





Richard Doidge

Commissioning Manager, Strategy and Integration Adult Care and Health Commissioning Birmingham City Council

Email: richard.doidge@birmingham.gov.uk

Tom Knight

Director Affinity Works

Web: www.affinityworks.co.uk

Email: tom.knight@affinityworks.co.uk

Introduction

Richard Doidge

Commissioning Manager, Strategy and Integration

Key Business Drivers

As a council we wanted to better understand and predict adult social care trends, needs and costs.

We wanted to:

- Quantify demand on adult social care services
- Understand trends in the care market
- Show and predict trends in citizens' wants and needs
- Better understand our costs in an era of restricted public finances, to improve value for the public purse



Setting the Scene

Challenges

Existing methods of analysing prevalence of need, service demand and trends in the care market relied upon various sources, including:

- The 2011 Census
- Academically-calculated prevalence rates for disability and need
- Performance statistics and government statistical returns
- Annual finance reviews

This was fragmentary, and we needed a reliable way of pulling this all together, in a way that was comprehensive, live, and predictive.

Setting the Scene

Social Care: Landscape helps with those challenges through

Granularity of analysis; the differing effects and trends on different groups of citizens and needs

Analysis across different service types and tenure

Predictive analysis, both in-terms of volume of need, complexity of need and likely costs

The information to work more effectively with citizens and the social care market, to develop and support the types of services that people want and need.

Support for strategic development, and financial planning



COVID 19 Impact

BUT...

We had commissioned a strategic tool to look at medium and long-term trends.

... But of course, things change slowly in adult social care don't they?...

... And what the app could not predict, was COVID-19.

As we know, COVID had an unprecedented effect on all aspects of life across the world, including social care.



Key Observations

What we have seen since the start of the pandemic:

Initially, a huge effort to move people out of hospital and into social care settings (care homes and community).

Care homes on lockdown to protect citizens and staff

Costs increasing, due to PPE, staffing and additional pressures

Early in the pandemic: care homes filling up and vacancies limited.

Now: care homes carrying more vacancies than normal, creating additional financial pressures.

The social care landscape is changing at a rapid pace – all of which needs careful monitoring so that we can assess the impact and plan our way forwards.

Social Care: Landscape

Landscape is a business intelligence product that offers a 360 degree view of insights related to social care

Social Care: Landscape

Population & Prevalence

Delayed Transfers 1111 of Care

Quality & Capacity







Inputs/Sources: ONS : Prevalence Rates ¦ Demand Model

Outputs:

General Population Projections

Ages 0-90+ split by custom age bands

Targeted projections of health conditions, tenure and support arrangements Inputs/Sources: National DToC Data

Outputs:

Historic analysis of DToC for both acute/non-acute

Benchmark against other LAs with local and national ranks

Breakdown of underlying causes

Inputs/Sources: CQC ! Local Performance Data ! Food Standards Agency ! **NHS Digital**

Outputs:

Number of registered services & capacity (current and trend)

Quality of services (current and trend) + provider failure warning

Locations + coverage map

Inputs/Sources: Case Management System ! Demand Model

Outputs:

Total spend and number of people supported

Average unit costs

Number of companies and services used

Inputs/Sources: Case Management System

Outputs:

Forecasts of activity and commitment by PSR and age group

Predicts major categories to less than 2% variance 12 months ahead

Reacts to unexpected changes in demand

Key Points:

- Data is harvested from both open and private sources and consolidated into a single, coherent data model
- It's always up-to-date so key decisions can based on the latest available data

Public Plugins (e.g. Market Position Statements/FOI)



Social Care: Landscape

The Demand Model looks at historic activity and produces forecasts based on identified trends and patterns found in the historic data

Social Care: Landscape

Prevalence

Delayed Transfers 🚺 of Care

Quality &



Activity



Demand Model



Key Points:

Inputs/Sources: ONS : Prevalence Rates ¦ Demand Model

Outputs:

General Population Projections

Ages 0-90+ split by custom age bands

Targeted projections of health conditions, tenure and support arrangements Inputs/Sources: National DToC Data

Outputs:

Historic analysis of DToC for both acute/non-acute

Benchmark against other LAs with local and national ranks

Breakdown of underlying causes

Inputs/Sources: CQC ! Local Performance Data ¦ Food Standards Agency ! **NHS Digital**

Outputs:

Number of registered services & capacity (current and trend)

Quality of services (current and trend) + provider failure warning

Locations + coverage map

Inputs/Sources: Case Management System ! Demand Model

Outputs:

Total spend and number of people supported

Average unit costs

Number of companies and services used

Inputs/Sources: Case Management System

Outputs:

Forecasts of activity and commitment by PSR and age group

Predicts major categories to less than 2% variance 12 months ahead

Reacts to unexpected changes in demand

In typical 'business as usual' scenarios the demand model can forecast major care categories to within 2% variance 1 year into the future

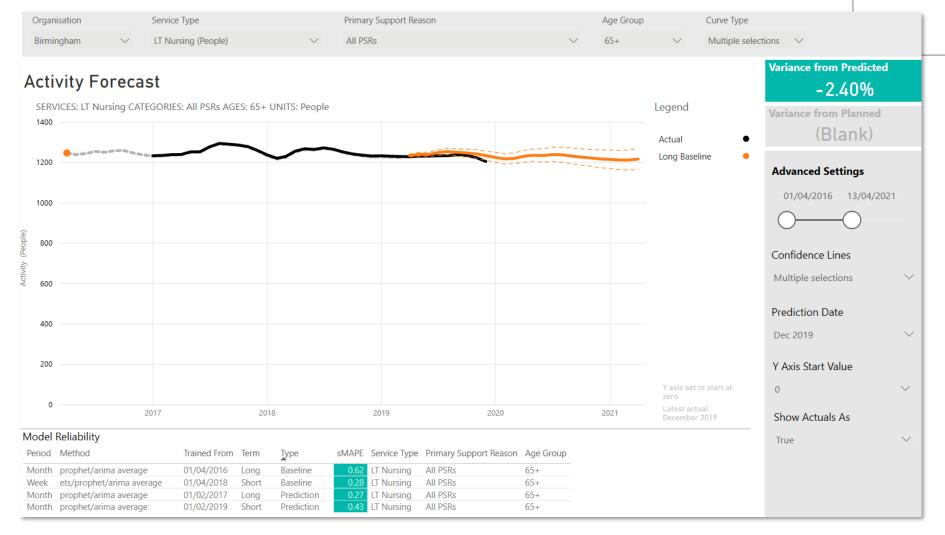
This has been proven in realworld use across many care categories in multiple LAs

Public Plugins (e.g. Market Position Statements/FOI)



Demand Model – Pre COVID

- The demand model makes forecasts for any combination of service type, PSR and Age Group which we call a demand category
- This forecast is a typical demand category prior to COVID 19



Key Points:

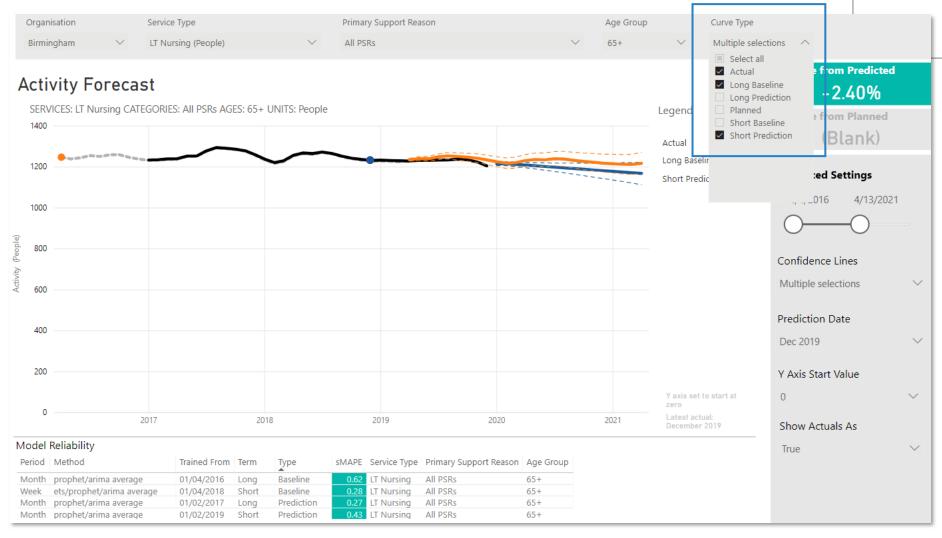
 Birmingham's configuration currently support about 500 separate demand categories

 all of which can be monitored individually or in groups



Demand Model – Pre COVID

- A number of different forecasts can be deployed. These place more or less emphasis on recent events
- Plans can also be configured and visualised



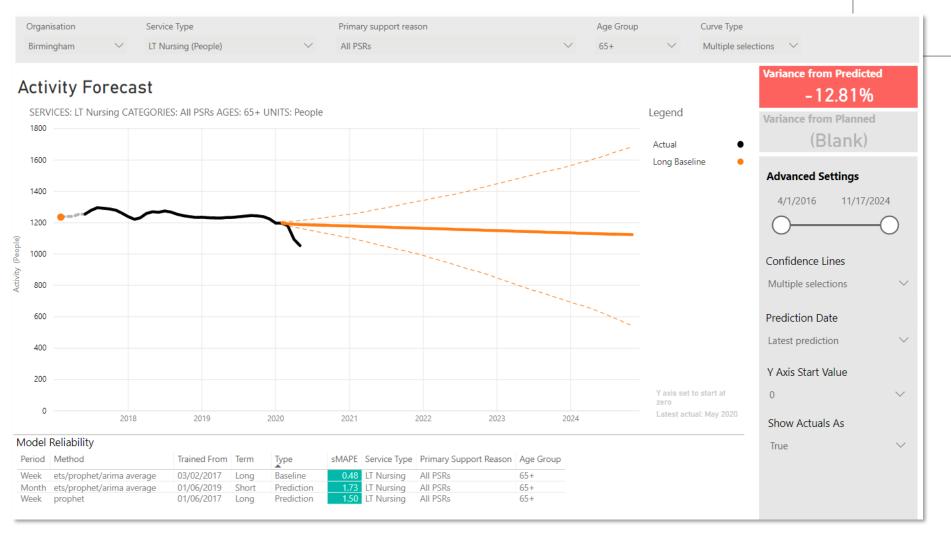
"Everybody has a plan until they get punched in the mouth"

Mike Tyson



Demand Model – Current Position

- Baseline forecast made from January 20 (the latest pre-COVID position). The variance figure indicates a 13% drop in activity for this demand category
- Significant reductions only present in April/May (post lockdown) so this could well decrease further



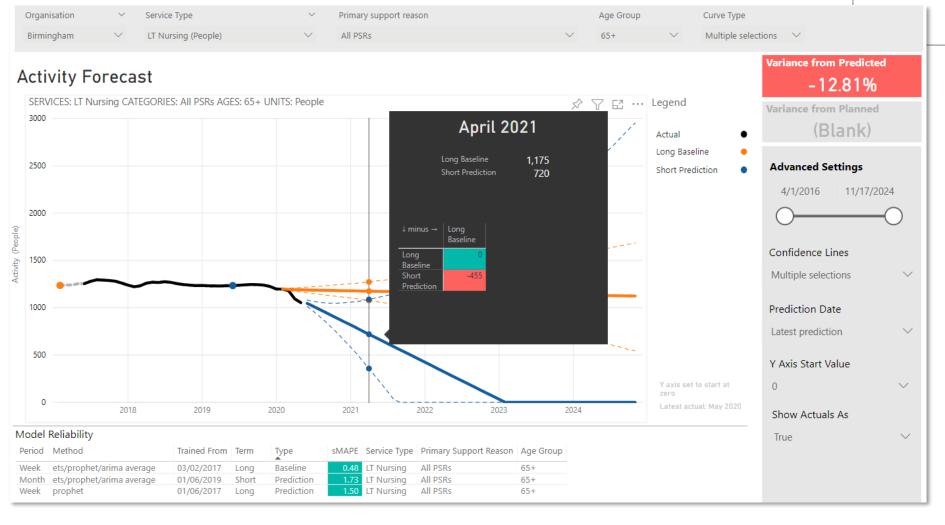
Key Points:

 Activity snapshots are taken weekly but presented as monthly averages to reduce jitter



Demand Model – Current Position

Using the short prediction we can estimate that the number of older people using longterm Nursing could be down by 450 people (39%) at the end of 20/21



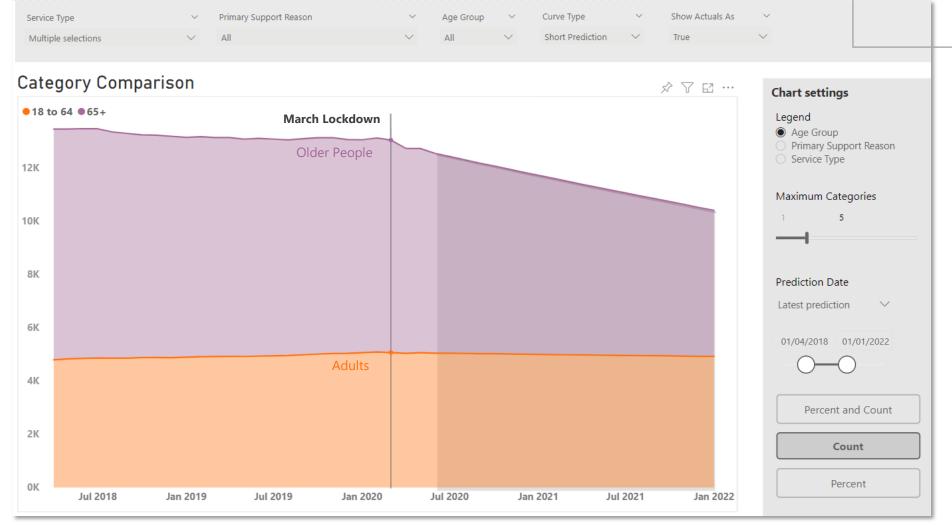
"Your goal right now isn't predictions. It's preparation for what comes next. We must shift our mindset from making predictions to being prepared." Amy Webb

How futurist cope with COVID



Demand Model – Whole of Market Analysis (Age)

- Changes can also be viewed across a broader cross-section of social care
- The projected impact on people 65+ is quite dramatic. This is not exclusively due to COVID deaths in many cases is it due to a reduction in take-up of social care services



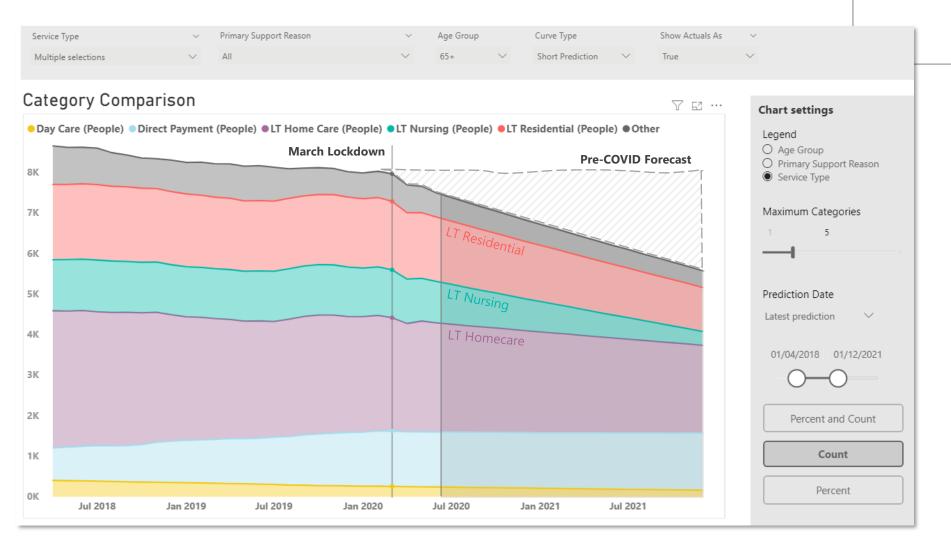
Key Points:

 The darker shaded area is based on the short prediction and therefore highly susceptible to change (in either direction) as the situation progresses



Demand Model – Whole of Market Analysis (Service Type)

- Switching the breakdown enables us to view the same impact across either Primary Support Reason, or Service Type



Key Points:

 Activity can be viewed in-terms of the number of people using the service, the number of units (e.g. Homecare hours) or as percent of total



Spend & Activity

- Spend and activity is another key area where change can be viewed and measured

Social Care: Landscape

Population & Prevalence

Delayed Transfers of Care



Quality & Capacity



Spend 8 Activity



Demand Model



Inputs/Sources: ONS | Prevalence Rates | Demand Model

Outputs:

General Population Projections

Ages 0-90+ split by custom age bands

Targeted projections of health conditions, tenure and support arrangements Inputs/Sources: National

DToC Data

Outputs:

Historic analysis of DToC for both acute/non-acute

Benchmark against other LAs with local and national ranks

Breakdown of underlying causes

Inputs/Sources: CQC | Local Performance Data | Food Standards Agency | NHS Digital

Outputs:

Number of registered services & capacity (current and trend)

Quality of services (current and trend) + provider failure warning

Locations + coverage map

Inputs/Sources: Case Management System ¦ Demand Model

Outputs:

Total spend and number of people supported

Average unit costs

Number of companies and services used

Inputs/Sources: Case Management System

Outputs:

Forecasts of activity and commitment by PSR and age group

Predicts major categories to less than 2% variance 12 months ahead

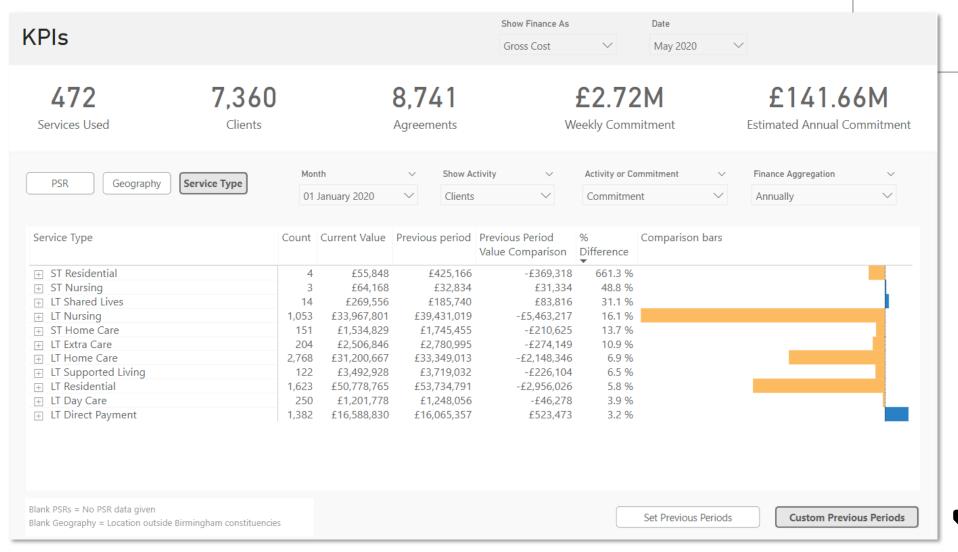
Reacts to unexpected changes in demand

Public Plugins (e.g. Market Position Statements/FOI)



Spend and Activity

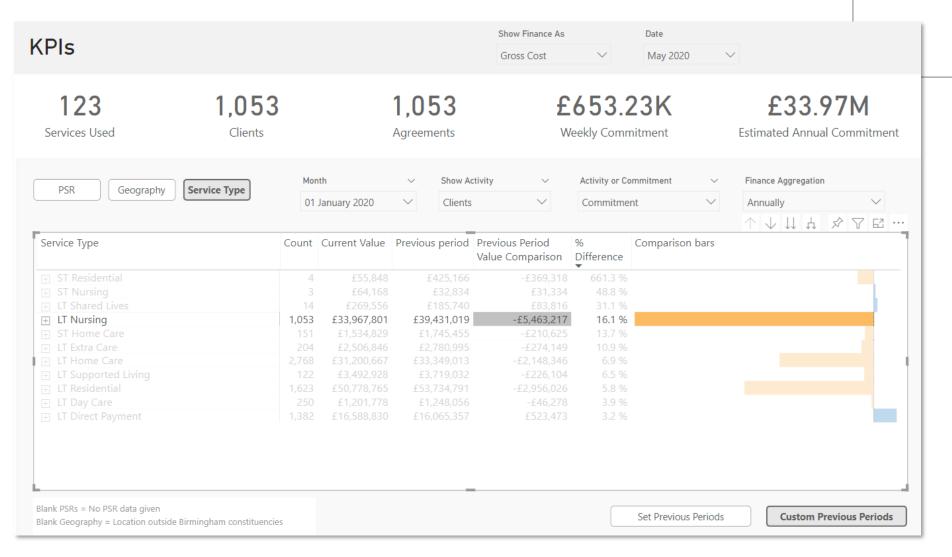
- For any demand category KPIs relating to the number of people, agreements, unit costs, annual commitment can be explored
- These can all be compared to any previous period to measure change





Spend and Activity

- We can look at the number of services used for each category (and who/where those services are), and cross reference that with capacity data to highlight potential problem areas

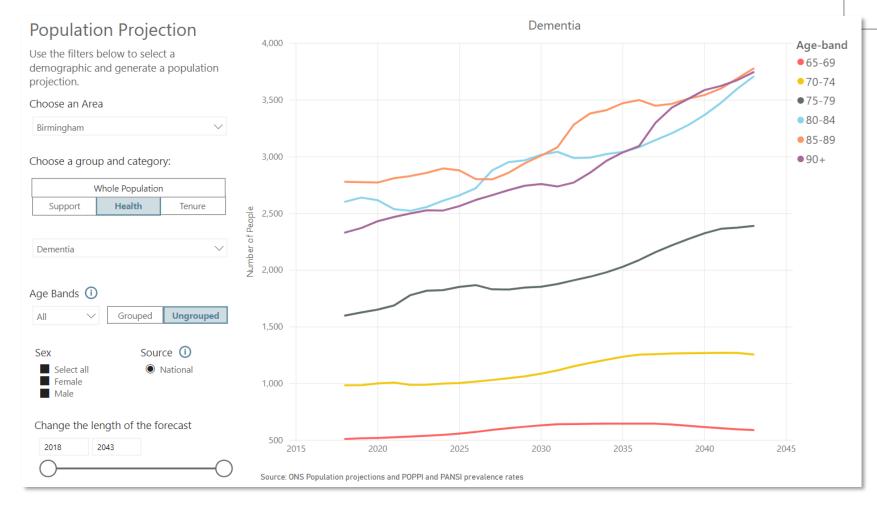




Other Modules

Social Care: Landscape







Other Modules

Social Care: Landscape







Other Modules

Social Care: Landscape



Care Quality in Birmingham – Dynamic Executive Summary

From 1 February 2018 to 1 June 2020, the number of care home and community based locations rated as 'Good' or 'Outstanding' has increased from 325 to 385. This is an increase of 60 or 18%.

In the same time period, the number of care home and community based locations rated as 'Requires Improvement' or 'Inadaquate' has decreased from 115 to 99. This is a decrease of -16 or -14%.

The tables below can be used to compare similar changes between geographic areas.



Good or Outstanding care home and community based locations

Geographic Area	From Count	To Count	Change (%)	Total location count change (%)
Birmingham	325	385	18%	10.0%
England	17,284	19,605	13%	8.6%
WM Metropolitan	885	965	9%	9.2%
WM Region	1,987	2,120	7%	8.2%

Requires Improvement or Inadequate care home and community based locations

Geographic Area	From Count	To Count	Change (%)	Total location count change (%)
Birmingham	115	99	-14%	10.0%
WM Metropolitan	248	272	10%	9.2%
England	4,184	3,701	-12%	8.6%
WM Region	481	550	14%	8.2%

Quantified quality changes after reinspection (e.g. Good to Outstanding = +1, Outstanding to Requires Improvement = -2)



Key Points:

- Landscape has substantial insights on a wide range of quality metrics
- It is possible to benchmark against any LA/group in the country (e.g. statistical neighbours)
- Al-driven analysis can warn about care homes at risk of an inadequate rating before it happens





Public Plugins

- Public plugins allow you to surface insights outside your organisation.
- Example use cases include Market Position Statements and/or self-service FOI requests

Social Care: Landscape

Population & Prevalence

Delayed
Transfers

of Care

Quality & Capacity



Spend & Activity

Demand Model

îlii

Inputs/Sources: ONS | Prevalence Rates | Demand Model

Outputs:

General Population Projections

Ages 0-90+ split by custom age bands

Targeted projections of health conditions, tenure and support arrangements

Inputs/Sources: National DToC Data

D IoC Data

Outputs:

Historic analysis of DToC for both acute/non-acute

Benchmark against other LAs with local and national ranks

Breakdown of underlying causes

Inputs/Sources: CQC | Local Performance Data | Food Standards Agency | NHS Digital

Outputs:

Number of registered services & capacity (current and trend)

Quality of services (current and trend) + provider failure warning

Locations + coverage map

Inputs/Sources: Case
Management System ¦
Demand Model

Outputs:

Total spend and number of people supported

Average unit costs

Number of companies and services used

Inputs/Sources: Case Management System

Outputs:

Forecasts of activity and commitment by PSR and age group

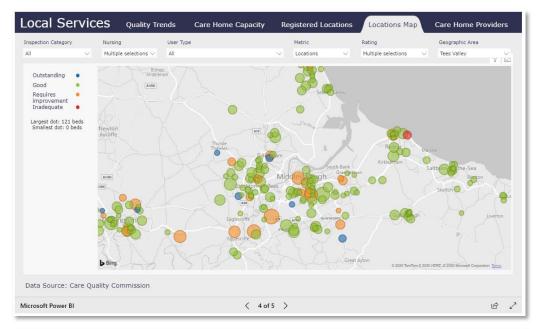
Predicts major categories to less than 2% variance 12 months ahead

Reacts to unexpected changes in demand

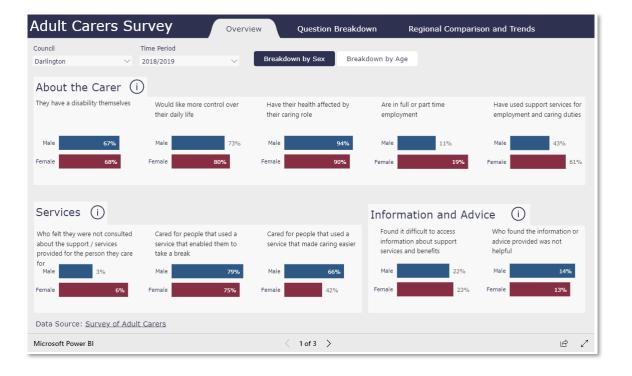
Public Plugins (e.g. Market Position Statements/FOI)



Public Plugins – Share insights outside your organisation









Summary

COVID-19 has changed the world, and the way we all live and work, including adult social care

Changes to demand at a scale and at a pace which is unprecedented in modern times, changes to social care practice and financial pressures have made this very challenging for all in the sector.

Birmingham, and all local authorities, will continue to support and advocate for our citizens, for the care market and for the NHS and our other partners.

We will use the Social Care Landscape app, to help assess the short and medium term effects on social care, the market and peoples' needs and aspirations; using a logical, fact-based approach that is responsive to the fast pace of current change.

As well as COVID recovery BCC is resuming Brexit planning including further extensions to Landscape e.g. to monitor impact on the care workforce

