

**P**redictive  
**P**reventative  
**P**recise  
**P**opulation  
**P**atient  
**P**erson



# System P

THIS PROGRAMME IS ACROSS CHESHIRE & MERSEYSIDE

## IDENTIFYING TRENDS, PATTERNS AND SYSTEM OPPORTUNITIES



System P is a whole system approach to addressing multiagency, multisector challenges that negatively impact population health, and will deliver transformational change in service provision through collaborative working. It is based on four 'DACP' pillars of work – data transformation, care transformation and payment transformation – to reflect our belief that transformation in all four areas is required to genuinely change public services in order to manage population health more effectively.

## Complex Lives Update

In the System P Complex Lives Workshop in November we asked for suggestions on how to develop the infrastructure within the VCFSE sector to strengthen and integrate the offer for Complex Lives families.

A fund of £80k was made available to realise this ambition. In addition to this, at the Complex Lives workshop in October, we offered an investment fund of £20k to explore engagement activities with local people.

This was to ensure that a qualitative insight piece also sat alongside the 'hard' data.

The solution to the above challenges that we would like to test, is the development of a Community of Practice (CoP) across each of the 9 places, and for an over-arching CoP across the Cheshire & Merseyside region.

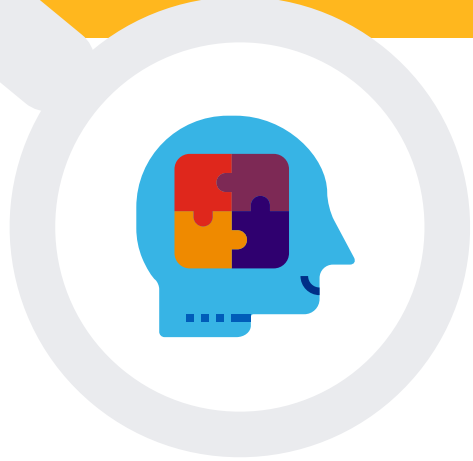
Each of the 9 Places in Cheshire & Merseyside will have a total allocation of £10k.

The model of delivery will help to build relationships across the system at leadership, management, and operational levels.

Continuous evaluation and reflective learning will enable us to identify what works and build on this; creating opportunities to challenge current practice and develop new ways of working where appropriate.

### In this issue:

*Complex Lives Communities of Practice / Complex Lives in Knowsley / System P Data Model / Data Model Development / Applications of the Data Model / Research Funding Associated with System P / Frailty and Dementia Risk Factor Insight /*



# Communities of Practice

## Complex Lives

### Voluntary, Community, Faith & Social Enterprise

VCFSE Organisations need to express an interest to their local infrastructure partner either via VS6 (hosted by One Knowsley) or CWIP (hosted by Warrington Voluntary Action)

[Racheal.Jones@OneKnowsley.org](mailto:Racheal.Jones@OneKnowsley.org)  
[alison@warringtonva.org.uk](mailto:alison@warringtonva.org.uk)



1

### Exploration

Creation of an ongoing Community of Practice model at place for Complex Lives with a flexible and responsive agenda, as deemed most appropriate by its membership.

2

### Awareness

Raise awareness and generate local interest in developing a Community of Practice (CoP) model for Complex Lives. Facilitate sector and systems to meet up, with the delivery of a place event as a starting point.

3

### Creation

Initial exploration of organisations supporting individuals or families within the Complex Lives cohort. Understanding their service offer, their key relationships and interfaces both within the sector and with broader health and care partners

4

### Connection

Connect the CoP into the Place governance arrangements for health and care and ensure an ongoing dialogue and mutually responsive and supportive approach

5

### Engagement

Explore specific areas of engagement with local people which will help address gaps in current knowledge

6

### Scaling Up

Feed into the C&M overarching Complex Lives CoP which brings together all 9 places to share best practice, learning, tools, materials, expertise etc. Link into the overarching governance at ICS where appropriate also.

C&M  
level

Place  
level

# Complex Lives

## Knowsley



We have recently started working closely with Knowsley Place to explore a new targeted approach to working with primary care and social prescribers.

System P produced an additional Complex Lives Household pack for the Northwood area of Kirkby, a ward which has a total of 970 households, 98 of which come under the Complex Families definition.

These 98 families utilise approximately £1.4m of health and care services each year.

Work is in progress to develop an algorithm which helps identify people who sit within the Complex Lives cohort and who have a certain set of characteristics e.g. recent mental health diagnosis, or sit within a priority age group, which could make them more amenable to a more proactive, community based offer.

As this work develops, we will continue to share learning with other Places across Cheshire & Merseyside.



**Liver Scans  
for Cobalt  
Housing  
Residents**

Health screening is a key element of good healthcare, however these interventions are often at lower levels in the Complex Lives cohort, than they are in the general population.

Working alongside the Public Health Programme CHAMPS, System P

helped facilitate the joining up of health professionals and a local housing association to provide on-site liver screening.

We will continue to build on this joined up model of delivery to reach out to high priority communities.

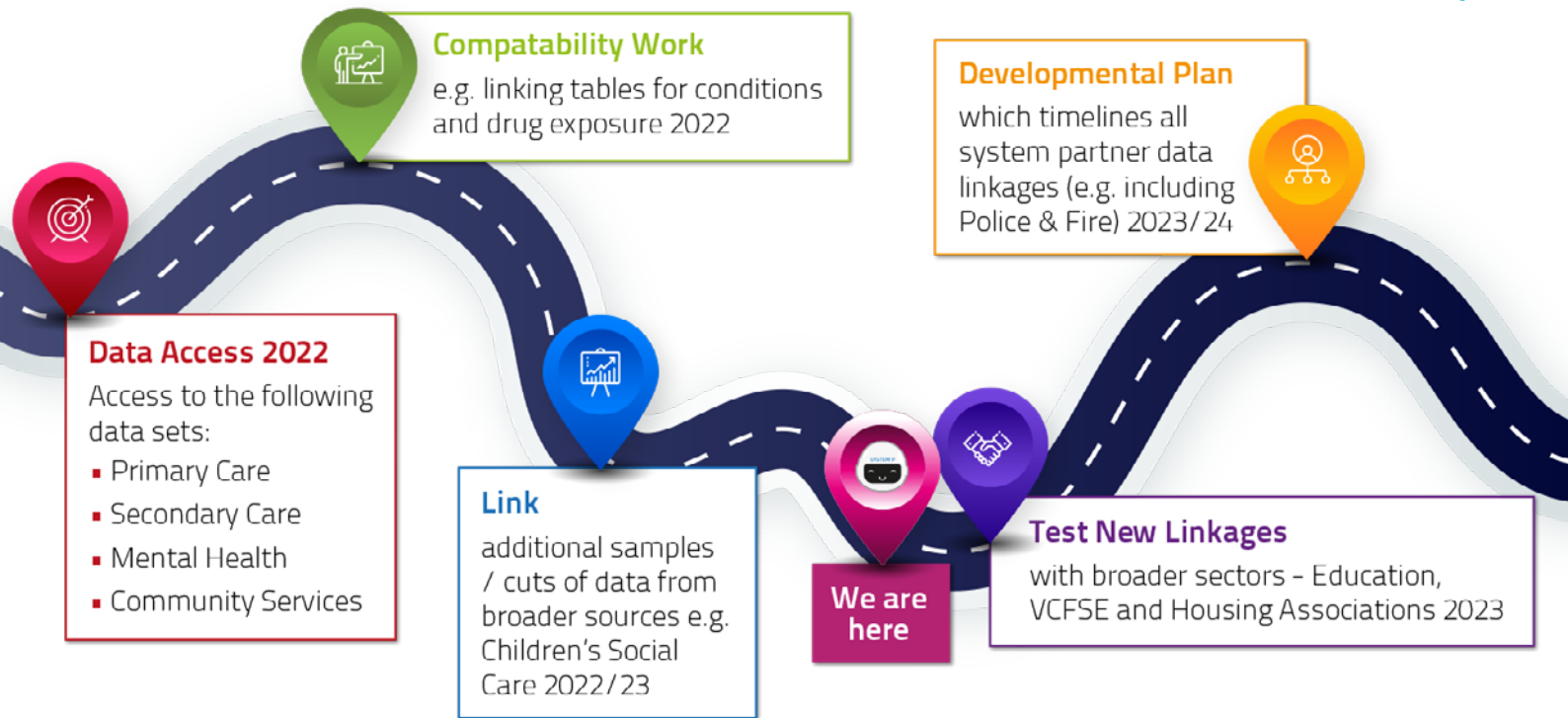
# Improving outcomes through System P data analysis

We are keen to share knowledge, skills and learning as the programme develops.

To rapidly apply robust analytics requires linking and integrating data across a wide range of services – into what is called a Data Model.

Considerable progress has been made in making these data usable by a network of analysts working across organisations using the System P data model to deliver service improvements.





## CIPHA has also used the data model for a number of core Population Health Management tools, some examples of which are shown below.

These tools enable segmentation and stratification of a given population or specific issue.

The reports contain data on the epidemiology and risk or certain outcomes and also have the ability

for those involved in direct care to identify cohorts for intervention.

If you would like access to the CIPHA system please contact [cipha@merseycare.nhs.uk](mailto:cipha@merseycare.nhs.uk)

- Demographic breakdown of waiting list by Provider, Place, PCN & Practice, stratified for risk of an adverse outcome.
- Create bespoke cohort using waiting time, speciality, condition, demographics, protected characteristics and many other variables.

### Waiting List Insights

- Ability to search GP registered patients in Cheshire & Mersey ICS (~2.5m)

### Enhanced Case Finding

- Stratify patients by demographics, conditions, service utilisation, risk and other valuables

- Informs planning for winter re: patients potentially affected and interventions required.
- Shows 'cold homes' and enables segmentation by geography, conditions and risk scores.
- Includes LSOA fuel poverty data and household energy performance certificates.

### Fuel Poverty

- Shows a population level view but also has the ability to drill to patient level.

System P has recently been referenced in a national document, 'ICS intelligence functions – toolkit to support implementation of the NHSE guidance'.

This toolkit accompanies NHSE guidance that describes what an ICS intelligence function should aim to do and what an emerging, developing and maturing intelligence function should look like.

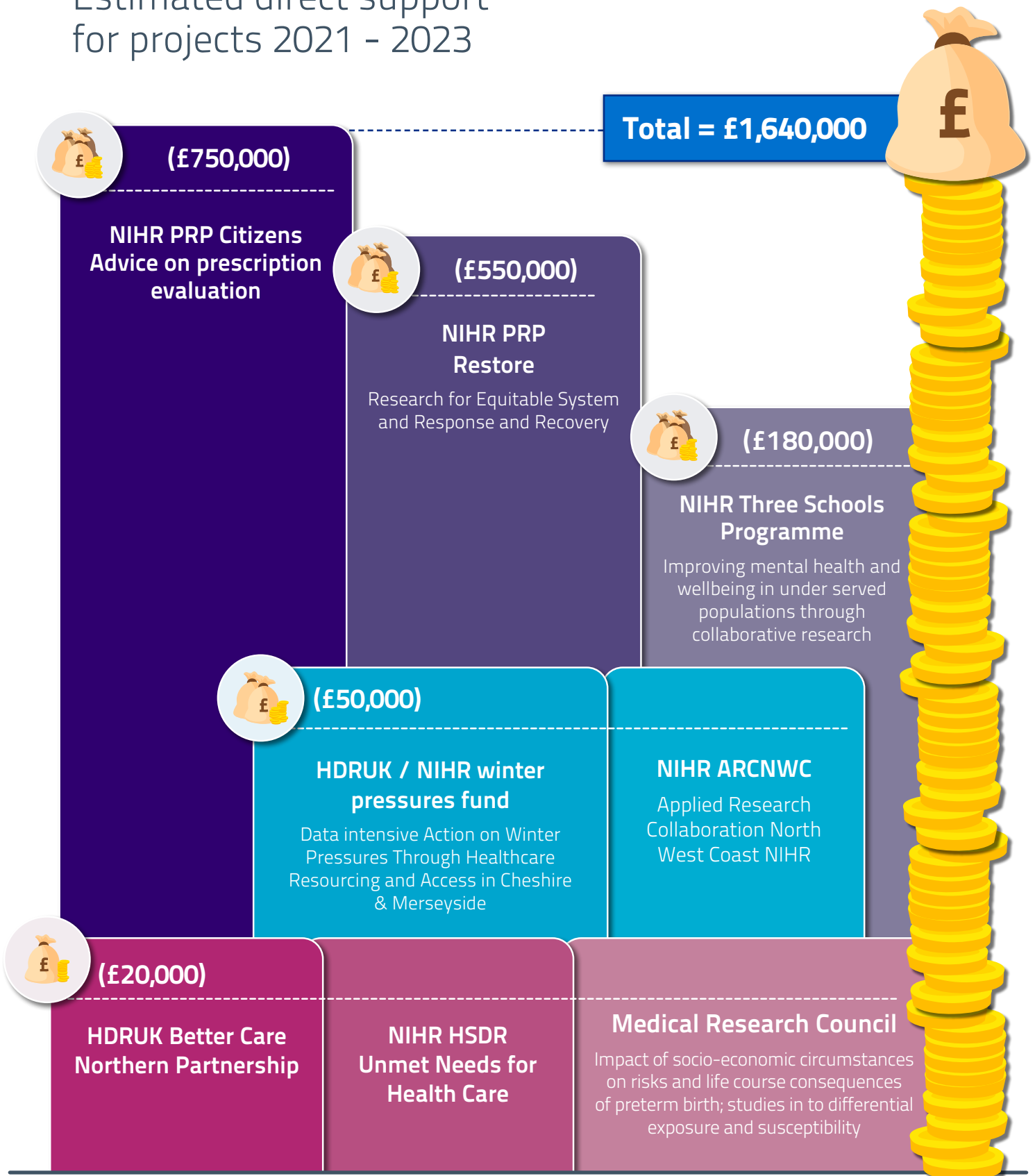
It has been developed for NHSE by the Strategy Unit with additional advisory input from the Nuffield Trust.

[www.england.nhs.uk/long-read/building-an-ics-intelligence-function/](http://www.england.nhs.uk/long-read/building-an-ics-intelligence-function/)



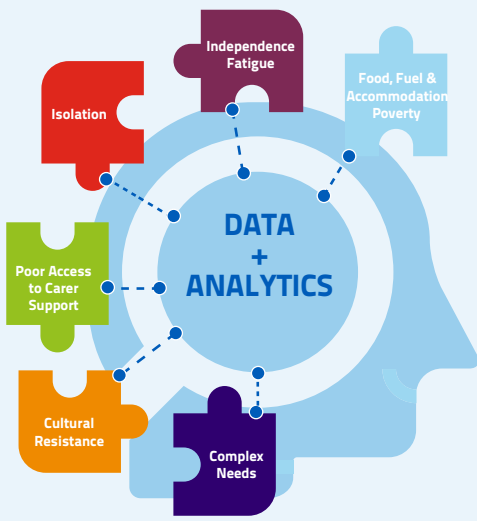
# Research funding leveraged through System P

Estimated direct support for projects 2021 - 2023



# Frailty & Dementia

## Risk Factor Insight



Enhanced analytical work has been produced for the Frailty & Dementia Segment, further to system wide feedback and specialist input.

This additional insight has looked into the most likely risk factors affecting this population and reviewed these against the four sub-segment domains of the population.

### Sub-Segment Domains:

1. Severe Frailty
2. Moderate Frailty
3. Mild Frailty
4. Dementia

### Risk Factors:

1. Living Alone
2. Falls
3. Deprivation
4. Depression
5. Diabetes
6. Long-term Conditions

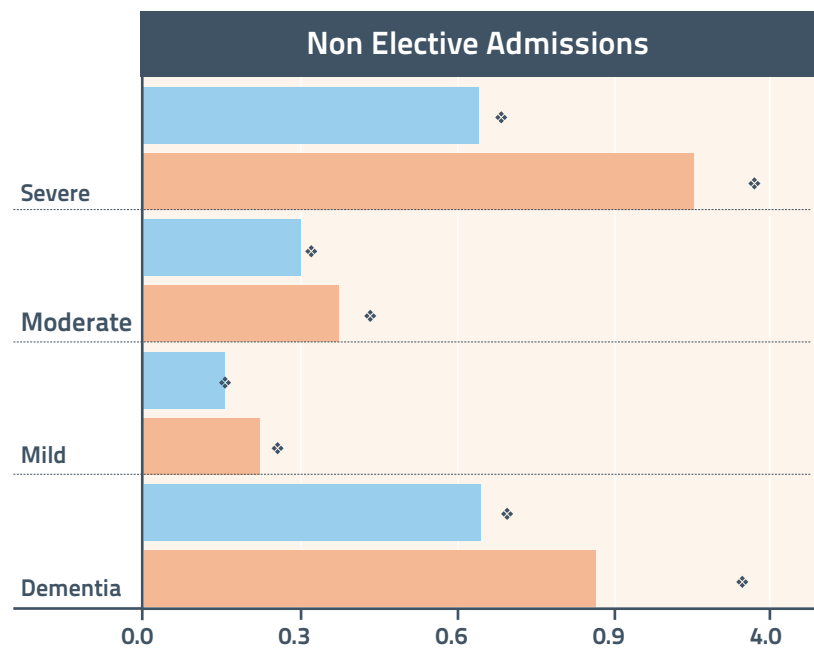
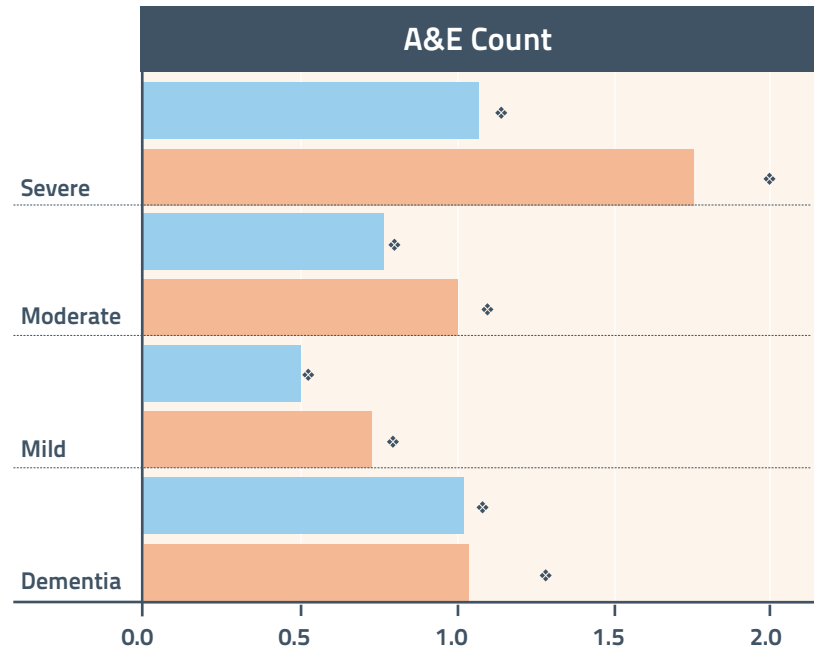
## Question?

Is depression a risk factor which could be taken into account when designing Virtual Frailty Wards?



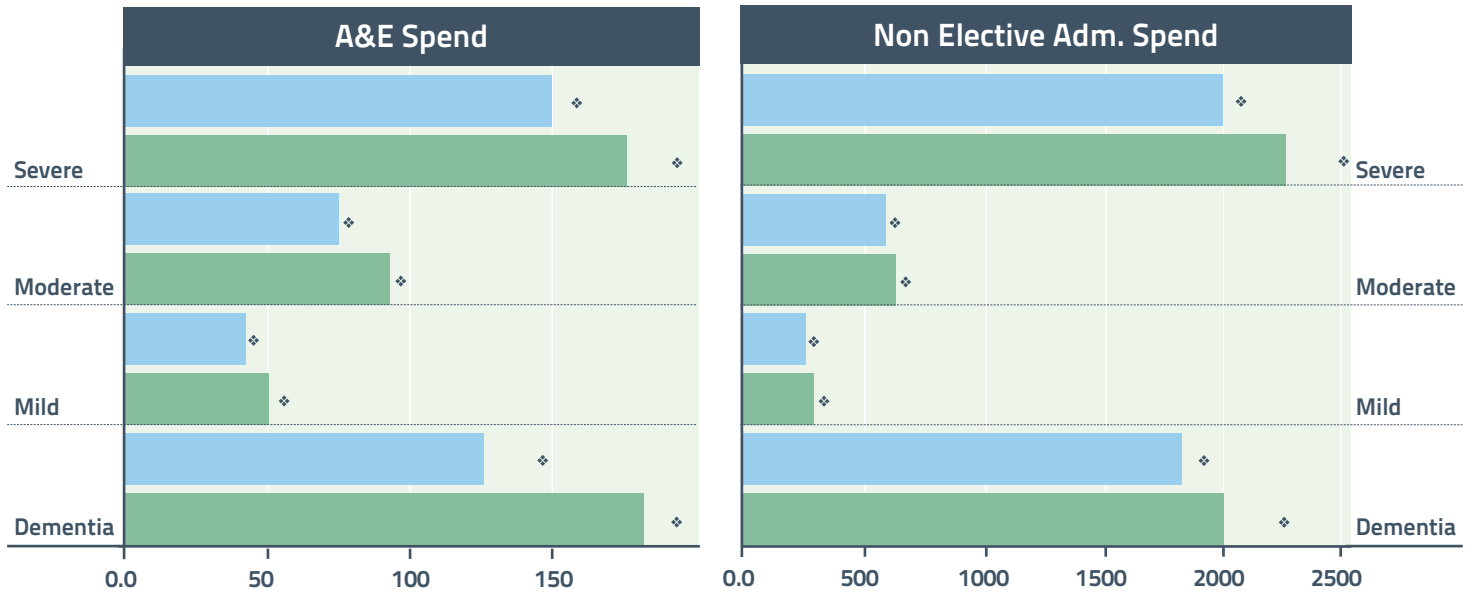
### Example St Helens

Risk Factor - Depression on acute activity



- Those with a risk factor of depression are more likely to attend A&E and get admitted than those without
- A&E attendances are notably higher in St Helens than C&M, across all domains, both with or without this risk factor, apart from people with both Dementia and Depression together.

## Example Wirral | Risk Factor - Deprivation on acute spend



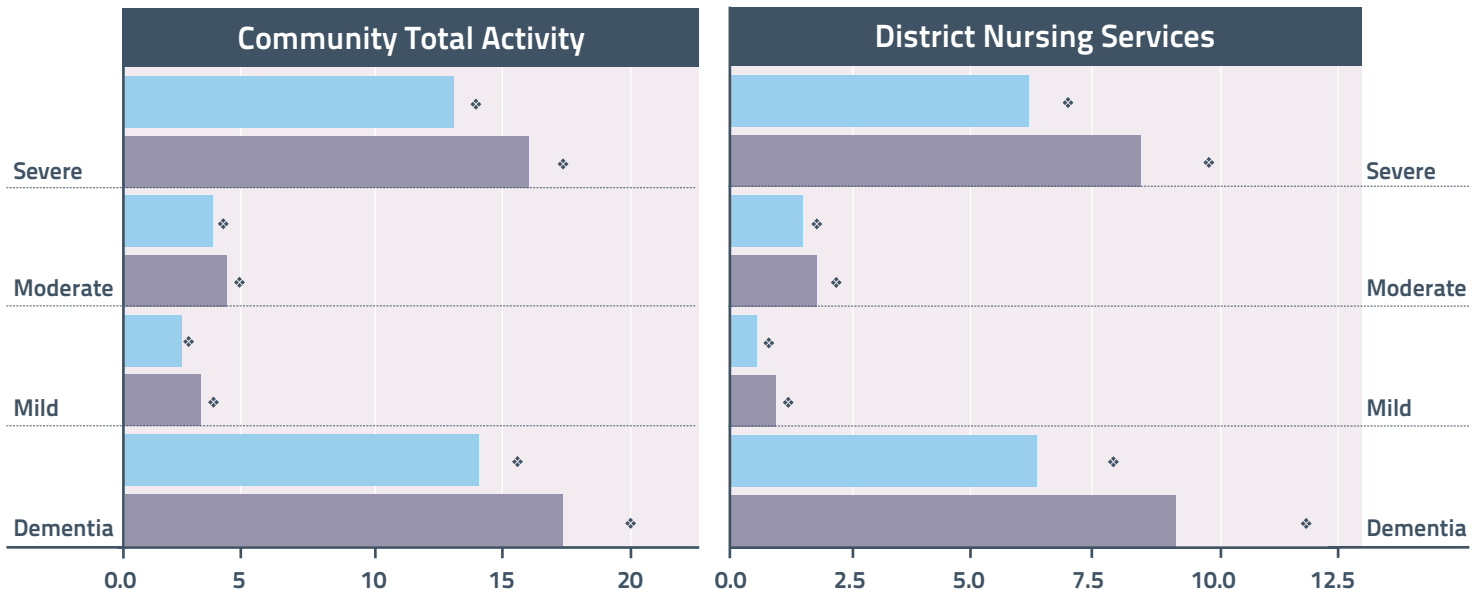
**Key** ♦ Cheshire & Merseyside average Living Alone Yes No

- Those living in the most deprived quintile have a greater average spend in A&E, compared to those without this risk factor.
- The average non-elective spend is also higher for those who live in the most deprived quintile, compared to those who do not.
- Both of the above points apply to all sub-segment domains but the difference is greater for severe frailty and dementia, than it is moderate and mild frailty.

### Question?

How can services align their capacity to the areas of greatest deprivation?

## Example Liverpool | Risk Factor - Living alone on community activity



### Question?

How might proactive models of care work alongside those services in the community which are already supporting people with frailty & dementia?

- Those living alone are accessing more services in the community than those who don't (however they are using less urgent acute care, data not shown here).
- Total community contacts are higher across Liverpool than the C&M average.
- Average number of District Nursing contacts is similar to the C&M average, apart from dementia which is lower (but please note the breadth of the confidence intervals).

**Key** ♦ Cheshire & Merseyside average  
IMDQ1 Yes No



Individual	System P Role	Role Outside of the Programme
Professor Joe Rafferty CBE	Executive Sponsor	Chief Executive Mersey Care NHS Foundation Trust
Professor Iain Buchan	Leading Expert Population Health	Chair in Public Health & Clinical Informatics & Executive Dean, Institute of Population Health, University of Liverpool
Professor Matt Ashton	Leading Expert Public Health	Director of Public Health, Liverpool
Dr Louise Edwards	Senior Responsible Officer	Executive Director of Strategy, Mersey Care
Andrea Astbury	Programme Director	Deputy Director of Strategy, NHS Liverpool CCG
Wes Baker	Strategic Analytics	Director of Strategic Analytics, Economics and Population Health Management, Mersey Care
Nicola Pilling	Project Support	Project Support, Midlands & Lancashire Commissioning Support Unit
Helen Bennett	Senior Advisor	Deputy Director of Strategic Planning & Intelligence, Mersey Care
Helen Duckworth	Intelligence Infrastructure	Associate Director of Business Intelligence C&M, Programme Director for CIPHA
Professor Ben Barr	Data Science & Analytics	Professor in Applied Public Health Research, Institute of Population Health, University of Liverpool

# final thoughts

**Never has there been a more important time to transform the health and care system to work around the needs of the population, rather than the needs of local organisations and services.**

However, during challenging times it can feel like a luxury to spend the time to stop and think about how we work and why. Without this kind of introspection, we risk greater burnout for our staff and loss of confidence from our local population. Innovating the model of care can enable us to work smarter, not harder. System P is here to help systems do this.

If you think we can help unlock challenges in your system, please get in touch: [andrea.astbury@liverpoolccg.nhs.uk](mailto:andrea.astbury@liverpoolccg.nhs.uk)

