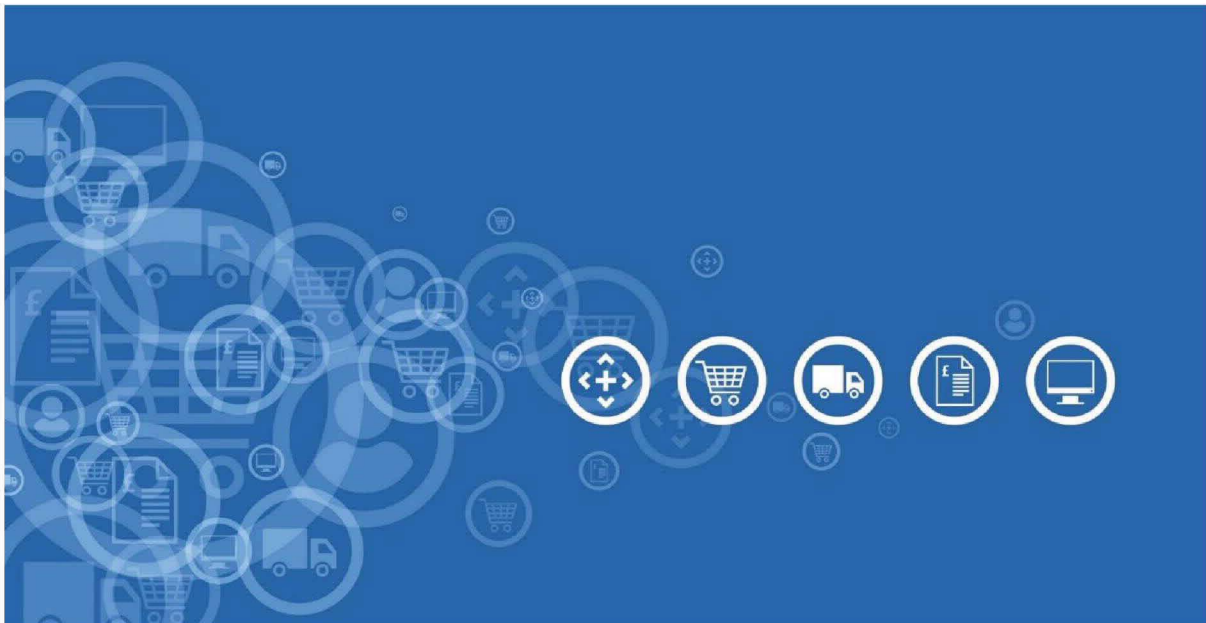


OFFICIAL SENSITIVE (COMMERCIAL)

Pandemic Influenza Preparedness Programme (PIPP) Just in Time (JIT) Lessons Learned

July 2020



Name Redacted

Category Tower Manager – PIPP & EPRR
Supply Chain Coordination Limited
July 2020

Pandemic Influenza Preparedness Programme (PIPP) Just in Time (JIT) - Lessons Learned

Background

The Pandemic Influenza Preparedness Programme (PIPP) strategy, prior to the H1N1 Swine Flu pandemic in 2009, was based around the creation and maintenance of a stockpile of countermeasures. The strategy would ensure that the nation had the full capability of responding immediately to a 'reasonable worst case' (RWC) influenza pandemic and would have fully mitigated the risks of a failure in the inbound goods supply chain.

This 'Just in Case' (JIC) strategy, would ensure that all countermeasures were in place and ready for use. At a cost, it would safeguard the UK population against the manufacturing and supply side risks that might occur.

However, at the outbreak of Swine Flu, few countermeasures had been stockpiled, as the procurement processes and business case approvals were still in progress. Therefore emergency procurements were performed, and purchase orders were immediately placed on suppliers as soon as the pandemic threat was established (at the end of April 2009).

The delivery of some products happened extremely rapidly, because:

- the orders had been placed immediately, so putting the UK government towards the head of the production schedules,
- the inbound supply chain was not yet under any stress due to the effects of the pandemic (i.e. it was too early for infection rates to have had any significant impact), and
- the volumes of some of the countermeasures required were not vastly greater than business as usual requirements, so increasing production capacity was not a significant issue (e.g. additional shift working could produce the required output quickly and there were no lockdowns).

Following Swine Flu, the Strategic Outline Case (SOC) for PIPP countermeasures was re-assessed in the light of the experiences gained through responding to an actual pandemic.



A proportionate but precautionary approach to replenishment was adopted thereafter, which included a strategy to implement Just in Time (JIT) replenishment, or ‘top-up’, at the time of a pandemic. JIT utilises stockpiling, (but only part of the total required volume) and relies upon rapid ‘Just in Time’ procurement of the remaining volume at the outset of a pandemic alert, to make up the full requirement. In part, this emulates the actual experience of the Swine Flu response but mitigates some of the risks associated with those countermeasures that have longer lead times for delivery. As such, the initial stockpile would provide for the requirements early in a pandemic, until the quantities of the newly procured top up countermeasures are delivered.

Subsequent procurements involved market analysis of the supply chain to assess the proportion of target volume that could be assigned to JIT. Frameworks were then procured to ensure formal arrangements were in place ready for the next pandemic.

Coronavirus Pandemic 2020

On 12th January 2020, the World Health Organization (WHO) confirmed that a novel coronavirus was the cause of a respiratory illness in a cluster of people in Wuhan City, Hubei Province, China. WHO declared a pandemic on 11th March 2020.

JIT frameworks & orders

NHS SC began engaging with suppliers on the PIPP JIT frameworks on the 27th January 2020. The first JIT order, for 6.8million FFP3 respirators, was placed on 31st January 2020, the same day as the first UK confirmed cases. Subsequent orders for products on JIT frameworks followed throughout early February.

Table 1 details the delivery outcomes of all JIT orders raised.

Table 1 - JIT deliveries

Product	First Delivery	Comments
FFP3 respirators	N/A	No suppliers on framework able to supply.
Safety glasses	N/A	No suppliers on framework able to supply
Oxygen masks & nasal cannulas	Week 15	First and second placed suppliers on framework unable to supply. Third placed supplier imposed 49% price increase.

Alcohol hand rub & Liquid soap	Week 14	No suppliers able to supply framework product due to shortage of raw material and bottle tops. Alternative product with flip-top supplied.
IV admin sets	Week 15	Products not in high demand as a result of Covid.
IV cannula	Week 12	Products not in high demand as a result of Covid.
Luer syringe	Week 12	Products not in high demand as a result of Covid.

FFP3's

The initial order for FFP3's was placed with French based company, Valmy, who were first placed on the FFP3 PIPP JIT framework. This followed discussions with the supplier who confirmed they would be able to fulfil the order. All other suppliers on the framework stated they would not be able to meet the requirement.

Initial deliveries were due to arrive on 16th March 2020. On 9th March 2020, Valmy approached NHS SC to request a 400% price increase, from 0.17p to 0.85p per mask, citing raw material price increases as the reason. PHE/NHS SC agreed to this increase.

The first shipment of respirators was due to be shipped on 16th March 2020, however the stock was requisitioned by the French Government, following a decree which restricted the export of any surgical facemasks or respirators until 31st May 2020.

Subsequent discussions took place between Government departments and Valmy, and following negotiations, on the 29th April 2020 a separate order was agreed with Valmy for the supply of 167,000 FFP3's and 1,000,000 FFP2's at a further increased price.

The JIT FFP3 framework was therefore considered to have been unsuccessful.

Other JIT orders were subject to similar difficulties as suppliers were impacted by raw material shortages, production was reduced due to factory closures, and deliveries were delayed due to border restrictions.

Alongside this, China's dominant role in production of finished products and raw materials, caused disruption in the majority of global supply chains. This highlighted that many



companies were not fully aware of the vulnerability of their supply chains when affected by global shocks.

Finally, as the global pandemic started in China, other countries placed orders ahead of the UK, which exacerbated the lead times for delivery, and increased demand led to significant price increases.

Recommendation

The experience of executing the JIT frameworks in the Covid-19 response has proved that JIT is not a viable strategy for pandemic preparedness going forward. Therefore, in building and maintaining the stockpile in future, it is recommended 100% of all the emergency volume requirements are held on a 'just in case' (JIC) basis in preparedness.

Although this will inevitably impact on storage volumes and associated costs, this preparedness will be significantly more cost effective when compared with recent events when some prices increased tenfold and the clinical and media implications of not having the required PPE to meet RWC planning.