

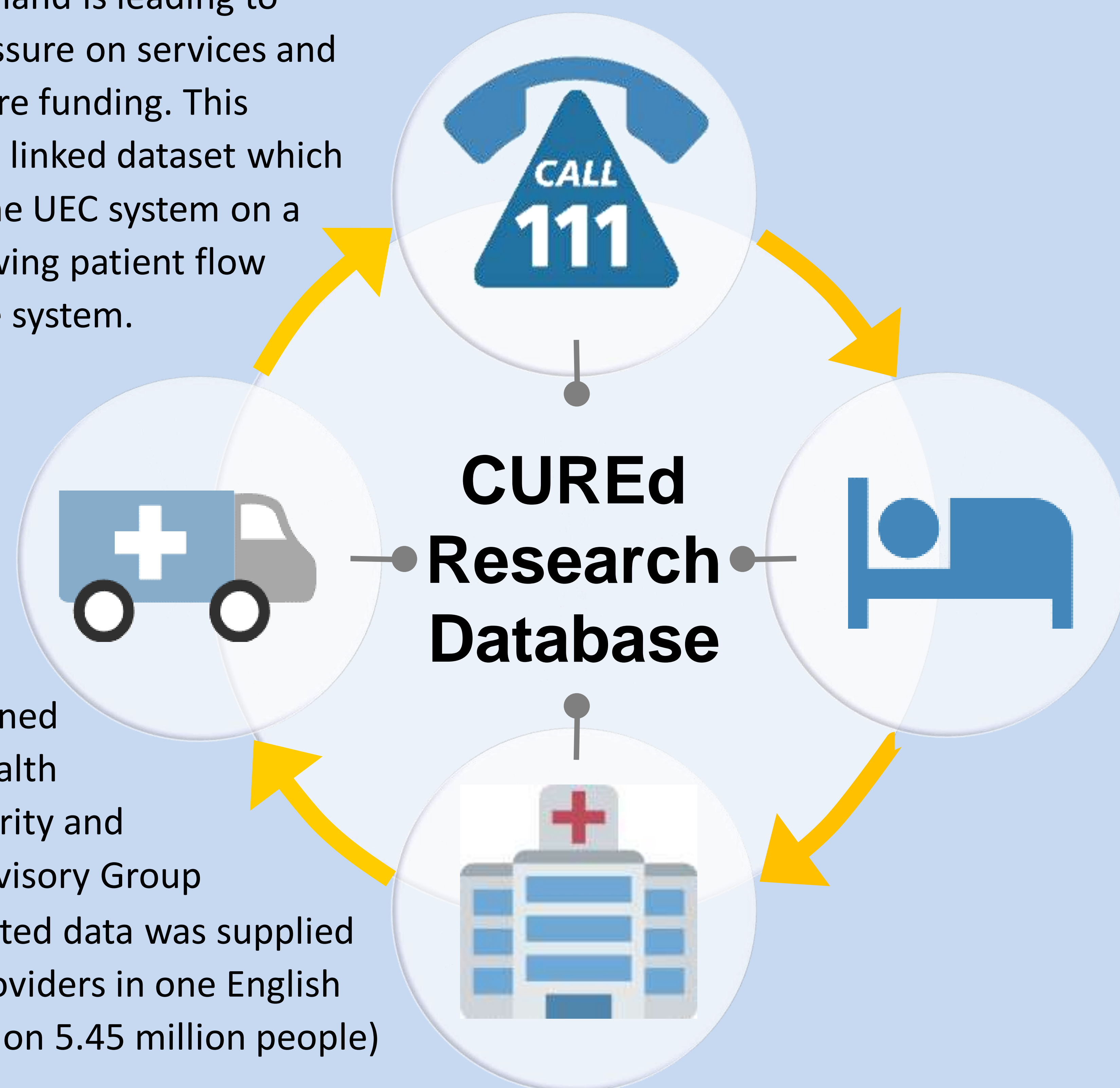
Background :

Urgent and emergency care (UEC) provides substantial health benefits across the world but increasing demand is leading to unsustainable pressure on services and need for health care funding. This research created a linked dataset which maps the use of the UEC system on a patient-level, showing patient flow through the whole system.

Methods :

- Approvals obtained from the UK Health Research Authority and Confidential Advisory Group
- Routinely collected data was supplied from all UEC providers in one English region (population 5.45 million people) including:-
 - ❖ NHS111
 - ❖ ambulance service
 - ❖ 19 acute hospital NHS trusts (ED and inpatient admissions)
- Data included all patient identifiers for the period 2011-2017
- Processes were established to enable researchers access to pseudonymised data extracts

Figure 1: Data linked from individual UEC services to form CUREd Research Database.



Results :

- Following a 20-month development period, a large (>15 million patient episodes) and unique research database 'CUREd' was created
- Deterministic and probabilistic matching of patient name, address, date of birth and NHS number was used for the linkage
- Provides detailed picture of the characteristics of demand in the UEC system from the point of contact (such as a call to the ambulance service/NHS111) through to different parts of the system (ED and inpatient admission)

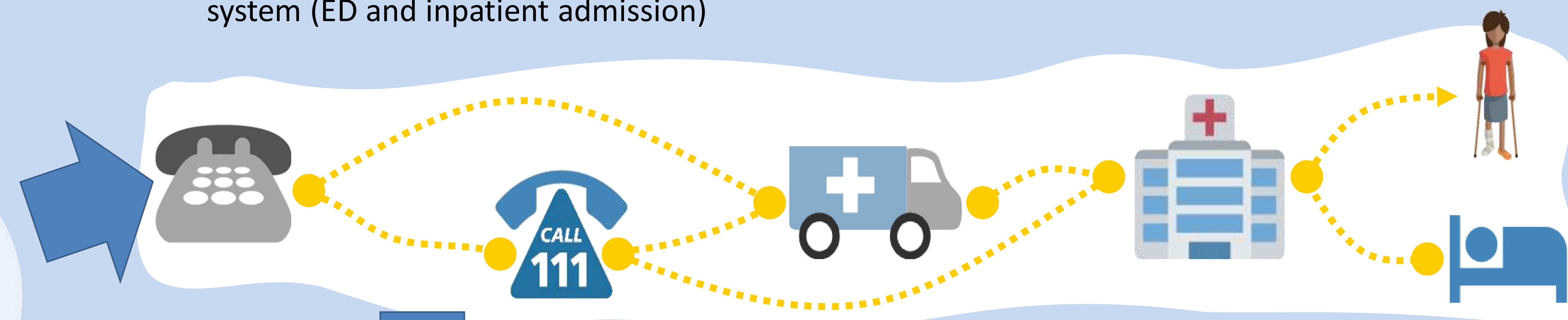


Figure 2: CUREd allows researchers to map patient flow through the whole UEC system

Help researchers to understand:-

- Key patient groups
 - ↳ How, why, when and what happens to them
- Key pressure points

Identify areas for potential improvement and interventions

Conclusion :

CUREd represents the largest resource of clinical and demographic data for the UEC system in the UK. It is accessible to external researchers to support audit and research in UEC.

In a healthcare system where individual services are not routinely linked, CUREd can be used to advance the understanding of how the UEC system is utilised by patients: the multiple contacts, re-attendances, re-admissions and the impact of these on patients and the health service.

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