

Applied Research Collaboration North West Coast

Care and Health Informatics

Sarah Rodgers

On behalf of the Care & Health Informatics team

Kostas Daras – Researcher – 50% with CHI, 50% with IPH (w Ben Barr)

Routinely collected data – health data science

A sub-topic within health informatics

- Using data collected by your health care providers (GP, hospital etc.) for whole populations
- Linked across GP, hospitals, social care for same person through time.
- Direct (optimise) health services to have better outcomes
- Evidence non-health changes (e.g. policies on housing, benefits, air pollution, etc.) impact on health

Capturing changes in the determinants of health (e.g. education, service provision), and health outcomes, in places **over time**

PLDR data resources 92 longitudinal area-level indicators – tailored to *your* research

- Do you have a clear pathway from **change** to **outcome**?

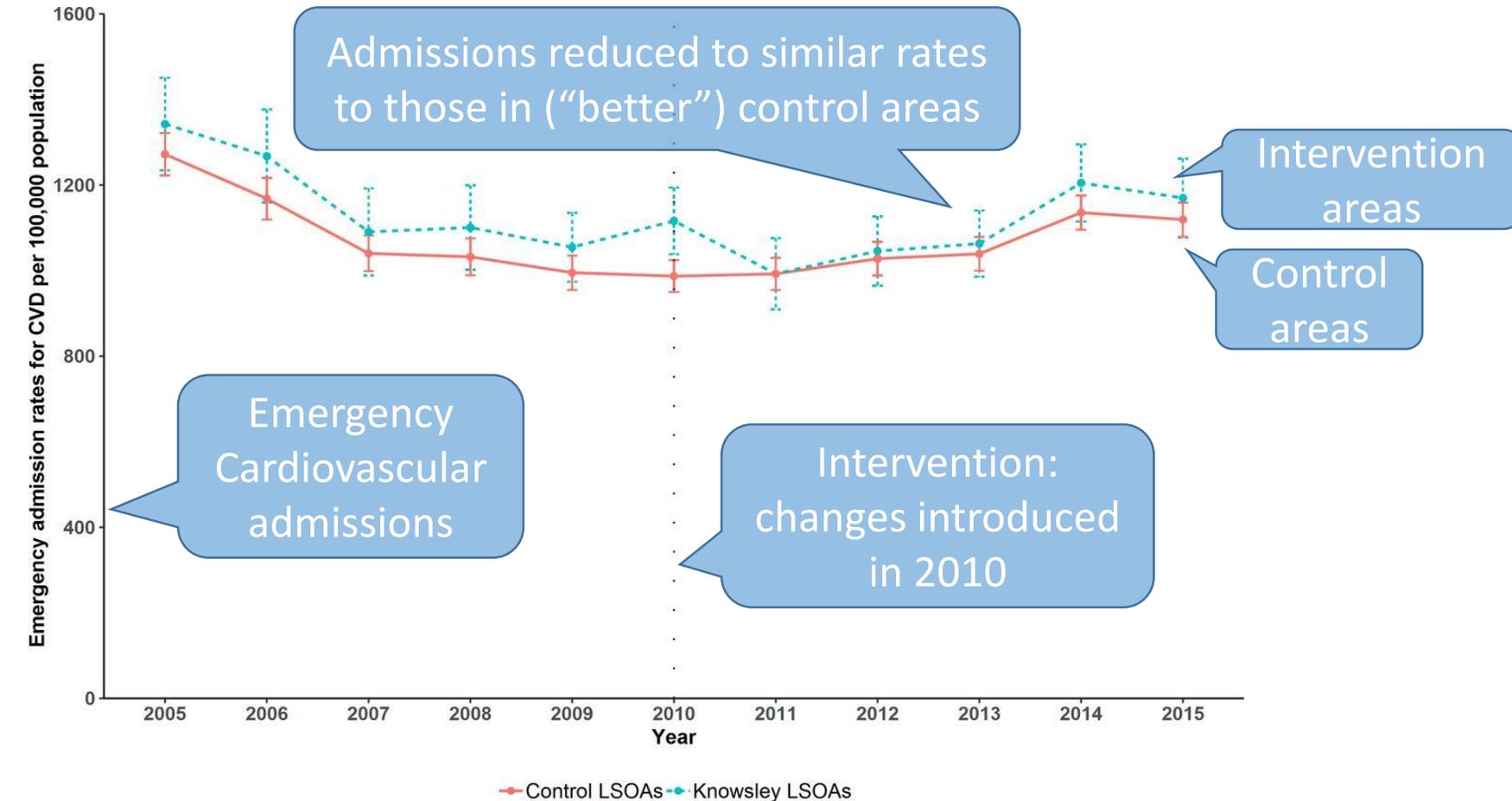


Evaluate the impact of area based local authority and NHS **economic, environmental, social, governance and service redesign** on health and social outcomes



Supporting evaluation of natural experiments:

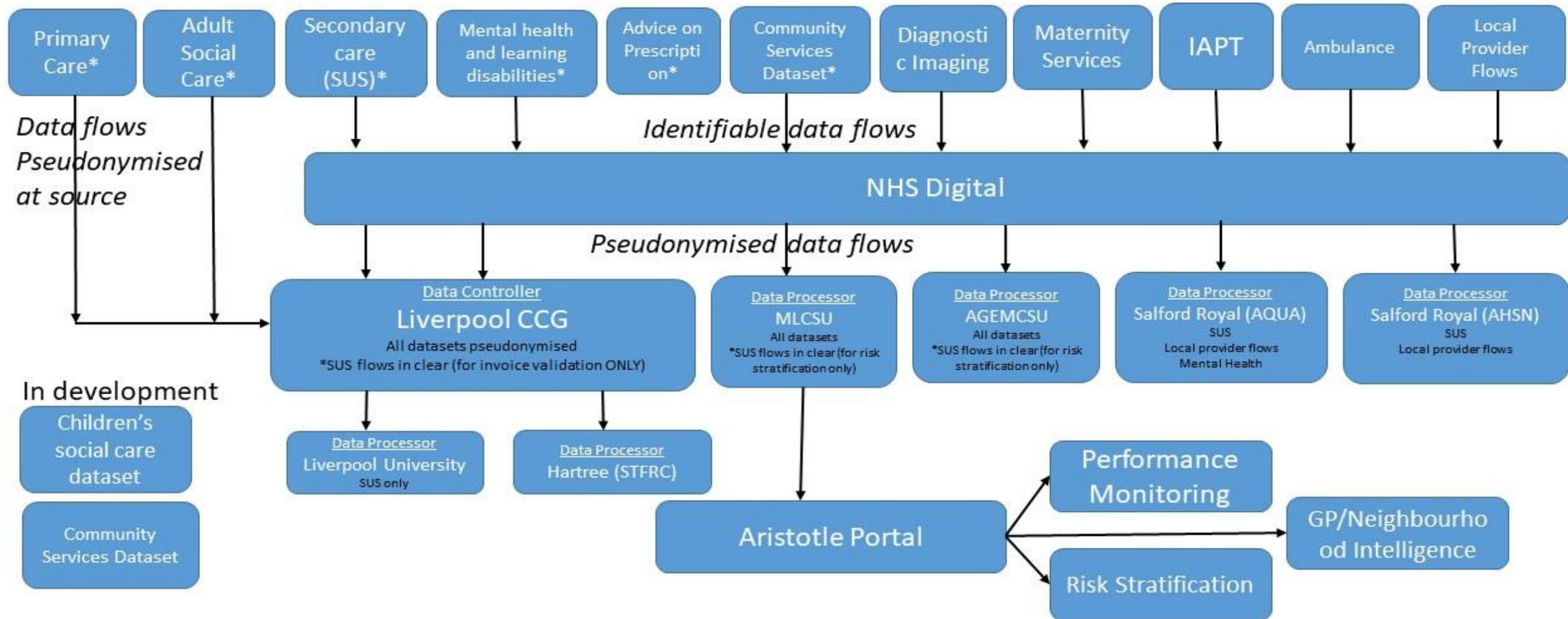
Trends in CVD emergency hospital admission rates per year, by Knowsley and matched control LSOAs, 2005–2015.



Analysis adjusted for multiple potential confounders:

- Index of Multiple Deprivation (IMD)
- Distance to A&E (km)
- Distance to (nearest) General Practitioner (km)
- Working age unemployed (%)
- GPs per 1000 population
- Female population (n)
- Population aged 50+ years (n)
- QoF: CHD prevalence (%)
- QoF: smoking prevalence (%)
- QoF: hypertension and blood pressure reading of 150/90 mmHg or less (%)
- Emergency admissions for CVD per 100 000 population per year

Linked multi-sectoral data at Liverpool CCG - for commissioning purposes (only)



Recommend how to combine and refine digital infrastructure to improve data-uses into enhanced public benefit (ARC Objective → progressing as part of the Civic Data Cooperative)

Public Involvement and Engagement

-> Information Governance

- Public engagement is a **fundamental** part of the management and the future data linkage in the NWC region.
- Involve the general public in all levels of the management of data for commissioning, research and implementation.
- Members of the public provide advice, and give recommendations on safeguarding and ethical approval.

- Next steps: **invite a small group of Public Advisors to help advise us – 2 “lead advisors”**
- Initial tasks to help advise on **governance of the Place based Longitudinal Data Resource**.
- Later: panel provides us with the public’s perspective on **data linkage research** and there are opportunities for **lay representatives to join research study teams**

“So much useful information is already in existence about us as individuals and communities regarding our health, wellbeing, education, development and nutrition, that it seems logical that if this information can be used for research which will benefit the public, then it should be.”

Julie

Dot

“Because the data are anonymised, preventing individuals’ data being identified, I have faith in the system. There are safeguards in place so that researchers only have access to what is required for their piece of research and there is a rigorous evaluation process before applications to use the databank are approved.”

“This data holds a fount of very valuable information about the state of the nation. Data can be accessed by authorised analysts to research many different aspects of patient diseases. It can then identify the benefits to patients and change the way health is targeted.”

Jan

ARC NWC Care & Health Informatics Team



Sarah Rodgers



Kate Warriner



Ben Barr



Jo Knight



Kate Fleming



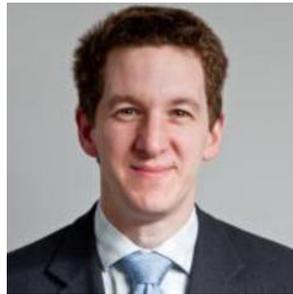
Iain Buchan



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Paula Williamson



David Worthington



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Jonny Keville



Keith Bodger

**Public
Advisors**

**Data Scientist
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**(50% Shared
with IPH)**

**Data Scientist
TBC**

**Data Scientist
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