



# London Mental Health System Stocktake and Modelling

## Analysis and Report from NHS Benchmarking Network

Final Report 24<sup>th</sup> June 2019



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# Introduction

- This report summarises the results of work conducted by the NHS Benchmarking Network (NHSBN) for NHS England and NHS Improvement to review the provision of inpatient mental health beds and specialist community services in London.
- The project has been conducted for the Mental Health in Emergency Departments working group and references the interests of a wide range of stakeholders across London including; commissioners, providers, regulators and other partners.
- The work focuses on assessing the current scale of delivery of specialist mental health services across London and how this relates to the known demand for services as evidenced by both current and historic data. The focus of the work is primarily on London's bed stock and trends related to inpatient care, however, to fully contextualise London's services the work also includes analysis of specialist community based mental health services.
- The work takes a forward view to assess likely population trends over the next 5 years. This is relevant in anticipating the broad trends of likely future demand and what London's mental health system might do to anticipate and accommodate these projected changes.
- Data has been sourced from a number of places including the NHS Benchmarking Network's annual mental health benchmarking project. A bespoke census was also undertaken to collect data on latest bed utilisation to ensure project findings are relevant and timely.
- The project's work has been subject to wide engagement with discussions held with a large number of groups across London (outlined on page 5).



# Scope & Objectives

- The project's objectives are as follows:
  - To quantify and profile London's mental health bed stock and use of inpatient care
  - To quantify and profile other related system elements including community based specialist mental health care
  - To profile relationships and dependencies within the system
  - To compare with peer systems and wider NHS trends
  - To assess the suitability of existing arrangements against London's mental health needs
  - To model forecast population changes over the next 5 years (to 2024/25)
  - To explore core principles and assumptions that could underpin the development of a strategy for London's future mental health system
  
- The project's scope is as follows:
  - Adult specialist mental health services delivered in London
  - Services delivered by NHS Providers of specialist mental health care within London
  - Services delivered by London Trusts for Londoners (i.e. excluding CNWL NHSFT's provision for Milton Keynes, and excluding ELFT NHSFT's provision for Luton and Bedfordshire).
  - To use readily available data that minimises data burden on the London system wherever possible
  - To construct macro demand and capacity modelling scenarios that allow system changes to be modelled

# Project governance & engagement



- The project reports to the Mental Health in Emergency Departments Working Group established by NHS England.
- The project is an independent review that has tried to engage with the wide range of stakeholders across London's mental health community. Key stakeholders within the project process are;
  - NHS England
  - NHS Improvement
  - Healthy London Partnership
  - Cavendish Square Group of Mental Health Trust Chief Executives
  - STP & CCG Mental Health commissioning leads and Accountable Officers
  - A range of regional groups e.g. London Review of Bed Based Care, Mental Health Integrated Care System group, London's Chief Operating Officers, London's Medical Directors etc
- The project has been conducted in parallel with work commissioned by NHS England / Health London Partnership from Imperial College Health Partners on;
  - Literature review of demand and capacity modelling in mental health
  - Analysis of factors driving demand in mental health inpatient care
- The project's work has been discussed with the following groups;
  - Cavendish Square Group
    - Chief Executive Officers: 11 January, 8 March
    - Chief Operating Officers: 8 February, 12 April
    - Medical Directors: 13 May
  - Regional Groups
    - Bed Based Review Steering Group: 19 March
    - Mental Health in Integrated Care Systems Programme Board: 19 March
    - Parity of Esteem Delivery Board: 4 April
    - Mental Health in Emergency Departments working group: 29 November, 8 February, 8 April
    - Mental Health Transformation Board (31 May)
  - Additional scheduled meetings
    - Accountable Officers: date to be confirmed
    - Cavendish Square Group Chairs: date to be confirmed
    - Cavendish Square Group CEOs: 10 July

# Data sources

- The project referenced the following data sources;

Theme	Data Source
Disease prevalence and need	NHS England needs weighting from the PRAMH formula Quality and Outcomes Framework
Funding and Finance metrics	NHS England CCG baseline funding profiles (from 5YFV Mental Health Dashboard) NHS Benchmarking Network finance benchmarks
Adult and Older Adult services; <ul style="list-style-type: none"> <li>• Inpatient care</li> <li>• Community services</li> </ul>	NHS Benchmarking Network data on capacity and activity for inpatient and community services NHSBN and NHS Digital data on care clusters CQC ratings
Children and Young Peoples services	NHS Benchmarking Network CAMHS project data for inpatient and community care
Workforce	NHS Benchmarking Network data on workforce size and shape



# Data sources

- The project referenced the following additional / new data sources;

Theme	Data Source
<b>Latest Bed census data</b>  - existing beds by specialty - use of beds outside Trust footprints (OAPS) - use of independent sector capacity	Bespoke census conducted with Trusts on 1 <sup>st</sup> February 2019
<b>Inappropriate capacity</b>  - census of medically fit patients	Census conducted with Trusts to explore extent of medically optimised patients still in beds at 1 <sup>st</sup> February 2019
<b>Bed utilisation</b>	Profile of bed utilisation during January and February 2019 from NHS England's CMS reporting system (completed daily by Trusts)
<b>Support for common mental health problems</b>	Profile of IAPT referrals, waiting times, outcomes
<b>Mental Health demand in emergency care facilities</b>	Emergency Care system data on mental health demand (incomplete)

# Data sources

- The project referenced new data sources from a bespoke census conducted by the NHS Benchmarking Network across all Trusts on 1<sup>st</sup> February 2019. This data was collected and returned to NHS Benchmarking Network by 15<sup>th</sup> March 2019. The data profiles the number of beds provided, how these beds were occupied, the flow of patients within London, the flow of patients into and out of London, and the extent of medically optimised patients fit for discharge but unable to be discharged.

## Bed Status Report - Friday 1st February 2019

Trust name	
Lead contact for this submission (in case of queries) - name	
Lead contact - email address	

Please answer these questions as of the position on Friday 1st February at 12 noon		Adult Acute	Older Adult	Male PICU	Female PICU	Eating Disorders	Mother and Baby	Low Secure	Medium Secure	High Dependency Rehabilitation	Longer Term Complex / Continuing Care	CAMHS	Other MH Beds
Total number of beds in your Trust													
Total patients in your Trust beds Friday 1st Feb 12 noon													
Of these	Total patients in your Trust beds who were medically fit for discharge as at Friday 1st Feb 12 noon												

Out of Area patients													
Total patients from your Trust, in an out of area bed - NHS provider													
Of these	total patients in an NHS bed in London												
	total patients in an NHS bed outside London												
Total patients from your Trust, in an out of area bed - Independent Sector provider													
Of these	total patients in an Independent Sector bed in London												
	total patients in an Independent Sector bed outside London												

# Modelling Framework



Theme	Variables	Key modelling factors	Assumptions Commentary
Inpatient beds	Actual bed numbers - by speciality (11) - locations - utilisation (occupancy) - out of area placements (overflow & service gaps) MHA detention levels	- average length of stay (+/-) - clinical use (cluster analysis) - bed occupancy (+/-) - Readmissions - DTOC (+/-) - medically fit patients	Exploration of bed provision by type and location. Including analysis of key variables impacting on need for beds (MHA use, ALOS, occupancy, crisis pathway & availability of home treatment). What level of variation is acceptable?
Community specialist care	Referral rates Caseload levels - by team type - by area	Background referral trajectories - caseload numbers (+/-) - time on caseload (+/-) - extent of home treatment - intensity of community care (interventions per person)	Balance of care between beds and community mental health teams. What is the maximum extent of community care that should be provided to minimise admissions?
Waiting times	Current waiting times for community care	Position statement on current waiting times pending clarification of future waiting times standards	Analysis shows current position against compliance with an 18-weeks refer to treatment target, further stratified data by team type is not available
Population	Growth forecasts Disease incidence by category	Population forecasts at city level from GLA	Borough level data suggests relatively standardised growth across London over next 10 years. Impact of Brexit unknown.
Workforce	Baseline numbers of staff employed (at high level)	Workforce implications major changes in service models	High level impact of macro assumptions on workforce size and shape (e.g. additional staff needed in community teams).
Productivity	Existing productivity levels (e.g. ALOS, contacts per day etc)	Impact of assuming changes in patient facing time and contact rates	Do we assume contact rates will improve in future?



Benchmarking Network

# Context

## Disease prevalence

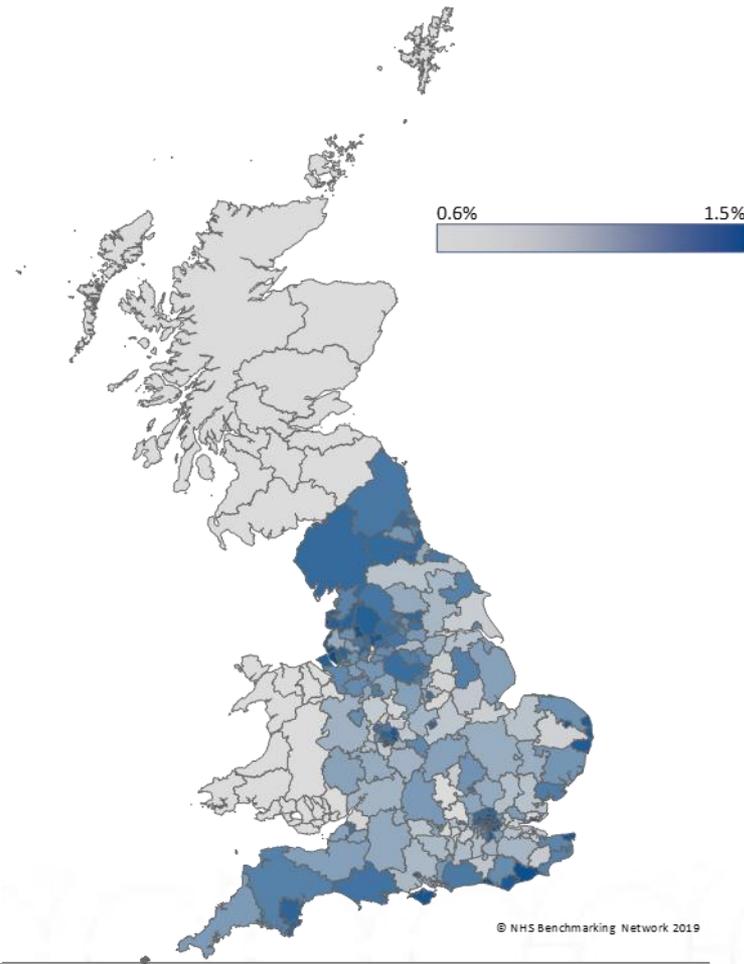
Analysis of London CCGs against England wide positions for major disease categories in mental health.

# Mental Health prevalence (SMI)

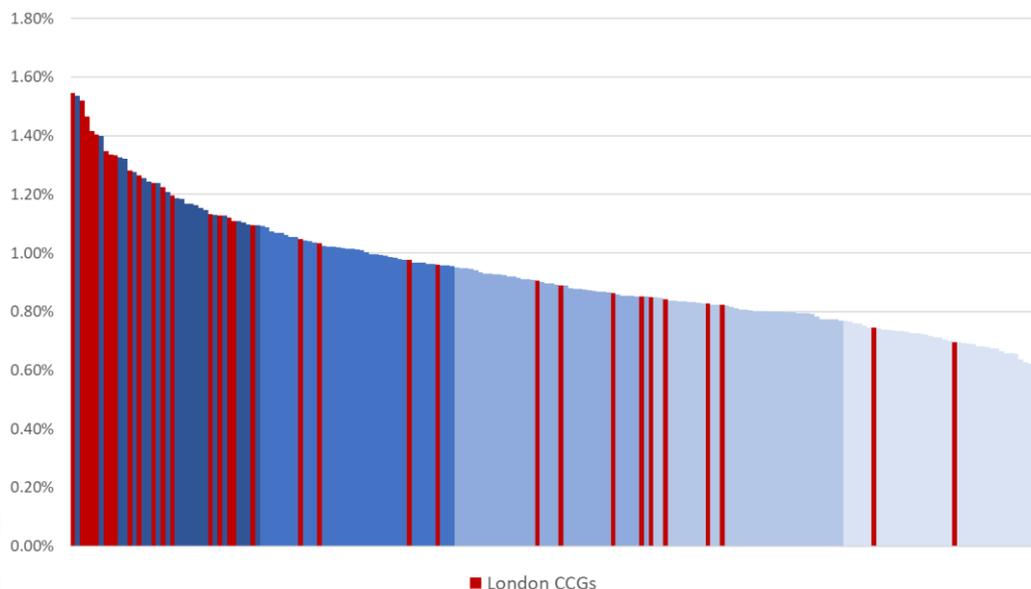


- The chart below shows the recorded incidence of Severe and Enduring Mental Illness (SMI) on local disease registers across England. Data is presented at CCG level with London CCGs shown in red.
- National average rates of SMI are around 0.9% of registered population. London CCGs report an average position of 1.11%, although there is a notable spread across CCGs. London reports 8 of the top 10 SMI CCGs nationally, with West London CCG reporting the highest levels of SMI in the English NHS at 1.55%. Only 8 of London's 32 CCGs have SMI rates below the national average.

Mental Health Prevalence 2017/18



Mental Health Prevalence 2017/18



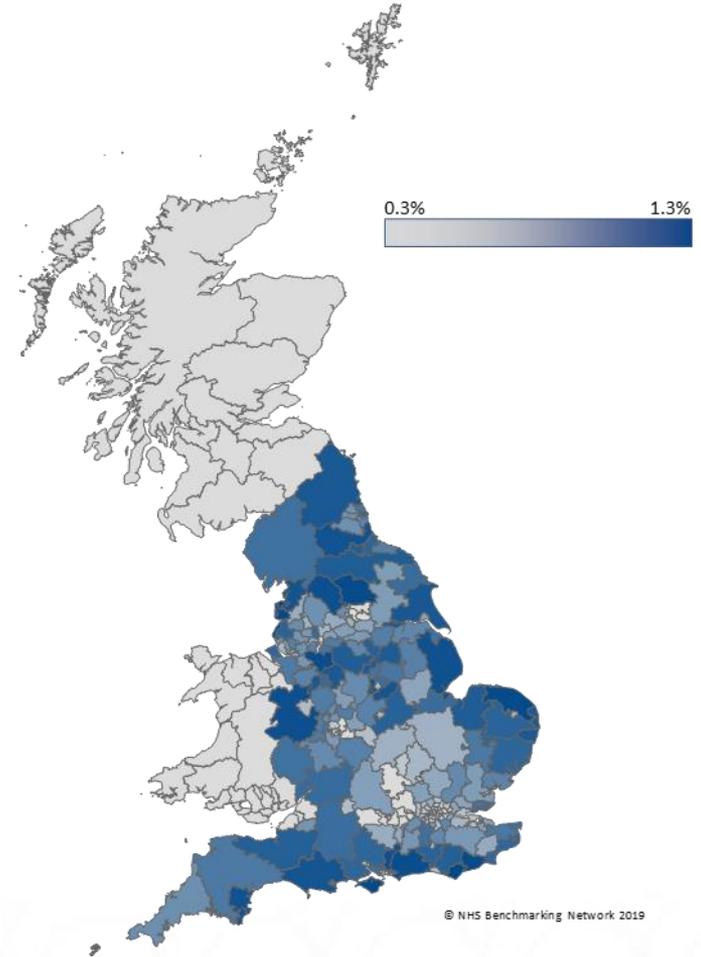
Data source: NHS Digital ; Quality and Outcomes Framework 2017/18 (aggregated GP Practice disease register positions)

# Dementia prevalence

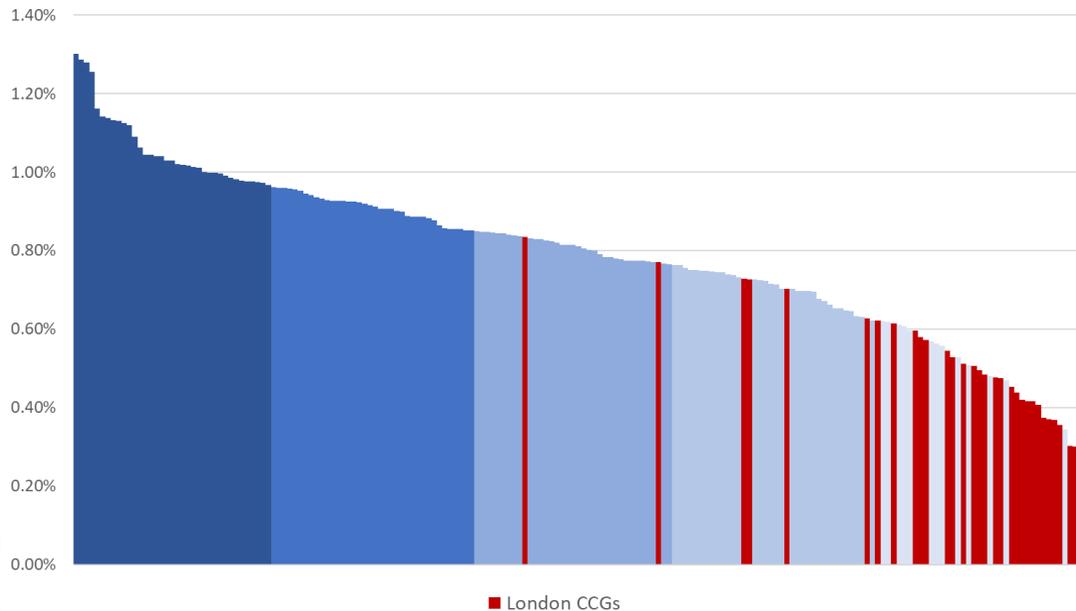


- The chart below shows the recorded incidence of dementia on local disease registers varies across England. The mean average is 0.79% and median average is 0.81%. London CCGs are highlighted as red bars on the chart.
- London CCGs typically report in the lowest quintile, in which 26 of the 32 London CCGs are present. Only Bromley CCG (0.83%) reports levels of Dementia that are marginally above the national mean and median averages. London is a relatively young city that has low prevalence of organic mental illness.

Dementia prevalence 2017/18



Dementia prevalence 2017/18

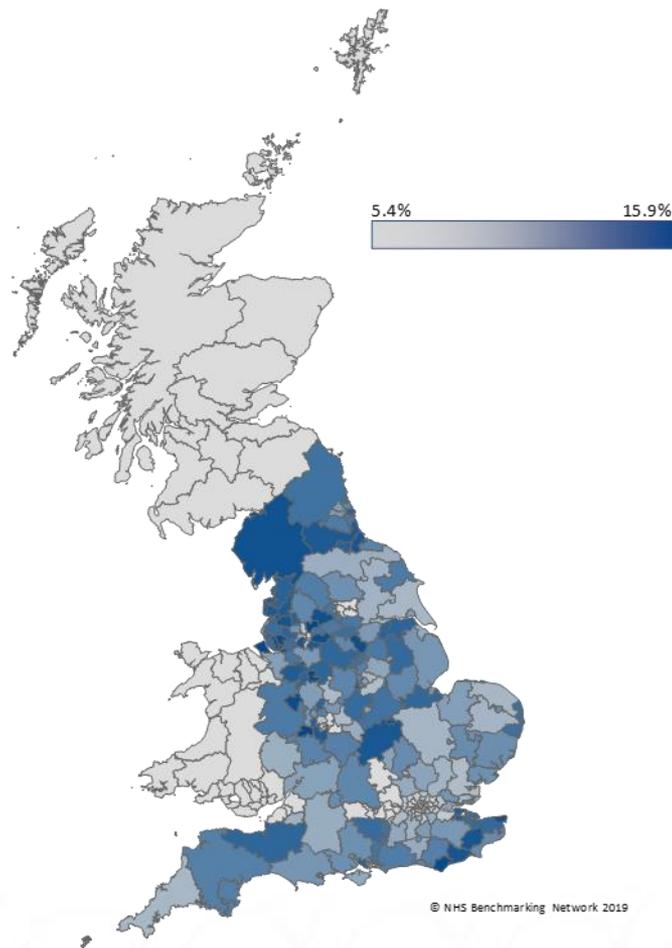


# Depression prevalence

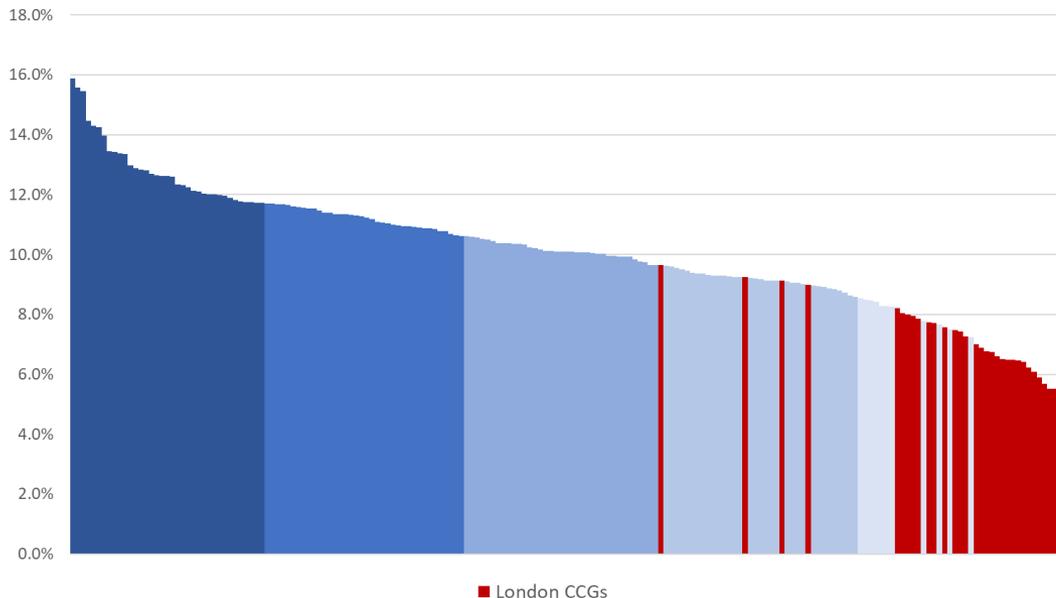


- The chart below shows recorded incidence of depression on local GP Practice disease registers across England. Data is shown at CCG level with London CCGs highlighted in red. National mean and median averages for depression prevalence are 10.1% of registered population.
- London CCGs report only within the lowest two quintiles, with a London CCG average of 7.2% depression prevalence. London has low incidence of depression with 28 of the 32 London CCGs report in the lowest quintile.

Depression prevalence 2017/18



Depression prevalence 2017/18

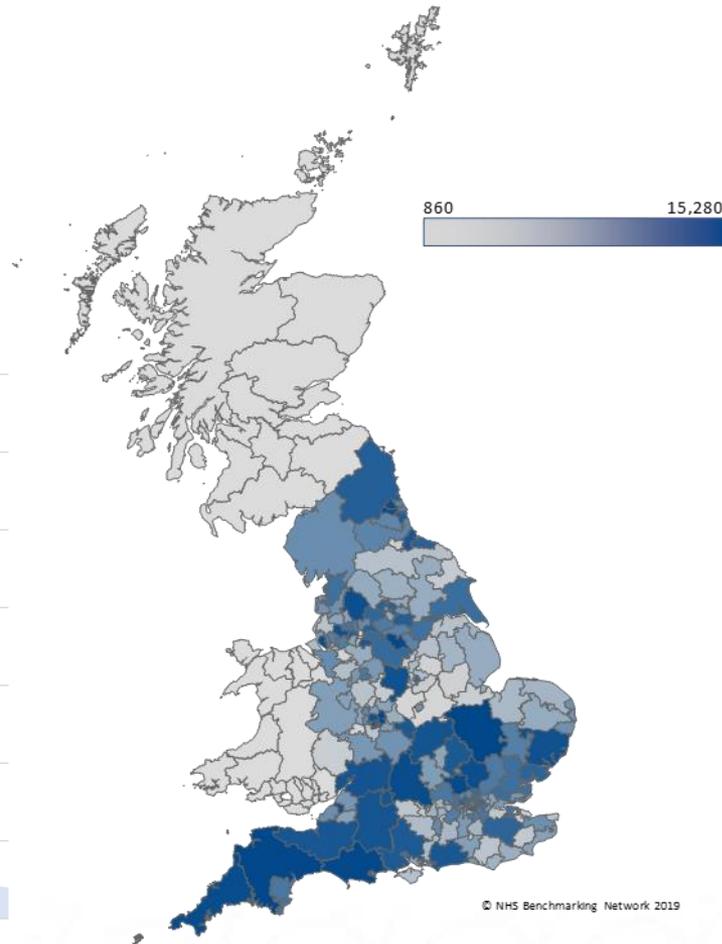


# IAPT waiting times

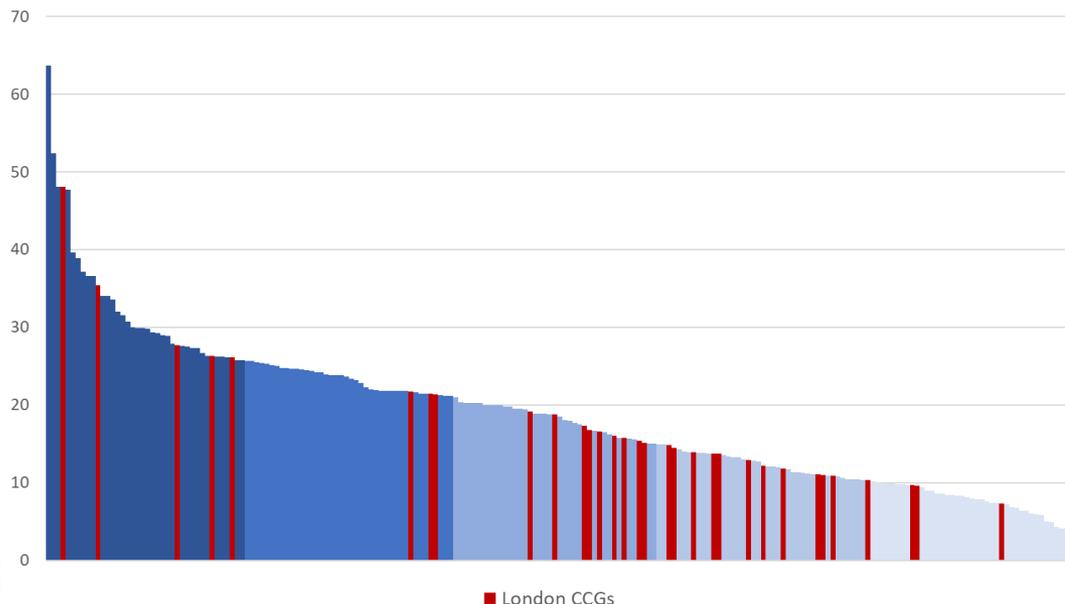


- IAPT typically offers the main first-line response for common mental health problems beyond primary care. Waiting times to access IAPT services vary across England.
- Mean and median averages to first assessment average 19 days nationally. The London CCG average is 17 days, however, a wide degree of variation is present.
- Barnet CCG (48 days), Lewisham CCG (35 days), City and Hackney CCG (28 days), Camden CCG (26 days) and Islington CCG (26 days) all report in the top quintile.

IAPT: Number of referrals waiting fewer than 6 weeks 2017/18



IAPT: Mean waiting time to first treatment 2017/18 (days)



Data source: NHS Digital ; Annual report on the use of IAPT services 2017/18

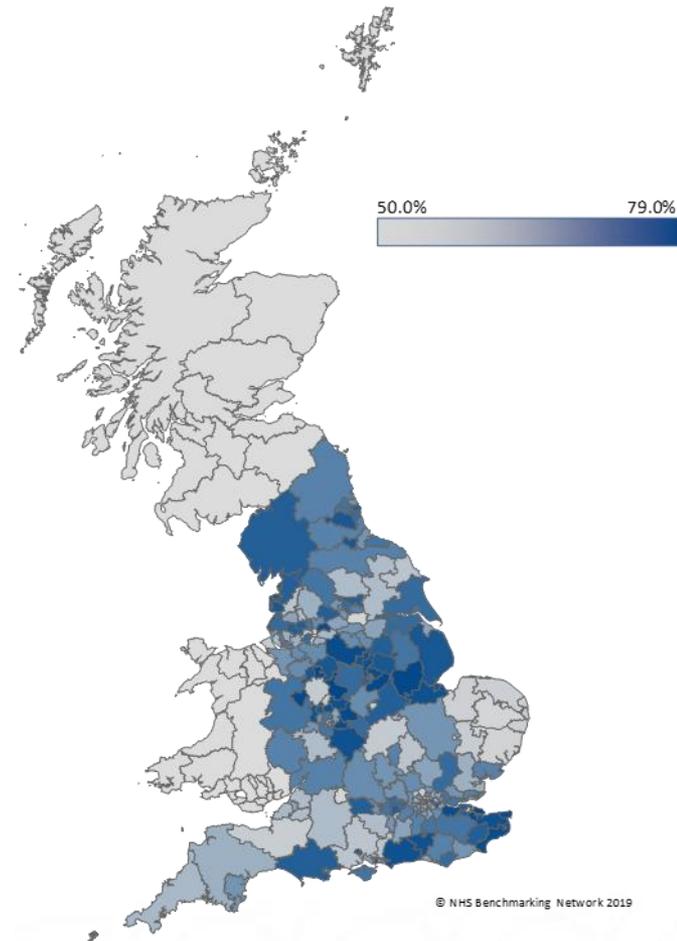
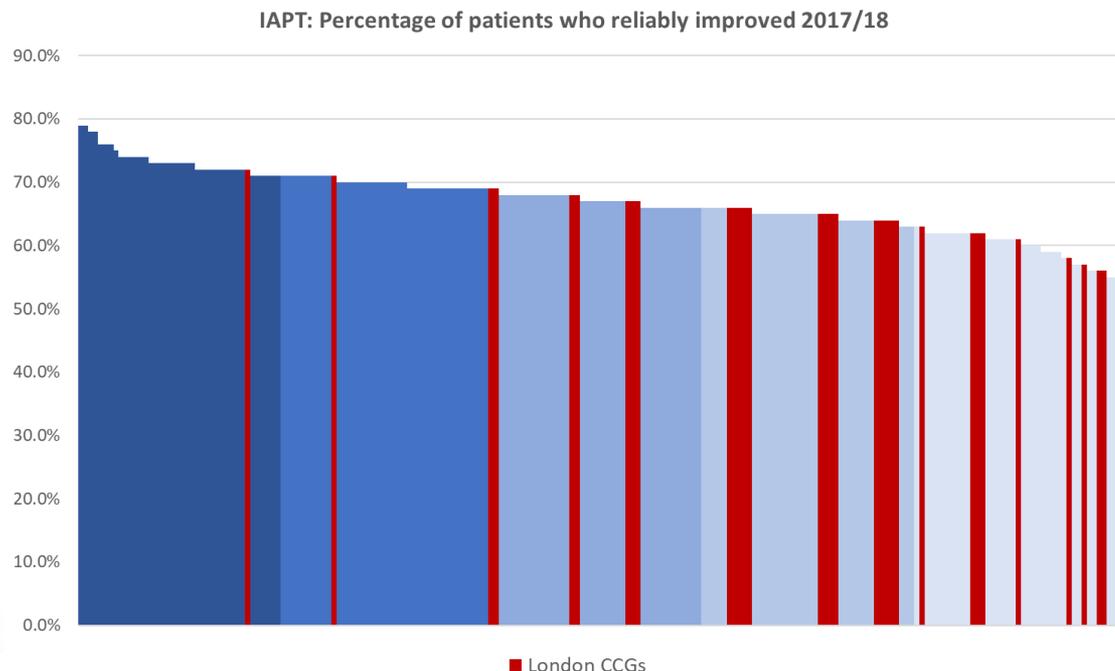


# IAPT Reliable Improvement



- The chart below shows the recorded rates of reliable improvement following access to IAPT services across England. There is a narrower degree of variation between CCGs across the country than with other indicators.
- Both the national mean and median averages are 67%. London CCGs report an average marginally below national averages at 65%.

IAPT: Percentage of patients who reliably improved 2017/18



Data source: NHS Digital ; Annual report on the use of IAPT services 2017/18

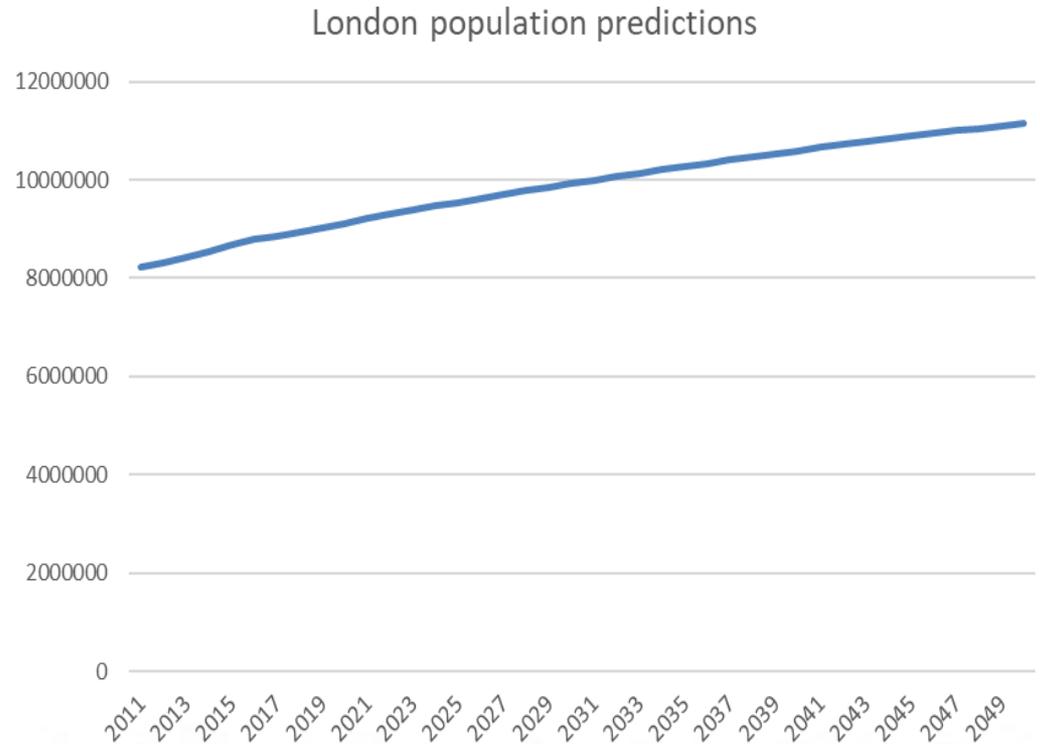


# London's predicted population growth



**MAYOR OF LONDON      LONDON ASSEMBLY**

- Data obtained from the Office of National Statistics and the Greater London Authority was used to profile changes in London's total population. This analysis used recent trend data showing actual population growth since 2011. Forecasts provided by the Greater London Authority have been used to profile population growth. Data is available until 2050 but has been forecast on milestones for the next 5 years and 10 years.
- Current population in 2019 is 9.0 million
- In 5 years (2024) London's population is forecast to grow to 9.5 million.
- In 10 years (2029) London's population is forecast to grow to 9.8 million.
- If per capita demand for mental health services remains steady, this would suggest service volume increases due to population growth of 5.6% in the next 5 years (1.1% p.a.) and 8.9% increase in next 10 years (0.9% p.a.).
- These forecast population changes have been used in the report to link to productivity and modelling scenarios.



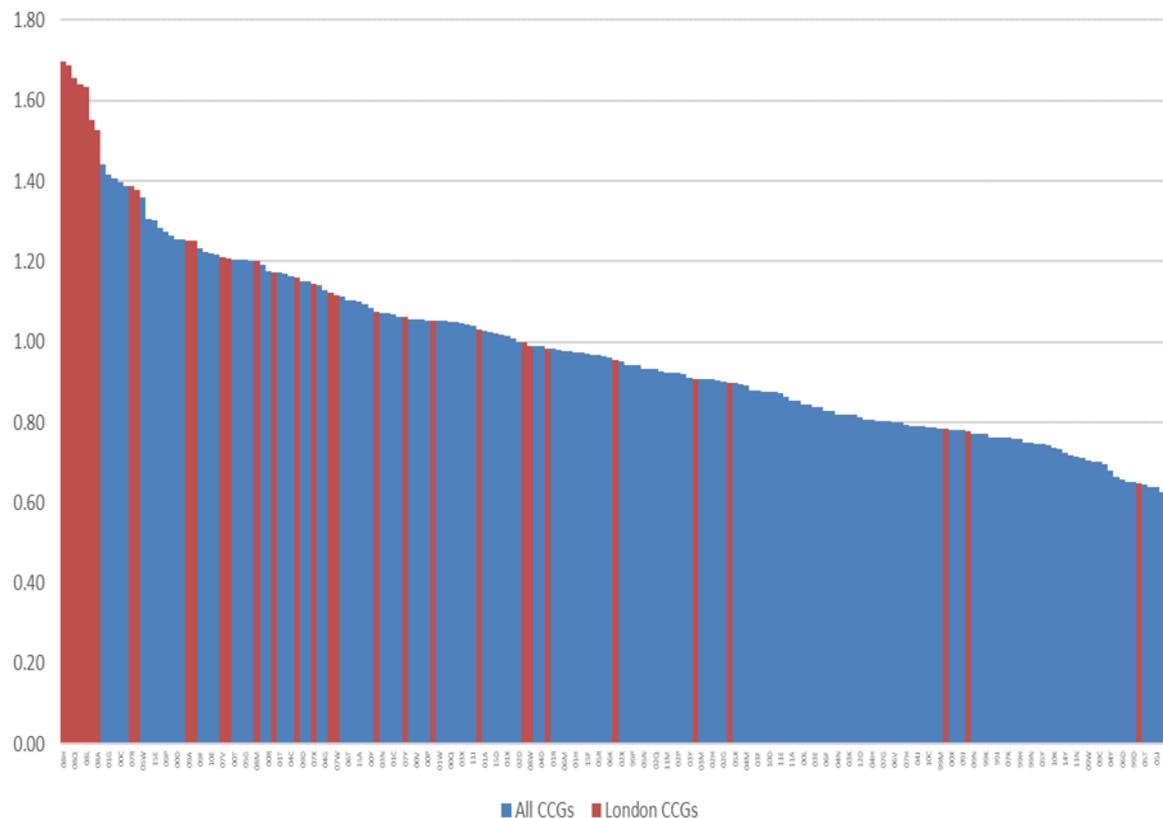
# Mental Health Needs



- Data from NHS England in the Person Based Resource Adjustment for Mental Health (PRAMH) is published alongside CCG baseline funding each year. PRAMH is a multi-factorial index that defines relative mental health needs for each CCG based on a range of factors including; disease prevalence, mortality, age, sex, and deprivation.
- The PRAMH index for 2018/19 for England is shown in the chart opposite with London CCGs shown in red. The mean average position for all CCGs is an index of 1.0, the London positions shown in the chart opposite indicate above average mental health needs in London. The range within London is from 0.65 (Hillingdon CCG) to 1.70 (Islington CCG).
- London's position of above average needs is driven by the higher incidence of SMI reported earlier in this report, with low rates of common mental health problems and organic illness due to the city's age profile and wider demographics.

## Mental Health Needs Index (PRAMH formula)

Source: NHS England CCG allocations 2018/19

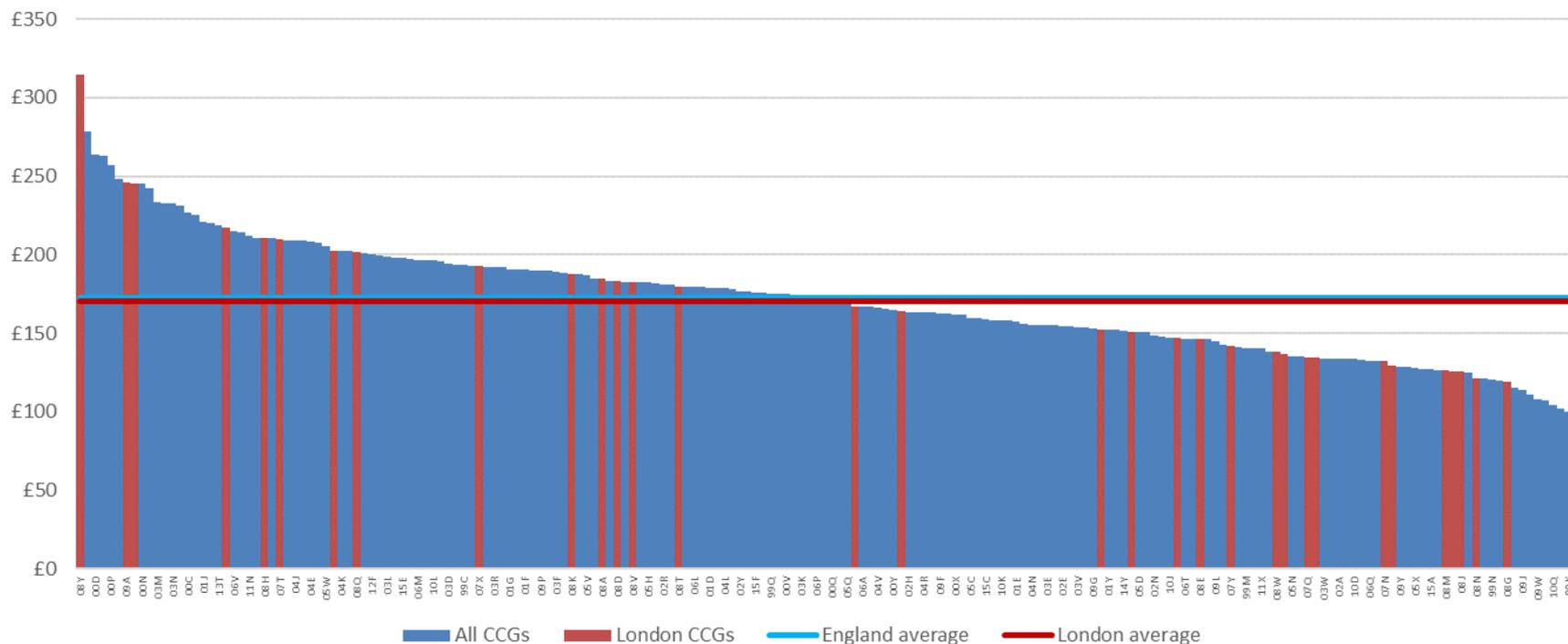


# Mental Health Investment (crude)



- CCG level investment in mental health services is reported via the Five Year Forward View Mental Health Dashboard. The most recently available published data relates to 2017/18 and is shown in the chart below. The chart shows spend per capita using a numerator of total reported spend by CCG, and denominator of CCG GP registered population. The England average using this methodology is £172 per head, and London CCG average is £170 per head.

Registered population: Mental Health spend per capita (2017/18 actual)

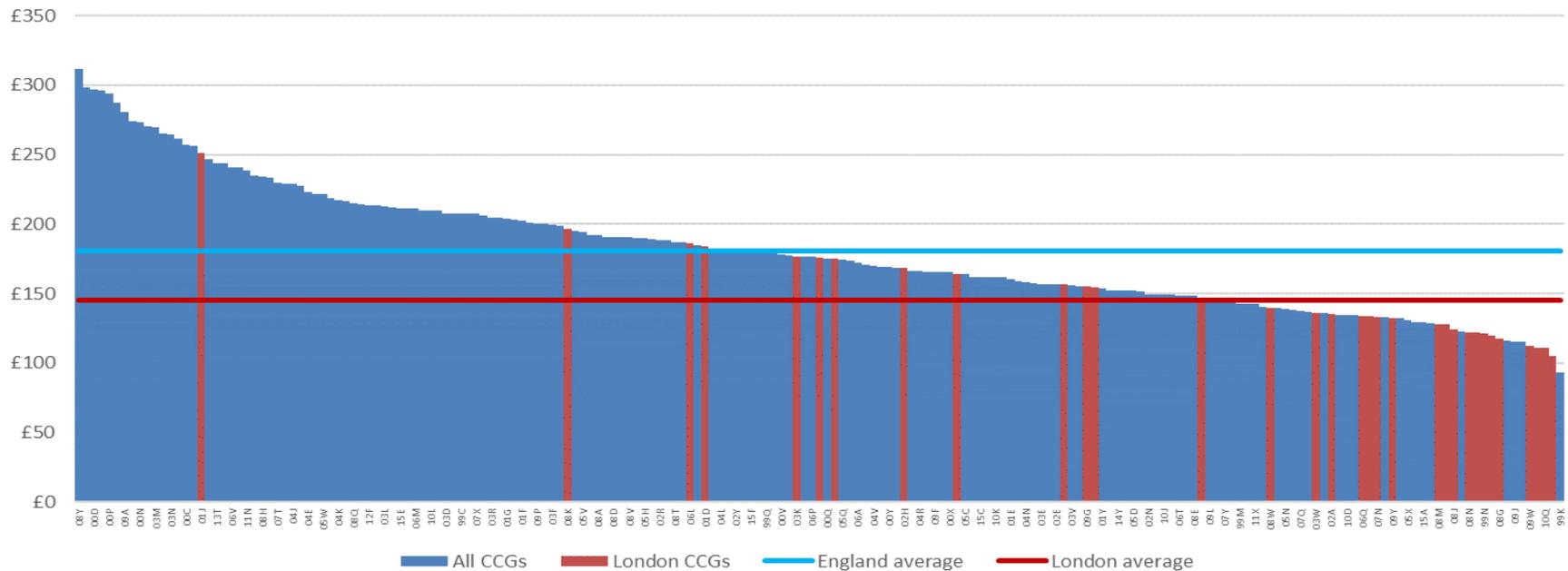


# Mental Health Investment (needs adjusted)



- CCG level investment in mental health services is reported via the Five Year Forward View Mental Health Dashboard. The most recently available published data relates to 2017/18 and is shown in the chart below. The chart shows spend per capita using a needs adjusted methodology which applies PRAMH needs weightings to CCG mental health investment per head data. This uses a numerator of total reported spend by CCG, and denominator of CCG GP weighted (needs adjusted) population. The London CCG average using this methodology is £146 per head and suggests investment takes place at below the position expected for London's needs. This has implications later on in the modelling work in considering needs adjusted requirements for both inpatient services and specialist community care.

Weighted population: Mental Health spend per capita (2017/18 actual)



# Inpatient services and bed stocktake results

The following section explores London's level of mental health bed provision and the extent to which this is utilised. Analysis is also provided of how Londoners access mental health beds alongside data on bed occupancy and average length of stay.

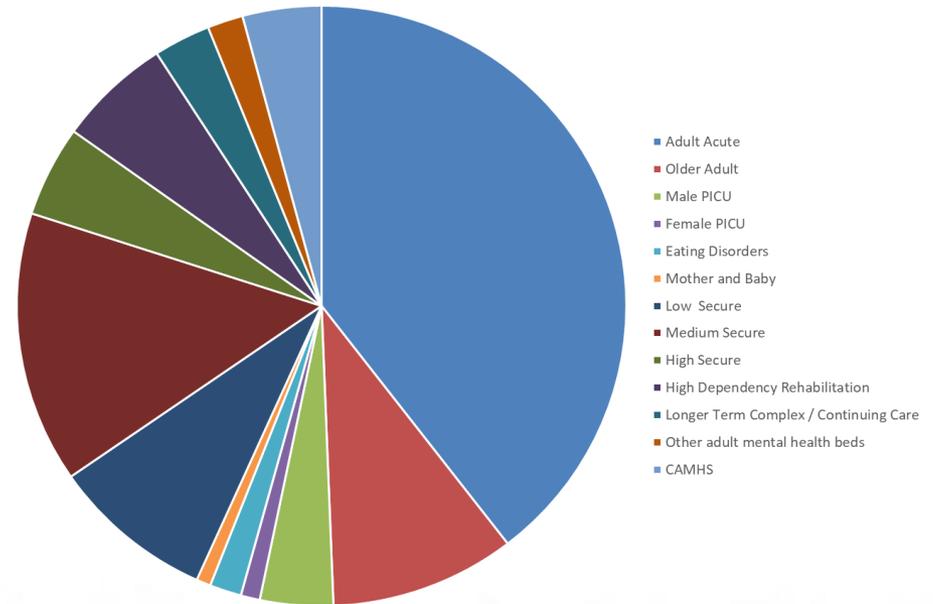


# Inpatient services & bed stocktake

- One of the main purposes of the project is to define and evaluate London's mental health bed stock delivered by NHS providers. The table and chart below summarises the size and shape of London's mental health bed stock as defined in the bed census that took place on 1<sup>st</sup> February 2019. A total of 4,332 NHS mental health beds were provided on this date with the largest category being Adult Acute services with 1,713 beds.

Mental Health beds in London - 1st February 2019

	Number	% of total
Adult Acute	1713	40%
Older Adult	426	10%
Male PICU	168	4%
Female PICU	44	1%
Eating Disorders	73	2%
Mother and Baby	33	1%
Low Secure	375	9%
Medium Secure	633	15%
High Secure	212	5%
High Dependency Rehabilitation	261	6%
Longer Term Complex / Continuing Care	131	3%
Other adult mental health beds	82	2%
CAMHS	181	4%
<b>TOTAL</b>	<b>4332</b>	<b>100%</b>





# Inpatient services & bed stocktake (2)

- Further analysis of the bed stock by sub-specialty is provided in the table below. The table confirms that 3 specialty areas (Adult Acute, Older Adult, and Male Psychiatric Intensive Care Unit (PICU) beds) are supported with inpatient beds in all of the nine London mental health Trusts which offer inpatient care
- Other specialities are not available in all Trusts indicating that patient flows outside local Trust footprint areas can be expected in these specialties. Many of these areas are services that are subject to specialist commissioning arrangements or delivered through New Models of Care arrangements. The most notable exceptions to this arrangement are perhaps female PICU which is offered in four Trusts, and Long-Term Complex / Continuing Care (six Trusts) and High Dependency Rehabilitation (seven Trusts) which are often provided through a mixed economy of local and national commissioning.

	Adult Acute	Older Adult	Male PICU	Low Secure	High Dependency Rehabilitation	Longer Term Complex / Continuing Care	Medium Secure	CAMHS	Female PICU	Eating Disorders	Other adult mental health beds	Mother and Baby	High Secure
BEH													
CANDI													
CNWL													
ELFT													
NELFT													
OXLEAS													
SLAM													
SWLSTG													
WLT													

**Key**

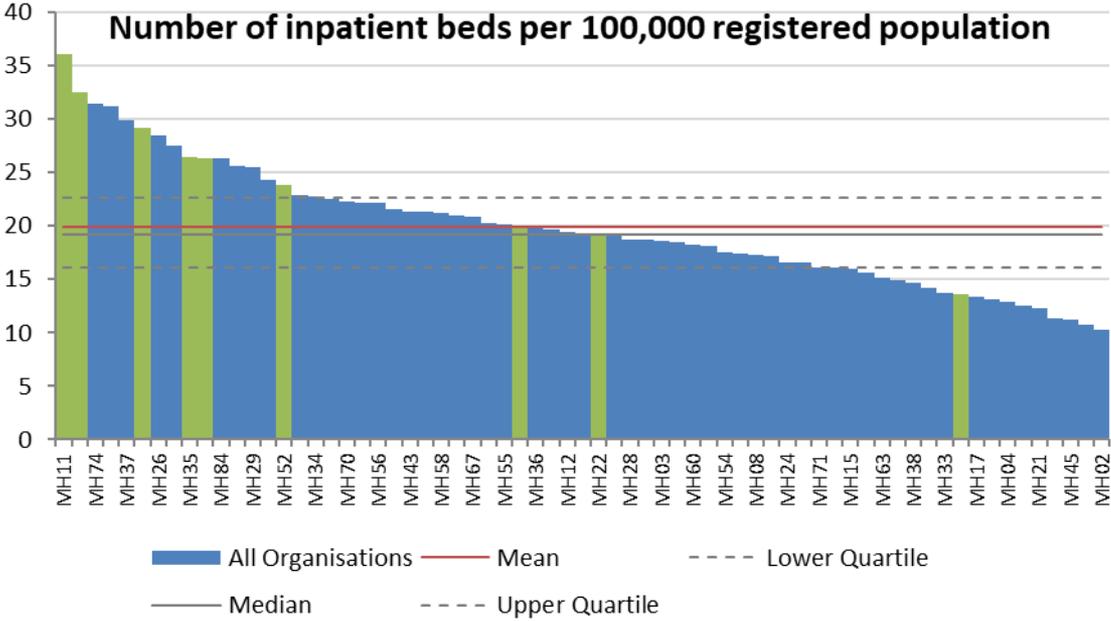
	Acute		PICU		Forensic		Rehabilitation		CAMHS
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# Adult Acute bed benchmarking 2018



## Adult acute beds per 100,000 registered population (16-64)

- Analysis of London's Adult Acute beds (1713 beds) is helpful in assessing the level of provision compared to the rest of the NHS and London's perceived needs.
- The NHS wide mean average bed provision is 20 adult acute beds per 100,000 registered population (16-64 age group)
- The median average is 19.2 beds which has been subject to a gradual 17% reduction in national capacity since 2012 and is illustrated in the bottom time-series trend chart.
- London's mean average level of provision is 26 Adult Acute beds per 100,000 population with a wide range evident across providers. The position of individual London Trusts are shown as green bars on the chart opposite.
- The average bed levels provided by England's largest cities excluding London has a mean average of 24 per 100,000 population.



**National trend, 2011/12 to 2017/18**

	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
<b>Median</b>	23.0	22.6	20.0	19.0	19.7	19.2	19.2

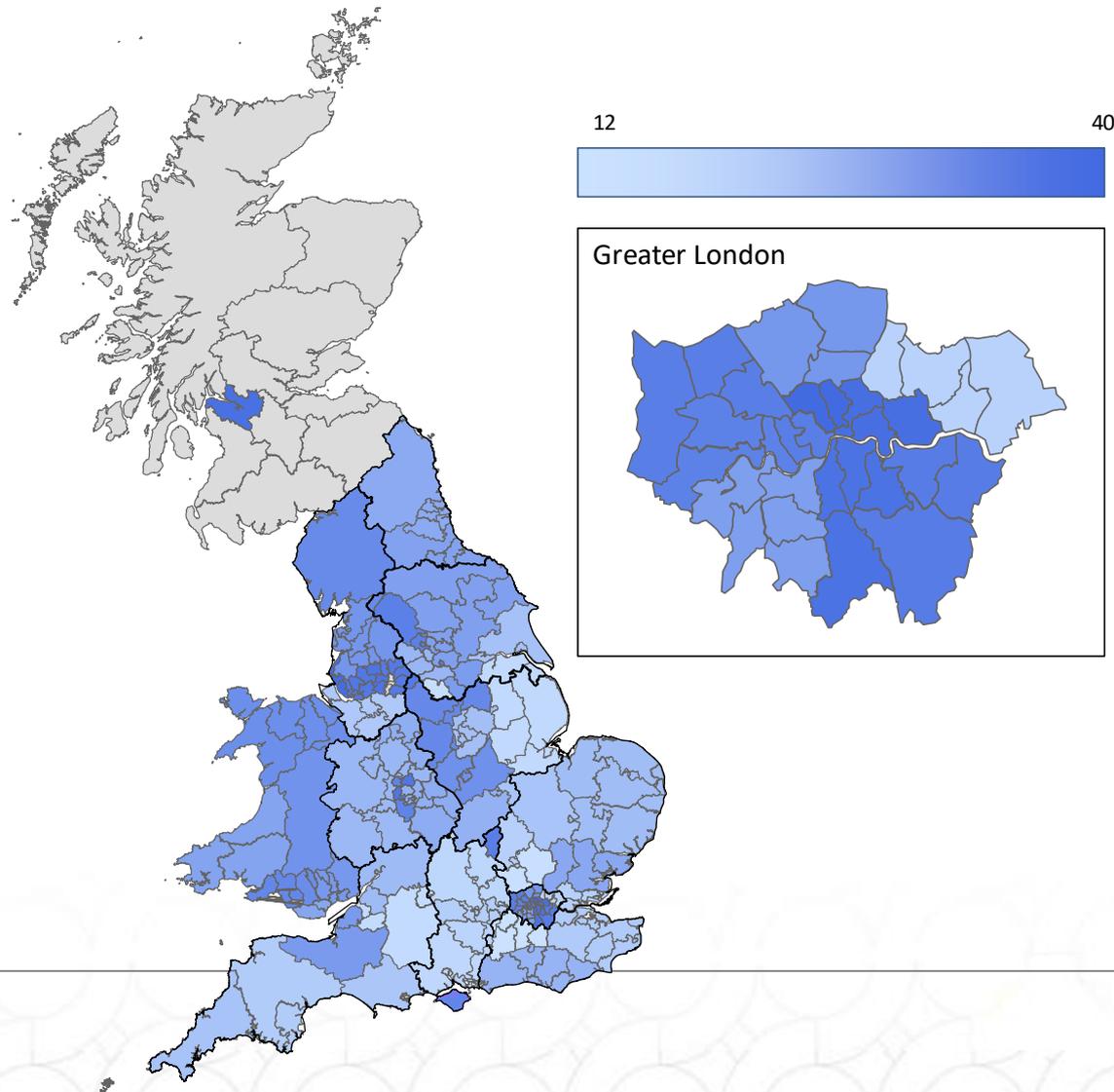


# Map of Variation – Adult Acute beds



Adult acute beds per 100,000 registered population (16-64)

- The maps of variation shown opposite show the national range in Adult Acute bed levels across the UK, and the variation that exists within London.



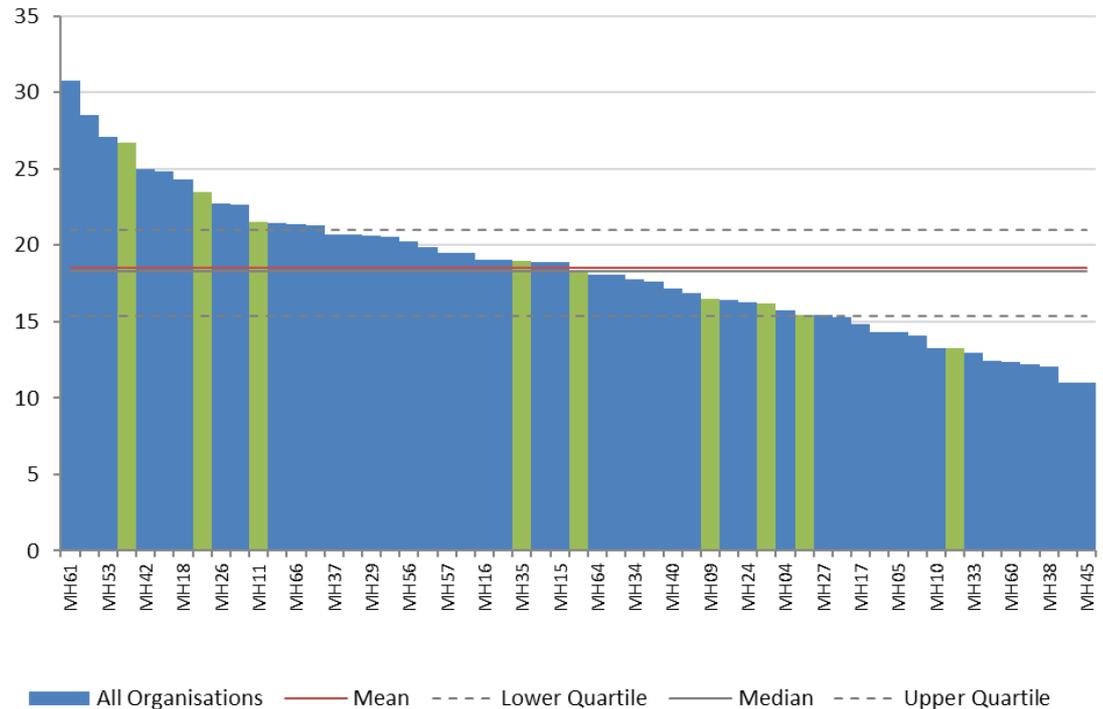
# Adult Acute bed benchmarking 2018



Adult acute beds per 100,000 **weighted** population (16-64)

- The shift of analysis basis to needs adjusted weighted population (using the PRAMH) weightings, produces interesting alternative positions for inpatient services.
- London's above average bed numbers when assessed on a weighted population basis fall into line with national averages when London's higher levels of mental health need are taken into account.
- The national mean average bed provision is 20 Adult Acute beds per 100,000 population (registered or weighted). The national median average is 19.2 beds.
- London's mean average when assessed used a needs adjusted "weighted" population methodology becomes 19 Adult Acute beds per 100,000 population, in line with the national median average.
- The metropolitan peer group mean average is also close at 20 beds per 100,000 weighted population. This methodology flattens out some of the variation that exists between Trusts.

Number of inpatient beds per 100,000 weighted population



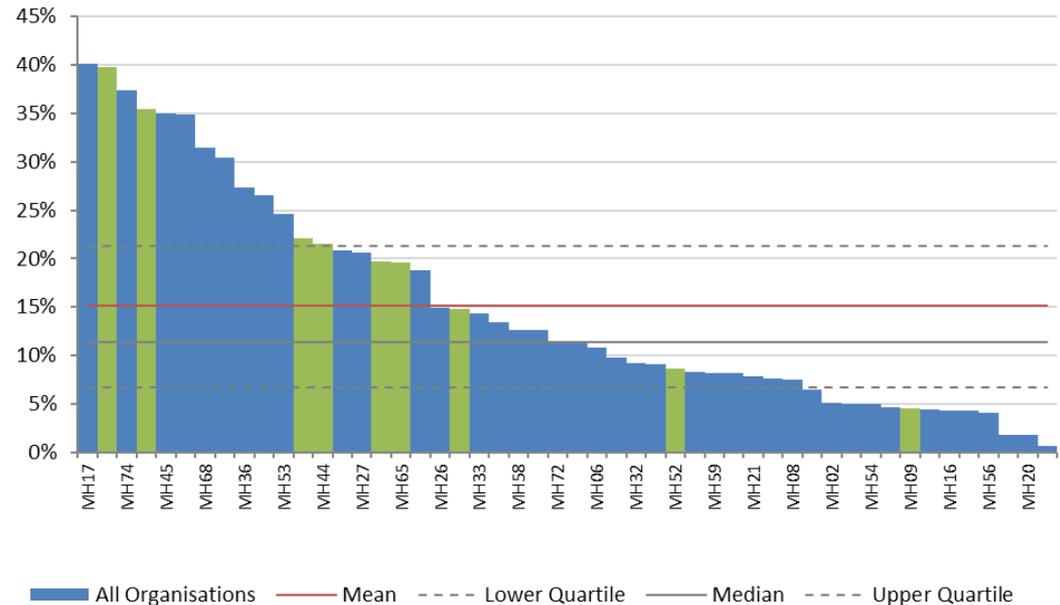
# Adult Acute bed benchmarking 2018



## Adult acute patients not known to services

- The percentage of patients who are admitted and not previously known to services can act as a proxy measure for the effectiveness of the acute pathway, the accessibility of specialist community mental health services, and the degree of coverage offered by Crisis Resolution and Home Treatment Services.
- NHS average levels of admissions for patients not previously known to services averaged 15% of all admissions in 2017/18.
- London's regional average rate was 21% although this average hides a wide range in rates from 5% of admissions to 40% of admissions. The highest rates of previously unknown patients are in Central London which aligns with perceptions of higher risks of unknown patients in providers with close proximity to major transport hubs. In developing additional insight on the profile of patients not previously known to services, Trusts should analyse how many of these patients had postcodes originating within the Trust's catchment area.

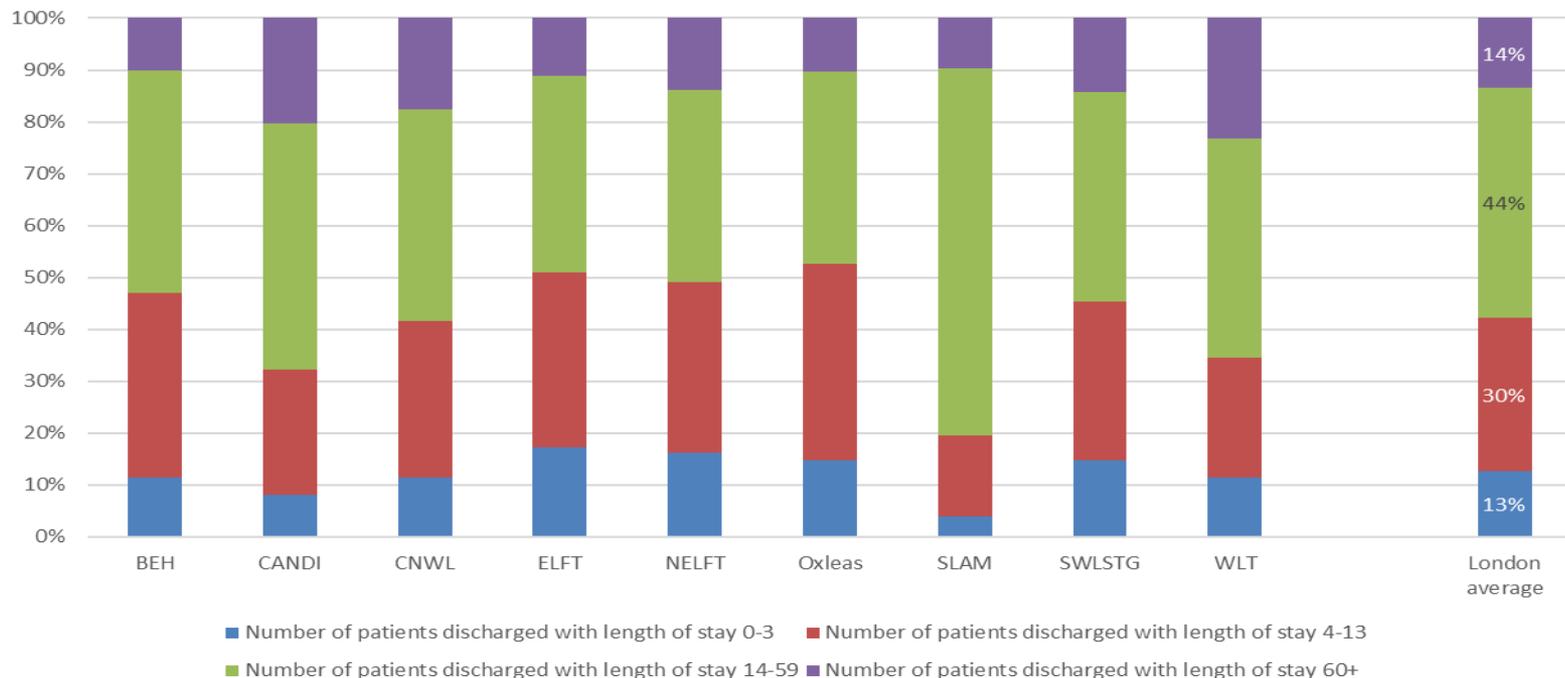
**Number of patients admitted to inpatient care during 2017/18 who were not previously known to the Organisation's mental health services as a % of total patients admitted during the year**



# Length of stay



Length of stay profile (adult acute beds, excluding leave)



- Date from the 2017/18 annual mental health benchmarking project shows that, on average 14% of patients stay in adult acute beds longer than 60 days (excluding times spent on leave). This is identical to the national average position across all providers.
- London reported slightly fewer very short stay patients. 13% of all discharges stayed 0-3 days in London, compared to 16% of discharges nationally.

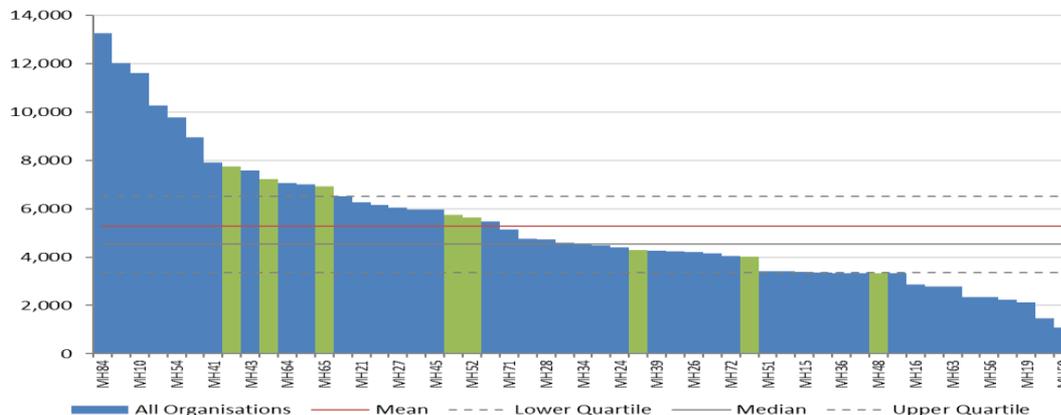
# Adult Acute – Crisis Pathway

## Activity in Crisis Resolution and Home Treatment Services

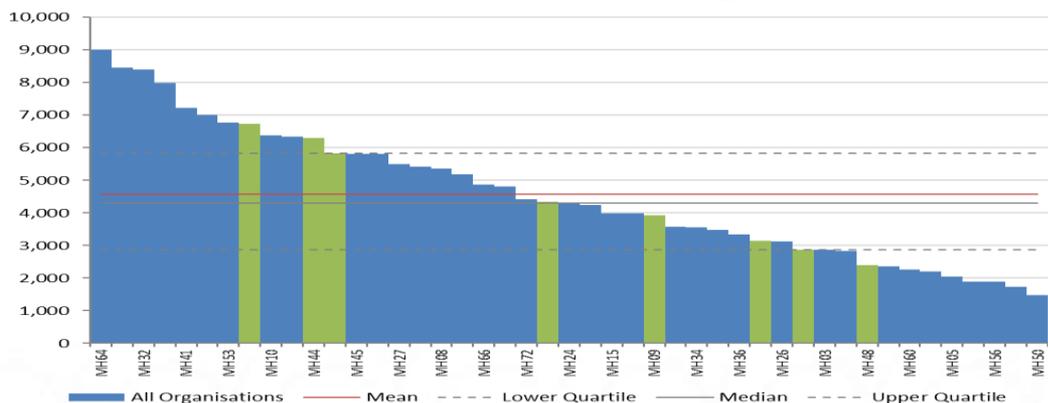


- Crisis Resolution and Home Treatment Services are central to London’s acute services pathway in providing rapid assessment, gatekeeping, short-term interventions, and providing alternatives to hospital admission.
- NHS average levels of activity for CRHT averaged 5,283 contacts per 100,000 population (registered or weighted) in 2017/18.
- London’s regional average rate was 5,617 contacts (top chart) when assessed on a registered population basis (6% above NHS average rates).
- When assessed on a weighted population basis (bottom chart), London’s average CRHT activity was 4,439 contacts per 100,000 population in 2017/18. This equates to activity levels 16% below national average rates.

CRHT - Total contacts 2017/18 per 100,000 registered population



CRHT - Total contacts 2017/18 per 100,000 weighted population

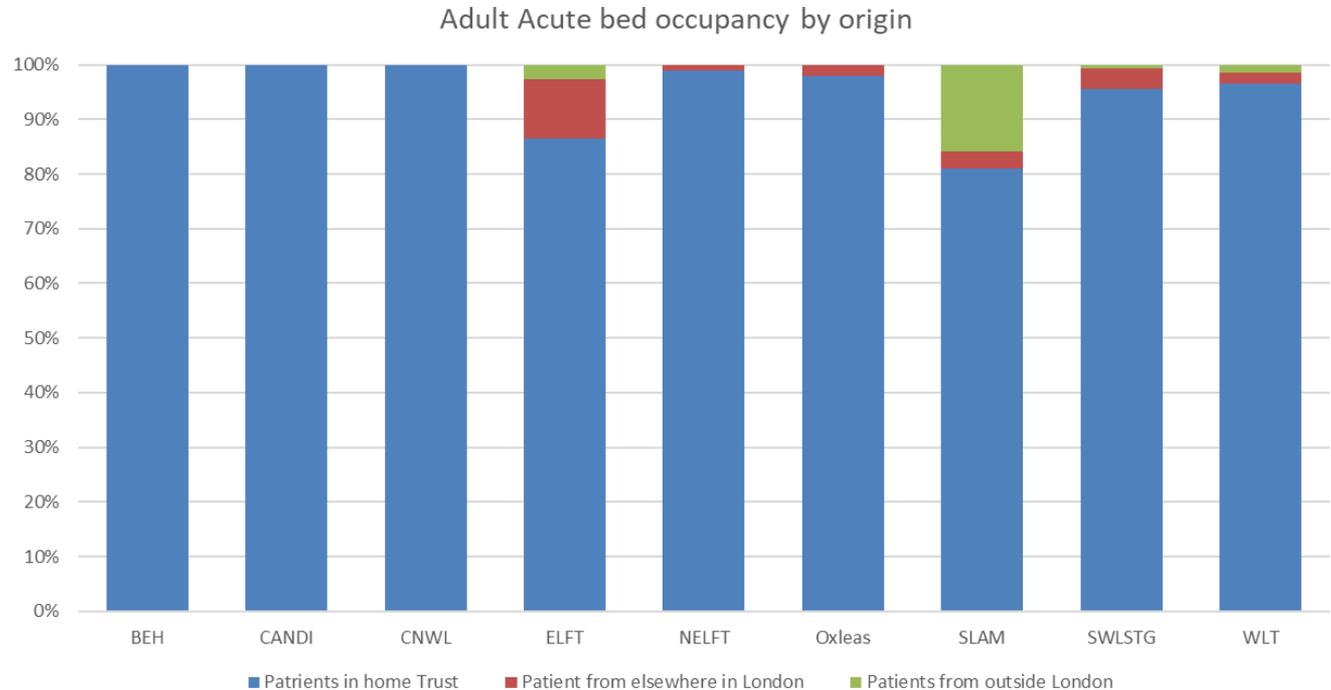


# London's Adult Acute bed occupants



## “Who is in London's Adult Acute beds?”

- The bed census on 1<sup>st</sup> February 2019 revealed that London's Adult Acute beds are largely occupied by London patients from within their home Trust catchment area.
- **93%** of admissions to Adult Acute beds were for patients in their home Trust
- **3%** of admissions were for patients from other areas of London
- **4%** of admissions were for patients from outside the London area

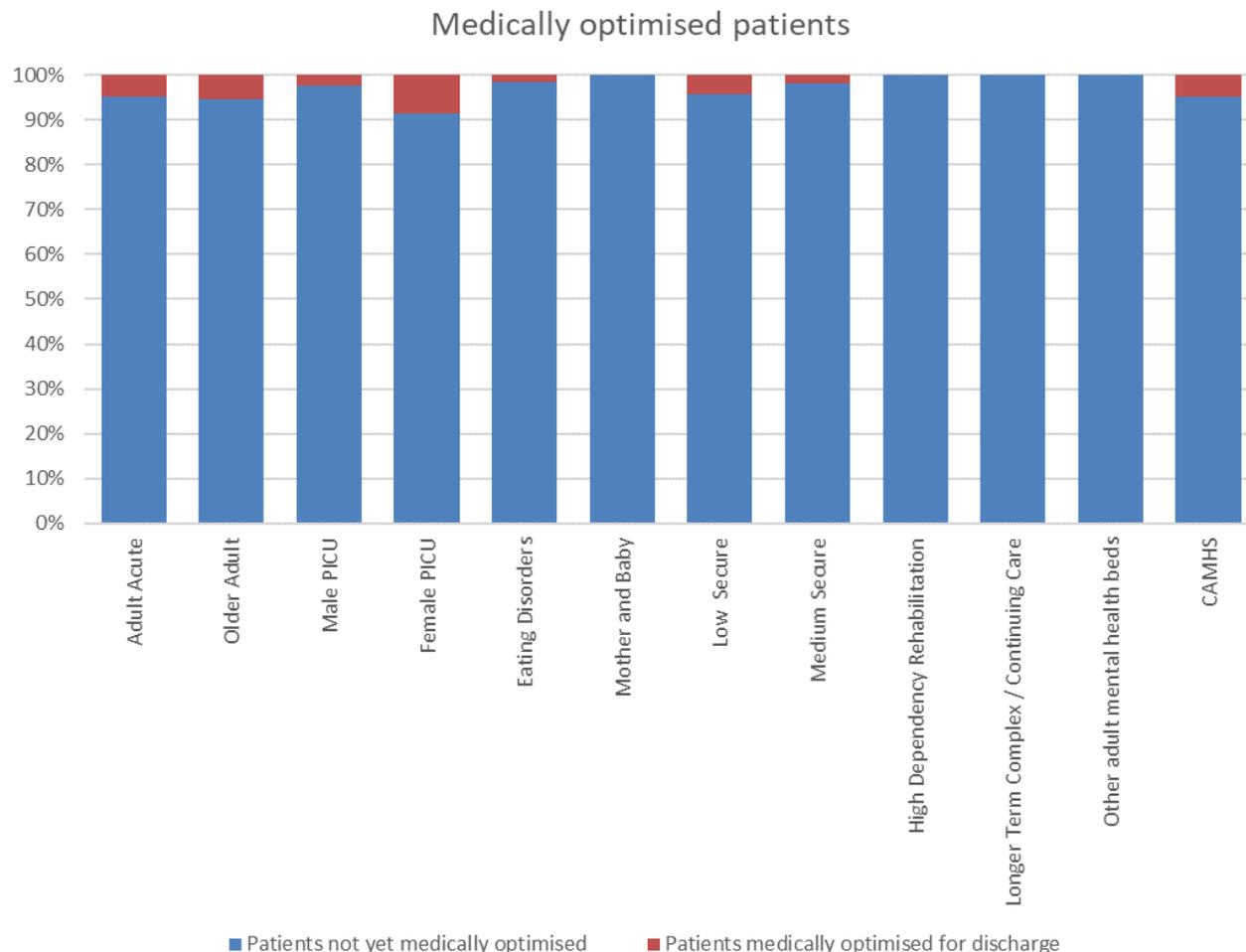


# Medical optimisation



## “How many inpatients are fit for discharge now?”

- The 1<sup>st</sup> February 2019 bed census revealed that, on average across London, fewer than 4% of inpatients in beds were categorised as “Medically optimised for discharge”.
- This was most common with Female PICU (9% of inpatients).
- In Adult Acute services 5% of beds were occupied by medically optimised patients.



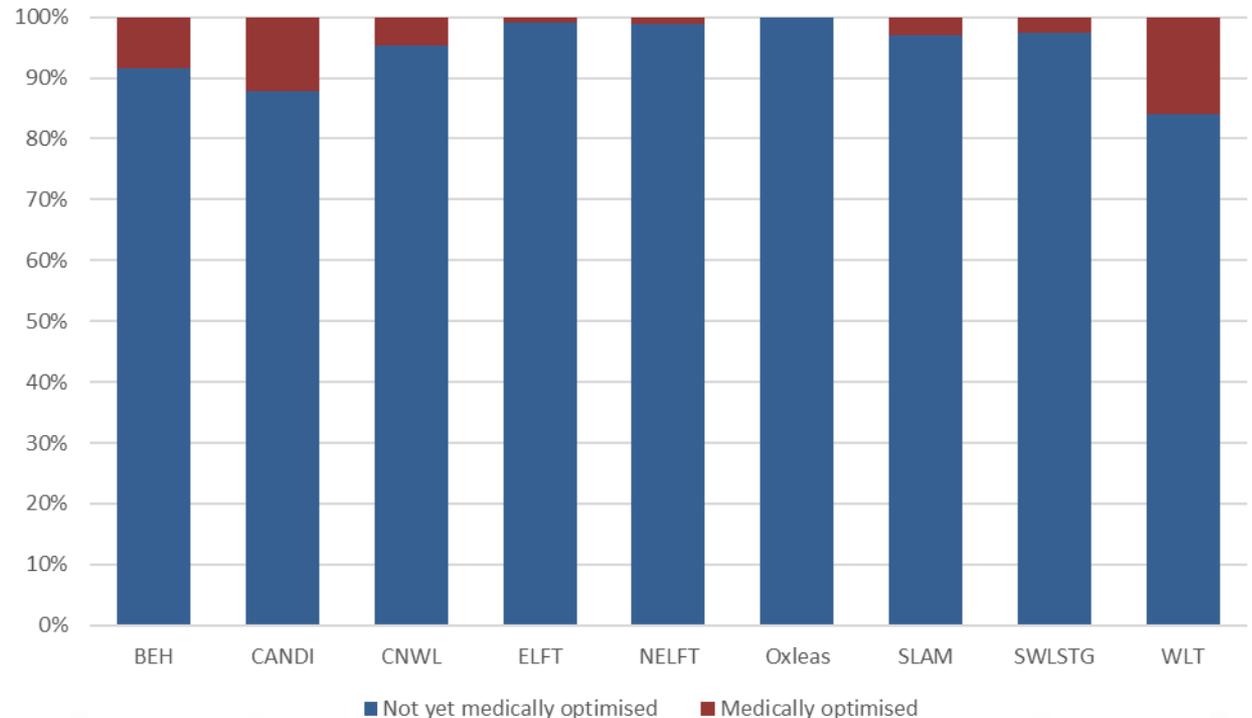
# Medical optimisation – Adult Acute



## “How many inpatients are fit for discharge now?”

- 5% of inpatients in **Adult Acute** beds were categorised as “Medically optimised for discharge”.
- Eight of the Nine Trusts had patients who were defined in this category.
- Oxleas were unable to provide data for this metric.
- West London and Camden and Islington reported the highest proportion of medically optimised patients.
- ELFT and NELFT reported the lowest incidence of medically optimised patients. Feedback from Trusts reported that these positions could vary over time.

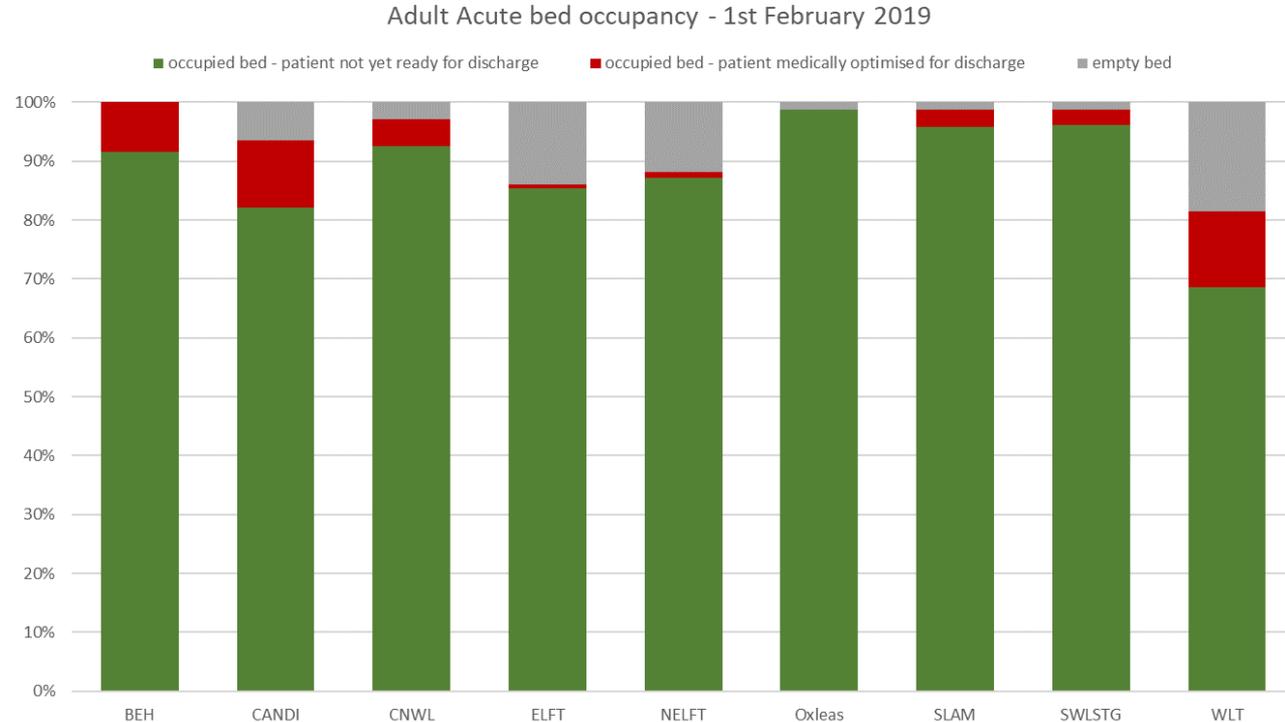
Medically optimised patients - Adult Acute



# Bed occupancy – Adult Acute



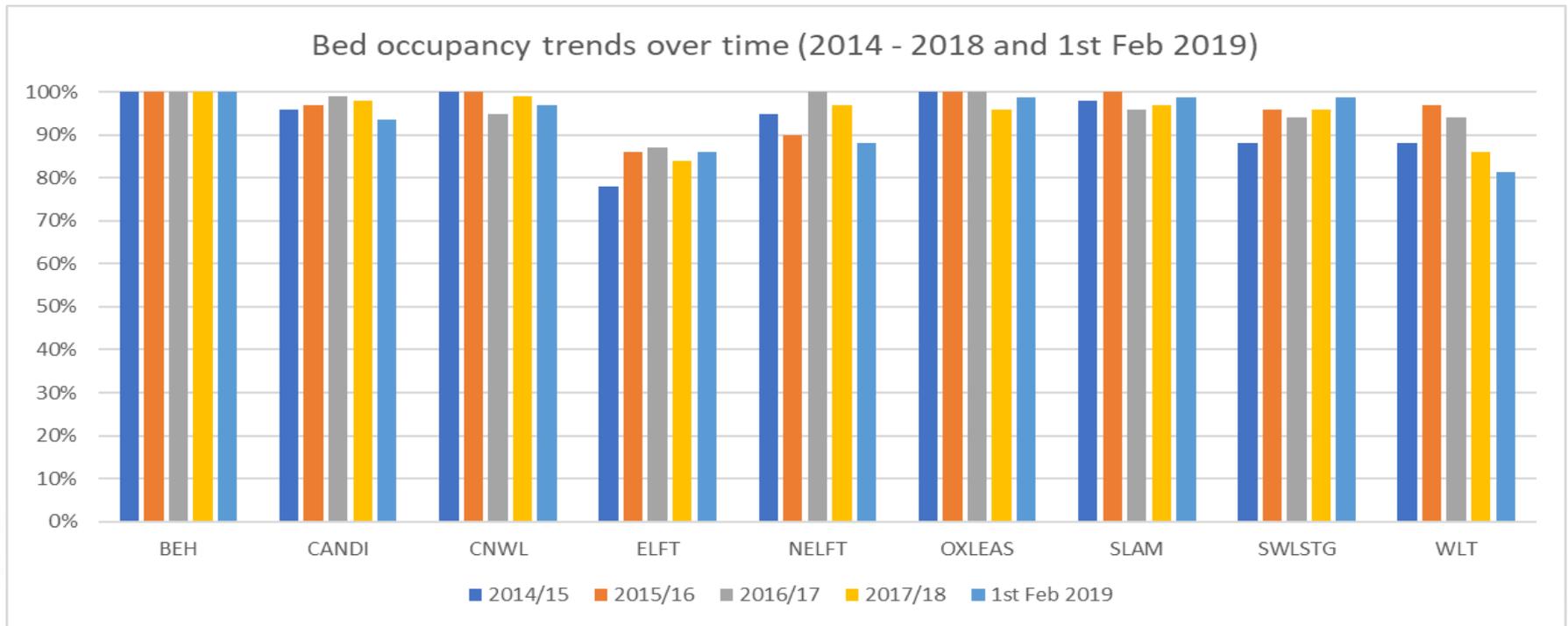
- Data from the 1<sup>st</sup> February bed census for Adult Acute services confirmed that one Trust (BEH) had 100% bed occupancy on 1<sup>st</sup> February 2019.
- Bed occupancy ranged from 81% to 100% with a mean average of 94% across the nine Trusts. The grey area on the charts indicates the extent of unoccupied beds on 1<sup>st</sup> February. Only BEH Trust reported 100% bed occupancy on 1<sup>st</sup> February.
- Bed occupancy excluding medically optimised patients ranged from 69% to 99%.
- Feedback from project group members and stakeholders suggested a need to be aware of the volatility of bed occupancy data with system design needing to incorporate a degree of headroom to cope with peaks in demand to avoid out of area placements.



# Bed occupancy over time



- The mean average bed occupancy position of 94% across the nine Trusts on 1<sup>st</sup> February 2019 can be compared with historic data collected by the NHS Benchmarking Network over the last 4 years.
- This is shown on the chart below, by Trust, and confirms a general coherence around this position when occupancy is assessed on an annual basis.
- Bed occupancy excluding leave averages 95% over the 4-year period.

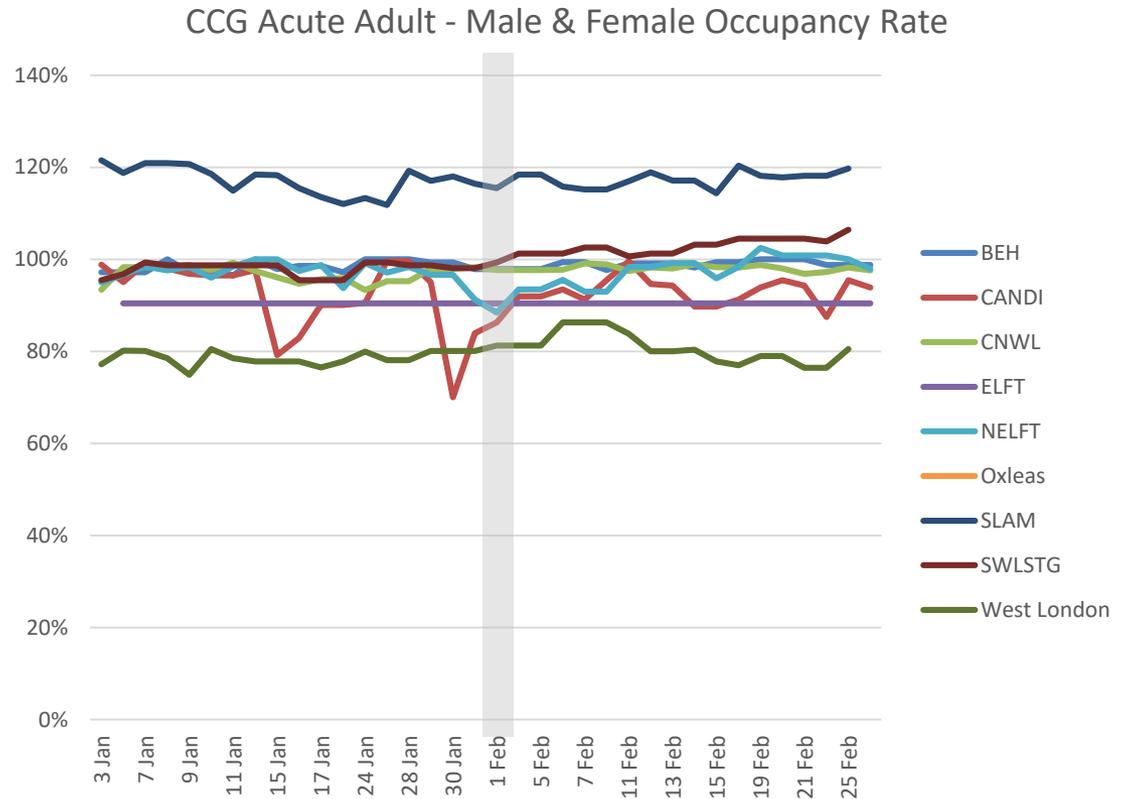




# London's Adult Acute bed occupancy

## Adult Acute Bed Occupancy Time Series

- The bed census identified bed occupancy at a point in time (Friday 1<sup>st</sup> February 2019 at 12.00) – highlighted in the chart opposite by the vertical grey line.
- Bed occupancy can vary over time and even on specific weekdays. It was agreed with Trusts to deploy the wider bed usage data already shared with NHS England. The data in the chart opposite shows time-series bed utilisation rates for Trusts on weekdays in January and February and shows the volatility that can develop in occupancy rates. This data was sourced from NHS England's CMS data collection system for mental health beds.
- Please note that a small number of Trusts reported occupancy at above 100% at several points, suggesting some inconsistency in reporting of leave days and available capacity. The position of SLAM is particularly noticeable with occupancy including leave of circa 120% reported.

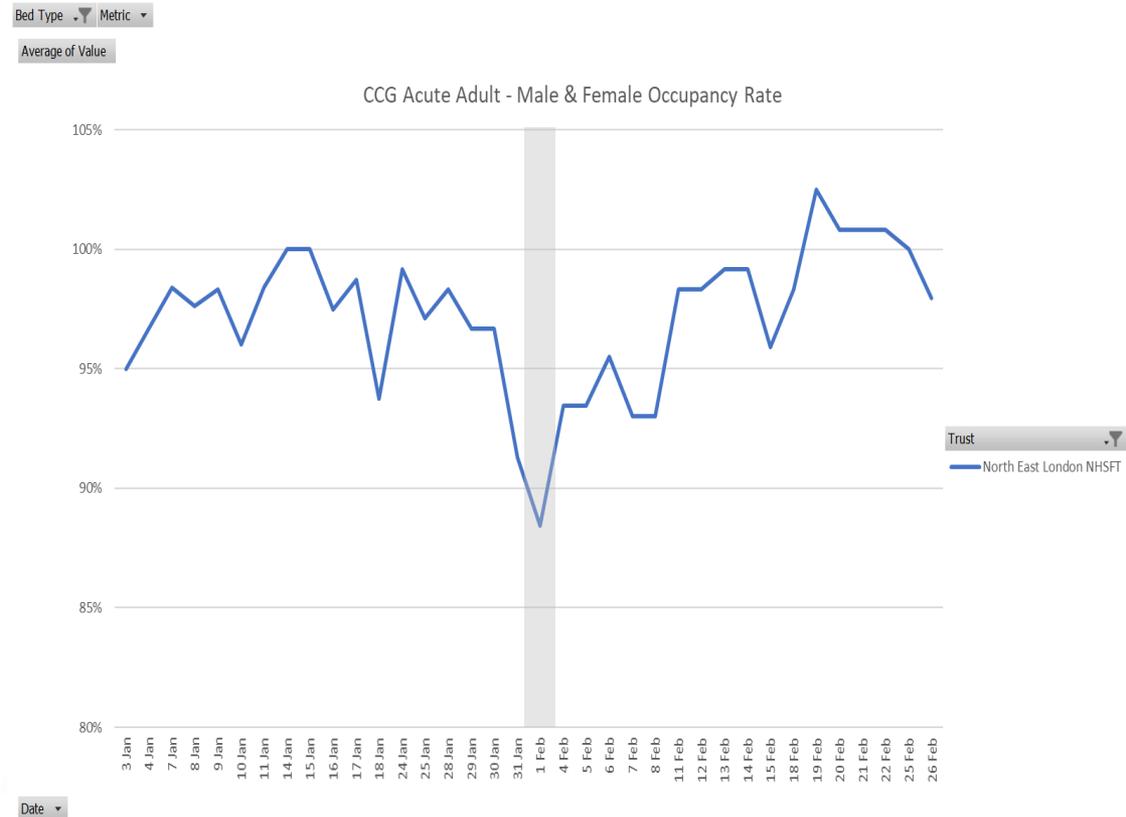




# London's Adult Acute bed occupancy

## Adult Acute Bed Occupancy Time Series

- The chart opposite shows the volatility in bed occupancy rates at North East London NHS FT during the months of January and February 2019.
- The Trust reported its lowest occupancy position of 87% on the census date of 1<sup>st</sup> February with occupancy rates rising steadily from this point.
- The range in bed demand experienced by Trusts emphasises the need to design a future system which has sufficient capacity and flexibility to be able to cope with peaks in demand.
- Target bed occupancy rates and the relationship with average length of stay reductions as an enabler of capacity are further explored on page 43.

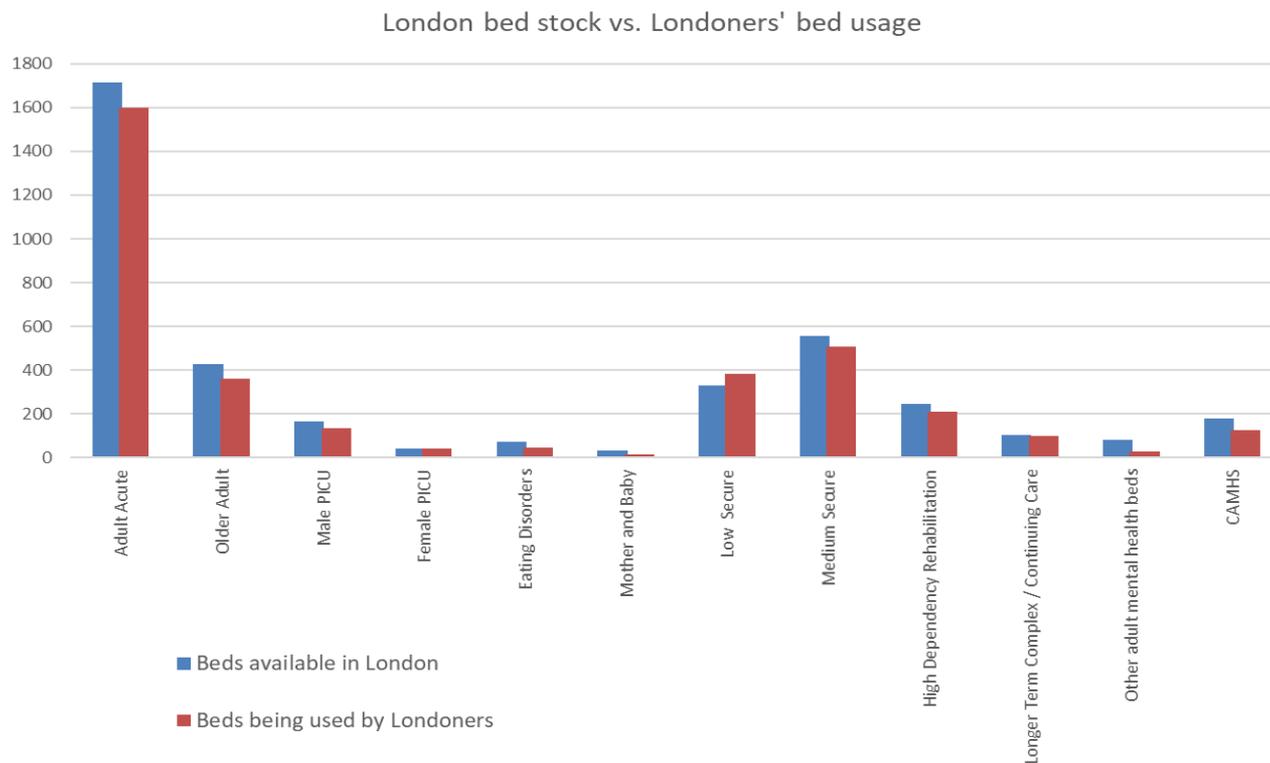


# Bed utilisation



## “How many beds are Londoners using?”

- Data from the bed census was used to assess how Londoner’s use of mental health beds compared with beds available in London on 1/2/2019. This included assessing the flow implications of out of area placements.
- If all beds in London Trusts were available to all London patients (i.e. there was no use by inpatients from outside London), demand would only outstrip supply for Low Secure beds.
- In other specialities, this conceptual analysis shows that no out of area placements would have been needed on 1<sup>st</sup> February 2019, in either the NHS or the Independent Sector.

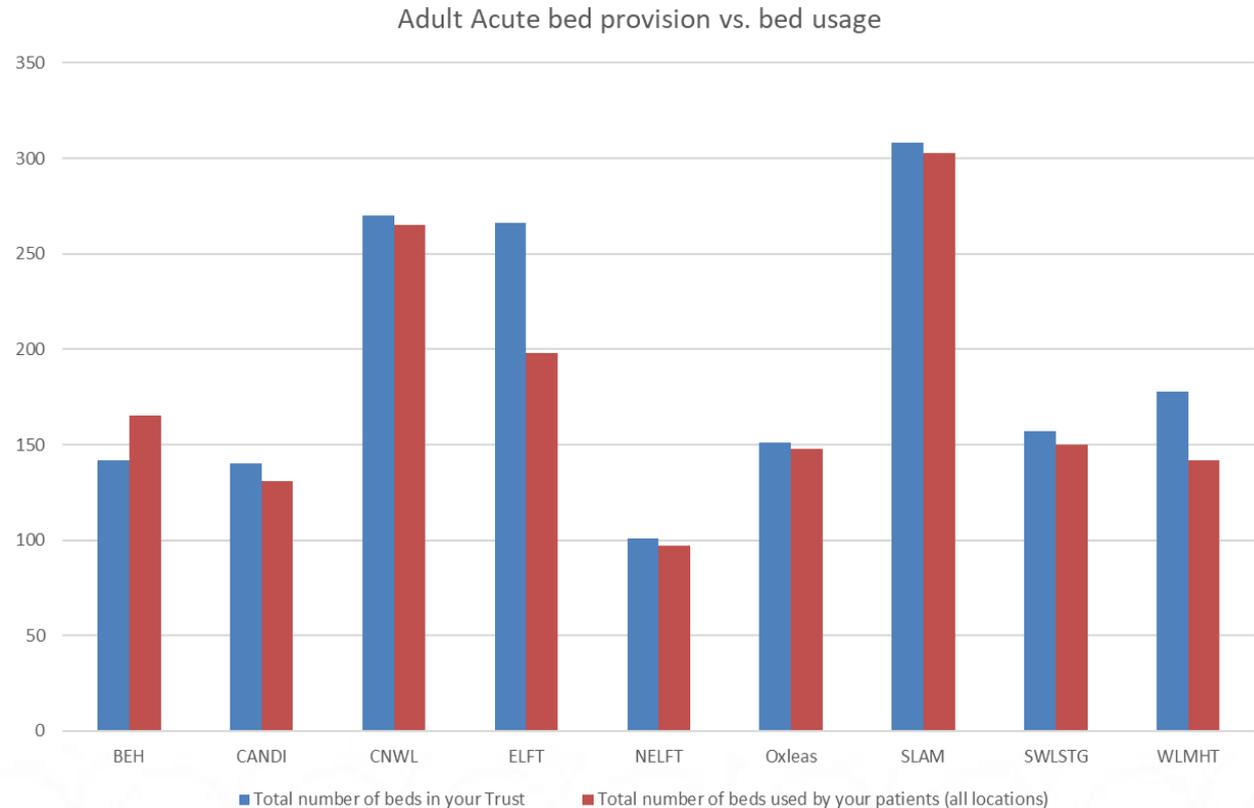


# Bed usage – local level



## “How many Adult Acute beds are being used?”

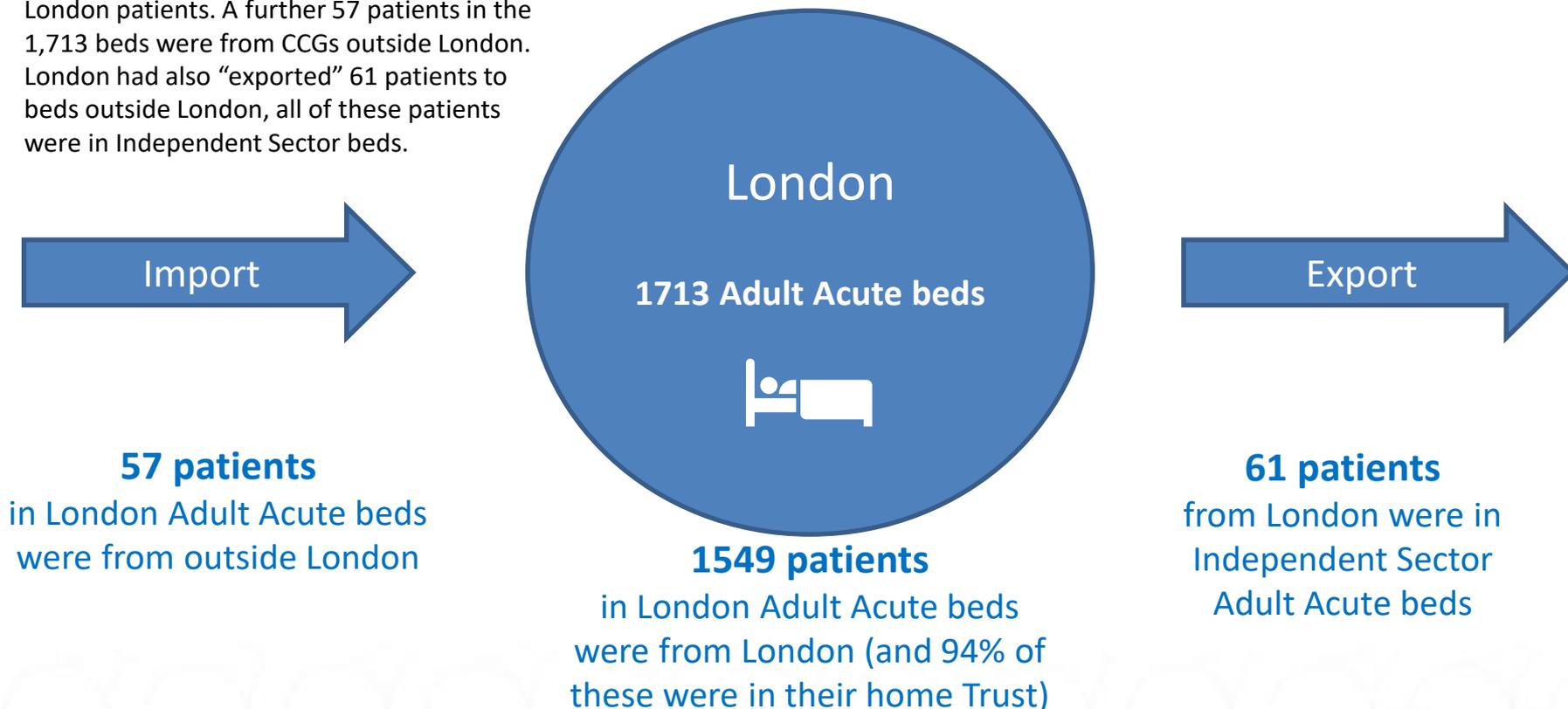
- The bed census on 1/2/2019 was also used to compare bed utilisation by local residents with availability of beds in that Trust’s footprint. Results showed that only BEH was using more adult acute beds than their in house supply on 1<sup>st</sup> February 2019
- In other Trusts, the local bed stock was sufficient for local needs. However, some of these beds may have been unavailable due to occupancy by patients from other areas.
- Bed stock on 1<sup>st</sup> February 2019 was therefore adequate in all areas of London apart from Barnet Enfield and Haringey NHS FT. The net flow implications of out of area placements is also referenced on page 38.



# Patient flow – Adult Acute



- This schematic shows the impact of net flow into and out of London's Adult Acute beds on 1<sup>st</sup> February 2019. London had 1,713 Adult Acute beds of which 1,549 were occupied by London patients. A further 57 patients in the 1,713 beds were from CCGs outside London. London had also "exported" 61 patients to beds outside London, all of these patients were in Independent Sector beds.



# Modelling Inpatient scenarios: Average length of stay (ALOS)

- To assess the impact of changing key variables within the system, a number of scenarios have been modelled to illustrate the changes in capacity that could be achieved through adjusting key variables, the first variables modelled relate to average length of stay. The impact of admissions growth is also outlined at the end of this section which shows how population growth may be factored into the model in addition to adjustments due to average length of stay and bed occupancy.
- Three scenarios have been modelled;
  1. ALOS reduces to London average
  2. ALOS reduces to national average
  3. ALOS in every Trust reduces by 1 day

Please note that this analysis has been used to present opportunities for optimising patient flow, creating headroom to cope with peak demand, and capacity that can support the demands that will come from population growth. The analysis is not focused on opportunities for benefits realisation and cost reduction on bed reduction which requires different methodologies around identifying the potential for cash releasing savings.

# Length of stay – scenario 1



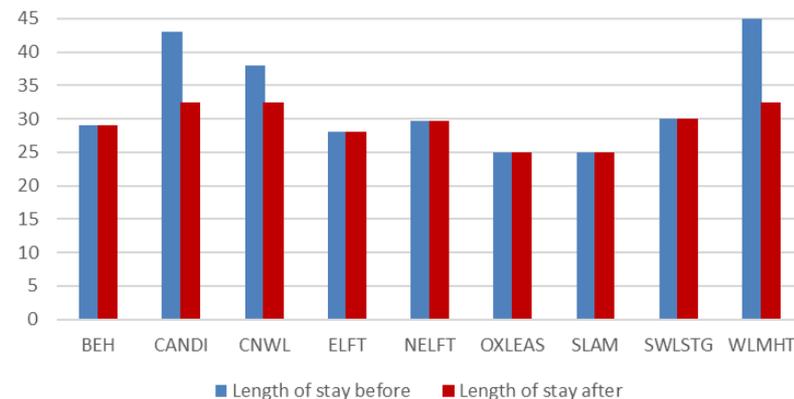
## Reduction of length of stay to London average

### Assumptions:

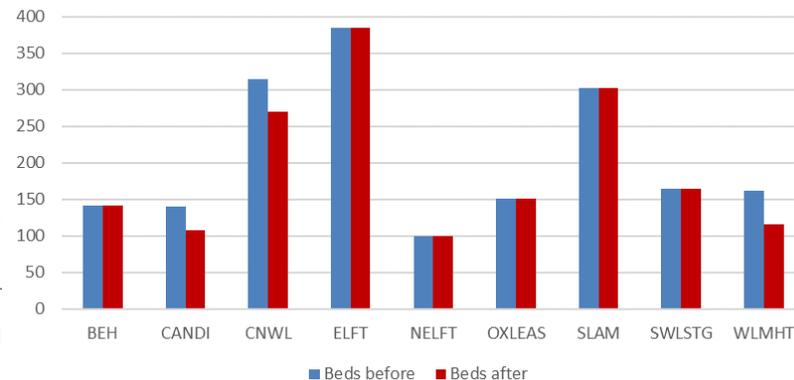
- London average ALOS currently 32.5 days
- Trusts with longer ALOS reduce to this level
- Admission levels stay the same
- This has the potential to release 122 beds across the 3 Trusts with ALOS above the current London average

	Length of stay before	Length of stay after	Action	Beds before	Beds after	Reduction in beds used
BEH	29	29	Maintain	142	142	
CANDI	43	33	Reduce	140	108	32
CNWL	38	33	Reduce	314	269	45
ELFT	28	28	Maintain	384	384	
NELFT	30	30	Maintain	100	100	
OXLEAS	25	25	Maintain	151	151	
SLAM	25	25	Maintain	302	302	
SWLSTG	30	30	Maintain	165	165	
WLT	45	33	Reduce	162	116	46
				<b>Total</b>		<b>122</b>

Adult Acute length of stay before and after



Adult Acute bed numbers before and after



# Length of stay – scenario 2



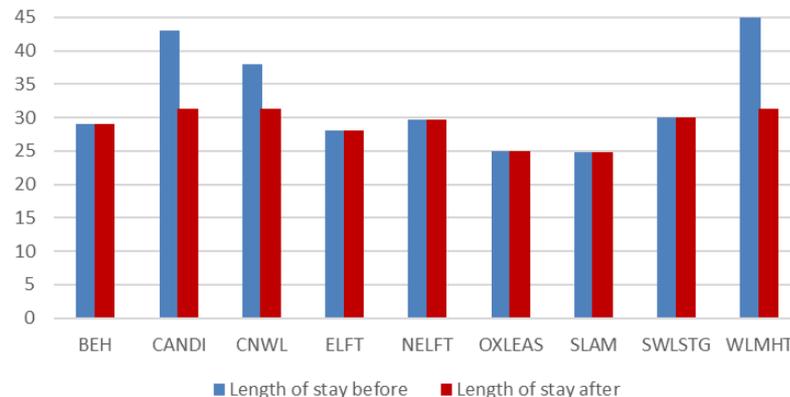
## Reduction of length of stay to national average

### Assumptions:

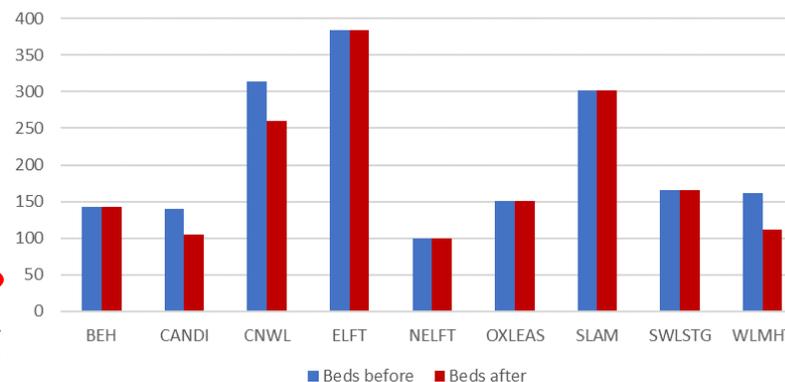
- National average ALOS is currently 31.3 days
- London Trusts with longer ALOS reduce to this level
- Admission levels stay the same
- This has the potential to release 140 beds across the 3 Trusts with ALOS above the current London average

	Length of stay before	Length of stay after	Action	Beds before	Beds after	Reduction in beds used
BEH	29	29	Maintain	142	142	
CANDI	43	31	Reduce	140	105	35
CNWL	38	31	Reduce	314	260	54
ELFT	28	28	Maintain	384	384	
NELFT	30	30	Maintain	100	100	
OXLEAS	25	25	Maintain	151	151	
SLAM	25	25	Maintain	302	302	
SWLSTG	30	30	Maintain	165	165	
WLMHT	45	31	Reduce	162	112	50
				<b>Total</b>		<b>140</b>

Adult Acute length of stay before and after



Adult Acute bed numbers before and after



# Length of stay – scenario 3



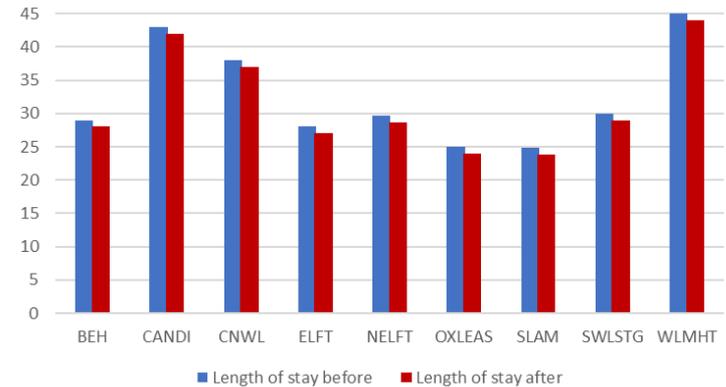
## All Trusts reduce length of stay by 1 day

### Assumptions:

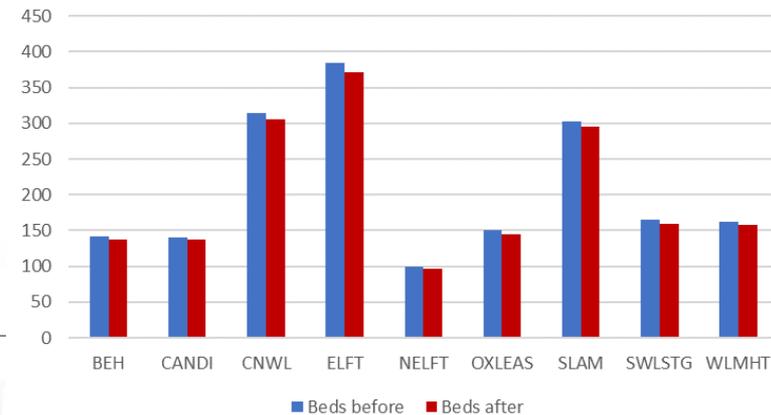
- All Trusts currently have different ALOS
- Every Trust reduces their ALOS by 1 day (regardless of whether currently above or below average)
- Admission levels stay the same
- This has the potential to release 54 beds across London (with a reduction of 3 – 13 beds per Trust)

	Length of stay before	Length of stay after	Action	Beds before	Beds after	Reduction in beds used
BEH	29	28	Reduce	142	137	5
CANDI	43	42	Reduce	140	137	3
CNWL	38	37	Reduce	314	306	8
ELFT	28	27	Reduce	384	371	13
NELFT	30	29	Reduce	100	96	4
OXLEAS	25	24	Reduce	151	145	6
SLAM	25	24	Reduce	302	295	7
SWLSTG	30	29	Reduce	165	160	5
WLT	45	44	Reduce	162	158	4
				<b>Total</b>		<b>54</b>

Adult Acute length of stay before and after



Adult Acute bed numbers before and after



# Modelling bed occupancy & admissions



The matrix shows the impact of changes in bed occupancy and growth in admissions/demand against the length of stay required to deliver these without any additional bed capacity. Data from the GLA confirms a likely population growth of 1% per annum over the next 5 years. This will generate additional admissions, bed occupancy, and need for inpatient capacity if balancing plans are not implemented. The table opposite shows how reducing average length of stay can create capacity that can contribute to meeting the demands of population growth.

## Assumptions

- Existing bed occupancy is 95%
- The current ALOS across London is 32.5 days
- Scenarios for lowering bed occupancy and/or accommodating increased demand for admissions (linked to anticipated population growth) are calculated
- A 90% bed occupancy position has been highlighted to illustrate the requirements of meeting this position, one that would create headroom to meet demand peaks, with ALOS reductions required to enable this. This approach can be tracked over time to anticipate the additional demands expected from population growth.
- Example:** to reduce bed occupancy to 90%, ALOS would need to be 31 days with current admission rates. With admission rates increasing by 5%, ALOS would need to be 30 days; with an 8% increase in admissions ALOS would need to be 29 days.

Current London position

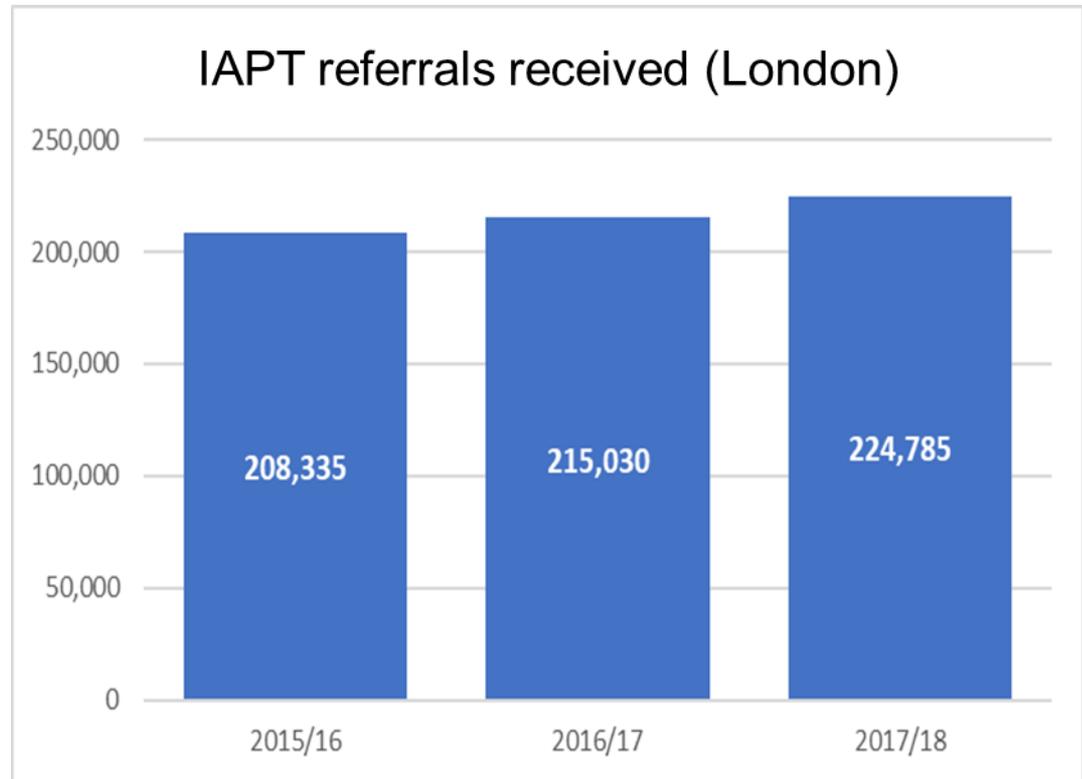
		Admissions								
		As is	+1%	+2%	+3%	+4%	+5%	+6%	+7%	+8%
Bed occupancy	95%	33	33	32	32	32	31	31	31	31
	94%	32	32	32	32	31	31	31	31	30
	93%	32	32	32	31	31	31	30	30	30
	92%	32	32	31	31	31	30	30	30	30
	91%	31	31	31	31	30	30	30	30	29
	90%	31	31	31	30	30	30	29	29	29
	89%	31	31	30	30	30	29	29	29	29
	88%	30	30	30	30	29	29	29	29	28
	87%	30	30	30	29	29	29	29	28	28
	86%	30	30	29	29	29	28	28	28	28
85%	29	29	29	29	28	28	28	28	27	

# Community services provision



# IAPT referrals received

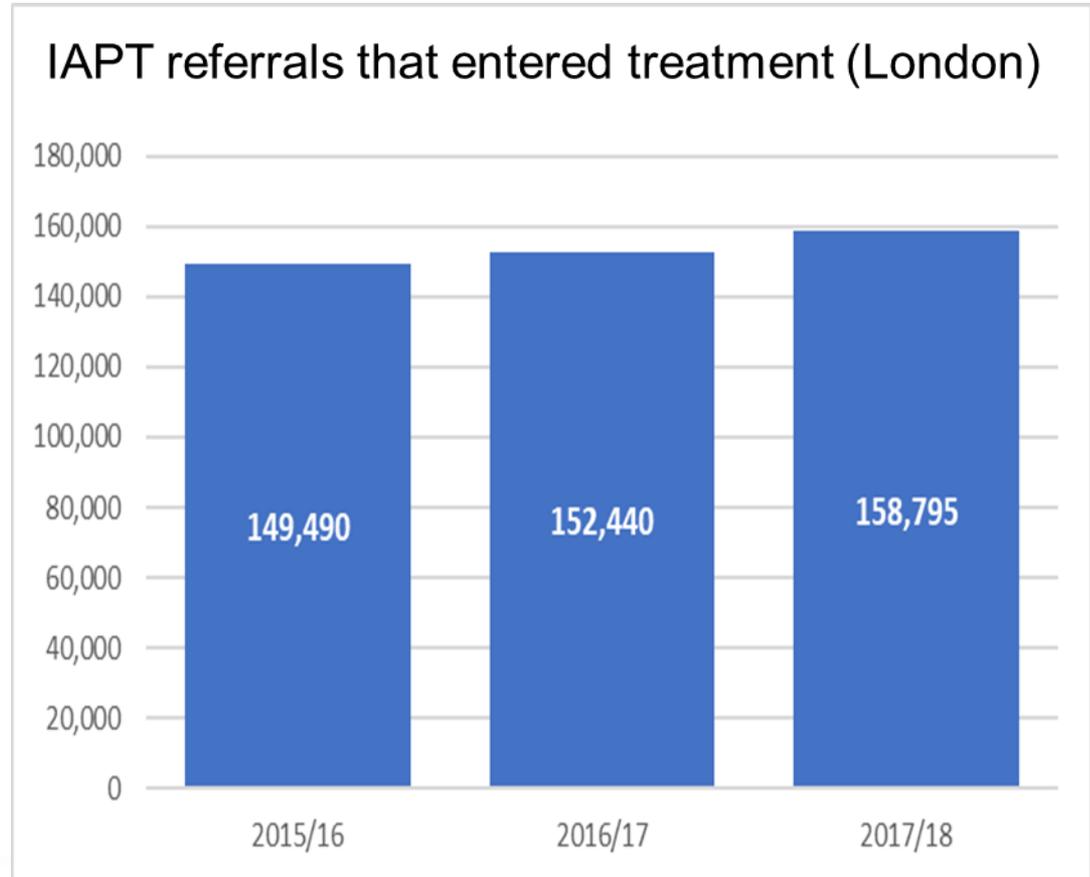
- Demand for IAPT services has grown rapidly in recent years, both in London and across England.
- London has reported an increase of 16,450 referrals to IAPT per year between 2015/16 and 2017/18.
- These additional referrals represent a growth in demand of almost 8% in the last 2 years.
- IAPT growth has contributed to a downward trend in specialist Community Mental Health Team caseloads as patients with common mental health problems have disappeared from CMHT caseloads. However, it should also be noted that across England there have been wider reductions in the number of people with SMI supported on community team caseloads (see page 48).
- IAPT growth provides interesting context for the specialist community care analysis provided in this section of the report.





# IAPT referrals entered treatment

- An additional 9,305 patients entered treatment with IAPT in 2017/18 compared to two years previously.
- This represents a 6% increase in people entering treatment over that period.
- The data confirms a gradual increase in IAPT activity as access to services for common mental health problems improves in line with the Five Year Forward View strategy.

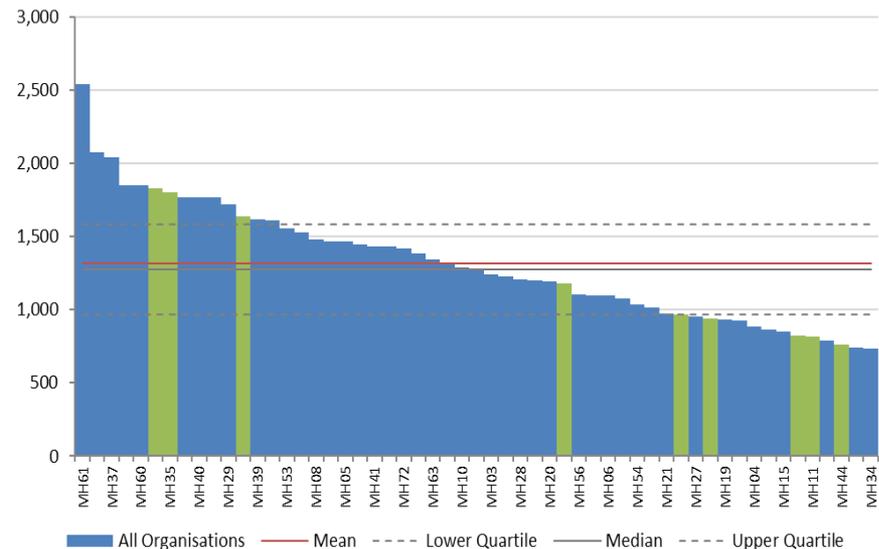


# London community team capacity



- London community caseloads for specialist CMHTs remain just above national average when assessed on a registered population basis (London 1,680, national average 1,598 per 100,000 registered population).
- However, London caseloads are notably below national average when needs weighting is included (London 1,183, national average 1,314 per 100,000 weighted population).
- The chart opposite illustrates London's position against the rest of the NHS when CMHT caseloads per capita are assessed on a weighted population basis.
- The mix of Care Programme Approach (CPA) patients can be used as a proxy measure of acuity. London's position of 27% of all caseload managed through CPA is consistent with wider NHS average rates. Wider contextual data can also be referenced including social determinants of health such as employment rates and access to settled accommodation.
- In absolute numbers, the data suggests an additional 14,000 patients should be on community caseloads in London, based on the needs of the capital.
- This position is related to the needs adjusted baseline investment levels reported earlier in this report. The level of inpatient capacity is consistent with that expected from London's above average needs, however, there is a deficit with fewer than expected numbers of people on community caseloads across the city.

**All CMHTs - Total caseload for Community Mental Health Teams as at 31/03/18 or most recent census period (number of patients on caseload) per 100,000 weighted population**

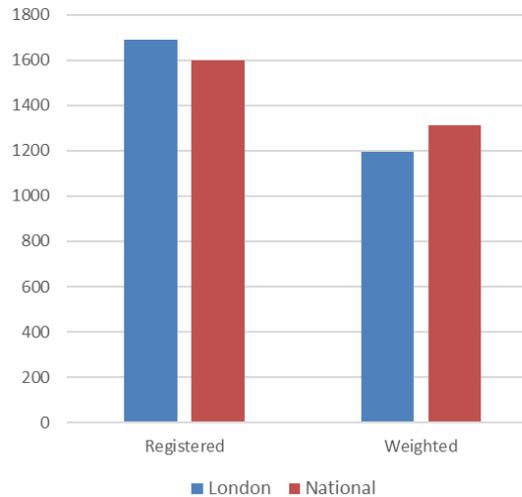




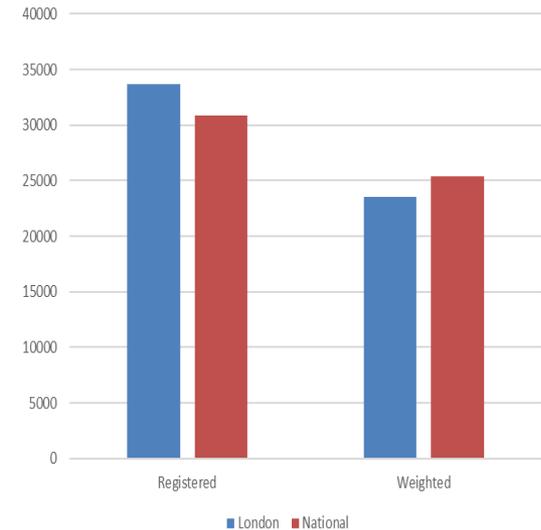
# Community caseloads & contacts

- London community caseloads and contact rates are illustrated in the 2 charts opposite using both registered and weighted population denominators. Both London's CMHT caseloads and contact levels fall below national average when needs adjustment weighting is included.
- Community caseload per 100,000 weighted population in London are 10% lower than the national average (1,183 for London versus 1,314 nationally)
- Community contacts per 100,000 weighted population in London are 8% lower than the national average (23,243 for London versus 25,360 nationally).
- It should be noted that community caseloads and contact rates across the NHS have been falling in recent years as alternative IAPT services have grown and Trusts have responded to financial pressures. The time-series chart on the bottom right shows trends in community caseloads per 100,000 registered population and confirms a decline in caseloads since 2013/14.

Community caseloads per 100,000 population



Community contacts per 100,000 population



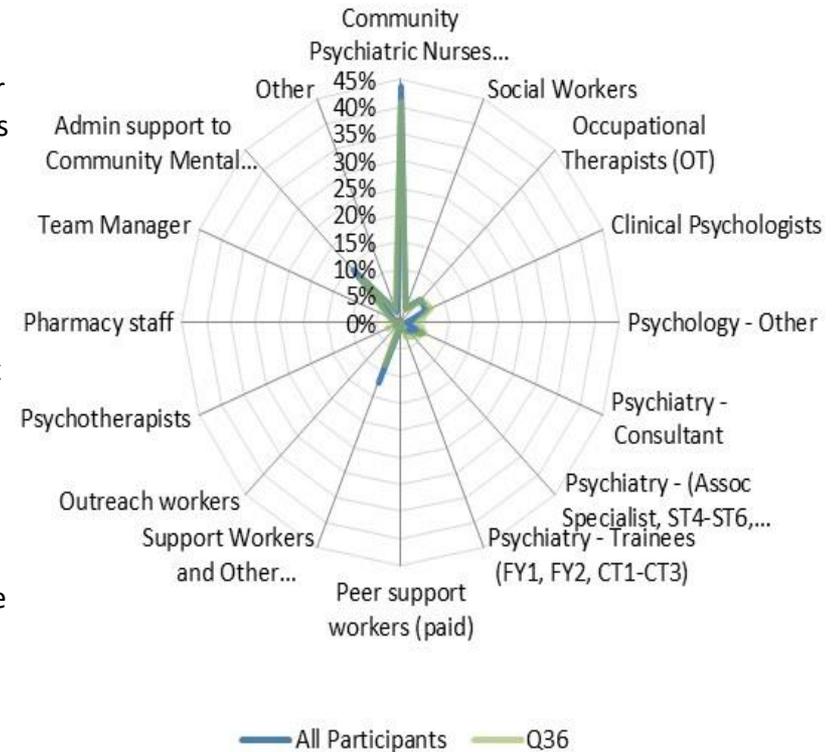
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	National trend
Mean	1781	2163	1709	1803	1614	1598	

# Quantifying the CMHT gap



- The needs adjusted methodology suggests that 14,000 fewer patients are on CMHT caseloads than might be expected if services were provided at a level consistent with London's needs. This is calculated from the figures shown on the previous page which highlight the gap between current provision and expected provision (if London were to perform at a level to match the national average).
- The implications of potentially delivering CMHT services to 14,000 additional patients are:
  - £59 million additional annual cost (year of community care for 14,000 people using current average costs for CMHT caseloads in each Trust, approx. £4,200 per patient per year)
  - An additional 740 WTE care coordinators working in the community across London (to provide care coordination for the additional patients, while maintaining existing caseload sizes)
  - The chart on the right shows London's average CMHT skill-mix and supports a possible discussion on the types of disciplines that might be needed in responding to the current capacity gap in community based care. Fidelity guides to staffing and team design are not widely available but can be referenced in Crisis and Home Treatment. The impact of paid peer support workers is also becoming increasingly recognised as a valuable initiative.
- The chart on the following page analyses waiting times to access specialist community based mental health services and profiles the percentage of referrals who are able to access treatment within 4 weeks of referral.

All CMHTs Team Profile

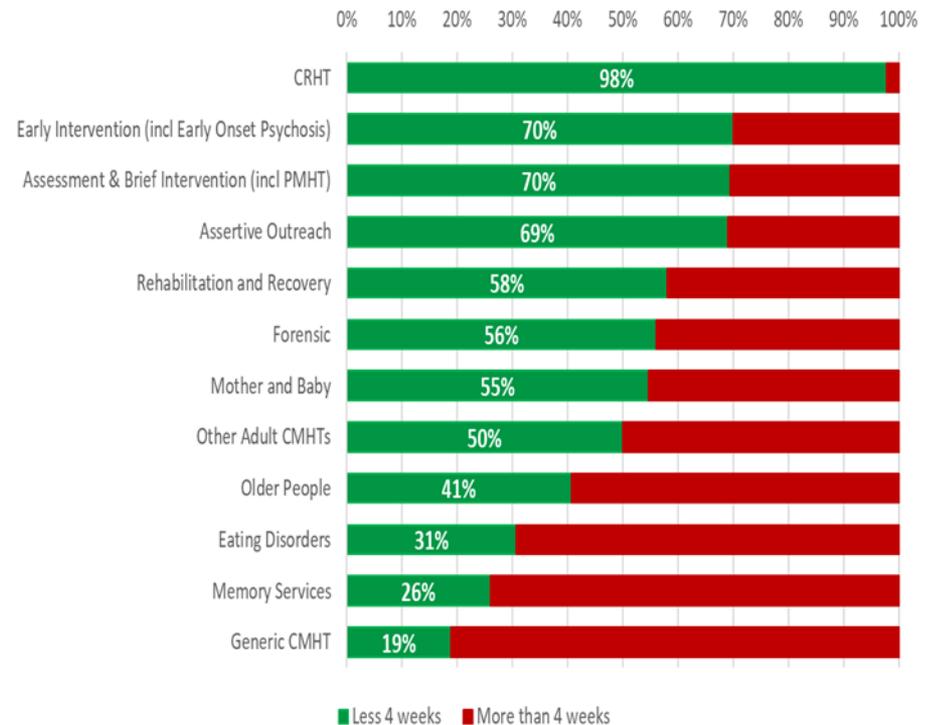




# Community services access

- Access to specialist community mental health services in London varies by team type.
- NHS Benchmarking network have analysed the high level data collected on the 2018 national benchmarking process (using 2017/18 year end data) to assess the speed of access to specialist community care.
- The chart opposite has been compiled using a Referral to Treat (RTT) definition based on a patient being seen twice (i.e. typically an assessment and treatment appointment). The chart shows the number of patients who accessed treatment within 4 weeks of referral. The most timely access is as expected in Crisis Resolution and Home Treatment (CRHT) and Early Intervention in Psychosis services.
- The data also reveals that the least timely access is within Generic Adult Community Mental Health Teams where 19% of patients received treatment within 4 weeks of referral. The lack of speedy access to generic CMHTs can be aligned with the gap in London's overall CMHT caseload and contact rates to confirm issues in aligning demand and capacity for specialist community mental health services.

Referral to Treatment: % of patients seen within 4 weeks by team type (London)



# Scenario 4 – community capacity gap



## Reduce ALOS by 1 day and reinvest resource in community teams

- Realising savings or being able to redeploy resource are fundamentally difficult concepts given the tightness of the acute pathway and unpredictability of peak demand times. For this reason a number of scenarios have been presented to illustrate the links between inpatient and community care, rather than the case for tangible opportunities. It should also be remembered that these scenarios exist at a time when a backdrop of 1% annual population growth is also forecast, suggesting demand growth for the system as a whole.
- Every 1 day length of stay reduction in each Trust has the equivalent impact of a 1.4% increase in community caseload size if resource can be redeployed between inpatient and community care. This 1.4% increase in community capacity is equivalent to supporting and additional **1,915** community patients per year.
- This assumes Trust's individual existing costs per bed and costs per community year of care are applied.
- Please note that the ability to redeploy staff and realise any cost savings is open to discussion and will require the use of benefits realisation methodologies.

	Savings based on 1 day LOS reduction across each Trust (scenario 3)	Additional patients supported on community caseload (year of care)	Equivalent to community caseload growth
BEH	£556,861	91	1.0%
CANDI	£420,633	95	1.5%
CNWL	£1,180,610	241	1.7%
ELFT	£1,535,777	414	1.1%
NELFT	£611,158	175	1.1%
OXLEAS	£822,474	309	1.7%
SLAM	£1,161,408	231	1.3%
SWLSTG	£727,839	182	1.4%
WLT	£605,897	178	1.4%
<b>Total</b>	<b>£7,622,657</b>	<b>1,915</b>	<b>Average 1.4%</b>

# Closing this gap



## Additional scenarios (referenced in Inpatient section)

- The other Inpatient scenarios used earlier in this report are also shown in terms of their impact in terms of switching resource between inpatient and community care.
- Reducing length of stay as a minimum to the current London average in each Trust releases 122 beds – equivalent to supporting a further 4,252 patients in the community on CMHT caseloads for a year of care.
- Reducing length of stay as a minimum to the national average in each Trust releases 140 beds – equivalent to supporting a further 4,880 patients in the community on CMHT caseloads for a year of care.
- Both scenarios assume Trust’s individual existing costs per bed and costs per community year of care are applied.
- These scenarios exist at a time when a backdrop of 1% annual population growth is also forecast, suggesting demand growth for the system as a whole will need to be effectively managed.
- The ability to realise any cost savings is open to discussion and will depend on concerted benefits realisation / redeployment strategies.
- Further scenarios based on improving productivity levels are shown at Appendix A. These scenarios illustrate the opportunity available to the system but need to be caveated with the same issues outlined above about the ability to realise benefits.

	Reduce length of stay to London average (scenario 1)	Reduce length of stay to national average (scenario 2)
Bed reduction	122	140
Additional patients supported in the community per year	4,252	4,880

# Conclusions



- The modelling work described in this report has been conducted in consultation with a large number of stakeholders across London. We would like to thank all contributors to this process.
- Earlier versions of this report were discussed with the Mental Health in Emergency Departments working group at its meeting on 8<sup>th</sup> April 2019 where observations on the work were discussed and suggested changes accommodated into an updated version of the report. The work was also discussed at a range of other stakeholder events including the Healthy London Partnership Mental Health Transformation Board at its meeting on 31<sup>st</sup> May 2019.
- The data included within the modelling work is broad and can support a large number of additional scenarios. It is our intention to make available a software model to stakeholders so scenarios can be further modelled locally
- The current elements of the model described in this report highlight the importance of key variables. The main conclusions we can offer at this stage are;
  - Future demand is expected to grow in line with forecast population changes which are estimated at 1.1% per annum over the next 5 years
  - Inpatient capacity appears to be adequate to meet normal demand in London. Trust operational teams have performed well to manage demand without requiring large numbers of patients to be accommodated in out of area placements or in the independent sector. Issues for the system do though exist around accommodating peak demand with existing bed occupancy rates of 95% offering little headroom at times of high demand. The modelling work illustrates the importance of effectively managing average length of stay as a key enabler of ensuring adequate patient flow, and ensuring service users can be accommodated in local services rather than resorting to out of area treatment. Variation in capacity and ALOS between Trusts is a discussion point as are the opportunities for closer harmonisation of services and service models.
  - Although Inpatient care is offered at a level that appears consistent with London's needs, capacity gaps are evident in specialist Community Care where CMHT caseloads and contact rates are lower than expected given London's high levels of need. This position suggests that eligibility levels may now be higher in London than typically seen in the NHS and service access more difficult. Variation in access rates and capacity is evident across Trusts which offers scope for further harmonisation.
- None of the scenarios presented in this report are self-contained and all have wider implications including offering discussion points on clinical productivity and future workforce requirements. Further illustrations of these issues are provided at Appendix A.
- For further information on the issues discussed in this report please contact the NHS Benchmarking Network via [s.watkins@nhs.net](mailto:s.watkins@nhs.net)

# Appendix A - Productivity scenarios

**To meet the anticipated 5% growth in demand linked to increased population size**

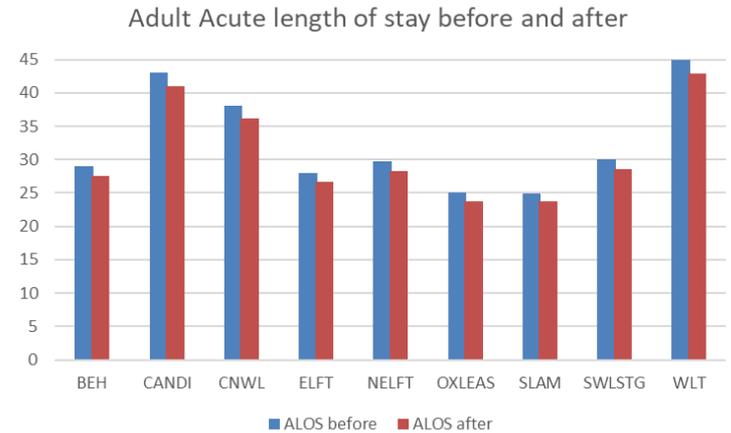


# Length of stay

What **LOS reductions** would be needed to accommodate predicted growth in demand within existing bed stock?

## Assumptions:

- Admission levels could rise by 5% in next 5 years, based on expected population growth.
- In order for bed numbers and occupancy to remain the same, ALOS would need to decrease.
- This decrease would be between 1.2 days and 2.0 days per Trust, based on current admission rates and current ALOS.



	Admissions before	Admissions after (+ 5%)	Beds before and after	ALOS before	ALOS after	Reduction in ALOS
BEH	1651	1734	142	29	27.6	1.4
CANDI	1096	1151	140	43	41.0	2.0
CNWL	2958	3106	314	38	36.2	1.8
ELFT	4651	4884	384	28	26.7	1.3
NELFT	1293	1358	100	30	28.3	1.4
OXLEAS	2104	2209	151	25	23.8	1.2
SLAM	2558	2686	302	25	23.7	1.2
SWLSTG	1886	1980	165	30	28.6	1.4
WLT	1338	1405	162	45	42.9	2.1



# Community support

## How many more community staff would be needed to accommodate a 5% population growth (and at what cost?)

### Assumptions:

- Population grows by 5% and demand rises in line with this.
- Caseloads and contact levels remain the same.
- In order to accommodate this, community staffing WTE would need to increase by 5%, which would lead to a 5% increase in pay costs.
- Across London, this would mean an additional 355 WTE staff working in community mental health services, at an additional cost of £18.7 million per annum.

	Community WTE before	Community WTE after (+5%)	Additional community WTE	Additional staffing cost (+5%)
BEH	469	492	23	£1,648,537
CANDI	394	414	20	£822,654
CNWL	960	1008	48	£2,630,766
ELFT	1484	1558	74	£3,357,204
NELFT	781	820	39	£1,853,957
OXLEAS	672	706	34	£1,849,596
SLAM	1223	1284	61	£3,511,502
SWLSTG	658	691	33	£1,836,048
WLT	459	482	23	£1,216,881
<b>Total</b>			<b>355</b>	<b>£18,727,146</b>

# Community support



How would **contact rates** need to change to accommodate 5% population growth in existing resource?

## Assumptions:

- In this scenario, no additional staff are available and the increase in demand is absorbed by the existing workforce.
- This would result in between 18 and 39 additional contacts delivered per WTE per annum (using a baseline of current staff contact rates).
- Variation between Trusts is based on current contact levels per clinical WTE.

	Community contacts before	Community contacts after (+ 5%)	Contacts per clinical WTE before	Contacts per clinical WTE after (+ 5%)	Additional community contacts per clinical WTE	Contacts per clinical WTE per day before	Contacts per clinical WTE per day after (+5%)
BEH	236,507	248,332	565	594	28	2.6	2.7
CANDI	133,974	140,673	363	381	18	1.7	1.7
CNWL	348,041	365,443	445	468	22	2.0	2.1
ELFT	468,927	492,373	586	616	29	2.7	2.8
NELFT	378,257	397,170	594	624	30	2.7	2.8
OXLEAS	194,545	204,272	361	379	18	1.6	1.7
SLAM	799,914	839,910	778	817	39	3.5	3.7
SWLSTG	255,102	267,857	419	440	21	1.9	2.0
WLT	156,859	164,702	389	409	19	1.8	1.9
		Average	500	525	25	2.3	2.4