infant
for neonatal and paediatric healthcare professionals

Improving neonatal transport by comparing services

Neonatal transport is evolving. Ten years ago it was still common for critically ill infants to be transferred by staff with little or no formal training for working within the transfer environment. Geographically-situated services which provided reliably-available transport for infants were rare. One consequence of the development of neonatal networks is the parallel development of transfer services with investment in staff, equipment and infrastructure. The establishment of formal transport services raises the question of what constitutes best practice within this environment.

Establishing evidence-based transport guidelines which maximise the potential for benefit for the infant while minimising the potential for harm is problematic. There is scant randomised controlled trial evidence for transport interventions. Instead, best-practice guidelines have been based on non-randomised studies and on the views and experience of transport 'experts'.

Whilst undertaking transport research is logistically and ethically problematic, it has also proved surprisingly difficult to do what on the face of it should be more straightforward quality improvement activities. A number of authors have reported in-house audit[1] and quality cycle[2] projects, although these are limited by the inability to compare outcomes with other centres.

Why is it so difficult to compare transport services? A key problem is the lack of a common language or set of definitions that allow transport services to speak to each other. This is because the systems by which transport services account for their activity have evolved to meet local needs, and these differ substantially around the country. For example, one team's 'emergency' transfer is another team's 'urgent, time critical' and someone else's 'acute.' Each transport service will have its own locally-derived criteria for deciding which infants fit the category, making it impossible to make comparisons between services. This applies equally across all areas of transport practice and data collection. There are no standard definitions of times that would allow comparison of responsiveness of transport teams and no agreement on what clinical data should be collected to reflect the effect of the transport on the infant.

With substantial investment being made, it is essential that new and existing transport services are able to demonstrate quality. With this in mind an expert group comprising mostly doctors and nurses was brought together under the auspices of the British Association of Perinatal Medicine (BAPM) in June 2005. Representatives were present from most of the neonatal transport services around the UK and a day was spent seeking consensus on what elements might constitute a 'minimum dataset' for neonatal transport.

This minimum dataset will define discreet categories of transfer such that every infant will clearly fit into a single category. It will also clearly define a set of data items to be collected on all transported infants. This will in turn facilitate comparison between different transport services.

The proposed data fall into three broad categories, of staff, timings and infant details. The infant details will include basic demography, such as birthweight as well as the support required at the time of transfer. Specific data regarding the condition of the infant, using values such as pH and temperature on completion of the transfer, that have been widely used in previous transport studies[1] and which the expert group agreed were possible markers of quality, will also be collected.

It is anticipated that the dataset will be launched in 2006 and that the first projects using the data will be undertaken in 2007/8. The committed engagement of the UK neonatal transport community in the project means that it is very likely to yield useful information and generate testable hypotheses. The potential benefit of this activity is improvement in the care of transported newborn infants. This may be by alerting teams to under-performance so that problem-focussed change can be instituted or by examining the work of teams with above average performance to identify best practice.

An added benefit of bringing the group together for this project has been the formation of a Transport Interest Group. The first open meeting of this will be in Manchester in July – details at www.neonataltransport.net.

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