Health care is becoming increasingly digitised, which is a fantastic opportunity. It’s new and we are still understanding how to maximise this opportunity for best improving patient care.

Before linking data

The patient journey
Much of the data collected in the NHS is held in isolation, it is not joined up. PHED Data* is a research project looking at the opportunities to safely join ambulance data to emergency department data.

The 999 call
Generally, there are more calls than there are ambulances available, so you are asked a series of questions on the phone to prioritise your need.

The GP’s call
12% of calls to the ambulance come from the GP. They mainly ring around 10am and 4pm on weekdays, meaning the ambulance service could better schedule shifts and services around this predictable demand.

Paramedic response
Paramedics rarely know the outcome of their patient, not even if the patient survived. Paramedics told us that outcome information would help with training, morale and maintaining professional standards.

Hospital evaluation
Data collected in the hospital varied hugely. 23% of records had no emergency department (ED) diagnosis information and only one in 13 EDs had a standardised approach.

After linking data

The patient journey
We linked 750,000 patient journeys. For the first time, the ambulance service knew the outcome of their patients.

The 999 call
Data linking showed that, within the lowest priority calls, 70% were from older people who were five times more likely to be hospitalised. Data linkage may help re-prioritise these calls.

The GP’s call
GPs are good at judging when a patient needs to go to hospital so their calls have a much higher admission rate than the general public: 67% compared to 44%.

Paramedic response
0.26% of patients conveyed by ambulance died in the emergency department. This is reassuringly low. Breathing problems may be an early warning symptom.

Hospital evaluation
The emergency care dataset has now been implemented. This means that there is a standardised dataset making this process much easier and accessible in the future.

Next
Despite challenges, it is possible to link ambulance and ED data. This means we can map out the patient journey in one continuous thread, from 999 call to outcome in the ED.

It is possible to understand what happens to patients once they’ve left the ambulance using data linkage. The results show benefits to patients, to paramedics and to the whole NHS system. Let’s standardise and link health data safely.

*PHED Data (The Pre-Hospital Emergency Department Data Linking Project) is a research project led by the London Ambulance Service, collaborating with The Nuffield Trust, Swansea University and Kingston University and St George’s University of London. This project is supported by the Health Foundation, an independent charity committed to bringing about better health and health care for people in the UK. © London Ambulance Service NHS Trust 2019.