

Ambulance Trust Supply Chain Study

National Summary Report
November 2023

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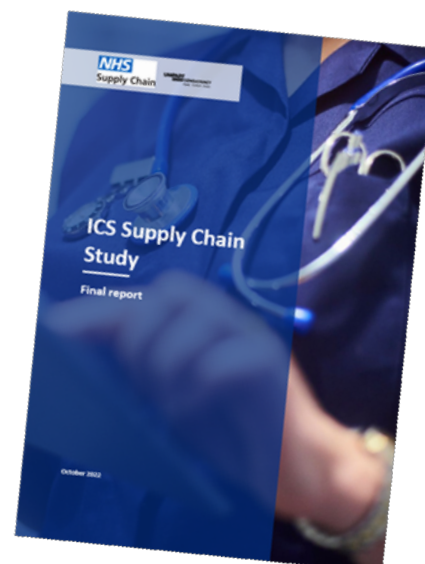
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1. Study Background

In 2022, NHS Supply Chain undertook a national ICS supply chain study, commissioned through Unipart Consultancy. The aim was to identify opportunities to strengthen the resilience, efficiency and service performance of supply chains for consumable products across the NHS, focussing on the contribution and leadership made possible by emerging and collaborative ICS structures/organisations.

The findings of this study clearly identified a role for an ICS in supporting and developing supply chains across the NHS, working at local, regional and national level. The report included a range of recommendations for ICSs to deliver this role and drive improved value across NHS provider services, highlighting potential savings nationally of over £200 million from process improvement across the healthcare supply chain.



During the original study, it proved difficult to engage ambulance trusts in ICS reviews. However, the findings indicated that ambulance trusts might benefit from this evolving ICS role alongside acute and community providers. NHS Supply Chain therefore commissioned a next step to focus a discreet study on ambulance trusts and test the validity of recommendations more thoroughly in an ambulance supply chain setting.

This report provides an overview of this second study. It is based on a wider engagement of five out of ten ambulance trusts, including site visits, desk top reviews of existing Ambulance Service reports and discussions with Trust Procurement and/or Supply Chain leads.

2. Study Overview

In this study, five ambulance trusts were engaged through discussions and network reviews, with on-site visits and wider desk top research. The consumable product supply chain of each Trust was reviewed and assessed for maturity in supply chain process, design, systems and resources. Each participating ambulance trust received a bespoke summary report.

- North East Ambulance Service (NEAS),
- North West Ambulance Service (NWAS),
- East Midland Ambulance Service (EMAS),
- South West Ambulance Service (SWAS)
- Yorkshire Ambulance Service (YAS)



Each ambulance trust was assessed against the supply chain maturity model (SCMM), used in the National ICS/Trust Supply Chain Study, which measures maturity in the supply chain across the elements of planning, purchasing, inventory management, storage & warehousing, transport and returns. For each element, maturity is assessed against themes of network design, processes, systems and people. The SCMM gives a score for each supply chain element and theme from 'low/high reactive' to 'managed' to 'optimised'.

Typically, ambulance trusts scored high or low 'reactive' for all supply chain elements, similar to the wider NHS provider levels. Several of the ambulance trusts have improvement initiatives underway which are likely to increase their assessment scores.

The study then considered both industry best practice and the findings of the initial ICS report, together with the results of the SCMM assessment and the site reviews and discussions. Ambulance trust demand chain and supply chain requirements are very different to acute hospital and community Trusts due to their broad and complex geographical spread, mobile emergency treatment, multiple incident types with differing requirements, and range of wider services including patient transport. Due to these unique features, some areas of ambulance supply chain development will continue to benefit from best practice sharing and collaborative projects with other ambulance trusts, as well as tapping into the supply chain development and strategies of the ICSs and NHS Supply Chain.

The review established key findings and developed a range of recommendations where collaboration of some kind might accelerate improvements in ambulance service supply chain resilience and costs. A unique report was produced for each Trust, summarising recommendations that could be progressed to drive value, including quick wins and longer-term development opportunities. These findings and recommendations are consolidated in this report.

3. Ambulance services environment

The study explored the range of pressures under which ambulance trusts operate, including increasing service complexity and demand, financial constraints and workforce pressures. These were considered for impacts on supply chain services:

- Ambulance trust supply chains are under significant pressure due to both the wider pressures faced by the NHS as a whole and those faced by ambulance trusts in particular (such as greater call complexity and longer handover times). Inflationary pressures are increasing focus on waste, obsolescence and product selection.
- Ambulance trust supply chains are extensive and cover a large geographical area, typically around 6,000 square miles, with between 40 and 120 ambulance stations and around 500-600 ambulances. Supply chain transformation programmes can be complex and change has to be carefully managed to protect patient care.
- Paramedic and ambulance availability is critical to be able to respond to incidents and this can be optimised by having separate teams, rather than paramedics, to do Ambulance Vehicle Preparation (AVP), thereby removing supply chain tasks from clinical roles.

4. Key supply chain findings

The key findings established that:

- Ambulances operate with a relatively small range of consumable products (300-400 lines), but the nature of their operations mean that each ambulance must be fully and correctly stocked to respond to a wide variety of incident types.
- Once mobile, ambulances must be correctly stocked and are very unlikely to be able to source missing product when responding to an incident. Vehicles also cannot guarantee an ability to restock during shifts if they run out (although restocking during hospital drop offs is common).
- Supplier reliability, high product availability and accurate order delivery are high priority so that the ambulances can be stocked adequately, with limited opportunity for product substitution.
- Products with long lead times are necessary as slow-moving product has to be stocked in the ambulance but may not be needed for months.
- Ambulance trusts share common supply chain aims to reduce costs, optimise paramedic time on patient care, improve product availability and develop Scan4Safety.
- Trusts are significant users of the NHS Supply Chain service for consumable products, depending on high product availability, long product shelf lives and low product substitutions.
- Trusts typically operate two network designs – a hub and spoke model operated by a central supply chain team, with NHS Supply Chain delivering centrally, or a less connected network of storage locations, managed locally by ambulance staff with local NHS Supply Chain deliveries. Those with a centralised design were benefitting from Ambulance Vehicle Preparation and the opportunity for scan to ambulance / patient, removing time spent by paramedics in preparing vehicles and managing stock.
- Ambulance trusts are users of both NHS Supply Chain's materials management system, eDC, and full Inventory Management Systems, in which some are more advanced than wider NHS trusts.
- Currently, ambulance trust supply chains have been ranked as low or high 'Reactive' against the Trust Supply Chain Maturity Model (SCMM). Trusts with a centralised network tend to be more mature.
- Opportunities exist to extend ambulance trust collaboration to further develop their supply chains by working with other ambulance trusts, working with designated ICSs and working with NHS Supply Chain.
- Whilst benefits realisation was not in the scope of this project, if the improvement initiatives detailed within this report are progressed, savings of up to 20% of current stock holding are achievable.

5. Opportunities for development through collaboration

A range of opportunities were identified for supply chain evolution to build resilience and service performance. When assessed against the recommended priority actions for ICSs to develop their supply chains, captured within the initial ICS Supply Chain Study, there was particular overlap between ICSs and ambulance trusts in the areas of Inventory Management, Warehousing & Storage (network) and Transport.

- Improve inventory management:

Ambulance trusts will benefit from the significant focus on inventory management being driven through the NHS Supply Chain IMS programme, the North Central London ICS Inventory Management Pilot and wider, individual ICS development programmes. These initiatives all contribute towards best practice in system implementation, data management, inventory management process development, training and benefits realisation.

Ambulance trusts can also contribute experience and expertise towards IMS implementation across an ICS and within the NHS Supply Chain IMS Programme as a result of their current system usage.

Finally, ambulance trusts have a longer-term opportunity to extend their IMS usage to include a wider range of products.

- Further develop network design, collaborating with other ambulance trusts:

Ambulance Vehicle Preparation (AVP) teams should be considered as best practice at ambulance stations to do vehicle checks, clean and stock to standard formats and release paramedic capacity. AVP teams can scan to ambulance as they stock them, treating each ambulance as a stocking location. Orders can then be consolidated by ambulance station and automated. AVP with scan to ambulance can also progress to 'scan to patient'.

In the longer term, trusts should consider cohesion of supply chain networks and management between consumable product and pharmacy and medical devices/equipment, including mobile logistics teams which deliver other products (pharmaceuticals and medical devices) to ambulance stations, put away, tidy the storeroom and manage returns and waste.

- Transport

Ambulance trusts could bring their extensive vehicle sourcing, management, maintenance and transport management services to the ICS to support NHS services in community and inter-hospital/clinic settings.

6. Constraints and risks

There are constraints to change which include financial and resource pressures, lack of current connectivity with ICSs and NHS Supply Chain, lack of continuous improvement skills and current supply chain complexity driving high cost of change.

However, with training, improved relationships and robust business case development, there are clear benefits which make change attractive and cost effective. There are also shorter-term benefits which could help fund longer term improvements, accelerated by appropriate continuous improvement capability.

7. Conclusion

This study has identified a number of areas where ambulance trusts could enable improvement to their supply chains through collaboration with ICSs and each other. There are a range of benefits from these initiatives including savings of up to 20% of stock value, release of clinical time to deliver patient care and increased efficiency in supply chain processes.

ambulance trusts have an opportunity to accelerate benefits in supply chain savings, resilience and quality but there are significant constraints which will limit progress.