ERA

Electronic
Records in
Ambulances

Work package 3 – Case Studies:
Observational shifts
Site researcher notebook

Site researcher:

_____

Ambulance service:

_____

Ambulance station:

_____

Date:

_____

Hours of shift observed:

_____

Project aim
The ERA project aims to understand how electronic records can be most effectively implemented in a pre-hospital context (ambulances) in order to support a safe and effective shift from acute to community based care, and how their potential benefits can be maximised.
1. To describe the current usage (challenges and opportunities) of electronic records and associated IT in ambulance services in the UK:
a. To describe processes of implementation, uptake and usage;

b. To investigate what use is currently being made of electronic records 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;

c. To investigate the use and development in ambulance services of other hand held technologies (including apps) to support decision-making and referral to community based care.

2. To understand how the ambulance workforce responds to the introduction of electronic records and associated infrastructure, and what impact they are perceived to have on the role of ambulance clinicians.

3. To investigate risks, benefits and unintended consequences of implementation of electronic records, in terms of changes to patient care, working practice of ambulance clinicians, management and organisational practice within ambulance services, and planning and commissioning processes in the wider health economy.

4. To understand the factors which lead to successful implementation of electronic records and adoption by the workforce, and how risks can be minimised and benefits maximized.

5. To assess the potential to further develop and implement electronic records, computerised clinical decision support and referral tools to support the shift to out of hospital care.

Work package 3 – case studies
Case studies in four ambulance services, along with their associated health economics, selected to represent services at a range of stages of implementation of electronic records.
Each case study will take a broadly ethnographic approach to examining the story of implementation and use of electronic records in the site, incorporating descriptive analysis of any available routine data on uptake, use and impact of electronic records.
To facilitate comparison across sites, we will include a particular focus on three tracer conditions known to have potential for increased non-conveyance rates: falls in older people; diabetic hypoglycaemia; and mental health crises. We will examine how, in each study site, the local health community is out of hospital care pathways are being provided for these groups, and how ambulance service data is (or could be) informing both care provision and planning/commissioning decisions with the use of electronic records.

Observational shifts
The site researchers will observe electronic records in use with three different crews in each site for a full shift, from three different ambulance stations, and aim to ensure that we observe people with a range of levels of enthusiasm for electronic records.
The site researchers will make observations and record reflections using a notebook and a digital recorder, and may discuss use of records with the crews between episodes of patient contact. In each study site, the site researcher will shadow ambulance clinicians on up to three 12-hour shifts. Shifts will be selected to ensure that different clinicians are shadowed, and that observation takes place at different times and in different localities. The researchers will observe the use of electronic and other records (when completed, by whom, processes undertaken) and the use of other data sources to support decision making. At times when there is no patient in the ambulance, the researchers may ask ambulance clinicians for clarification or explanation of processes and decision making, and then record this information.

Notes on shift arrangements

What crew members were you with?
What level of training/experience/ job role did they have?
Did the crew members regularly work together?
Describe the area where the ambulance was based (urban/rural/deprived/affluent etc)?
What kind of vehicle were you on?
Describe the interior layout of the vehicle and where kit for documentation was kept?

Summary of observations by time (examples shown in green)

Activity number	*Time*	*Activity*	*Tracer condition? Fall in older person/diabetic hypo/mental health crisis*	*Detailed observations? Y/N*
1	*06.45*	*Attended woman in her home in Ambridge, conveyed to ED at Borchester General*	*Y - fall*	*Y*
2	*08.05*	*Dispatched to patient with chest pain at Hollerton, stood down ten minutes into journey.*	*N*	*N*
1				
2				
3				
4				
5				
6				

Observational grid – evaluative – describe what happened for each activity where records were created

Call out – When did the call come in? What information was provided by Dispatch (incl presenting condition)? How was the information provided? What comments did the crew make on the call? Where did the crew travel to?

Patient and condition – Give a general description of the patient, and how they presented to the crew. Did they agree to having you (the observer) present?

Context – describe where the patient was (at home/in a public place/elsewhere). Who else was there – family/friends or neighbours/other ambulance service staff/other professionals? Did you go into the home or other venue with the crew? If so, where did you stand and what interaction did you have?

Assessment – What examination or assessment did the crew make? Where did this take place (in the home/in public place/ in the parked ambulance)? Were you present for some/all of it? What discussion was there with the patient and family/carers? What equipment did the crew use? How did they record their observations? What information did the crew share with the patient/family? What information resources did they access (including telephone calls to gather information)? How long did the assessment take (overall and broken down into stages, if relevant).

Conveyance – Was the patient conveyed? If so, where to? What happened during the journey – eg additional observations, completion of documentation, reassuring chat with patient? How long did conveyance take? Blue lights? How long did handover take? If there was a delay in handover, what happened during the waiting period?

Communication – If the patient was conveyed to the ED or another location, how was information conveyed at handover – verbally/handover of paper/electronically? Who received the information? How did they respond to it? If the patient was left at scene, was a referral made (formally or informally) to another provider? How did this take place? How long did it take to make the referral? What information was passed on? Who made the referral?

Recording – what records did the crew create for the patient? Who created the record? What input did the crewmate have? When was the record created? Was it done all at once or in stages? Where was it created (eg paramedic was sitting in the back of the ambulance) ? How was information recorded – eg handwritten paper record, electronic record, written on the glove (note all the ways this happened)? Where did they get the information from (eg observing patient, verbal information from patient, information from Dispatch, print out from ECG) ? Was information recorded more than once/transferred from one place to another? Describe how the record was used – tick boxes/ drop down menus/ free text answers; were any sections missed out or ignored? Was the record created in the presence of the patient? Did they get to see it? Did they have direct input?

Comments/reflections from crew – Did they make any comments or judgments on the recording or information exchange process during patient contact? If appropriate, ask them to reflect on it afterwards – easy/difficult, what works well, challenges, room for improvement? Ask them to talk not just about completing the record, but what information they would find it useful to access, and about the process of making referrals.

Activity number	*Details* ** Call-out * Patient and condition * Context * Assessment * Conveyance **

Reflections on shift

What thoughts struck you during the shift? What was unexpected or particularly interesting? What do you think worked well/ or didn't in relation to records? Were there things you didn't understand/needed to have clarified? What scope for improvement could you see? What did the crew members tell you which was relevant/useful? Did they talk about training/implementation of records?

Reflections re ERA

Any more general thoughts? New questions?