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The use of multi-sourced linked datasets in evaluating the Emergency Medical Retrieval and Transfer Service (EMRTS) CYMRU

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Objectives

EMRTS launched in April 2015 which saw consultants join critical care practitioners on air ambulance missions and emergency response vehicles. EMRTS delivers pre hospital, Emergency Department equivalent critical care for people in Wales with life or limb threatening injuries or illness from scene to definitive care. The evaluation will compare patients treated by EMRTS to cases both pre-EMRTs and EMRTS-offline (at night or bad weather) in improving survival and functional and quality of life outcomes.

Approach

The evaluation will require the use of multiple datasets to follow patients from time of incident, throughout hospital care and to calculate post care health status. Electronic reporting forms will be used to measure incident details, patient vitals and all treatments/procedures pre hospital, creating the EMRTS dataset and cohort. Patients' data will be linked to the Emergency Department Dataset (EDDS), Patient Episode Database for Wales (PEDW), Critical Care dataset, Trauma Audit and Research Network (TARN) and Intensive Care National Audit and Research Centre (ICNARC). TARN and ICNARC will provide data on patients transferred to English specialist care facilities.

ONS (Office of National Statistics) and WDS (Welsh Demographic Service) data will be used for demographic and survival analysis.

GIS techniques will be used on WAST (Welsh Ambulance Service Trust) data for time saved analysis in transferring patients to definitive care.

Following discharge from hospital patients will be interviewed six months and one-year post incident for longer-term functional and quality of life outcomes.

Results

Datasets are currently being assembled for the service evaluation. Data will be encrypted and anonymized through NWIS (NHS Wales Informatics Service) to enable research through the Secure Anonymised Information Linkage (SAIL) facility. Results will include rate of survival, effect on length of hospital stay, time to definitive care, the use and appropriateness of EMRTs specific interventions and functional and quality of life outcomes.

Conclusion

To allow for data collection the service evaluation is still in the early stages and will be compared with local and international data.

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