

# VIVALDI

## Reducing Infections and Improving lives

*Our mission is to improve the quality of life for people living, visiting, and working in care homes, while also reducing the risk of infections and avoiding hospital admissions.*

*We endeavour to achieve this through the VIVALDI study that utilises existing data, with minimal input required from care home providers*



# **VIVALDI study: Building a research infrastructure with care home partners**

**Professor Laura Shallcross, UCL and Zoe Fry, The Outstanding Society**

# Widespread reporting of deaths in care homes – BUT NO DATA

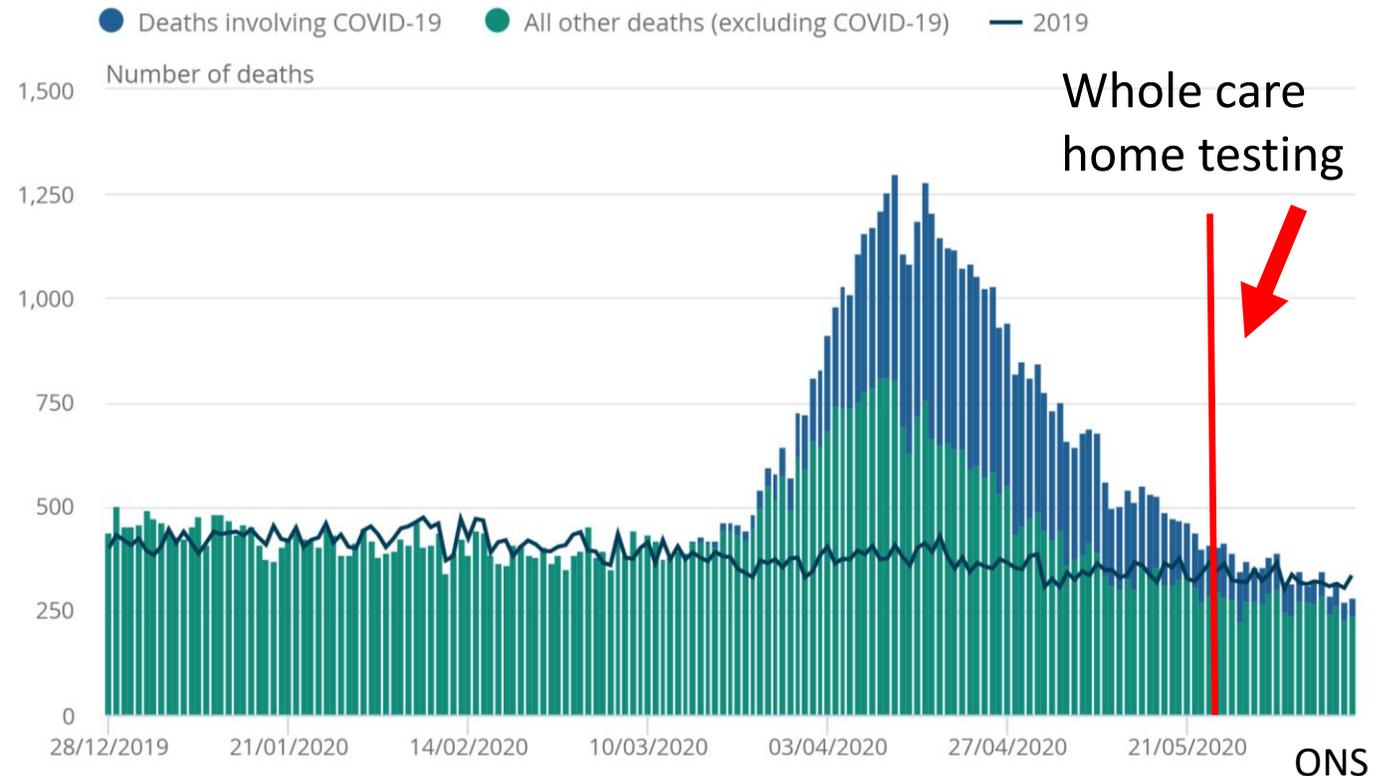
CORONAVIRUS

## Coronavirus: Care homes ‘not warned about rising infection rate’



*The Times May 20, 2020*

### Wave 1: Number of deaths in care home residents from 28/12/19 – 12/6/20, England and Wales



Unable to answer important questions to guide policy =  
setup of the VIVALDI study?

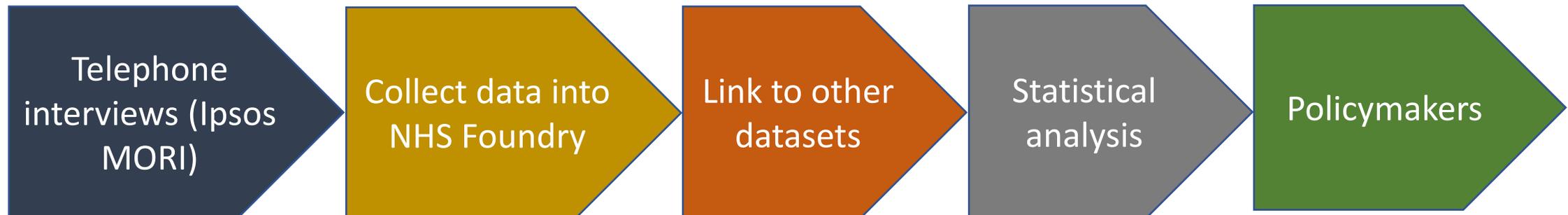
**Government funded programme of research to inform the  
pandemic response in care homes in England**

- Started May 2020, ends March 2023
- Delivered in partnership with providers, led by UCL
- High-quality research on rapid timescales informing policy

## VIVALDI-1 survey of care home managers

2 key questions

- How many people in the home have been infected?
- Why are some homes getting (large) outbreaks and others are not?
- Telephone survey of care home managers (26 May – 19 June)
- Homes mainly providing dementia care or care to > 65 years
- Collaboration between UCL, ONS, DHSC and PHE/UKHSA



# Main risk factors for SARS-CoV-2 infection & outbreaks

Structural factors	Infection outcome			
	Infections in residents	Infections in staff	Outbreak*	Large outbreak†
Increased social deprivation	Red	Green	Green	Green
For-profit status	Red	Red	Green	Yellow
Larger LTCFs	Red	Red	Red	Green
<b>Staffing factors</b>				
Lower staff-to-bed ratio	Red	Red	Green	Green
Use of agency nurses	Red	Red	Red	Red
Staff working at other sites	Green	Red	Green	Green
Staff not cohorted	Red	Red	Red	Green
No staff sick pay	Red	Red	Green	Yellow
<b>Control measures</b>				
Lower cleaning frequency	Yellow	Red	Green	Green
Inability to isolate residents	Red	Red	Red	Red
Number of admissions to LTCF	Red	Red	Red	Green
Later closure to visitors	Yellow	Green	Green	Green

■ p<0.008   
 ■ p=0.008-0.05   
 ■ p>0.05   
 ■ Risk factor reduces odds of infection, an outbreak, or both

**Proportion of people testing positive for COVID-19 in wave 1:**

**RESIDENTS (n=160,033):  
10.5 % (9.9-11.1%)**

**STAFF (n=248,594):  
3.8% (3.4-4.2%)**

**First results published**  
**16/07/20**

## Direct impact of the VIVALDI-1 survey on policy

- Focusing limited COVID-19 testing capacity on staff

*Vivaldi showed staff were more likely to infect residents than vice versa*

- Establishing the Adult Social Care Infection control fund to ensure that staff could afford to self-isolate when unwell

*Vivaldi showed the care homes that did not pay full sick pay were more likely to have infections in staff and residents*

- Reducing movement of care home staff across sites

*Vivaldi showed that care homes where staff frequently worked across sites were more likely to have infections in staff*

# The 'main' VIVALDI study (300 care homes, c. 60,000 residents and staff)



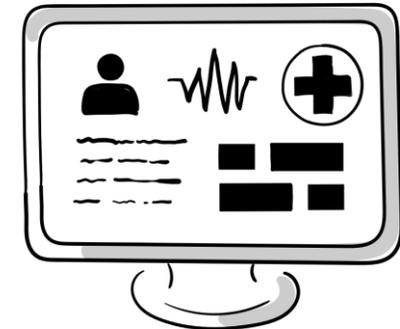
Created by tezar tantular  
from Noun Project

**1) Collect blood to  
investigate immune  
response**



Created by Luis Prado  
from Noun Project

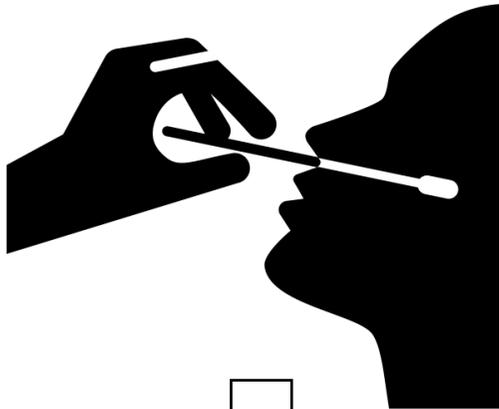
**2) Retrieve COVID-19  
test results from  
national programme**



**3) Link to national data  
e.g vaccines & hospital  
admissions**

## How does the study work?

1. All care home staff and residents tested for COVID-19



Created by Luis Prado

2. Each test is labelled with the persons name, NHS number and their CQC-ID



3. Results from care home staff and residents sent electronically to NHS England and stored securely

4. NHS-numbers from test results used to link to other healthcare records that are held by the NHS e.g. hospital admissions, cause of death

5. Linked dataset used for research on COVID-19 in care home

**DATA LINKAGE PROCESS ONLY PERMITTED DURING THE COVID-19 PANDEMIC**

This approach has allowed us to address key policy questions.....

- What is the risk of getting COVID-19 more than once?
- How well do vaccines protect residents and staff against infection, hospital admission and death?
- How effective are boosters? How long does protection last?
- How did risks change in residents and staff after Omicron? Did Omicron change the risk of work in care home staff and residents?
- How does the care home building affect spread of COVID-19 (work in progress!) .....

## Taking stock – where are we now?

- We have built a new care home research programme
- We have shown that research can deliver evidence to rapidly inform policy
- We have built strong partnerships with care providers and policymakers

### Risks

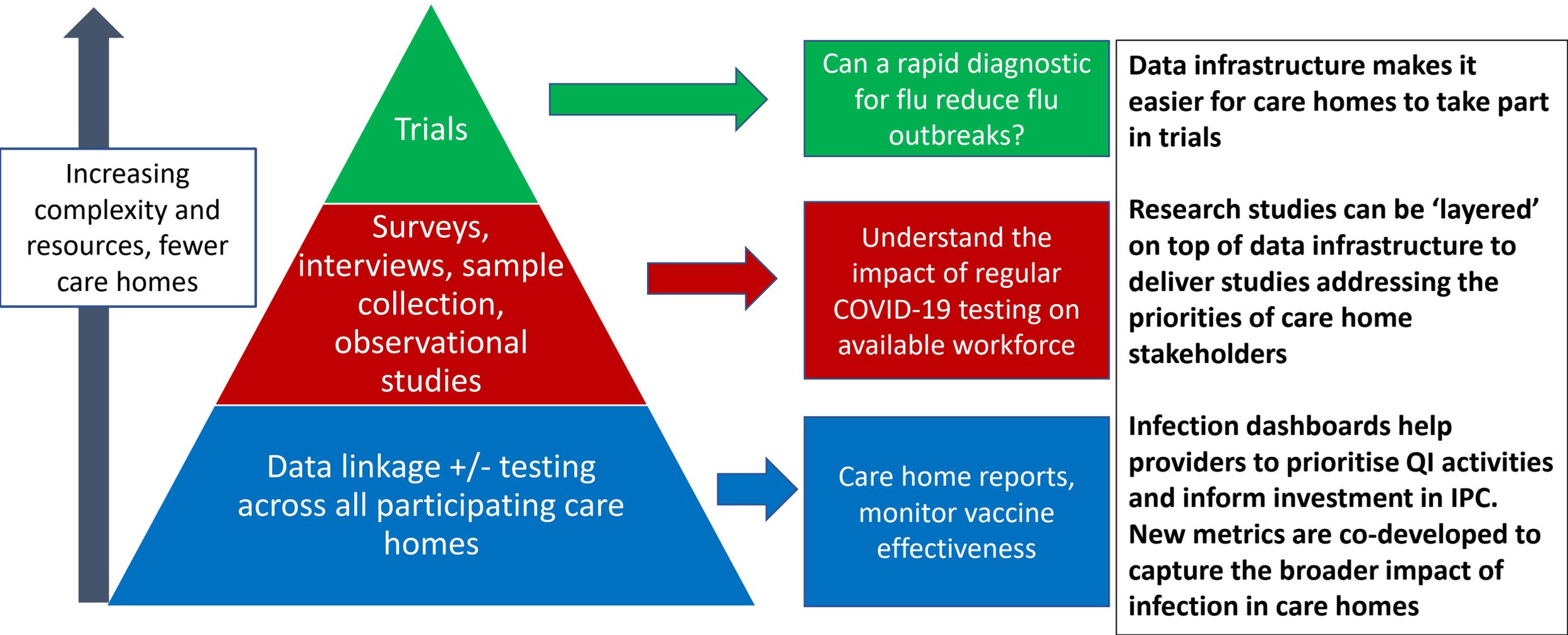
- **If this programme stops we could be back in a March 2020 scenario:**
  - *inability to track levels of infection beyond outbreaks*
  - *no data on vaccine effectiveness as immunity wanes*
  - *extreme vulnerability to pandemics, seasonal infections*
- **Missed opportunity for a positive legacy from the pandemic**

## The opportunity

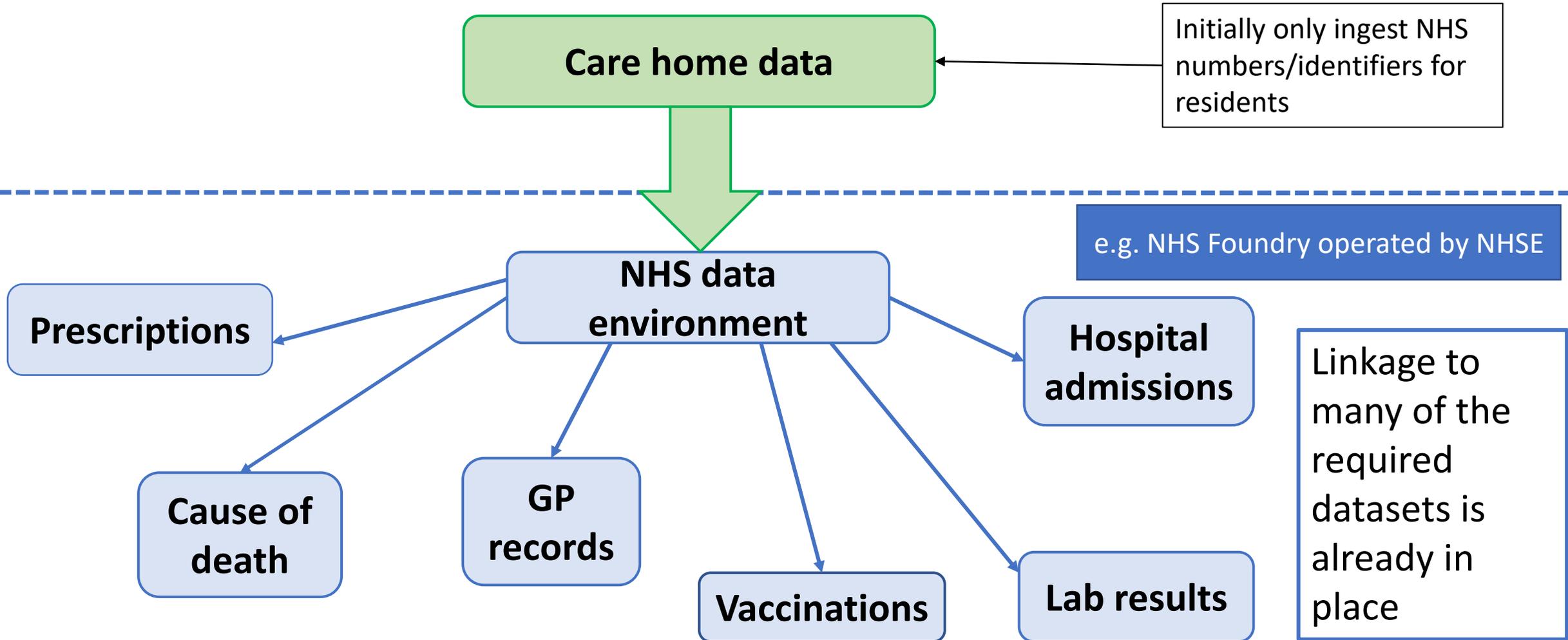
To challenge the view that infections and outbreaks are an inevitable part of being in a care home by creating a programme of research and surveillance on infection which:

- Is coproduced with the care home stakeholders
- Strongly informs policy and public health decision-making
- Capitalises on lessons learned from the pandemic
- Lays the foundation for a future, broader research agenda

# Data sharing and linkage enabling QI, surveillance & research on infection



# Linking data from residents to other NHS datasets



## Study aim

*To challenge the view that infections and outbreaks are an inevitable part of living in a care home, by:*

1. Changing how we measure infection to incentivise action
2. Delivering exemplar studies on priority infections

## Social care infection indicators



# Hospital admissions, # bloodstream infections, # deaths



How much income is lost due to outbreak-related care home closures? Can we quantify outbreak severity?



How does infection impact on QoL?  
e.g. # days that outbreaks close home to visitors

**Success: Indicators adopted (researchers, policymakers, CQC)**

## Building momentum...

Prof Lucy Chappell (CEO NIHR), Michelle Dyson (DG ASC), and Prof Jenny Harries (CEO UKHSA) visited a care home in Cricklewood in May 2022 to learn about care homes experience of COVID-19 and the VIVALDI study



## & more momentum...

The Journey:

- CQC TA meeting March 2022



*As a care home group senior manager, the reality is that if it was done by care associations, we would more than happily participate. I feel from external organisations it's 'done onto' and meaningless.*

*Why would we want to share very detailed information into a system and process that does nothing to help us? SO many external bodies just don't understand our realities, or ask questions in ways that make sense I cannot and will not do anything that is not beneficial*

- April 2022 – OS started to promote future project
- May 2022 – Initial Meeting with OS, UCL and Care England



- May – September. Development of relationship between Accademia, Policy and Independent organisation with the focus on sharing and celebrating best practice and helping others to improve
- October – December – Working Group
  - Working group with key stakeholders – Multi pronged approach
  - Working with other Care Associations
  - Onboarding of care homes
  - Development of webpage
  - Recording podcasts
  - Virtual meetings
  - 1-1 meetings
  - Learning from other best practice e.g. DACHA
  - Raising the profile of research in Social Care
  - December 15<sup>th</sup> – Stakeholder meeting – Where we are now





**Prof. Laura Shallcross MBE**  
Chief Investigator for the VIVALDI study  
UCL Institute of Health Informatics

and care homes worked together, informing national responses to COVID-19.

*If we can do this kind of work during a pandemic, imagine what could be achieved if we adopted the same approach for other common infections, like flu or norovirus.*

*We want to challenge the view that infections and outbreaks are simply an inevitable part of living in a care home, by delivering research and surveillance that tackles all kinds of infections.*



**Prof. Martin Green OBE**  
Chief Executive Officer  
Care England

*The Vivaldi project really shows the benefit of care homes being involved in research.*

*Vivaldi delivered changes in policy and practice that were driven by the experiences of care homes. For one of the first times in our recent history, we had a policy agenda that was dictated by what worked for the care homes during a global pandemic.*

*Vivaldi has clearly shown the power of care homes coming together with researchers to define the best practice for both residents and staff.*



**Zoe Fry BSc – Nursing Studies,**  
Diploma in Adult Nursing.  
Executive Director  
The Outstanding Society

*The VIVALDI study was such a significant milestone for Social Care to use research and surveillance to inform best practice to improve the lives of residents and teams within Care Homes.*

*The OS are delighted to work with UCL and Care England to continue using evidence obtained within Social Care to reduce the*

[Click here to view slides](#)

**vivaldi** CARE

Shaping social care research

16th February 2023

**Governance & Oversight Work-stream**

00:00 41:07

### Engagement Meetings

**vivaldi** CARE

Shaping social care research

16th February 2023

**Engagement Work-stream**

00:00 52:20

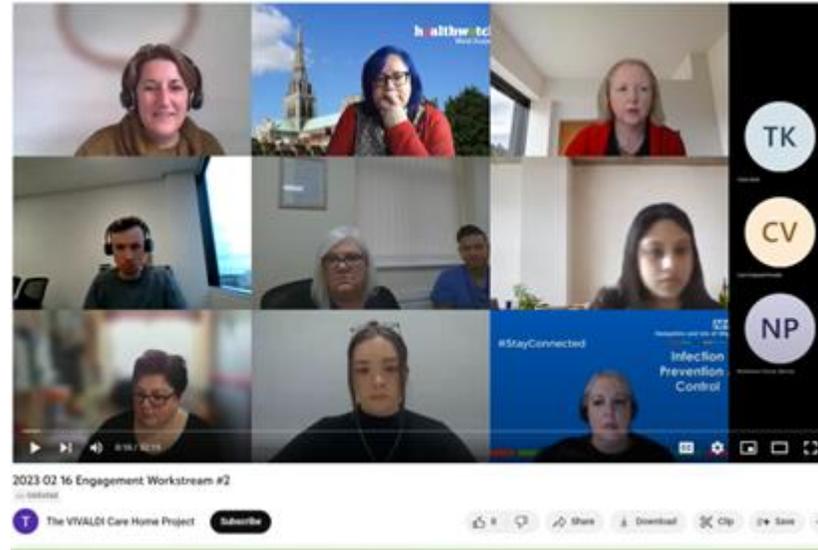
**vivaldi** CARE

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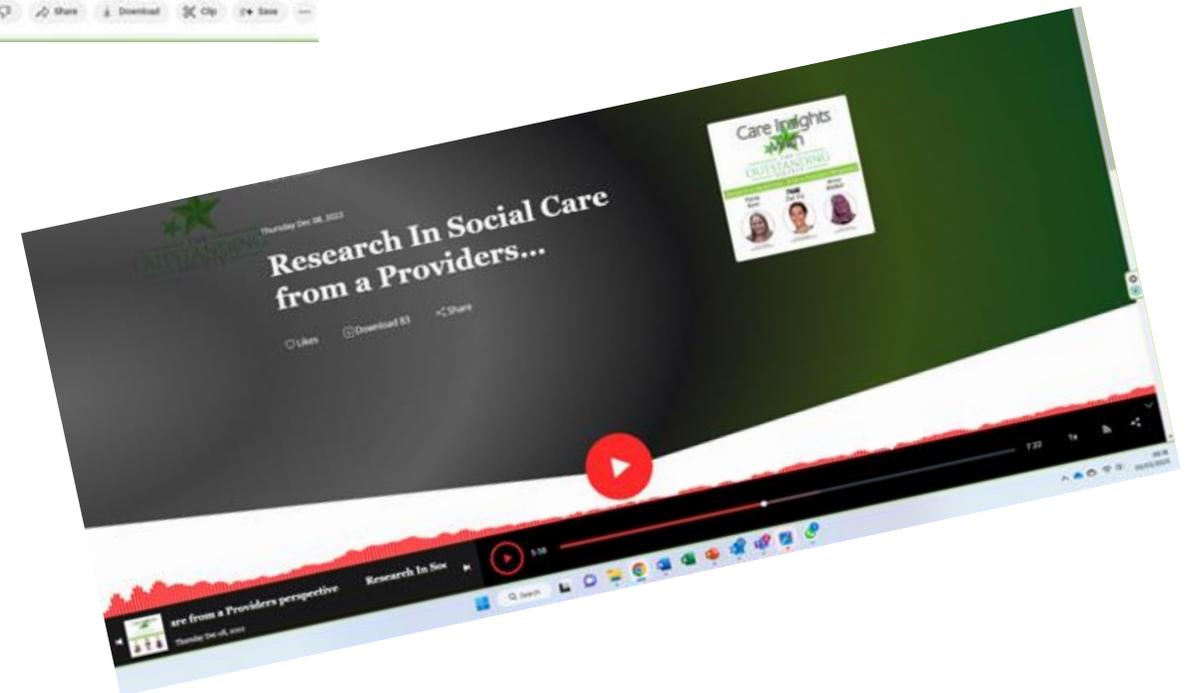
16th February 2023

**VIVALDI Engagement**

January – March 2023



- Governance and Oversight Working group
- Engagement and Communication Working group
- Podcasts
- Panel Discussion
- Learning from others
- Presentations
- Onboarding



**March 30<sup>th</sup> 10-11 – Stakeholders Meeting**

This is an opportunity for providers, their teams, residents, relatives, ICB's, health and social care professionals along with the local community to hear about the progress made and ask any questions ahead of the launch.



**Residential and Home Care Show Wednesday 26<sup>th</sup> April**

The official launch of VIVALDI Social Care 3:30 – 4:15pm panel discussion people & business theatre followed by Drinks and Canapes in the OS learning lounge

Panel: Directors of the OS, Prof. Laura Shallcross, Prof. Martin Green, Prof. Deborah Sturdy, Prof. Ruth Endacott, Care Associations, Providers, Relatives

# Acknowledgements

Maria Krutikov

Andrew Copas

Andrew Hayward

Maddie Shrotri

Oliver Stirrup

Paul Flowers

Susan Hopkins

Pablo Medina

Jen Barr

Borscha Azmi

Paul Moss

Gokhan Tut

Chris Fuller

Zoe Fry

Sam Crawley

Martin Green

Liz Whyte

Liz Jones

James Robson

Natasha Southall

Jeremy Farrar

Claire Goodman

Martin Knapp

Adelina Comas-Herrera

Natalie Adams

James Blackstone

Jackie Cassell

Iona Cullen Stevenson

Niccola Hutchinson Pascal

Rebecca Giddings

Hadjer Nacer

Care home residents  
and staff who have  
participated in the  
study

Funders:  
UKHSA  
NIHR