Real time resource locator for acute neonatal transfer service: LocANTS, a combined tool and system for efficiency gains in acute neonatal transfer

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Abstract:

Aims: Technological improvement remains a constant need in neonatal transport. ANTS is responsible for a large geographical area (6 counties, 15% of UK) with a large population density (>68,000 deliveries/yr, > 6.168 million people). 13 transfer services out of 14 in UK are unable to meet nationally agreed key performance indicator (KPI) of mobilisation (60 min) for time critical transfers. Time taken to complete the clinical referral, collating and checking all resources (drugs, vehicle etc.), availability of teams are the main contributory factors for this delay. To improve the efficiency of transport service we are developing a tool, LocANTS ; to validate this tool we introduced a small part of this as a manual version (paper / screen) which is updated daily at 08:00 to localise available resources from January,2019.

Method: The paper copy includes on-call team/shift, pending transfers, vehicle, equipment, stock medication related updates, road and weather conditions, regional cot status, review of transfers (for shared learning) and in-utero transfers in the previous 24 hrs.

Results: Data from 4months showed a reduction of mean dispatch time for emergency transfers (including time critical) from 39 to 35 min (prior to the introduction of automation). As part of the shared learning component, 14 cases were identified and discussed with referring hospitals over the 4months compared to 3,4,3 cases in each of the previous year's respectively. The mean time of return of equipment after repair reduced from 31.3 to 9.8 days.

Conclusion: By locating some available resources at a single point of time we observed positive changes in a number of measurable parameters. With this validation now we are building a dynamic real time platform (LocANTS) as proof of concept to show all the available resources (including clinical parameters) required for neonatal transfer in one consolidated screen alongside videoconferencing replacing the current audioconference, so that the team are ready to despatch "time to roll" immediately the call for a transfer is made which will significantly improve KPI, handover quality, shared learning opportunities across the region, leading to efficient improved patient care .

Biography:

A.Dhar is a experienced paediatrician with special interest in tertiary Neonates and neonatal transport, currently working as a Honorary Senior Clinical Fellow in NICU at prestigious Addenbrookes hospital, Cambridge and ANTS (Acute Neonatal transfer service) for East of England , ex-Chief Resident of Addenbrookes Hospital, leading the digital innovation project LocANTS . He has a demonstrated history of leading in digital healthcare company based in London . Skilled in Healthcare Information Technology (HIT), Digital Healthcare Industry, Clinical Research and Critical Care. He is one of the consultative group member looking at models of care for Paediatrics 2040 (impact of artificial intelligence) by RCPCH.

Publication of speakers:

1. A.Dhar. Introducing high-flow nasal cannula to the neonatal transport environment. Acta Paediatr 2017 ;08- 13.