Assessment of the Covid-19 Supply Chain System (CSCS)
Summary Report

26 February 2021

Prepared by The Yellow House

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1 Introduction

In September 2020, WHO, with the advice of the CSCS Task Force (SCTF), commissioned an assessment of the Covid-19 Supply Chain System (CSCS) focused on three main areas: strategy, implementation and moving forward.

The lessons learned assessment was conducted by The Yellow House, together with MM Global Health, from October 2020 through February 2021. The assessment was steered by a Joint Steering Group (JSG) comprised of SCTF members and chaired by the member from the Danish Refugee Council. The JSG met five times over the course of the four months in order to provide their advice on the scope, methodology and findings of the assessment. The Terms of Reference and a full list of members of the JSG is available in Annex 1.

WHO, together with WFP, acted as the Secretariat for the assessment. WHO allowed the assessment to be as independent as possible.

This document provides a summary of the key lessons learned from 2020 and recommendations for the future. It is supported by a slide deck providing the full analysis and a summary slide deck providing an executive summary of the assessment and recommendations.

2 Methodology

The assessment consisted of four streams of information gathering:

1. A desk review of documents, meeting minutes, press releases, other surveys and assessments as well as interviews with key informants from WHO, WFP, the purchasing consortia leads at WHO, the leads for PPE Procurement Reference Group at UNICEF and the Global Fund. A list of references is available in Annex 2.

2. A survey to collect views on the CSCS. 397 stakeholders identified by the JSG and the Secretariat were invited. 113 responses were received, of which 75% were from UN staff and 50% were at the global level. The summary of the survey questions and response is available in Annex 3.

3. Interviews with key stakeholders, as identified by the JSG and the Secretariat. 48 stakeholders were invited and 29 were interviewed. A copy of the interview protocol and list of those interviewed are available in Annex 4.

4. A quantitative data review using data from the CSCS dashboard, Supply Portal, Buyers, WFP and ad-hoc sources (e.g., meeting minutes, publicly available data). A description of data sources is available in Annex 5.

While there was a wide range of views within and between stakeholder groups and some gaps and inconsistencies with the data, by using these multiple information sources, it was possible to triangulate the information and identify common themes. This analysis was pressure tested with the JSG and stakeholders and the JSG in order to inform the lessons learned and recommendations in this assessment.

It should be noted that while UN and NGO staff working in countries and regions provided numerous inputs, limited input was received from countries; therefore, their input was given more emphasis in the overall analysis.

3 Context

The CSCS was established during an unprecedented time. The world was facing a novel pathogen, the scope and spread of which was unknown in the beginning of 2020. WHO declared a Public Health Emergency of International
Concern on 30 January and a Global Pandemic on 11 March. By end March, nearly a quarter of the world’s population was under quarantine, travel was restricted, schools closed, and markets for basic supplies and key medical supplies had contracted quickly. By early April, more than one million cases were confirmed with over 60,000 deaths, increasing to 83 million cases and 1.8 million deaths by the end of the year.

The UN and public health partners took early action to ensure access of life-saving supplies. By end January, WHO convened the Pandemic Supply Chain Network to alert of market constraints for Personal Protective Equipment (PPE). In early February WHO reached out to UN agencies and NGOs to begin discussions on coordination, and in mid-February the WHO Director General reached out to select Heads of State and Industry CEOs calling out for help with expanding PPE manufacturing. A rapid response of PPE and test kits to countries, notably by WHO and UNICEF, was well underway in February and March. The UN Crisis Management Team (CMT) convened in mid-February, from which the concept and structure of the CSCS matured. The CSCS started in March and was fully launched in end April.

The CSCS brought together UN agencies, public health partners, vendors and NGOs to improve access to critical, life-saving Covid-19 supplies via coordinated and efficient pandemic supply chains. It had two main objectives: i) sourcing and allocating essential Covid-19 products for IPC (PPE), clinical support (Biomedical products) and testing (Diagnostics), and ii) delivering these products via a virtual and physical supply chain leveraging humanitarian air services.

It used three core strategies: consolidated demand and allocation, coordinated purchasing and streamlined delivery. The CSCS set-up was comprised of: an interagency Task Force that provided strategy and oversight, three Purchasing Consortium (PPE, Biomedical, Diagnostics), and a Control Tower that provided the operational backbone, the systems and tools, and coordinated delivery.

## 4 Findings

### 4.1 Quantification of the CSCS

Below is a synopsis of what the CSCS provided to countries 2020.

- $1,091 million Covid-19 supplies for 184 countries
- 46% PPE, 41% diagnostics, 13% biomedical supplies (based on $ value)
- 1,023 million units of PPE were supplied to 169 countries
- 71 million diagnostics tests/kits were supplied to 161 countries
- 58,246 oxygen concentrators to 127 countries (mostly to LIC, LMIC)
- 3,462 ventilators to 84 countries (approximately half were UMIC)
- Of the 184 countries, 29 were low-income and received 26% of the supplies, 51 were lower-middle and received 37% of the supplies, 57 were upper-middle and received 31% of the supplies, and 47 were high-income countries and received 6% of the supplies.
- UNDOS and IOM procured supplies for UN and peacekeeping staff.
Through a multi-lane procurement approach, there were 13 main buyers in the CSCS. The health procurement assets of the UN and global health partners were leveraged, with 71% of supplies for countries being procured by WHO (including PAHO) and UNICEF. PAHO was the only regional buyer in the CSCS and accounted for $135 million and 30% of the WHO total.

All WHO regions received supplies via the CSCS, with the highest proportion of supplies going to the African Region and the lowest proportion to the Western Pacific Region.
Note: the value and quantities for the Americas Region includes one large order of 10 million manual diagnostics tests for Brazil with a value of $80 million, which significantly impacts the data for this region.

According to the survey, low- and middle-income countries accessed approximately 50% of their Covid-19 supplies via the CSCS. Their next most frequent channel for accessing Covid-19 supplies was going directly to markets themselves. The countries with the largest procurement value through the CSCS are illustrated below.
There was also a multi-lane approach to delivery. More than half of over 4,500 deliveries shipments and around 70% of volumes transported were managed via the WFP hub and spoke system designed for the CSCS. More than 60% of deliveries were delivered by air. The WFP transport service for cargo and passengers was noted by NGOs as a “game changer” and they may not have been able to continue their programmes without this support.

4.2 Early Action
One aspect that stood out was the early and rapid action taken by WHO and UNICEF as well as donors and other partners. In late January and February, WHO provided early signals to markets, alerting industry on market constraints for PPE and publicly projected a need of PPE of 1.3 billion units for the coming 9 months. There was a rapid deployment of supplies by WHO and UNICEF in February and March. Already in February, 84 countries received PPE and diagnostics and 104 countries in March. WHO actioned a “no regrets” mechanism to reach a large number of countries early, primarily using existing inventories. UNICEF provided higher quantities to fewer countries. Early funding was deployed by WHO. The Global Fund reprogrammed funding. The Gates Foundation provided bridge-funding to enable rapid deployment of supplies, and the Solidarity Fund launched in March. The
CSCS called on experts (e.g., CHAI) to negotiate and secure access terms with manufacturers of automated PCR diagnostics tests, and the first meeting of the Diagnostics Consortium was in early March. A biomedical supplies forecast was prepared by WHO and used in discussions with industry to understand capacity in March. UNICEF and WHO started working on a forecast for PPE in March, which lead to a joint industry consultation and tender in the first half of April.

4.3 Coordination and Strategy

There was early coordination and strategy to set up the CSCS mechanism. Upon direction from the UN Crisis Management Team, the Supply Chain Task Force (SCTF) was established in the end of March and held its first formal meeting in early April. The SCTF, co-chaired by WHO and WFP, was comprised of representatives from 10 UN agencies and subsequently extended to NGOs and donors. The scope of the SCTF was to establish and implement a global strategy to ensure access to critical supplies as identified by WHO, bring together the collective capability of public and private sector actors and ensure the flow of vital supplies and essential cargo.

The overall CSCS plan was in place by early April and served as the roadmap for the strategy, structure and systems of the mechanism. The SCTF signed off on the strategy, but it was designed with minimal consultation with UN partners, NGOs, countries and regions.

4.4 CSCS Core Strategies

4.4.1 Consolidated demand

The CSCS intended to establish a clear, global demand for PPE, biomedical supplies and diagnostics via a combined bottom-up and top-down approach. There were strong early signals on demand, for example WHO called on industry to increase PPE production by 40% in early March. The first demand forecasts for PPE and biomedical supplies were developed in March and used for messaging to industry. No demand was communicated on diagnostic tests. The first version of an Essential Supplies Forecast Tool (ESFT) was used to develop country-modelled supply plans, although the first version resulted in an over-estimate due to uncertainties and no-regrets assumptions. The methodology in the ESFT evolved and improved over the year.

There were no regular updates on demand communicated to markets or countries, and the demand forecasts were constrained by available funding rather than overall need.

4.4.2 Allocation

The original plan was that based on agreed allocation principles, essential supplies would be allocated daily against requests received from countries. The allocation strategy would be reviewed weekly with input from WHO on epidemiology and other risk factors and adjusted accordingly. The Control Tower was set up to manage the allocations.

In practice, the allocations were delegated to each Purchasing Consortium by the SCTF and each Consortium developed a set of allocation principles. Implementation of the allocation principles varied by consortium and there was no overall oversight on the strategy or implementation by WHO pandemic response.

**PPE:** The PPE allocation principles were finalized in early June. Before they were finalized, the buying organizations used their own allocation models, and there is no evidence that joint allocations were made by the Consortium.

**Biomedical:** Allocation principles were finalized in early May; however, country absorptive capacity and funding were the determining factors for supply, rather than an allocation.

**Diagnostics:** Allocation principles were finalized in late April and given the supply constrained environment for PCR tests, allocations were needed. While there was agreement on the principles, there was tension around the implementation and weighting of the principles, for example epidemiology vs. country vulnerability. Ultimately, funding, first-in-queue, and organizational / procurement agency interest were the main determinants of allocations. Pre-existing orders were maintained after the consortium allocation principles were created, except for some country orders cancelled by vendors (mainly in AMR) and moved to the Consortium. The lead-times for allocation decisions...
were considered long and the basis for decisions unclear to countries. NGO programmes were not included in the allocations. Finally, there was debate regarding allocations to UN and peacekeeping staff. The Diagnostics Consortium prioritised PCR tests for countries over staff needs and did not make an allocation. Acknowledging the importance of finding a solution, “duty of care” for frontline humanitarian workers should be taken into account in a future mechanism.

4.4.3 Coordinated purchasing
The CSCS intended to identify and map quality sources of Covid-19 supplies and then procure through a multi-lane approach using three channels: “(1) partner agency procurement (e.g., UNICEF, The Global Fund), including sourcing, validation, procurement, and QA. (2) sourcing intermediaries managed by WHO. (3) WHO sourcing and procuring products in the market. These three channels will mobilize the resources to provide essential health products.”

Through the CSCS coordinated purchasing effort, significant volumes were procured, notably by organisations that normally procure items for health programmes. A multi-lane approach was implemented with different strategies. All buyers went direct to market. In addition to their own procurement of diagnostics, The Global Fund procured PPE via UNICEF and PPE, diagnostics and biomedical supplies through UNDP. Of note, WHO purchased PPE in China via a consolidator to reduce their management of large numbers of suppliers and to localise the dynamic production and QA situation. A one-buyer, one-supplier strategy was put in place for PCR diagnostics and coordinated buying for biomedical supplies and eventually for PPE was implemented. The extent to which these lanes were strategically decided or coordinated varies. Additionally, there was a lack of alignment and coordination with the World Bank on procurement.

Additionally, catalytic negotiations with automated PCR diagnostic manufacturers in a “suppliers’ market” of novel products helped secure access to quantities and pricing. Bridge financing, combined with the use of inventory and emergency procurement, facilitated an early surge response of diagnostics tests and PPE to the pandemic. However, the lack of a volume guarantee may have been a key factor in the reduction in availability from the PCR manufacturers. In general, access terms negotiated for the CSCS were granted to UN agencies and the Global Fund, leaving NGOs and the World Bank having to negotiate separate terms. This, combined with other factors, may have influenced the World Bank to create their own Bank-facilitated procurement platform for the Covid-19 response.

Overall, the CSCS accessed some of the lowest prices on the market. There were no signs of major price gauging. PCR and RDT prices are high compared to similar non-Covid-19 tests, but these should decrease after development costs are recovered (e.g., by 2Q 2021). There were material weighted average price variations between UN buyers for PPE and biomedical supplies. It is difficult to assess why these variations occurred and it is recommended that pricing is analysed and monitored in a future mechanism.

There was agreement that the product groups of PPE, biomedical supplies and diagnostics were the right focus for the CSCS. However, there were some differences in specifications between buyers and what was considered “essential”. This contributed to some challenges at the country level as well as a potential waste of resources; for example, $59 million of “non-essential” PPE was procured in 2020. Quality of PPE products was identified as an issue in the first months of the pandemic, but procurement through the CSCS provided a quality assurance that was noted by multiple stakeholders.

After the initial rapid response, it is difficult to assess the speed of the CSCS procurement and how it compared to HICs and other buyers. Long or longer-lead times than in a “normal” emergency response could be expected due to the scale of the pandemic. The CSCS was in competition with the whole world for PPE and diagnostics. In the most constrained months in 2Q, some countries nationalised their supplies, which further impeded access. Volume commitments from PCR manufacturers did not materialize in full. Standard procurement processes and country/client MOUs processes slowed responsiveness. A look at lead-times across 2020 showed rapid response and short lead-times in in February through early April, and then for the rest of the year most requests across all products, were fulfilled over a period of months not weeks.
4.4.4 Streamlined delivery
The streamlined delivery operation of the CSCS was established in order to provide a global logistics distribution system, consisting of a Control Tower for access to supply and delivery, four strategic international consolidation hubs and six regional staging areas, strategic and prioritized cargo airlifts, passenger air services and tailored supply chains for each product category (although subsequently WFP was not used for diagnostics tests requiring cold chain).

While consolidated deliveries through WFP started already in February, including facilitating donations from Jack Ma Foundation, the WFP Emergency Service Marketplace was formally launched at the end of April. The hubs that were established for the CSCS, notably those in Liege and Guangzhou, played a key role throughout 2020, in the beginning for accessing shipping corridors when most were closed and subsequently for consolidating cargo. There was continued access for cargo and passengers throughout the year. The collective and consolidated volumes as well as the pooled costs helped maintain access and were key to smaller organisations who had difficulty negotiating cargo space on their own. NGOs in particular noted that the WFP services were a “game-changer” for their humanitarian programmes. In addition to the WFP services, most buying agencies continued to use their own freight forwarders to some extent, notably for temperature-controlled shipments.

There was a lack of visibility from buyers on upcoming deliveries to pre-book cargo, which limited the opportunity to consolidate, especially for smaller countries. There was also no coordination between deliverers. Quantification differences between shippers and buyers (volumes vs quantities, etc.) should be looked at to facilitate better coordination in the future.

Overall, a lack of visibility on shipment status was cited as a challenge for countries. There was need for better coordination and planning of deliveries between delivering agencies, as there was no consolidated visibility between buyers of what was being sent where or when, which could also be a challenge for receiving countries. Finally, there was a tension between consolidation and speed, which requires regular discussion and a mechanism for pulling out a key shipment, if needed.

4.5 CSCS Architecture

4.5.1 CSCS Task Force
While the SCTF met regularly and received updates on funding, procurement and logistics activities, and eventually to the epidemiology of the pandemic, it became more of a large information sharing mechanism rather than a strategic decision-making body. The SCTF was not able to maintain an end-to-end view of the CSCS nor did it review the strategies or focus of the Control Tower or Purchasing Consortia. It received updates from partners and the Consortia on supply status but did not regularly review supply, demand and operational data on a regular basis to understand performance and areas for improvement. There were some misunderstandings on strategy and information gaps among SCTF members, and many stakeholders identified the need for improved communication. Stakeholders also noted a need for a smaller, executive level group to provide a forum for agreeing on strategy and escalating tough decisions.

4.5.2 Control Tower
The Control tower was set up to be the operational backbone of the CSCS with a dual focus on demand/ allocation and delivery as well as supporting the SCTF.

At the onset operational partners were asked to deploy staff to the Control Tower (Geneva) on the premise the proximity would facilitate operational coordination. WFP deployed a large team immediately and led the delivery strategy from Geneva for the duration (refer to 4.5.4 Streamlined Delivery). Other partners sent staff on short-term missions (4-6 weeks) but no operational leads.

Proximity seemed to facilitate and operationalise connection to the pandemic response, as well as foster teamwork. It would have been better if there was more proximity of operational leads in all areas in order to help coordination of a multi-lane approach – notably, procurement and delivery.
Extensive information on each component of the CSCS was prepared and made available on-line, including the Covid-19 Essential Supplies Catalogue.

The demand and allocation work was delegated to the Purchasing Consortia, therefore, leaving the Control Tower with the focus of establishing the supporting tools (e.g., the Supply Portal), WHO and WFP transactions and partners requesting support through WHO, as well as facilitating the SCTF.

As visibility of the performance of the CSCS was not achieved via the Supply Portal, the Control Tower fell short of supporting the SCTF with data and analyses. The incomplete Supply Portal set-up also impacted countries, who experienced a lack of visibility on the status of their requests, including delivery information via their different buying channel. A data consolidation platform was created in the second half of the year and by year-end most buyers shared updated data on a regular basis, and it became a more reliable source of information.

4.5.3 Purchasing Consortia

Three Purchasing Consortia focusing on Diagnostics, Biomedical supplies and PPE respectively were set up during March – April. While all consortia operated from March/April through the end of the year and were able to secure a substantial quantity of supplies, they all functioned differently against the original plan, which is due to multiple factors, such as market dynamics, strategy, allocations, communication, and others.

<table>
<thead>
<tr>
<th>Plan</th>
<th>Diagnostics</th>
<th>Biomed</th>
<th>PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree technical interventions, specifications and map out country delivery plans</td>
<td>✓*</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>Calculate demand forecast</td>
<td>X</td>
<td>✓*</td>
<td>✓</td>
</tr>
<tr>
<td>Convene/engage industry &amp; negotiate price and volume agreements</td>
<td>✓</td>
<td>✓*</td>
<td>✓*</td>
</tr>
<tr>
<td>Distribute procurement/purchasing tasks</td>
<td>✓</td>
<td>✓</td>
<td>✓*</td>
</tr>
<tr>
<td>Coordinate financial commitments to industry</td>
<td>✓</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Ensure production schedules are integrated into the distribution system and deliveries prioritized</td>
<td>✓*</td>
<td>✓*</td>
<td>X</td>
</tr>
<tr>
<td>Allocation - added to Consortia scope in July</td>
<td>✓*</td>
<td>✓*</td>
<td>X*</td>
</tr>
</tbody>
</table>

4.5.4 Planning Tools and Data

In order to support implementation and coordination, a suite of planning tools was developed and launched. This included the WHO Partners Platform to enable real-time tracking to support the planning, implementation and resourcing of country preparedness and response activities (launched in mid-March), the Essential Supplies Forecast Tool (ESFT) to help governments, partners and other stakeholders to estimate potential requirements for essential supplies to respond to the pandemic (launched end March) and the Supply Portal to enable consolidated demand, requisitioning of supply needs per Covid-19 National Action Plans for allocation and action by the Purchasing Consortia (launched in early May). WFP created an on-line Emergency Service Marketplace (ESM) for managing deliveries by WFP.

However, there were not clear linkages between the tools and they were not accessible (at least in the beginning) to all partners. Additionally, the Supply Portal was incomplete and did not provide visibility to users on the status of requests, causing substantial frustration and inefficiency in implementation. Overall, this led to disjointed data and eventually to a post facto data collection, rather than real-time data sharing. There was also no evidence of an CSCS data strategy, including definition of data needs or use to monitor performance and inform planning and decision making.
5 Could be ‘Better if’

Based on the findings and analysis, a number of “Better ifs” have been identified, which could be applied to continued pandemic response, or in preparation for a future response. These include:

5.1 Execution Leadership – maintain a global perspective

While there was wide agreement on the concept of the CSCS, it was frequently noted that execution was challenging. This was due in part to inconsistent leadership across partners and in different forums, lack of understanding, visibility and monitoring of the end-to-end strategy and organisational interests. Often operations and reporting seemed to replace strategy and decision-making in the SCTF. In order to address these challenges, the execution could be better with a leadership approach per the following:

- Establish a fire-wall between coordination and implementation.
- Use data to understand needs, monitor performance and communicate.
- Create a small executive level group to provide strategic leadership and focus.
- Maintain an overarching, end-to-end view of markets and supply chain – including demand (needs, funding) and supply (availability, price, allocation) and strategies.
- More senior-level engagement across partners (not just WHO) to keep strategic and agile. The right people in the right place – draw on expertise.

5.2 Stay pandemic-response led

There were some key areas in which the CSCS response did not necessarily demonstrate an alignment with the WHO-led pandemic response. One example is allocations for diagnostics, where there was debate among partners on the operationalization of the allocation principles. Another is the use case for PPE, where there was a difference between agencies on the definition of “essential” PPE for the Covid-19 pandemic response, resulting in a material spend on “non-essential” PPE items. Therefore, an aligned response could be better if:

- Stay Pandemic-response led to provide authority & expertise (a ‘final voice,’ if needed) on:
  - Negotiation and ensuring access terms link to procurement
  - Specifications, use-case & suitability of supplies
  - Demand forecast - top down & bottom up
  - Demand generation
  - Allocation of scarce supplies
  - Product innovation
- This would also help reduce organisational interests / perspectives / functions as a stronger factor on key access issues, for example at the Consortium.

5.3 Regional and localisation

Countries and regional bodies asked to be more involved in the design of the CSCS. They called for greater empowerment of local and regional procurement as a central part of a mechanism, and suggested sourcing supplies from local and regional markets. Given that countries accessed approximately 50% of their supplies from other channels, it is key for at least strategic alignment and coordination. But more so, including country and regional purchasers in a mechanism could increase access and ownership. Providing information on the evolving global situation of key supply markets would help inform country access strategies. It would also give context to allocation decisions – which in any case need to be more timely and transparent. It could be beneficial to build a country-facing platform, including by connecting to partner platforms and engaging national government and regional institutions.

5.4 Define and use data

Data is essential for monitoring supply chains, assessing market situations and supporting communication. While substantial amounts of data were collected during 2020, the data needs were not defined and the collected information was not used in a way to drive performance, support decision making or foster collaboration. It was also a challenge for organisations to share data and there were inconsistent reporting formats between organisations. The CSCS would be better if:
• Data needs defined for visibility of a supply chain operation and market situations, as well as for multi-directional information flow within and outside of the CSCS.
• Data sharing compacts and a pre-built system for data sharing given system interoperability challenges.
• Data used to drive performance, manage risks, course correct, support decision making.

5.5 Create a playbook on roles and a system to coordinate

One significant challenge to the CSCS was setting up the mechanism in the middle of the pandemic. In fact, the build of the CSCS was at the time when markets were most constrained, gaps in funding were becoming clear, and overall, it was the most complex phase of response to the pandemic. This challenge led to frustration and inefficiency. The overall response could be better if a playbook (with roles, system, SOPs, data needs, etc.) is built out in “peace time” and is in place when needed. This would allow a CSCS mechanism to be faster and access supplies earlier (reduce lead-times) and with more efficiency (less time deciding who does what) during the most complex phase. It could also better enable country and regional engagement and leadership. This playbook could include:

• Roles and responsibilities
• Standard Operating Procedures
• Data needs and information exchange
• Suite of tools – focus on visibility, coordination, planning and end-to-end execution
• Country-facing platform to provide visibility for planning and execution
• A plan for Duty of Care for frontline humanitarian staff

It is important that defining a playbook is a consultative process, with UN agencies, countries, regions and other global health partners (NGOs, Funders, Foundations, IFIs, etc) involved in the design. This is key to buy-in, quality of execution and accessing key strengths of the network.

5.6 Tighter coordination of the multi-lane approach

Although a multi-lane procurement approach was an explicit strategy of the CSCS, there seemed to be a lack of understanding on this approach from different stakeholders involved in the CSCS, and if an agency was procuring directly instead of through a consortium mechanism, it was sometimes viewed as negative or territorial. This could be due to lack of visibility on the end-to-end CSCS plan and / or a lack of strategy on integrating the different procurement lanes. There were also possible opportunities / efficiencies not leveraged by not proactively managing this strategy. The multi-lane procurement approach could be better if:

• There is tighter coordination and strategy on the approach, including at the Task Force level
• The coordination and strategy are right-sized to the market typology
• The coordination includes technical specifications, QA, procurement and delivery to countries, and market-facing engagement on demand and access negotiations

5.7 Financing

While ‘bridge funding’ was available early in the year to support the initial response in 1Q, funding was noted as a constraint to the effectiveness of the CSCS. Availability of funding was a driving factor in the realisation of supplies for countries, rather than allocations. There was also lack of visibility of real need, as demand was tempered by available funding. Therefore, in order to help with continued speed of response and to secure volumes, it is key to set-up financing tools.

• Funding to back volume guarantee contracts issued to manufacturers of novel products
<table>
<thead>
<tr>
<th>Market typology</th>
<th>Market Characteristics</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commodities (eg, PPE)</td>
<td>• Some inventory in the market</td>
<td>• Strategic inventories</td>
</tr>
<tr>
<td></td>
<td>• Many suppliers</td>
<td>• Use a consolidator for global level supply to increase operational efficiency</td>
</tr>
<tr>
<td></td>
<td>• Low barriers to market entry</td>
<td>• Share quality assessment of suppliers</td>
</tr>
<tr>
<td></td>
<td>• Off shoring to low-cost manufacturing</td>
<td>• Alignment on use-case, composition of sets and technical specs</td>
</tr>
<tr>
<td></td>
<td>• Rapid scale-up</td>
<td>• Regionalisation: inventory and procurement (&amp; production)</td>
</tr>
<tr>
<td></td>
<td>• Price elasticity</td>
<td>• Coordinate the buy – primarily for countries, but do not over organise, which may slow things down</td>
</tr>
<tr>
<td></td>
<td>• Inconsistent quality</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Interchangeable products</td>
<td></td>
</tr>
<tr>
<td>Technical equipment (eg, Biomedical supplies)</td>
<td>• No inventory in the market</td>
<td>• Build out medical oxygen during peace-time (given likelihood of other respiratory disease and the lack of access to medical oxygen in LIC and LMIC for regular health services)</td>
</tr>
<tr>
<td></td>
<td>• Few suppliers</td>
<td>• This will also increase local and regional technical expertise and increase production capacity</td>
</tr>
<tr>
<td></td>
<td>• High barriers to market entry</td>
<td>• Consider regional/global stockpiles of some products (at manufacturers)</td>
</tr>
<tr>
<td></td>
<td>• Customization, complex products (500-2500 parts)</td>
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<tr>
<td></td>
<td>• Price inelasticity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Very difficult to scale-up production at a rapid pace</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Interchangeable products</td>
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</tbody>
</table>

| Differentiated products (eg, Diagnostics) | • Could be novel/pathogen specific                         | • Set clear technical specs and testing protocols                            |
|                                           | • Few suppliers/oligopolies                                | • Strengthen buyer influence: Leadership from pandemic leadership, volume guarantees, establish a lead buyer or at least shared strategy and organization of buyers |
|                                           | • High barriers to market entry                             | • Establish an allocation mechanism led by pandemic leadership                |
|                                           | • Regulated products                                       | • Ensure sufficient resources to provide timely assessments of novel products |
|                                           | • Market has a public health focus                         |                                                                                  |
|                                           | • Plug & play manufacturing for some products               |                                                                                  |
|                                           | • "Supplier market" as they set price and decide where products go |                                                                                  |
|                                           | • Limited product interchangeability                       |                                                                                  |

5.8 Market-tailored strategy to access critical supplies

As noted above, the different Purchasing Consortia performed differently, which should be expected, given the different markets each was trying to access. Looking at the CSCS, there were three distinct market archetypes: commodities, technical equipment and differentiated products. The access to critical supplies could be better if there is a better understanding of the market types and a pro-active approach depending on the market type.

5.9 Build out basic medical oxygen needs in LIC and LMIC

A respiratory infection pandemic highlighted what was already known – there is limited access to medical oxygen for primary healthcare needs, particularly in low resource settings. Given the longer lead-times for equipment, limited absorptive capacity of countries, and limited technical assistance capacity, it is unrealistic to expect a much greater rapid scale-up of medical oxygen in an emergency from what was achieved. Moreover, larger or different solutions may be a more appropriate choice for countries oxygen supply over time but the least feasible during an emergency. Taking into account long-standing shortfalls and given the risk of potential future respiratory infection, the international community should build on the current momentum and support countries increasing their medical oxygen to the needed levels.

6 Conclusion

Prior to the assessment, few people if any, had an overview of the work of the CSCS (across its large breadth and depth). There were divergent stake-holders views on most aspects of the CSCS. A lack of data and an underestimation of the effort to keep people informed and coordinated contributed to the lack of shared understanding.
The CSCS established and implemented a global strategy to help with access to critical and life-saving Covid-19 supplies. It harnessed the collective capabilities of the UN and tapped into key expertise and assets of partners, including on market-facing negotiations and financing. The culture and atmosphere during peak constrained periods were negative at times – seemingly due to a lack of agreement on strategy and roles, and organisational interest. Visibility on who was buying-what-for-whom and coordination were weak. Key interventions by partner leadership and a shared commitment were key and the CSCS created inclusive and information exchange forums in the midst of healthy and sometimes unhealthy competition between organisations/buyers. It acquired large volumes of PPE, biomedical supplies and diagnostics and maintained open corridors that delivered these essential, life-saving supplies to 184 countries in need. It did fall short in some important areas of implementation, such as coordinated end-to-end supply chain (E2E) strategy, allocation, communication, data and lead-times, and the limited operational link to the pandemic response left space for other priorities to be the determinate for key decisions. It is difficult to assess if “equitable access” was achieved, due to different views on the definition of “equitable.”

Throughout the assessment it was clear that the majority of respondents believe that a CSCS approach was needed and should be continued and adapted for the future, including around demand and allocation, procurement and delivery. Therefore, applying the lessons learned from the CSCS, a future set-up could look like:

---

**In order to achieve equitable access to essential pandemic supplies, the mechanism should be adapted to different phases, working with countries, the UN, global health partners, WB/IFIs, and markets**

**BUILD THE PLAYBOOK**  
To move quickly and efficiently – draw on a “playbook” (including roles, responsibilities, data needs, etc.) and preparedness measures (e.g., strategic inventory) to adapt based on the pathogen and scope of the outbreak.  
Develop with countries, regions, global health partners, WB/IFIs.  
Incorporate lessons learned.

**RAPID RESPONSE**  
Be prepared to provide a rapid response cushion for 2-3 months via a combination of regional, country and global actions.  
Adapt the playbook.  

**MAXIMISE ACCESS**  
Provide leadership for a global response that empowers regions, countries and partners by setting goals, coordinating, and providing visibility.  
Continue with main architecture: Pandemic Lead, Purchasing Consortia, Streamlined Delivery. With new regional, country, line and market typology based.  
Keep pandemic led: Allocation of scarce quantities, specifications, use-case, and negotiations with markets at key moments.

- Country needs  
  Build on the partner platform  
- Coordinated Supply Chains, including ICL  
  Build on the concepts of the supply portal and PIC/S.  
- Visibility on global markets  
  Build on global market dialogues.

---

In order to move quickly and efficiently, there should be a **mechanism** that builds on a “playbook” (including roles, responsibilities, data needs, etc.), developed in advance with countries, regions and partners, and preparedness measures (e.g., strategic inventory) that can be adapted based on the pathogen and scope of the outbreak. The mechanism should be prepared to:

- Provide a rapid response cushion of supplies for a 2-3 month period, via a combination of regional, country and global actions, based on strategic preparations;
- Maximise access thereafter by empowering regions, countries and partners by setting goals and providing visibility on country needs, coordinated supply chains, and global market situations; and
- Stay pandemic response led on allocations of scarce supplies, specifications, use-case definitions, testing algorithms, and negotiations with markets at key moments.

The mechanism should build on the Lessons Learned of this report and earlier lessons learned (notably Ebola) and similar work underway in WHO such as the Partner Platform, PIC/S, and global market dialogues.

There should be a **global overview of evolving market situation of key, essential products** to provide all countries information on global and regional markets, with real-time situation updates:

- To inform their access strategy and how they approach markets,
- To keep them apprised of market and access challenges,
- To support decisions on local manufacturing.
Finally, WHO has an important role to play in the initial rapid response. After which, WHO should continue to leverage its operational leg in maximizing access, while leaning in to its leadership role for demand and allocations, overseeing a coordinated supply chain that provides and uses data for all, and providing visibility on global market situations on essential pandemic supplies.
Annex 1 – Joint Steering Group Terms of Reference

JOINT STEERING GROUP TO PROVIDE ADVICE AND OVERSIGHT OF THE ASSESSMENT OF THE UN COVID-19 SUPPLY CHAIN SYSTEM

Terms of Reference
Final, 9 October 2020

Background

The global COVID-19 outbreak has led to an acute and drastic shortage of essential supplies, including personal protective equipment, diagnostics and clinical management equipment. At the request of the UN Secretary-General and in support of the UN Crisis Management Team, a Supply Chain Task Force was convened to establish the COVID-19 Supply Chain System (CSCS).

The CSCS consists of the Supply Chain Task Force, the Purchasing Consortia (PPE, Biomedical Equipment, Diagnostic Tools), and Control Tower.

- The Supply Chain Task Force oversees a concerted and coordinated approach that both leverages the well-established and proven systems, process, and mechanisms that participating partners have in place while reflecting the need to build on respective strengths and generate synergies for enhanced collaboration in these exceptional circumstances.
- Three Purchasing Consortia have been established at global level for each of the key product areas: Personal protective equipment (PPE), Diagnostics and Clinical Management to coordinate and leverage exiting mechanisms, systems, expertise, and capacity of the participating partners.
- The Control Tower is the central interface where country demand, partner procurement mechanisms, and logistics/distribution come together. The Control Tower manages execution of allocation against principles and strategy provided by the Task Force / Consortia. This includes reviewing requests, mapping available supplies, allocating available supplies to requests, and identifying a supplying agency to fulfil allocation.

Now, just over four months after the activation of the Supply Chain Task Force, the WHO is looking to conduct an assessment the CSCS performance to date and improvement opportunities to help inform its future direction.

This assessment will be carried out during September-November of 2020 and has been launched by the Supply Chain Task Force. A consulting firm was contracted to support the WHO SCSC Secretariat with the assessment, under supervision of the Chief, Operations Support and Logistics

Objectives and Scope of the Assessment

This effort aims at conducting a holistic outside-in assessment of the CSCS setup, performance, and activities to date. The assessment should address three primary questions:

a. How well has the CSCS been delivering against its core mandates, including:
   • Aggregating and processing demand for supplies
   • Finding and procuring essential COVID-19 supplies
   • Reconciling supply for scarce items with requests from countries (allocation)
   • Distributing and delivering allocated supplies to requesters (logistics)

b. How effective and well-suited is the current CSCS organizational and operational setup for enabling successful execution of the stated mandates?

c. What are the timing options and key consideration factors for transitioning the CSCS from emergency response into sustainable long-term supply chain?

Key Activities and Desired Outputs of the Assessment

Key activities of the assessment include:
• Coordinate official kick-off with the Steering Group to align expectations and stakeholders’ roles in the assessment including
  o Defined KPIs and criteria against which success should be assessed
  o List of CSCS activities in scope for assessment, including:
    ▪ Demand aggregation and processing
    ▪ Procurement of critical supplies during severe supply shortage
    ▪ Distribution and shipment of supplies
• Conduct interviews with key stakeholders to assess success and optimization opportunities (in people, processes, systems) over the course of delivering the CSCS core mandates, likely including representatives from: Central team (Task Force, Purchasing Consortia, and Control Tower); Regional organizations; Countries; Partnering organizations/agencies; Supplying agencies; Funding partners; Vendors
4. Review key operational processes, organizational roles & responsibilities, and technology systems against industry best practices and targets of the organization
5. Generate report outlining assessment findings, concrete optimization opportunities to ensure sustainable operations, as well as timing and consideration factors for transitioning the CSCS
6. Review assessment report with key stakeholders

The output should include and assessment report and recommendations that help respond to the following.
• Assessment of overall performance, key successes and challenges of current operational & governance model and agency responsibilities
• Recommendations of operational and governance changes to address challenges in a sustainable manner
• Initial high-level perspectives on key consideration factors and timeline for transitioning the CSCS into longer term supply chain solution
• Organizational and operational key learnings from the CSCS that is applicable to the ACT-Accelerator program

Joint Steering Group Objectives

Under the oversight of the Supply Chain Task Force, a Joint Steering Group (JSG) will provide advice to the assessment process, the appraisal of findings and the development of recommendations. It is expected to provide technical and operational input and feedback throughout the assessment process.

The JSG will specifically ensure the use of an appropriate methodology including the selection and adaptation of assessment evaluation tools.

The JSG will review summaries of the assessment interim and final reports as well as the development of recommendations.

Constitution of the JSG

The Supply Chain Task Force members, Purchasing Consortia and Control Tower will nominate participants so there is a good mix of expertise and organisations with no more than 8 members.

The JSG will include members with expertise including in public health, supply chains and product & markets. The JSG should also include individuals with experience in an NGO, Foundation, UN and/or the private sector, and from both lower and higher resourced countries. Individual expert(s) may be selected to ensure expertise.

SG meetings will be planned and supported by WHO and its consultants.

JSG Terms of Reference

Members are required to participate in all JSG meetings.
There will be virtual meetings over the time period September - November 2020. At their first meeting they will nominate a Chairperson.
Members are expected to prepare for JSG meetings by reviewing pre-reads.
Members will input to and review the evaluation process and the interim and final evaluation reports.
Members will maintain confidentiality including on any commercial sensitive information.
The JSG will sunset at the end of the assessment period (scheduled for November 2020).

**Joint Steering Group Members, CSCS Assessment**
Christian Grønnerød, Danish Refugee Council (Chair)
Stephen Cahill, Director of Logistics, WFP
Ellen Hynes, Operations Support and Logistics Lead, Health Emergencies Programme, WHO
Miguel Alvarez, Chief, Operational Sustainment and Healthcare Section, Procurement Division, Office of Supply Chain Management, UN DOS
Connie McDonough-Thayer, Deputy Program Director, CHAI
Sebastien Cazaneve, Director of Global Logistics & Supply Chain, IMC
Ken Legins, Chief, Supply Chain Strengthening, UNICEF
Annex 2 – Desk Review References

Terms of Reference
- COVID-19 Supply Chain Inter-Agency Coordination Cell Terms of References - Updated (March 2020)
- Supply Chain Task Force
- Diagnostics Consortium, Operational Framework to deliver key diagnostics to implement the WHO-led allocation of Covid-19 Diagnostics, 14 August 2020
- PPE Purchasing Consortium for COVID-19, draft as of 6 May 2020
- UN COIVD-19 Supply Chain consortia – clinical care

Allocation / allocation models
- Biomedical Allocation Model, July 2020
- Guiding Principles for Allocation | Diagnostics Consortium for COVID-19
- Guiding Principles for Allocation | PPE Consortium for COVID-19, Draft 4 June 2020

Meeting minutes
- UNCMCT meeting minutes
- Supply Chain Task Force meeting notes
- Supply and markets working group meeting minutes
- Diagnostics consortium meeting minutes and supporting materials (including Diagnostics – Technical Frequently Asked Questions)
- Biomedical consortium slide decks
- PPE Procurement Reference Group meeting minutes and supporting materials (under confidentiality)
- 2019-nCoV Global Supply Coordination Network Meeting Minutes, 7 February 2020
- EDG (Emergency Directors) summary note, 20 March 2020
- Inter-Agency Standing Committee, Summary Record and Actions Points, 2 April 2020
- Inter-Agency Standing Committee, Summary Record and Actions Points, 28 April 2020

CSCS materials
- Emergency Global Supply Chain System (COVID-19) Catalogue as of 23 September 2020
- COVID-19 Supply Chain System Purchasing Consortia Status as of 28 April 2020
- COVID-19 Supply Chain System: Requesting and Receiving Supplies
- COVID-19 Supply Portal Supply Coordinators, 7 September 2020
- COVID-19 Supply Portal Frequently Asked Questions
- Notes and Disclaimers concerning WHO’s COVID-19 Supply Portal
- COVID-19 Supply Chain System Process Flow

Market information & background
- Pandemic Supply Chain Network – Market Survey, Biomedical Equipment – COVID-19 pandemic (no date)
- Pandemic Supply Chain Network – Market Survey, PPE Assessment – COVID-19 pandemic (no date)
- UNICEF Joint Tender Industry Consultation (slides), 6 April 2020
- UNICEF COVID-19 impact assessment and outlook on personal protective equipment, 4 May 2020
- UNICEF COVID-19 In Vitro Diagnostics Supply Assessment and Outlook Update, July 2020
- WHO Oxygen Supply Consortium Market Landscape Update (draft), 23 April 2020

**Strategy documents and assessments**
- Independent Oversight and Advisory Committee for the WHO Health Emergencies Programme, Interim report on WHO’s response to COVID-19 January-April 2020
- WHO Strategic Response and Preparedness Plan, 4 February 2020
- WHO COVID-19 Strategy Update, 14 April 2020
- WHO COVID-19 preparedness and response progress report, 1 FEBRUARY TO 30 JUNE 2020

**Other**
- Email from WHO to UN Agencies and other stakeholders regarding supply shortages and need for coordination of PPE, 5 February 2020
- Templates and recipients for letters from WHO DG to CEOs (12 February 2020) and Heads of State (19 February 2020)
- WHO E2E Covid Supplies Outreach program summary (power point presentation), 12 October 2020.
- WFP Common Services Survey Results, November 2020
- Press releases

**Interviews with key informants**
- WHO OSL, Paul Molinaro, Michael Griffin
- WHO Biomedical / Clinical Care Consortium Lead, Michael Griffin, Janet Diaz
- WHO Diagnostics Consortium lead, Lara Vojnov
- WHO PPE Consortium Lead, Bruce Gordon
- WFP, Stephen Cahill, Veronica Rovegno
- UNICEF PPE Procurement / Procurement Reference Group Leads, Philipp Kalpaxis, Robert Matthews, Katinka Rosenbom
- The Global Fund, Peter Sands, Martin Auton, Kevin Emancipator, Azizkhan Jafarov, Lin Li
### Overview

**Summary of Survey Questions**

(Edited for simplification, removing question flow logic)

#### Identification Questions (to guide the rest of the survey)

- What type of organisation do you represent? (selected choice)
- With respect to CSCS, what "organizational" level are you primarily engaged with? (selected choice)
- In what WHO region are you based? (selected choice, global not counted)
- Since the start of the SARS-CoV-2 pandemic, for what product(s) have you accessed supply via the CSCS? (PPE/BioMedical Supplies/Diagnostic Tests)
- What area(s) of work of the CSCS have you been involved with until now? (selected choice)
- Since the start of the SARS-CoV-2 pandemic, from which sources did you access your COVID-19 supplies? (CSCS: COVID-19 Supply Chain Systems; Other aggregators, including other pooled procurement mechanisms; Bilateral agreements with another country; Market; directly from vendors without other intermediaries)

#### General Questions

- With respect to (PPE/BioMedical Supplies/Diagnostic Tests), was the CSCS helpful in (consolidating demand / coordinating purchasing / streamlining delivery)?
- In your opinion, how well did the CSCS bring public and private sector partners together to collectively contribute to access to critical COVID-19 supplies?
- In your opinion, how well have partners collaborated in the CSCS?
- Do you agree with the statement "The Control Tower shared information in a timely manner, including on roles, processes and decisions"?
- Do you agree with the statement "The Task Force shared information in a timely manner, including on roles, processes and decisions"?
- In your opinion, how clear are the roles and responsibilities within the CSCS?
- Considering the urgency of the SARS-CoV-2 pandemic, would you agree that decisions made in the CSCS were taken in a timely manner?
- In your opinion, how well were the CSCS learnings captured and acted upon along the way?
- In your opinion, how helpful was the Task Force in supporting the CSCS solve problems that were escalated, resolve conflicts, and bring partners together?
- In your opinion, which aspects of the CSCS could be useful to continue or adapt to ensure access to COVID-19 supplies for the response to the next wave of the SARS-CoV-2 pandemic? (Consolidating Demand, Coordinating Purchasing, Streamlining Delivery, Other)
- Given the global market constraints linked to the SARS-CoV-2 pandemic, how satisfied are you with the contribution of the CSCS to accessing critical COVID-19 supplies? (PPE/BioMedical Supplies/Diagnostic Tests)
- In your view, which are the strengths and weaknesses of the CSCS?

#### Demand / country level

- How helpful was the CSCS demand coordination mechanism (including the portal) at country level?
- How effective was demand coordination at the country level? (PPE/BioMedical Supplies/Diagnostic Tests)
- Was demand validated against national action plans? - Personal Protective Equipment (PPE/BioMedical Supplies/Diagnostic Tests)
- From your standpoint, how clear was the communication of the WHO allocation guiding principles? (PPE/BioMedical Supplies/Diagnostic Tests)
- Do you agree with the following statement: "relevant stakeholders were adequately involved in allocation decisions"?
- Did you receive the amount of COVID-19 supplies requested via the CSCS? (PPE/BioMedical Supplies/Diagnostic Tests)
- Did you receive the COVID-19 supplies requested via the CSCS as per the agreed timing? (PPE/BioMedical Supplies/Diagnostic Tests)
- How often did you use other channels to meet your demand for COVID-19 supplies? (PPE/BioMedical Supplies/Diagnostic Tests)
- Given the market constraints linked to the SARS-CoV-2 pandemic, how satisfied are you with the support offered by CSCS in addressing your demand for COVID-19 supplies?

#### Purchasing

- Did you receive the needed information in a timely manner to perform your purchasing role?
- Did demand consolidation help streamline your purchasing activities for COVID-19 supplies? (PPE/BioMedical Supplies/Diagnostic Tests)
• Given the global market constraints, did the Purchasing Consortia increase access to COVID-19 supplies? (PPE/BioMedical Supplies/Diagnostic Tests)
• Did the Purchase Consortia help reduce prices of COVID-19 supplies? (PPE/BioMedical Supplies/Diagnostic Tests)
• In your opinion, how agile the Consortia have been during the emergency response phase?
• Did the Purchasing Consortia leverage the partners' expertise for the different COVID-19 supplies? (PPE/BioMedical Supplies/Diagnostic Tests)
• Were the Purchasing Consortia collaborative? - (PPE/BioMedical Supplies/Diagnostic Tests)
• Were the standards for product quality assurance well-defined? (PPE/BioMedical Supplies/Diagnostic Tests)
• Was the needed information about suppliers (including terms and conditions) shared by the CSCS with your organization? (PPE/BioMedical Supplies/Diagnostic Tests)
• How often, did you use other channels to procure COVID-19 supplies? (PPE/BioMedical Supplies/Diagnostic Tests)
• Given the global market constraints linked to the SARS-CoV-2 pandemic, how satisfied are you with the different CSCS Procurement Consortia? (PPE/BioMedical Supplies/Diagnostic Tests)

Delivery

• Did the CSCS leverage existing delivery mechanisms?
• Do you think the World Food Program (WFP) hub-and-spoke system helped with timely delivery?
• Do you think the World Food Program (WFP) hub-and-spoke system helped with cost-effective delivery?
• Did the shipping information shared allow you to manage expectations from your stakeholders?
• How often did you use different delivery mechanisms? (PPE/BioMedical Supplies/Diagnostic Tests)
• How often did you use different delivery mechanisms? (PPE/BioMedical Supplies/Diagnostic Tests)
• What other delivery mechanism did you use?
• Given the transportation constraints linked to the SARS-CoV-2 pandemic, how satisfied are you with the CSCS support in delivering supply?
• What could have been done differently or in addition to help improve access to critical and life-saving COVID-19 supplies?

Summary of Survey Invitee and Responses

397 invitees across stakeholder groups / 113 full responses (as below)
Annex 4 – Interview Protocol and Interview List

Interview Protocol

<table>
<thead>
<tr>
<th>Introductory Question</th>
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<tbody>
<tr>
<td>1. How were you involved in the CSCS?</td>
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<tr>
<td>• Were you directly involved in any of the 3 priority areas (consolidated demand,</td>
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<tr>
<td>coordinated purchasing, streamline distribution)?</td>
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<td>• If yes, which ones?</td>
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<tr>
<td>• If no, what was your involvement?</td>
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<table>
<thead>
<tr>
<th>A – General Questions</th>
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<tbody>
<tr>
<td>2. In your opinion, to what extent did the CSCS have a strategy to improve access to</td>
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<tr>
<td>• Was the focus on consolidated demand, coordinating purchasing and streamlining</td>
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<tr>
<td>delivery the right priorities?</td>
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<tr>
<td>• Why or why not?</td>
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<tr>
<td>• Were there any changes to the strategy as access to critical supplies changed</td>
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<tr>
<td>over time?</td>
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<td>3. Do you think that the CSCS improved low- and lower-middle-income country access to</td>
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<tr>
<td>critical Covid-19 diagnostics (such as diagnostic tests and related equipment), Bio</td>
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<tr>
<td>medical supplies, such as oxygen and PPE supplies, such as masks and other protective</td>
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<tr>
<td>equipment?</td>
</tr>
<tr>
<td>• Did access vary between diagnostics, bio medical / oxygen, and PPE. If so, in what</td>
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<tr>
<td>way?</td>
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<td>4. How well do you think the allocation of scarce supplies was managed? For example,</td>
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<td>was the allocation useful? Fair? Clear?</td>
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<tr>
<td>• Did allocation vary between diagnostics, bio medical / oxygen, and PPE. If so, in</td>
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<tr>
<td>what way?</td>
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<td>5. Do you think that the CSCS approach was successful in leveraging the collective</td>
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<td>capabilities of public and private sector actors?</td>
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<tr>
<td>• Why or why not?</td>
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<td>• Who do you think the key partners were?</td>
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<tr>
<td>6. In your opinion, how well did the different stakeholders (for example, NGOs, UN</td>
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<td>agencies, suppliers, governments, etc) work together in the CSCS?</td>
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<td>7. Taking a step back, how much value add did the CSCS bring to your organization or</td>
</tr>
<tr>
<td>country for improving access to critical Covid-19 supplies?</td>
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<tr>
<td>8. Please tell us your view of the enabling environment for the CSCS, and how you</td>
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<td>think this supported or did not support the work?</td>
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<tr>
<td>For example, the Supply chain task force, the control tower, the supply portal, etc.</td>
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<td>9. Which aspects of the CSCS, if any, could be useful to continue or adapt to ensure</td>
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<td>access of critical Covid-19 tools for the next phase of the pandemic response?</td>
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<td>For example, for future vaccine work, diagnostics, etc.</td>
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<td>• What about any lessons learned for other emergency responses?</td>
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<tr>
<td>• What, in your opinion, could a future mechanism look like?</td>
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<thead>
<tr>
<th>B – Country-level Questions</th>
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<tbody>
<tr>
<td>10. How did you secure your supply of O2, PPE, Diagnostics?</td>
</tr>
<tr>
<td>• What other channels, other than the CSCS, did you use to secure supply??</td>
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<tr>
<td>• Did the way you accessed supply vary by product?</td>
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<td>• Did it vary over time?</td>
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<tr>
<td>11. How satisfied were you with the CSCS mechanism in contributing to your access to</td>
</tr>
<tr>
<td>Diagnostics, oxygen and PPE?</td>
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<td>12. How effectively was demand defined and coordinated at country level? How did</td>
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<td>demand compare with the national action plan?</td>
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<td>13. How was the communication on delivery? Did you know when your supplies were to</td>
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<td>arrive?</td>
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</table>
14. Did you use the CSCS portal?
   • If yes, was the portal accessible? How easy was it to use? Would you use it again?

C – Purchaser Questions

15. Are you responding for all product groups (diagnostics, BioMedical, PPE)? If not all, which ones?

16. Did the consortium:
   • maximise availability?
   • decrease competitive buying?
   • help with prioritisation of orders/deliveries?
   • help with pricing?

17. Was the consortium set-up agile for emergency response/pandemic procurement? For example, how fast was the procurement? Did it adjust during different phases of the pandemic?
   • If yes, what factors allowed for this?
   • If no, what were the bottlenecks or issues faced?

18. What changes did you experience in the market during the period? For example, availability, price, etc. And to what extent did the consortium approach adjust in response to these market changes?

C – Vendor Questions

19. Were you satisfied with the procurement processes (solicitation, negotiation, contracting, ordering, delivery)?

20. Was it more or less streamlined compared to normal? Did it reduce competitive buying?

21. Did the approach help with prioritising deliveries?

22. What challenges did you face with regards to supplying products?

23. Overall do you think that the CSCS improved access to low and lower middle income countries?

D – Delivery Questions

24. Did you use the WFP transport? If not, what did you use instead?

25. How does this compare to regular delivery mechanisms?

26. How did this service support the response of your organization?

27. What changes did you experience in the ability to move products during the period? And to what extent did the approach adjust in response to these changes?

E – Questions for Partners that did not participate

28. Did you know about the CSCS?

29. If so, why did you not participate?

30. How did you acquire supplies? What challenges did you face and how did you address these?
**Interview List**

**48 stakeholders invited / 29 interviewed**

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Name of Interviewee</th>
<th>Stakeholder Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNICEF</td>
<td>Etleva Kadilli</td>
<td>UN HQ</td>
</tr>
<tr>
<td>Unitaid</td>
<td>Ademola Osighesan, Robert Matiru</td>
<td>UN HQ</td>
</tr>
<tr>
<td>UNFPA</td>
<td>Eric Dupont, Danielle Jurman, Udara Bandara, Daniela Andries</td>
<td>UN HQ</td>
</tr>
<tr>
<td>WHO</td>
<td>Mike Ryan</td>
<td>UN HQ</td>
</tr>
<tr>
<td>WFP</td>
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### Annex 5 – Data Sources

<table>
<thead>
<tr>
<th>Data description</th>
<th>Timeframe</th>
<th>Description</th>
<th>Limitations</th>
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</thead>
<tbody>
<tr>
<td>Supply Portal</td>
<td>From May to year-end 2020</td>
<td>Request by date which enables analysis over time</td>
<td>Only requests through the Supply Portal – mainly WHO</td>
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<tr>
<td>WFP dispatches</td>
<td>February to year-end 2020</td>
<td>Dispatches by date which enables analysis over time</td>
<td>Only WFP dispatches</td>
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<tr>
<td>Consolidated Partner Procurement data analysis</td>
<td>January to year-end 2020</td>
<td>Consolidates data across agencies to give an indication of total throughput of the CSCS for all 2020</td>
<td>Not all partners provide data. No time dimension included. Issues with data quality</td>
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<td>Agency specific input through email communication (received from IOM, IMC, TGF, UNDOS, UNICEF, UNFPA, UNOPS, WFP, WHO)</td>
<td>Varies</td>
<td>Receipt of agency specific information</td>
<td>Inconsistent format. Some partners did not provide supplemental data</td>
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<td>Stock - inventory</td>
<td>Year-end 2020</td>
<td>Gives a snapshot of year end stock from high throughput agencies</td>
<td>Only received from WHO and UNICEF. Only totals by product category from UNICEF (not item level)</td>
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<tr>
<td>Public data</td>
<td>From February – year-end 2020</td>
<td>Sourced from public statements made by CSCS partner organisations</td>
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