

COVID-19 and the Global Supply Chains for Medical Supplies



Global supply chain for PPE

Since the start of the COVID-19 outbreak, supply chain for key medical supplies, especially Personal Protective Equipment (PPE), has been significantly disrupted

- Short-term global demand for protective gear has grown by a factor of 20+
- This has been exacerbated by the supply shortfall due to significantly lower production in China during late Jan-early March
- Some market intermediaries and suppliers have raised the price of PPE, especially N95 masks
- It is difficult for medical grade PPE manufacturers firms to increase production quickly
- Some apparel/clothing/textile manufacturers are repurposing their production lines to manufacture masks and gowns- not always easy/quick to repurpose to medical grade PPE

Global supply chain for medical equipment

The supply chain for medical equipment is working under significant demand

- Short-term demand surge for critical medical equipment especially ventilators and oxygen therapy equipment. Acute needs in EU, US and preparedness demand in other countries with less aggressive infection scenarios
- It is very difficult for medical equipment manufacturers to increase production quickly
- Some discrete part manufacturing companies are repurposing their production lines to manufacture ventilators, but timelines and any other aspects are highly uncertain
- Globally coordinated procurement facilitation may be the best option to secure critical supplies

Global supply chain for testing laboratory supplies

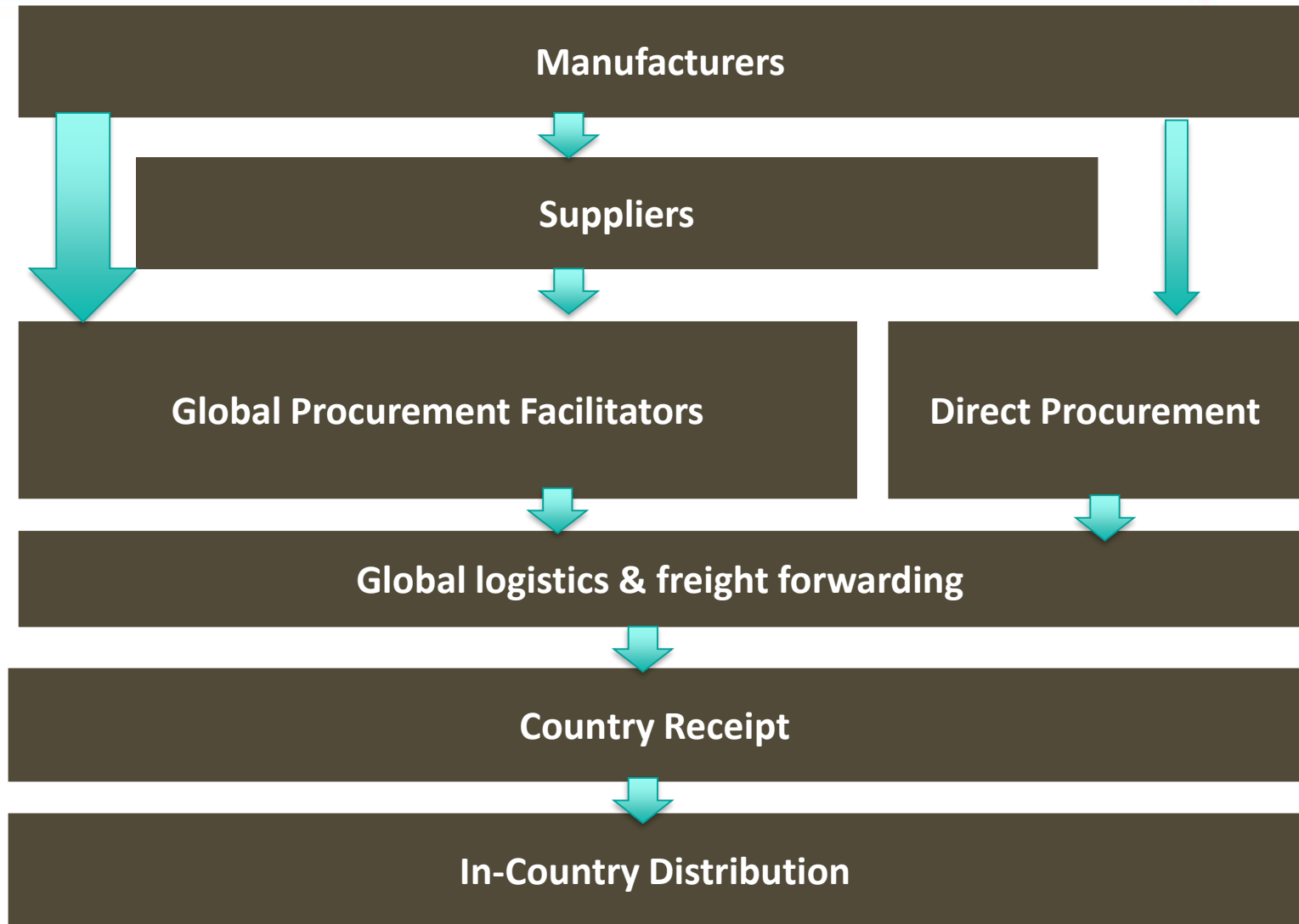
Demand and supply scenarios are different for the three different types of tests

- Centralized, machine-based (high throughput)
 - Point of care, machine-based (faster)
 - Rapid Diagnostic tests
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- Demand and supply for machines vs for test kits, cartridges is showing different dynamics
 - Globally coordinated price-volume supply negotiations may enable countries to secure high quality testing supplies at more affordable prices

International cargo capacity constraints

- Total air cargo capacity globally is 35% less (as compared to same time last year)
- Much of the decrease has resulted from very low belly cargo capacity due to cancellations of passenger flights
- Air cargo lanes which used to rely less on belly capacity (e.g. China-EU) have seen a smaller impact on their air cargo capacity
- Europe to Africa, and Europe to LatAm are the sectors with the most significant decrease
- Freighter capacity has increased to offset loss in belly cargo, especially for China outbound
- Cargo-only “passenger” flights being added by some airlines which are compensating for at least a portion of lost belly capacity
- Sourcing supplies is not sufficient, international transport is a key bottleneck. Procurement facilitators may be able to manage this better

Key actors in global supply chain for COVID-19



Critical supply chain actions needed over the next few weeks

Area	Critical activities
Infection Control & PPE protocol	<ul style="list-style-type: none">• PPE use protocols for POE, triage, case mgt, lab, etc• Number of patient/suspected patient interactions• Digital triage tools?• Plan for supply conservation efforts in case of PPE supply shortage
Bottom-up demand assessment for health facility infrastructure and equipment	<ul style="list-style-type: none">• Understand currently installed base of equipment• Carefully assess “overall system level” increase options in critical care capacity by taking into account multiple inputs e.g. staff capacity, auxiliary inputs. Fit for purpose bottom-up forecasts
Continued communication with the selected procurement facilitator	<ul style="list-style-type: none">• Organize routine status update meeting with the agency selected for procurement facilitation• Develop scenarios of timelines of supply pipeline
In-country logistics	<ul style="list-style-type: none">• Agree on roles and responsibilities for in-country logistics and distribution for quick response
Supply Chain Data collection and M&E	<ul style="list-style-type: none">• Develop a plan to capture stock and flow data for COVID-19 supplies