

PRANA

The Pre-hospital Research and Audit Network

Improving how we take care of seriously ill or injured people before they reach hospital and unlocking insights to enhance policies and infrastructures that can save lives.



Did you know that my projects, like PRANA, can benefit the whole of society and not just healthcare?

That's a big claim.



It's true! PRANA can link patients' medical data with data from other places like the Department of Transport to create me, **Linked Data!**



...I am full of new information to answer questions like 'What affects how fast an ambulance can get to hospital?' or 'How does car design impact injuries in a crash?'



Using linked data, this **safe project** can improve patient care, shape better policies, and make emergency response more efficient and effective...

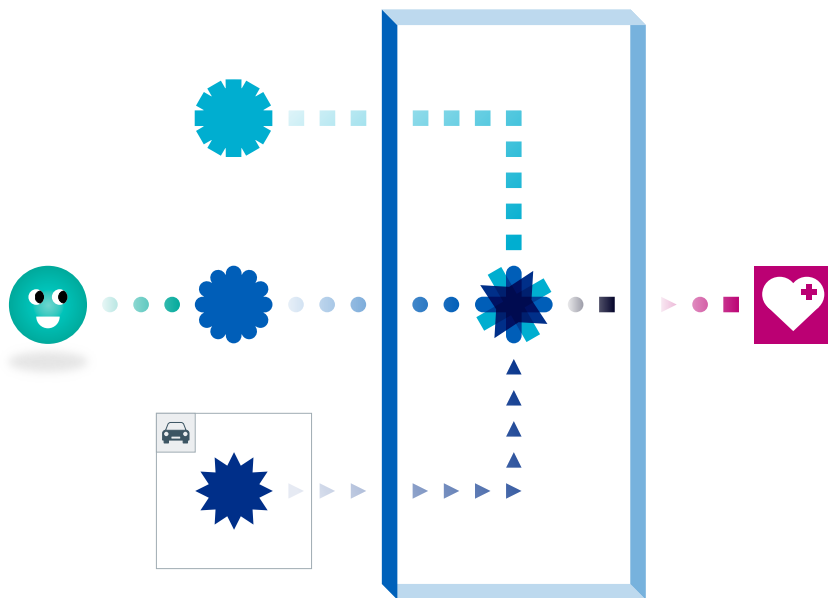
Can you fix the potholes on my road?



I'm more of a big picture kind of platform. PRANA's goal is to save people's lives, improve emergency care, and reduce road collisions--one of the UK's leading causes of trauma. Did you know that 1,700 people die each year?

Ok, that's more important than the potholes. So, by using this data you can change things?

I am full of untapped potential. You can analyse me, **Linked Data**, to help improve local ambulance services, look at health inequalities in how patients receive emergency care, develop new training for nurses and paramedics. You could even ask me questions about road quality.



The process starts with **you**. Using Wessex **SDE**, our PRANA researchers bring together data from **different emergency care organisations** and **data** from **transport organisations**, linking this to patients' **medical data**. From the **linked data**, we can **then look at the full critical care journey**, from patients' initial emergency response (such as a heart attack or severe injury) to their quality of life after treatment. Taking a systematic approach to collecting and analysing this data helps us see patterns and trends that **can help improve patient care, enhance medical services, and contribute to transport design, road safety policy and infrastructures that prevent injuries and deaths.**

Patient and Public Benefits of this research

Our team uses data to improve the care of critically ill and injured patients who need emergency medical attention. Insights from this data also help to better plan for patient care, including having the right staff and equipment at the right times. Beyond healthcare, insights from this data can be used to improve road safety policy and infrastructure to prevent people from becoming patients. This means less deaths from road collisions — a leading cause of major trauma in our society.



NHS Data to be used: NHS Ambulances Services, Air Ambulance Services, NHS England Hospital Event Statistics, adult and children's intensive care data, Major Trauma System data, out of hospital cardiac arrest data, national transplant data



Additional Data: Department for Transport, Coroners' data, road traffic investigation data

Background

Each day in the UK, people become unwell or get injured and require emergency response. Some face life-threatening illnesses or injuries and need what is called 'pre-hospital critical care'. At present, there is no national data collection of pre-hospital critical care. There is also currently no way of linking NHS data to other relevant data outside of the NHS, for example, Department for Transport data on road collisions. This means we are missing out on making improvements in how we care for people. And we are unable to unlock the insights we need to enhance injury and disease prevention. To address this knowledge gap, we have brought together a research team to establish PRANA, The Pre-hospital Research and Audit Network. PRANA is part of the Wessex SDE.

What's Next?

We would additionally like to see these data insights get used to improve policies and everyday infrastructure to help keep people safer. For example, the Department for Transport could use this data to help minimise road traffic accidents and improve road safety, preventing injuries and saving lives.

Research Collaboration:

Wessex Subnational Secure Data Environment and Clinical Informatics Research Unit at University of Southampton and University Hospital Southampton, NHS England

Partners include:

Department for Transport, Transport Research Laboratory, Air Ambulances UK, Faculty of Pre-Hospital Care of the Royal College of Surgeons of Edinburgh, British Association of Immediate Care Schemes, Intercollegiate Board for training in Pre-Hospital Emergency Medicine

Pre-hospital critical care refers to the specialized medical attention and interventions provided to individuals facing life-threatening illness or injury before they reach a hospital. This care is provided by nurses, paramedics and doctors.

