

Access to local services that keep me healthy, safe and well

The unique reference number given to every property in Great Britain is linking public health data with local services, to build a clear picture of residents' health and wellbeing in Kent.

Services such as care homes, GP surgeries and home safety visits are planned to meet local demand by analysing different types of public health information. To gain a better insight into residents' health and wellbeing, unique property reference numbers (UPRNs) from GeoPlace are used to understand how different issues are linked within the Kent Integrated Dataset (KID).

Challenge

Kent County Council and the clinical commissioning groups for Kent and Medway wanted to link matching records for analytical purposes, data visualisation and an in-depth understanding of where resources are needed.

Solution

Datasets from hundreds of local health and care provider organisations flow into a local data warehouse which is the deemed 'third party data processor'. The KID contains three types of data:



- Demographics: a dynamic list of patient population information comprising of age, gender and LSOA. This dataset is derived from monthly updates of the registered patient list for Kent & Medway population known as the 'Patient Master Index' from NHS Digital. This set of information represents the 'hub' of the KID in which all other datasets are linked to each other, using the pseudonymised NHS Number of each registered patient and the UPRN, based on national IG rules and guidelines
- Structured activity and cost data from up to 250 local service providers, mainly GPs as well as acute, community and mental health, adult social care, hospice, fire and rescue etc.
- Segmentation tools, such as:
 - Index of Multiple Deprivation, reported at LSOA.
 - Combined Predictive Model (local risk stratification tool developed by HISBi);
 - MOSAIC, a system for classification of UK households from Experian;
 - ACORN, a consumer classification tool from CACI's that segments the UK population; and
 - Electronic Frailty Index

Governance of the KID is through a local data partnership between Kent County Council Public Health and Kent and Medway Clinical Commissioning Groups. The work evolved from Kent's participation into national integration programmes over the last four years. Data is routinely accessed by Kent County Council's Public Health Intelligence for population health analytics purposes.

To strengthen the understanding of how different issues are linked, KID is making increasing use of UPRNs as a link between datasets at household level, and NHS numbers to link data at person level. The UPRN is the 'golden thread' that enables addresses to be easily referenced against each other, linking information held in one system to another.

Benefits

Identifies patterns and focuses on prevention through risk profiling

Along with the NHS number, the UPRN provides a linkage point for the patient population data within KID. This makes it possible to identify where data from different sources relates to an address, and thereby begin to identify any patterns, without revealing the identities of the relevant individuals.

This is especially important given the data protection considerations when accessing and analysing person level datasets to assess population health risks and inequalities in health and care provision. It is particularly useful for planning Fire Authority Safe and Well visits to improve health and wellbeing, reduce social isolation and risk of unintentional injuries in the frail or elderly, and analysis of household type and its relationship between emergency admissions and mental health referrals from the police.

Provides insight from both a geographical and a population needs perspective

Much of Kent's health care information is based around a location. By adding a single field containing the UPRN, it is possible to link matching records in different databases for analytical purposes. In the case of long-term residential care, the UPRN is helping to accurately identify care homes and their residents, including self-funders for county council commissioning and planning purposes.

It also helps to help to quantify the extent of an issue locally, such as social isolation, by using local data rather than relying on high level national estimates which may not reflect local variation and context.

Enables visualisation of data to better plan and target resources

The ability to bring datasets together geographically enables planners to visualise where things are in the real world, which is vital when trying to understand where resources need to be deployed. By developing robust samples of families with single and multiple vulnerabilities, such as single parents, teenage parents, mental health issues and learning disabilities, needs can be modelled to meet current and future demand.

The estimated total value of health and social care services reflected in the KID is at least £3.5 billion. The UPRN has enabled public health to segment the population, to better understand its needs, and to target resources where they are needed most through place-based services of care.



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