Image of paramedic using a tablet

ERA: Electronic Records in Ambulances

What the study is about

Electronic Records in Ambulances (ERA) is a two-year study of the implementation of electronic Patient Clinical Records (ePCR) and associated technology in emergency ambulances.

Electronic records have great potential in terms of identifying and managing repeat callers, information transfer to other providers, linking with other electronic resources (e.g. for decision support and referral), and research and audit.

We are interested in how the introduction of ePCR can help emergency ambulance services with the shift to delivering more health care outside hospitals, where this is better for patients, by offering alternatives to transfer to the emergency department (ED). We want to know what are the challenges to bringing in ePCR and using them to the full, and what implications they have for the emergency ambulance workforce.

How might electronic records support improvements to patient care and service efficiency?

- by acting as a base to which other electronic resources (e.g. decision support software, referral tools or 'apps') are attached
- by facilitating transfer of patient information to or from other providers
- by supporting real-time sharing of diagnostic information
- by identifying those who might benefit from community based interventions (eg falls services, interventions for repeat users)
- by making data readily available for audit, research and evaluation
- by encouraging more thorough assessment and recording

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What we've done

A ***rapid review of the literature,*** including an overview of the issues around implementation of technology in healthcare and a systematic review of literature on ePCR in ambulance services.

A ***telephone survey*** of progress implementing ePCR in all 13 UK ambulance services explored systems, implementation processes, perceived value and future plans. Interviews with information managers were thematically analysed.

Case studies in four UK ambulance services, along with their associated health communities, examined the story of implementation and use of ePCR. Cases were selected to represent services at various stages of implementing ePCR. We undertook observation shifts on ambulances to observe ePCR in use. We also carried out focus groups with ambulance clinicians, interviewed key stakeholders, and carried out descriptive analysis of routine data on uptake, use and impact of ePCR.

What we've found

What the literature tells us

- It's not always straightforward to bring technology into use in healthcare
- Technology may not produce the benefits which were expected
- Staff may devise adaptations or workarounds
- Costly projects are sometimes abandoned

What's the big picture across the UK?

- **7/13 services** had electronic patient clinical records systems
- In place for up to 10 years – most 2-3 years.
- Three of the services using ePCRs were in the process of changing their systems completely.
- Ortivus and Medusa were the main digital systems used, on a range of hardware: Panasonic Tough Book, Safe Triage Pro, iPad, digipens.
- **6/13 services** did not use ePCRs. Of these six, two had never had an ePCR system in place. The other four were at various stages of designing, procuring, and implementing new systems.
- **Completion rates** ranged from a reported 100% to 3%.
- 5/7 services with ePCR could transfer data out to hospitals

Some cross-cutting themes

1. Constant change

Transitioning from one system to another, one supplier to another.

Software and hardware updates.

To and fro – switching back to paper records.

2. Digital diversity

No standard hardware or software in use.

Great variety in how (and whether) other tech and record systems were linked to the ePCR.

3. Indirect input

Some patient data can be fed straight into ePCR.

But data entered by clinical staff is still sometimes written on a glove or notebook, or stored in the paramedic's memory, before being entered into the ePCR.

4. Data dump

In most services, ePCR seem to act mainly as a store for data.

As yet, there is limited evidence of their full potential being realised to transfer information, or support decision making or changes to patient care.

5. The system is bigger than the service

To realise all the benefits of ePCR requires engagement with other parts of the local health economy – and dealing with variations between providers.

Image of a paramedic walking with a patient down a front path, under and umbrella

Discussion points

1. How could ePCR have an impact on the workforce? – *eg decision-making, role*
2. What are the limits to the transition to digital?
3. How can services share knowledge/learn from each other?
4. Is it realistic to hope to measure change from ePCR?
5. How can an ambulance service ensure that change happens at all levels to ensure full implementation of ePCR?

What happens next

We are finalising the data analysis. This knowledge exchange workshop is an important stage of the study to help us to understand and interpret our data.

We will write up our report on the study for submission in September 2018.

Once the report is agreed with the funders, we will disseminate findings.

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ERA

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