after WHO delisted one BCG vaccine manufacturer with large capacity in late 2019, and another PQ supplier experiencing supply interruptions, even though others are producing to maximum capacity, with a high dependency on a main supplier. UNICEF will monitor closely market developments and maintain dialogue on next generation vaccines.
		<a href="#">Diphtheria, Tetanus, and acellular Pertussis (DTaP) Vaccine</a>	●	●	●	●	●	●	●	●	Low	Med	UNICEF will continue to work on encouraging suppliers to give UNICEF access to sufficient supply of DTaP at an affordable price level.
		<a href="#">Diphtheria, Tetanus, and whole cell Pertussis (DTwP) Vaccine</a>	●	●	●	●	●	●	●	●	Low	Med	There is sufficient availability of DTwP standalone vaccine supply to meet country needs, as country demand through UNICEF for this product is low.
		<a href="#">Pentavalent (DTwP-HepB-Hib) Vaccine</a>	●	●	●	●	●	●	●	○	High	High	Ensure sufficient supply and flexibility in the vaccine mix (DTP/pentavalent/hexavalent) to cover Gavi and non-Gavi country demands. Overall supply capacity is adequate to meet demand, however individual supplier capacity to be closely monitored to mitigate individual supplier risk. Continue support for product innovation as well as improve country demand forecast accuracy to ensure a sustained healthy market.
		Hexavalent (DTaP-HepB-Hib-IPV) Vaccine	●	●	●	●	●	●	●	●	Low	Low	Continuing to work on encouraging suppliers to give UNICEF access to DTaP-containing vaccine supply at an affordable price level.
		Hexavalent (DTwP-HepB-Hib-IPV) Vaccine	●	●	●	●	●	●	●	●	Med	High	UNICEF will include a wP-containing hexavalent in its next pentavalent tender for supply from 2022 (for MICs) and 2023 (for Gavi supported countries), coinciding with the opening of a funding window. UNICEF will seek sufficient and uninterrupted hexavalent supply availability at an affordable price once a product acquires WHO prequalification and is introduced in countries, and monitor impact on competing bulk demands for standalone DTwP, HepB, and DTwP pentavalent vaccine.
		<a href="#">Measles Vaccine</a>	●	●	●	●	●	●	●	●	High	High	Encourage close coordination between the Measles-Rubella Initiative (MRI) partners and countries to increase forecast accuracy and ensure vaccine availability. Ensure suppliers are able to respond to unforecasted outbreak response requests when demand for Measles vaccine decreases.
		<a href="#">Measles and Rubella (MR) Vaccine</a>	●	●	●	●	●	●	●	●	High	High	Encourage close coordination between the Measles-Rubella Initiative (MRI) partners and countries to increase forecast accuracy and ensure vaccine availability. Enable competition through encouraging new market entrants.
		<a href="#">Measles, Mumps, and Rubella (MMR) Vaccine</a>	●	●	●	●	●	●	●	●	Low	Low	Encourage close coordination between the Measles-Rubella Initiative (MRI) partners and countries to increase forecast accuracy and maintain vaccine availability and number of current supply sources.
		Hepatitis B (Hep B) Vaccine	●	●	●	●	●	●	●	●	Low	Low	Ensure sufficient supply of HepB to meet current country requirements. However, the availability of standalone HepB vaccine competes for the bulk used in producing pentavalent vaccine.
		<a href="#">Human Papillomavirus (HPV) Vaccine</a>	●	●	●	●	●	●	●	●	Low	Med	Supply sufficient for ongoing programmes, constrained for new country introductions and multi-age cohort vaccinations through 2023. Supply is anticipated to improve with WHO prequalification of pipeline vaccines and increased production capacity from existing suppliers. Countries urged to consolidate credible multi-year demand and to submit multi-year commitments through UNICEF.
		<a href="#">Pneumococcal Conjugate Vaccine (PCV)</a>	●	●	●	●	●	●	●	●	Med	High	Supply sufficient to meet current demand. New products available for all countries considering the switch to multidose presentations. In 2020, UNICEF established LTA's for the newly prequalified PCV, this has made prices more affordable for middle-income countries.
		<a href="#">Rotavirus Vaccine (RV)</a>	●	●	●	●	●	●	●	●	Med	Med	Overall supply availability is sufficient to meet country demand. However, UNICEF encourages wider supplier diversity and better product programme formulation suitability to alleviate pressure on preferred product presentation demand, which impacts supply security.
<a href="#">Tetanus and Diphtheria (Td) Vaccine</a>	●	●	●	●	●	●	●	○	High	Low	Country supply is sufficient and stable, with healthy market competition. UNICEF asks governments to improve demand forecast accuracy and review country forecasts on a quarterly basis in order to communicate requirements to partners and industry.		
High Risk / Regional Vaccines	Hepatitis A (Hep A) Vaccine	●	●	●	●	●	●	●	Low	Low	Supply availability is relatively sufficient to meet the low demand from a few countries. UNICEF market influencing strategies impeded by poor demand forecast accuracy and low demand.		
	<a href="#">Japanese Encephalitis (JE) Vaccine</a>	●	●	●	●	●	●	●	Med	Med	The early timing of delivery is important and encouraged due to the seasonality of the disease, long delivery lead times, and short vaccine shelf life. UNICEF to support Gavi programme changes to consider multi-year approvals for JE programmes. Similarly, countries are encouraged to consider multi-year budget allocation for JE procurement.		
	<a href="#">Meningococcal A Conjugate Vaccine</a>	●	●	●	●	●	●	●	Low	Low	Supply is sufficient to meet current demands. Supply is currently single sourced and there is no competition in this market segment. The relatively low-price from the sole supplier may be discouraging other market entrants. UNICEF to encourage supplier diversity and paediatric formulations.		
	<a href="#">Meningococcal C- and W-containing Vaccine</a>	●	●	●	●	●	●	●	High	Med	Supply availability of polysaccharide vaccine constrained and demand uncertain. Encouraging partners to improve forecast accuracy and epidemiological modelling. Suppliers to improve polysaccharide vaccine availability and/or conjugate vaccine affordability.		
	<a href="#">Oral Cholera Vaccine (OCV)</a>	●	●	●	●	●	●	●	Med	Med	Improve demand forecasts and encourage suppliers to increase production and supply availability.		
	Rabies Vaccine	●	●	●	●	●	●	●	Low	Med	Although there are four suppliers with WHO prequalified rabies vaccines, only one offer supply to UNICEF. Supply is sufficient to meet current low demand. Poor forecasting accuracy and low manifested country demand prohibits active UNICEF market influencing strategies. The anticipated start of Gavi support in 2022/23 with increased demand may attract more suppliers to seek WHO prequalification, increase competition, and open opportunities of active market shaping strategies.		
	Typhoid Conjugate Vaccine (TCV)	●	●	●	●	●	●	●	Med	Med	Engage with countries to shape demand and improve demand certainty. Encourage additional suppliers to obtain prequalification for their products so there is a balance of supply and demand as well as multiple national regulatory authorities (NRAs).		
	<a href="#">Yellow Fever Vaccine (YFV)</a>	●	●	●	●	●	●	●	Low	Med	UNICEF still encouraging suppliers to increase production and supply availability for routine and campaign activities for at risk countries. Seeking to secure affordable prices through UNICEF, as well as to secure 6 million doses for the Emergency Stockpile.		
New Vaccines	Ebola Vaccine	●	●	●	●	●	●	●	Med	Med	UNICEF encouraging suppliers to proceed to prequalification. One vaccine has WHO prequalification. Access to WHO prequalified vaccine limited to cases of outbreaks, with vaccination strategies in line with current SAGE recommendation. Allocation of vaccine is managed through the International Coordination Group (ICG) on Vaccine Provision, with supply of the vaccine managed by UNICEF, through UNICEF-contracted Ebola vaccine stockpile. UNICEF is following closely any upcoming SAGE recommendations for preventative use and availability of additional WHO prequalified vaccines.		



Health Technologies		Walk-in Cold (WIC) and Freezer (WIF) Rooms	●	●	●	●	●	●	●	●	Med	Med	WHO/PQS supported by UNICEF Cold Chain technical team issued in November 2020 the new specifications for large cold/freezer rooms. UNICEF is testing these with country specific tenders issued in 2020 and to be issued in 2021 among the 5 established LTA holders. As standard and large cold/freezer rooms are part of countries' COVAX requests, Cold Chain is increasing the tools to guide MoH on product selection, procurement and project implementation.
		<a href="#">COVID-19 Diagnostic Tests</a>	●	●	●	●	●	●	●	●	Med High	Low	UNICEF leverages wider availability of various competing products and their acceptability/adaptability (due to emergency context) in the countries to promote diversification of diagnostics supply and achieve lower prices. UNICEF leverages the COVID-19 Diagnostics Consortium engagements to secure access to certain diagnostics in scarce supply. UNICEF encourages manufacturers of COVID-19 diagnostics to list their products with WHO to ensure eligibility for UNICEF procurement according to the QA Policy for COVID-19 Dx.
		<a href="#">HIV Early Infant Diagnosis (EID) and Viral Load (VL) Point of Care (POC) Tests</a>	●	●	●	●	●	●	●	●	High	High	Monitor supply availability and engage with suppliers to secure supply until the production bottlenecks created by COVID-19. Continue to engage with countries to shape demand and improve demand certainty. Focus on securing sustainable and competitive price solutions, and continue coordination with partners to secure long term funding.
		HIV Rapid Diagnostic Tests (RDT)	●	●	●	●	●	●	●	●	Med High	Med High	Based on UNICEF's 2019-2021 Procurement Strategy for Serological Assays for HIV, Malaria, Hepatitis B and Hepatitis C two mini-tender have been issued in 2020, in Q1 and Q4 to capture newly WHO prequalified products in order to ensure that wide range of products are available. Due to the decrease in demand, UNICEF is working with programmes to analyse demand and working on improvements. Due to Covid-19 pandemic the project to generate the demand was on hold and we look forward to working on it in 2021 by arranging a webinar to RO and inform on the available tests through SD.
		HIV Community Self Rapid Diagnostic Tests (RDT)	●	●	●	●	●	●	●	●	Low	Med	Currently there are already 4 WHO prequalified products available on market and also available for procurement through UNICEF SD. Seeking to increase demand.
		<a href="#">Malaria Rapid Diagnostic Tests (mRDT)</a>	●	●	●	●	●	●	●	●	Med High	Med High	Based on UNICEF's 2019-2021 Procurement Strategy for Serological Assays for HIV, Malaria, Hepatitis B and Hepatitis C two mini-tender have been issued in 2020, in Q1 and Q4 to capture newly WHO prequalified products in order to ensure that wide range of products are available. The lack of suppliers in mRDT market was seen in 2020 during Covid-19 outbreak as many of the mRDT manufacturers entered also in Covid-19 dx market and that affected supply of mRDTs with longer lead times. UNICEF worked and will continue work closely with global procurers to make ensure there is no stock-out in countries and to address the issues globally.
		Yellow Fever Diagnostic Tests	●	●	●	●	●	●	●	●	High	High	UNICEF, GAVI and WHO collaborate to build a healthy market for Yellow fever diagnostics. The priorities for 2021-2024 are: continue the procurement activities related to Stage 1 of GAVI support; accelerate transition to Stage 2 of support by participating in efforts to support the industry to develop various types of test kits that best correspond to country needs and testing capacities, monitoring WHO validation of new tests and facilitating swift and innovative contracting with qualified suppliers; support initiatives to stimulate market interest in YF Dx products and catalyse competition. As a side benefit of these efforts, explore with partners opportunities to replicate the YF Dx model to support the Dx of other infectious diseases.
		Ebola Diagnostic Tests	●	●	●	●	●	●	●	●	High	High	5 products available on the WHO EUAL List. UNICEF tender launched 2019 to have supply arrangements and valid offers available for 5 products. Extending the offers with 3 suppliers for make sure there is availability of tests for emergency outbreak. Encourage partners and industry innovation and ensure availability and access for affordable, quality assured tests.
		<a href="#">Zika Diagnostic Tests</a>	●	●	●	●	●	●	●	●	High	High	In spite of the busy year due to Covid-19 outbreak great improvement of generating demand for procured Zika tests under the USAID project. Two projects ongoing with great help of MSF centre to coordinate the two projects: Operational Feasibility studies and deliveries to PAHO countries.
	Medical Equipment		<a href="#">Acute Respiratory Infections (ARI) Timer</a>	●	●	●	●	●	●	●	Med High	High	ARI diagnostic aid (ARIDA) continue to work with country programme stakeholders to make qualified decisions on scale with a second supplier contracted reducing price and increasing supply security. UNICEF launched a tender in 2019 to establish LTAs and to include the new class of products into UNICEF's supply catalogue. Project continues in 2021.
		Child Length-height Measuring Device	●	●	●	●	●	●	●	Med	Med	Maintain current expanded capacity. Innovation underway to meet higher requirements for accuracy of reading and data transfer in surveys.	
		<a href="#">Newborn Resuscitator</a>	●	●	●	●	●	●	●	Med	Med	Supporting product procurement and adoption through UN Commission, including demand generation. Maintaining market competition in face of potentially transitory price distortions. Seeking to expand supplier base and reduce cost.	
		Oxygen Concentrators	●	●	●	●	●	●	●	Low	Med	UNICEF seeks to ensure access to quality and fit-for-purpose products by assessing product specifications and engagement with partners in relevant oxygen fora (Every Breath Counts, U4O, etc.). £2.26M funding is expected to be released in 2021 from FCDO via COVID action, a UK-based consortium, for the oxygen concentrator re-think innovation PIP. Plans are now on the way to actualize this dream. Tender was launched in 2019 and two more LTAs were added making it a total of four (4), hence to offer countries with oxygen product solutions with updated specs. There is a change in colour from Orange to Green for affordability and this is because of the high demand for oxygen concentrators globally as a result of Covid-19 and even though prices were high, 94 countries afforded to procure this product. The Scaling Pneumonia Response INnovaTions (SPRINT) is a UNICEF project that aims to scale proven interventions for the treatment of pneumonia: Amoxicillin dispersible tablets and oxygen therapy. SPRINT seeks to accelerate uptake in target countries.	
		Pulse Oximetry	●	●	●	●	●	●	●	Low	Med	UNICEF seeks to ensure access to quality products that are fit-for-purpose, and has participated in the development of specifications with stakeholders and suppliers, looking at use in harsh environments, paediatrics, and varying skin pigmentation, as well as development to include standard motion, low perfusion, and testing for wider population. The Scaling Pneumonia Response INnovaTions (SPRINT) is a UNICEF project that aims to scale proven interventions for the treatment of pneumonia: Amoxicillin dispersible tablets and oxygen therapy. SPRINT seeks to accelerate uptake in target countries.	
		Vacuum Extractor	●	●	●	●	●	●	●	Low	Low Med	Encouraging partners to develop and monitor QA and performance standards to address quality concerns.	
		Examination gloves	●	●	●	●	●	●	●	Med	Low	Maintain current strategy to stockpile the products and continue efforts to geographically diversifying the supply base. Availability of raw materials is a manufacturing bottleneck. Encourage R&D by some manufacturers to come up with innovative alternatives for manufacturing materials or material mix, which could potentially optimize raw material requirements, increase production capacity and reduce cost.	
Personal Protective Equipment (PPE)		Medical/Surgical Face Mask	●	●	●	●	●	●	●	Low Med	Low	The markets have stabilized since the start of the COVID pandemic and prices are dropping to their normal levels. Maintain current strategy to stockpile the products and focus on geographically diversifying the supply base. Support initiatives to build regional/local manufacturing capacity.	
		High Filtration Masks / Respirators	●	●	●	●	●	●	●	Low Med	Low	The markets have stabilized since the start of the COVID pandemic and prices are dropping to their normal levels. Maintain current strategy to stockpile the products and focus on geographically diversifying the supply base. Support initiatives to build regional/local manufacturing capacity.	
		Gowns	●	●	●	●	●	●	●	Med	Low	The markets have stabilized since the start of the COVID pandemic and prices are dropping to their normal levels. Maintain current strategy to stockpile the products and focus on geographically diversifying the supply base. Support initiatives to build regional/local manufacturing capacity.	
		School Bags	●	●	●	●	●	●	●	Low	Low	New ITB and LTA established Q3 2020. New orders placed availing delivery. No change in either specification or strategy is foreseen till 2023	
Education		<a href="#">Emergency Tents</a>	●	●	●	●	●	●	●	Low	Low	New High Performance Tent innovation project completed. One LTA established and order placed both direct delivery and WH replenishment issued. The establishment of 2 more LTAs in progress, as well as for all the Add Ons. This was an outcome of an innovation project over the last 7 years, hence the new HPT is expected to be maintained till further change is deemed necessary.	
		E. Coli Detection	●	●	●	●	●	●	●	Med	Med	UNICEF Supply Division is challenging rapid E.coli detection tools through a product innovation project. A Target Product Profile has been published and a Request for Proposals (RFP) was launched in 2020, to capture E.coli test innovations that are faster, easier to use and more accurate. A further RFP is likely to be issued within the next two years as technologies evolve.	

Water, San	Water Sanitation	Hand Pumps									Low	Low	UNICEF Supply Division together with Regional Offices are assessing local/ regional markets on spare parts, maintenance and installation for public domain handpumps.
		Water Purification Tablets									Low	Low	UNICEF Supply Division (SD) is working with other partners (the Humanitarian Innovation Fund (HIF), WHO, etc) to assess alternatives to chlorine-based water treatment products. SD has published product guide on Household water filters, is planning to organise webinars with RO/CO staff and will look at field trial options in 2021 for product validation. In 2021, UNICEF SD will support a research on the end use of chlorine tablets (TOR / concept note).

\* Market shortcomings are described as minimal / not present (**green**), moderate (**orange**), and severe (**red**).

\*\* Composite severity of market shortcomings for each product is assessed as none, mild, moderate, moderate-to-severe, and severe

\*\*\* Level of opportunity for market intervention, based on practical and strategic considerations as low, medium, or high

Modelled after the UNITAID Market Dynamics Dashboard

[We welcome users' feedback either online as comments or via email.](#)

- none
- mild
- moderate
- moderate-to-severe
- severe