Using social care data to identify personalised medication interactions
1. Birdie’s mission

2. A research project example: identifying and preventing medication interactions
Care Worker App

Agency Hub

Family App

Connected hardware

birdie.care
We are working with hundreds of home care agencies across the UK, supporting over 18,000 care recipients in their own homes - with data from over 250,000 visits every week
Our goals and partners

Helping our partners deliver better care

Contribute to nationwide care improvement

Research partners anonymised data

Helping local communities

Agencies data controllers
Identifying and preventing medication interactions
The Problem

Taking lots of medications can make lots of adverse events more likely

- Side Effects
- Falls
- ↓Mobility
- Hospital
The Data

Over the last year Birdie has collected:

- Free text observations from carers: x 7 million
- When a medication was taken: x 5 million
birdie x faculty

Oscar Bennett
Adverse events in text logs:

Medication records:
Adverse events in text logs:

Medication records:
Initial model

100s of different statistical Hypothesis tests across 1000s of timelines

birdie.care
Initial model

- Statistical inference tool
- Correction for multiple comparisons
  - Bonferroni Correction
- Controlled for the confounding influence medical conditions using medical history records
Example Results

Dorothy

Monday Meds
- Warfarin
- Diazepam
- Codeine
- Propranolol
- Rosuvastatin
- Cyclizine

Next 48hrs
- Warfarin: x 3.5
- Diazepam: x 3.5
- Codeine: x 3.5
- Propranolol: x 2.0
- Rosuvastatin: x 3.8
- Cyclizine: x 4.4
Impact

1. Helping agencies to identify care recipients, like Dorothy, who are at greater risk of a range of adverse events

2. With better awareness of risk comes better ability to step in and prevent problems

3. More personalised risk estimates
Next steps

1. Artificial Intelligence in Health and Care Award application results
2. Using machine learning to identify and mitigate medication-related risks and improve social home care
Helping our partners deliver better care

Helping local communities

Contribute to nationwide care improvement
Appendix
Birdie is a universally recognised innovator

Selected partners

alina homecare
MEDACSGLOBALGROUP
SureCare

Press & Awards

Forbes
FT.com
LaingBuissonAwards
centrica

Working with

NHSx
CareQualityCommission
GovStart
DigitalHealth.LondonACCELERATOR
Tunstall

birdie.care
Birdie’s mission and traction are widely recognised

Awards
- Top-10 health-tech
- Top-10 UK startups
- Top-50 EU startups
- Best SME culture 2019

Accelerators and accreditations

Certified

DigitalHealth. London | ACCELERATOR

PUBLIC

Kamet

Nasdaq

Crown Commercial Service Supplier
Our mission

Help older adults live with confidence, longer, healthier and happier in the comfort of their own home while their families feel reassured and supported.
Our ambition by Dec 2023, is to have radically improved the lives of 1 million older adults and have the financial means to sustain our growth independently.
Birdie is in a unique position to change home care now

- Unique, up to date, daily home care visit observations including care recipient activity and well-being, linked to needs assessments and associated outcomes
- Access to home care workers regularly visiting people’s homes, with opportunities for greater involvement
- With an ‘interoperable ready’ platform for future data sharing *

* Birdie data is coded in SNOMED and using FIHR standards, and available through open APIs, making it interoperable ready for NHS services. Other care professionals can also access Birdie via temporary third party log-in, pdf downloads, joining ‘care circle’ app, or tailored solutions for direct access to agency data. We have also started integration discussions with Council facing software, such as Care Director, ContrOCC or Mosaic.