Comparison of Traditional vs. Emergency PPE Supply Chains

April 10th, 2020
Traditional PPE Supply Chain

1. Orders from Hospital
2. Orders reach material suppliers
3. Suppliers make parts for PPE manufacturer
4. Products distributed through supply chain
5. Hospital receives order

Notes:
- The customer initiates an order. The information flows down the supply chain through distributors, original equipment manufacturers, and to their suppliers.
- Components then move through the supply chain, are assembled into the final product, and the product moves to the customer.
- To keep costs low, companies have "leaned" the supply chain by reducing inventories and by trying to maintain a level flow of orders.
- When the demand is constant, customers rapidly receive their order.
- If any element of the supply chain has a disruption: a processing delay, material shortages, or even rapid increases in demand, the entire chain can come to a halt as soon as existing supplies in warehouses are depleted.
Emergency PPE Supply Chain

1. Hospital orders through many sources
2. Orders reach material suppliers
3. Suppliers make parts for PPE manufacturer
4. Manufacturer tries to satisfy as many orders as possible
5. Hospital receives orders from some sources

Notes:
- In the current pandemic, several new channels have developed to deliver PPE.
- Hospitals, medical clinics, and long-term care facilities are now placing orders directly to manufacturers, to the State of Iowa, and to their traditional medical suppliers.
- Order volumes for some PPE have dramatically increased. Existing factories may simply not have the capacity to produce to the demand and may not have time to ramp up production.
- In some cases, a manufacturer of PPE may not be able to get a key component from a supplier because their warehouse stores have been depleted. This is especially true now where there is competition in the supply chain for resources.
- The primary cause of this problem is the spike in demand itself.
New Iowa PPE Supply Chains

1. Hospital orders through many sources

2. Orders reach material suppliers

3. Suppliers make parts for PPE manufacturer

4. Manufacturer tries to satisfy as many orders as possible

5. Hospital receives orders from new sources

Notes:
- Iowa manufacturers have been innovative, partnering with new suppliers to develop PPE and deliver it directly to Iowa medical facilities and to the State of Iowa.
- They can do this faster in some instances because the supply chains are shorter. However, even with shorter supply chains, delays in delivery of PPE can still occur because of a lack of timely orders or because of difficulties getting key resources.