













TSG Endeavour - Transport System

In collaboration with NHS England and the National Institute for Health Research Supported by the Academic Health Science Network and Innovation Agency Funded through UK Research and Innovation and Private Enterprise

COVID-19 - Timely allocation of resource and personnel solution P-SuFs – Patient & Service User Flow System

Following the Covid19 pandemic, the need for the whole of the healthcare system to ensure effective, efficient, and timely allocation of resources and personnel, together with the transfer of care has never been greater. Whilst we must ensure the more vulnerable and disadvantaged members of our communities still receive the health and social care that they need, so as not to compromise their health and wellbeing.

Every healthcare organisation whether it be from the public or private sector has a need to transfer patients/service users to or from hospital, home, care home, specialist, or regular clinic appointments.

Many within the community are disadvantaged due to their specific care, mobility and/or transport needs and are reliant upon the healthcare system to provide suitable transport for them to attend out of home clinical or care facilities. Alternatively, the healthcare provider may arrange for healthcare professionals to provide care for those disadvantaged members of the community, within the places where they live.

Endeavour responds to an existing NHS need to efficiently transport patients... Pre-Covid-19 pandemic, issues with existing systems resulted in high costs in missed appointments, wasted resource and delays. Both during and post-pandemic these issues will significantly increase. Nationally, the majority of outpatient, clinical and non-emergency elective appointments have been cancelled/postponed since start March 2020. Patients have independently cancelled or postponed treatment. Some third-party providers have ceased trading or reduced capacity due to lack of need/business... Easing of restrictions has resulted in high levels of rescheduled appointments and PTS requirements alongside reduced capacity to meet need.

This innovation focuses on ensuring appropriate services and/or transport are matched to the needs of those patients/service users in an effective manner, in real-time. Furthermore, the innovation supports the coherent service provision during transport between the various organisations operating within the health care system, dramatically improving the use of the care professional's time, the patient/service user's experience, and efficiency over existing systems.

Using algorithms and AI, the innovation will provide a fully integrated procurement system / process that provides all the required functionality to deliver a seamless, robust, efficient regulated, cloud-based platform.

The booking service and dynamic patient/service user risk assessment bring ease of use and access to resources in real-time. Ensuring patient/service user needs are matched with the most suitable personnel and resources, whether they are in-house, 3rd party or private provider, local authority, community, charity, or volunteer. This reduces waiting times and delays, reduces risk, and ensures care is provided and undertaken in accordance with standards and regulations. This in turn mitigates missed, postponed, and cancelled visits/appointments and reduces bottlenecks and bed blocking and the associated additional costs of the duplication of work.

Fleet management, routing, load optimisation and dynamic navigation elements of the solution improve the speed and flow of patients, personnel, and resource in and out of the whole of the healthcare system.

Guaranteeing suitably trained and experienced personnel, resource and vehicles are allocated to meet the needs of the patient/s and service users, capacity and journeys are optimised and efficiencies are made by dynamic navigation choosing the most appropriate routes, taking into consideration congestion, accidents and delays, by using live traffic data. These features reduce wastage, inefficiencies, labour costs, fuel and maintenance charges and have an additional benefit of reducing the carbon footprint.

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