

Predictors of generation of electronic patient clinical records: analysis of routine data from four UK emergency ambulance services



Background

The roll-out of electronic Patient Clinical Records (ePCR) across UK ambulance services is an important aspect of modernisation, with anticipated benefits for efficiency and patient care, but is incomplete. We examined whether an ePCR was generated for each patient attended in four emergency ambulance services, and why generation rates might vary.

Methods

We explored a two month snapshot of data from the four services (AS1-4) for January-February 2017. Analysis showed at each site proportion of calls attended with an ePCR (rather than a paper record), and odds ratios for ePCR generation associated with a range of demographic, clinical and operational factors.

Results

The dataset included almost 400,000 calls where a resource arrived at scene. Rates of ePCR generation varied between ambulance services, ranging from 31.8% in AS2 to all calls in AS3.

Analysing by ambulance service, we found that a number of factors had a statistically significant association with whether an ePCR was created:

geography	in two services for which we had such data, there was variation by hospital conveyed to and by ambulance station locality; both variations were very marked in AS2
time call received	in three services, calls in daytime hours were slightly less likely to be recorded on an ePCR than evening or weekend calls
patient disposition	in three services, record creation rates were lower for patients left at scene after treatment rather than conveyed to hospital
call priority	in all services, the least urgent calls were least likely to be recorded on an ePCR, ranging from 16.3% in AS2 to 99.5% in AS3

	AS1	AS2	AS3	AS4
Proportion of calls attended resulting in an ePCR	90.8%	31.8%	105.8%*	77.9%
Proportion of lowest priority calls resulting in an ePCR	65.1%	16.3%	99.5%	54.1%
Proportion of patients treated at scene and not conveyed with an ePCR	76.5%	30.2%	99.7%	55.4%

* ePCR automatically started at the time a resource was dispatched, so it still existed on the system even if the resource was stood down.

Conclusions

Organisational culture and practice is likely to account for variation in ePCR creation rates between services, and may shape discretionary decision making by clinicians about whether to create an ePCR. The anticipated benefits of ePCR will be limited by inconsistent implementation.

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