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NHS procurement and the origins of the NHS PPE crisis

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Procurement is seen by many clinicians and NHS managers as a perennial issue, which is currently being illuminated in the public domain by the COVID-19-related Personal Protective Equipment shortages. In this briefing we offer an excursion into the current structure of NHS procurement followed by the elucidation of the PPE crisis in the UK. We discuss three propositions.

Proposition 1. The series of recent policies aimed at centralisation of NHS procurement is designed to increase efficiency and is subject to the success (or lack thereof) of the current procurement model.

Over the last two decades, the imperative of the national supply chain management has been one of efficiency. Savings of up to 1.2-1.5 billion were expected each year as a result of the nation-wide procurement. Consolidated centralised procurement was meant to answer this expectation and to reduce fragmentation and inefficiencies in the procurement system. In October 2006 NHS Supply Chain was established with the contract awarded to DHL to provide increasingly centralised and standardised procurement services to the NHS, managed by the statutory NHS Business Services Authority and accountable to the Department of Health and Social Care (DHSC).

It is known that in the first ten years of operation, NHS Supply Chain did not deliver to its full potential. Barriers to efficiency were wide variation in procurement capability and capacity (Carter 2016), poor cost containment and inadequate relationships between health service providers and the NHS Supply Chain. There was an apparent need in aggregation of demand, rationalising and simplifying the procurement landscape as well as in tailoring procurement channels to the needs of NHS clients.

A new Operating Model (NOM) came into existence in 2018 which attempted to transform supply chain management by introducing a series of 11 categories covering medical, capital and non-medical areas of the procurement spend (known as 'towers'). Each one of which is facilitated by an organisation known as a Category Tower Service Provider CTSP' contracted to act as intermediaries between the NHS and equipment providers (some of which are for profit firms and some of which are collaborations of NHS organisations). For example, the Collaborative Procurement Partnership (CPP LLP) was formed in 2018 composing of four hubs to manage three Category Towers.

Does this model live up to expectations? It is clear that despite the transformations associated with the NOM comprehensive centralisation has yet to be achieved. In 2019 consolidated procurement by NHS Supply Chain using the CTSPs accounted for 53% of market share with the objective to achieve 80%. At present, two other procurement routes exist: first, the collaborative procurement in NHS hubs which are earlier and continuing collaborations of NHS organisations - the hubs hold framework agreements with suppliers, they procure products within three towers but also procure outside towers by influencing circa £2.5bn a year collectively; second, direct expenditure by NHS trusts which is likely to amount for up to 20% of overall procurement in the NHS - the Trusts procure via tendering

systems: Tenders Electronic Daily (TED), a European public procurement electronic journal is one of the most commonly utilised.

Proposition 2. The chain of contractual relations with intermediaries and providers complicate the accountability and efficiency of the supply chain.

There is therefore a wide range of actors involved in the supply chain including multiple forms of intermediary private and public organisations including collaborative procurement hubs and CTSPs; and many NHS organisations on the demand side. This entails a series of complex contractual relationships with different incentive structures. There are also implications for increased transactions costs due to the proliferation of contractual relationships. Whereas collaborative hubs and individual organisations utilise tendering opportunities, the NHS Supply Chain has established the chain of contractual relations with intermediaries and providers. These contracts are enacted in the form of framework agreements or dynamic purchasing systems, probably underpinned by electronic catalogues with third parties on behalf of the NHS.

The financial side of NOM is created on the basis of a commercial arrangement that allows contractors to obtain commercial margins in their supplies or provision of services, which is the way in which NHS Supply Chain has been funded. The CTSPs are paid partially on the basis of the amount of savings achieved, but the details of these contracts are not publicly available and due to the lack of transparency with contracts it is not clear how the incentives in them operate. This contractual structure may not be appropriate to maintain quality and to achieve cost control. It is fair to conclude that implicit decentralisation occurred: the NOM created an additional layer of contractualised governance by using intermediaries, which has potentially led to a loss of accountability and reviewability of key decisions in the operation of the NHS Supply Chain heavily dependent on the CTSPs (Sanchez-Graells 2018). It is becoming apparent that the decentralisation with various intermediaries and independently procuring NHS organisations demonstrates the limits of consolidated, centralised procurement and may be a peril to sustainability of the national model.

Another, albeit, competitive, view explicates the current model as privatised rather than partially decentralised. A complex web of companies distancing NHS trusts from suppliers is associated with profit-taking: the produces receive their contracts via CTPSs, CTSPs are paid to find suppliers and finally, the procured products is delivered by another company with a logistics contract (Hall et al 2020). Meanwhile, fragmentation takes place due to the horizontal division into multiple CTSP contracts, and there is an additional complication of outsourcing some of the system to foreign private companies. The problems however arise when there are multiple middlemen and the whole systems starts to feed on corrupted outsourcing, cronyism, and cartels, as the recent report argues (Hall et al 2020).

Proposition 3. Attempts to further centralise NHS procurement during COVID-19 pandemic are taking place but have not borne fruit due to misalignments between supply and demand.

Pre-COVID-19 procurement picture is shown as complicated with many actors managing the supplier-customer relations and with tensions around centralisation-decentralisation. The

pandemic caused an unprecedented demand for the volume (it is estimated that one hospital Trust can use up to 72,000 pieces of Personal Protective Equipment a day) and speed of delivery. Severe shortages across all health and social care settings in the UK have been reported in March-May 2020. As a response, the Government initially attempted increased centralisation in relation to PPE procurement.

A new dedicated channel launched at the end of March by the NHS Supply Chain, effectively created an independent tower responsible for supplying PPE. The new system for the acute Trusts has started by operating a 'push' model, with essential equipment being issued to NHS trusts based on the expected number of COVID-19 patients. NHS Supply Chain has also tasked Sustainability and Transformation Partnerships with facilitation of the 'Mutual aid' between Trusts and CCGs (PPE dedicated supply channel 2020). Despite the attempts towards greater centralisation, the system has proved to be inadequate and prone to several problems with preparedness, manufacturing, supply and delivery. Drawing on media analysis in particular, we identified five most apparent problems with the PPE supply chain during the pandemic.

First, poor preparedness surfaced when the National Stockpile was found to be insufficient. The UK's national pandemic stockpile was ready to supply around 200 NHS trusts with protective equipment aimed to protect from an influenza pandemic, rather than the 58,000 NHS providers, GP surgeries, care homes and hospices that have required it for COVID-19. The scale of the stockpile fell in value by almost 40% over the past six years, besides the fact that some essential items such as fluid-repellent gowns and visors were not included in the stockpile (Foster & Neville 1 May 2020).

Second, logistical problems exacerbated the crisis: in addition to supply problems there were abundant distributional problems. The Unipart Logistics responsible for NHS Supply Chain logistics operations was partially blamed for delays so that Clipper Logistics and military forces were tasked with local deliveries.

Third, the international supply shortage posed a number of problems. Several countries including China have implemented export bans and shipments to the UK have been cancelled or delayed. There were instances of "gazumping" of UK orders for PPE by higher bidders from overseas (Neville & Asgari 20 April 2020) and of shipping of substandard gowns. The current procurement landscape was likened to the "Wild West", in which some people are acting like "international arms dealers", where some manufacturers are demanding prices 10 times higher than normal for some items (Carding 23 April 2020).

Fourth, a lack of manufacturers in the UK meant that domestic production of PPE needed to be 'ramped up'. Meanwhile, confusion and delay occurred as the Government appointed Deloitte Consulting to run UK sourcing efforts - over 8,000 local businesses' offers to help were left largely unanswered. Lord Deighton (CEO Olympic games) was eventually appointed to coordinate the end-to-end process of design through to manufacture, termed the 'make' programme. However, a key challenge remaining is that of expedited vetting and validating suppliers and products. Local donations of PPE and DIY manufacturing in the community are supplementing the national/international efforts so that decentralisation has also been used to help solve the urgent problems of PPE supply (Hall et a 2020, p.29).

Fifth, there have been mixed messages about parallel sourcing by individual NHS organisations. Many trusts have been procuring their own PPE, as well as other COVID-19 related goods, to supplement "push" deliveries from the national procurement body, NHS Supply Chain. At the beginning of May, the DHSC asked trusts to stop sourcing their own PPE to reduce competition by those trusts with the strongest purchasing departments and largest budgets. However, Trusts were allowed to continue working with new, small and local suppliers, which adds to the confusion among local organisations (Hignett 15 May).

Supply chain management and procurement are very difficult for a linked network of organisations as complex as the NHS. Centralisation has been a key goal in the NHS but has only ever been partially achieved. The COVID-19 emergency has shown that under conditions of system stress agile procurement is really important, which may not be well served by adherence to centralisation or by complicated supply chains. The narrative around NHS procurement should shift from reducing 'waste' to collaborating and empowering local managers to act in risk management mode during and post-crisis. There is a role for Sustainability and Transformation Partnerships as well as for Integrated Care Systems in providing a regional forum for procurement co-ordination, although in order to do this effectively such coordination would probably need a statutory footing.

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