

HIMSS[®] 26

EUROPE

19-21 May | Copenhagen

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#HIMSS26EUROPE

DISCLAIMER: The views and opinions expressed in this presentation are solely those of the author/presenter and do not necessarily represent any policy or position of HIMSS.

EXPERT **INSIGHTS**
EXCEPTIONAL **IMPACT**



Culture and mindset first...
then data & analytics

A little about me...



An organisation performing well?

Trust Board Scorecard Q4 2009/10

KEY MONITOR, NATIONAL, PARTNER AND LOCAL TARGETS	2009/10 Target	2008/09 Actual	2009/10 Q3	2009/10 Q4	Trend Q3-Q4	Comment
Monitor Targets						
Annual number of MRSA bloodstream infections reported	0	0	0	0	→	
Reduction in C. Diff	0	0	0	0	→	
CPA inpatient discharges followed up within 7 days (face to face and telephone)	95.0%	99.5%	99.0%	99.1%	→	
Patients occupying beds with delayed transfer of care	7.5%	3.5%	1.8%	1.8%	→	CQC Indicator definition covers only April-Aug 2009
Admissions made via Crisis Resolution Teams (end of period)	90.0%	98.3%	99.0%	96.7%	↓	
Number of Crisis Resolution Teams	7.1	7.3	7.3	7.3	→	
Other National/CQC Targets						
Completeness of Ethnicity Coding – PART ONE. Inpatient in MHMDS (Year to date)	85%	98.1%	97.3%	97.3%	→	Local target 95%.
Completeness of Mental Health Minimum data set – PART ONE (As per 2008/9)	99%	97.6% Underachieved	99.4%	99.4%	→	Target assumed 99% as per CQC threshold 2008/9. MONITOR have confirmed 99% threshold for 2010/11 for this indicator.
Completeness of Mental Health Minimum data set – PART TWO (New – confirmed 22/12/2009)	TBA	Not Used	45.0%	45.0%	→	No threshold set by CQC or MONITOR for 2009/10 therefore cannot assess compliance.
Patterns of Care – assignment of Care Co-ordinator within Mental Health Minimum data set	80%	99.6%	93.2%	93.2%	→	
CAMHS - National Priorities - Six targets graded 1 (lowest) to 4 (best)	24	22	22	24	↑	Maximum Score 24
Annual Staff Survey (Job Satisfaction)	Benchmarked	Satisfactory	N/A	TBC		Survey based - Annual, threshold not available yet
Patient Survey	Benchmarked	Below Average	N/A	TBC		As above
Drug Misusers in effective Treatment	90.0%	95.5%	92.9%	92.9%	→	
Access to healthcare for people with a learning disability – report compliance to CQC	Yes	Not Used	N/A	Yes		
Best practice in mental health services for people with a learning disability – Green Light Toolkit Score	48	40/48 Underachieved	42	46	↑	Max Score 48
Maximum waiting time of four hours in A&E from arrival to admission, transfer or discharge	98.0%	97.5%	98.3%	98.3%	→	Partner target for acute trusts. This will be excluded from future reports.
PCT Contract and Mandatory Targets						
Number of Early Intervention Services Teams	3	3	3	3	→	
Early Intervention Services Caseload	511	569	534	544	↑	
Newly diagnosed cases of first episode psychosis receiving Early intervention Services	176	243	199	248	↑	
Number of patients receiving Adult Crisis Resolution Services (Episodes for Year to date)	2280	2,346	1874	2552	↑	
Specialist Addictions – % of discharges retained 12 weeks or more	85.0%	96.1%	92.9%	92.9%	→	
Specialist Addictions - Number of drug misusers in treatment (snapshot at period end)	678	710	780	776	↓	
CAMHS Service protocols	12	12	12	12	→	Maximum Score 12
Mixed Sex accommodation breaches	0	0	0	1	↑	Reported as required to PCTs, no penalties or compliance issues.
Patient Experience - Community						
Assessment within 28 days of referral	95%	Not Used	88.2%	92.8%	↑	Local target of 95%
CPA patients - care plans in date	95%	93.1%	93.3%	94.2%	→	
Patient Experience - Inpatients						
Adult Acute Inpatient Bed Occupancy Year to Date (excluding home leave)	95%	95.3%	98.3%	97.3%	↓	See graphs overleaf for more detail.
Information Governance/Assurance						
Information Governance Toolkit score	90.0%	87.0%	87.0%	90.9%	↑	Next assessment expected October 2010

Mental health

Three patients die on psychiatric ward

Three patients have died within 12 months on the same ward following warnings from unions about budget cuts

Mark Gould

Tuesday 12 April 2011
13.10 BST



This article is 4 years old



Spike in mental health patient deaths shows NHS 'struggling to cope'

More staff for Mile End psychiatric ward with 3 violent deaths in 10 months

20:52 12 April 2011 | Mike Brooke



Mile End Hospital



Sentinel event



Visits to other organisations



Trust board bespoke learning sessions



Early small-scale tests



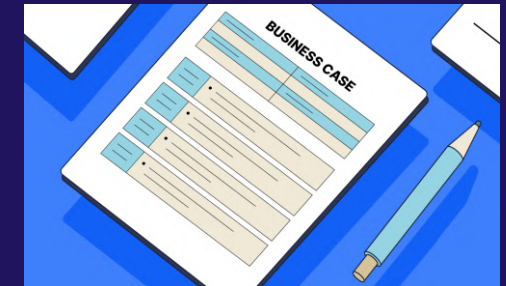
Assess Change Readiness



Identify strategic partner



Developing the strategy through engagement



Approve Business Case

Leadership mindset

from...

Problem solvers

Managing by exception

A climate of reporting, assurance and fear

to...

Creating the environment for others to solve problems

Learning from variation, and balancing time between bright & dark spots

Asking curious questions, creating a culture of psychological safety

To improve
quality of life for
all we serve

AIM

Engaging,
encouraging &
inspiring

1. **Communicating & celebrating QI work internally** - newsletters, website, stories, awards, events, annual IHI visit
2. **Sharing externally** - Publications, conferences, awards, social media, open mornings, influencing key national and international influencers

Developing
improvement skills

1. **Build skills** - Pocket QI, Improvement leaders programme, improvement coaching programme, leadership development, board development, IAs
2. **Application** – infrastructure around teams, leadership behaviours

Embedding into
daily work

1. **Develop a holistic quality system that encompasses QP, QI, QA & QC**
2. **Learning system** - Life QI, networks, collaborative events
3. **Align with priorities** – QI forums, annual planning
4. **Supporting deeper service user involvement**

Results-based work
(QI projects and
large-scale
programmes)

Directorate-level priorities

- Defined through annual cycle of planning
- Most local projects aligned to directorate priorities
- Achieved through QI forums

Trust-wide strategic priorities

- Annual process to identify large-scale improvement programmes
- Decided by CQO with executive team
- Based on most urgent complex challenges across the Trust
- Build infrastructure to support learning and delivery

Preliminary Improvement Plan

The PIP is built on six themes for IMMEDIATE action:



Plus, working within existing recovery plans



By engaging with staff at the Ask and Act workshops the Preliminary Improvement Plan will

grow into a full Quality Improvement Plan

Measurable Key Performance Indicators

Robust governance and accountability for action



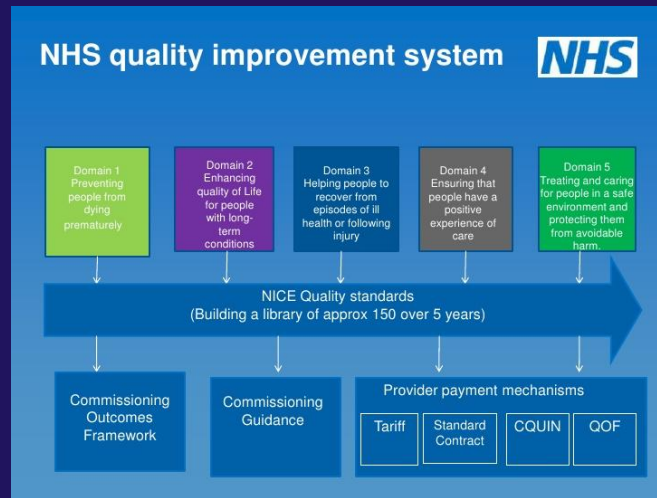
Delivered by: Health Innovation Network
Led by: NHS England

Improving quality in the English NHS

A strategy for action

Authors: Chris Ham, Don Berwick, Jennifer Dixon

February 2016



Published by NHS England and NHS Improvement

Our 2020 Vision: Our strategy to improve patient care over the next five years.

Our vision: Outstanding care and treatment you can be confident in.

What are the core characteristics of improvement?

Tackling a complex problem

Diverse representation, from those closest to the problem

Applying a systematic method

Theory-building

Testing and learning

Use of data over time

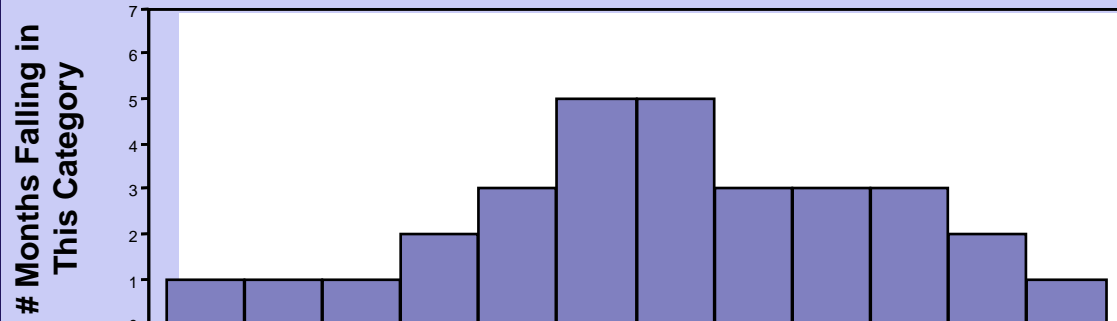
Quiz Alert!

Where would you choose to go for your Coronary Artery Bypass Graft (CABG) surgery?

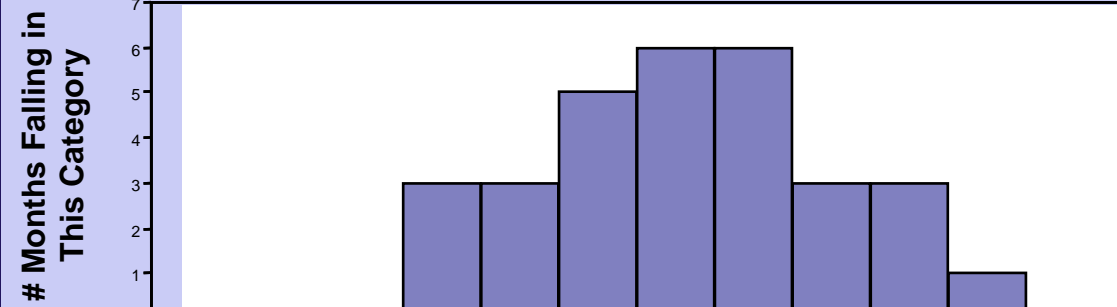
Hospital	Average Percent Mortality	Average CABG Cost
A	3.48%	£17,000
B	3.48%	£13,000
C	3.48%	£14,500

Data in a table

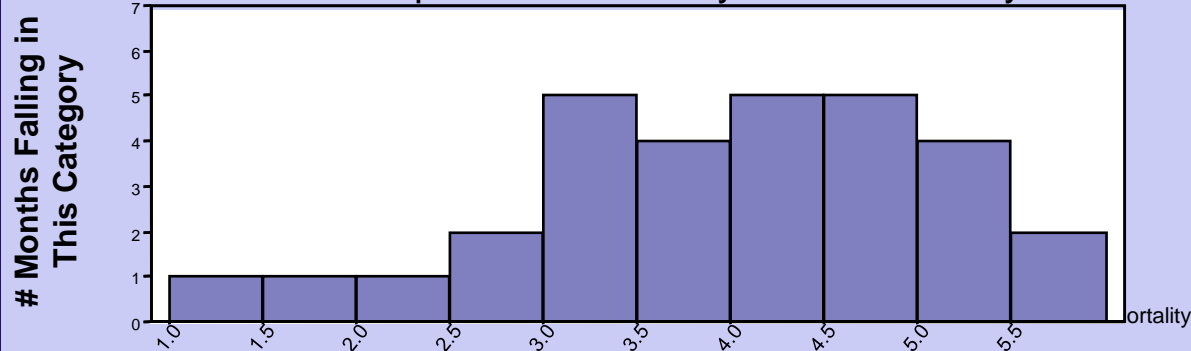
Hospital A: % Monthly CABG Mortality



Hospital B: % Monthly CABG Mortality



Hospital C: % Monthly CABG Mortality

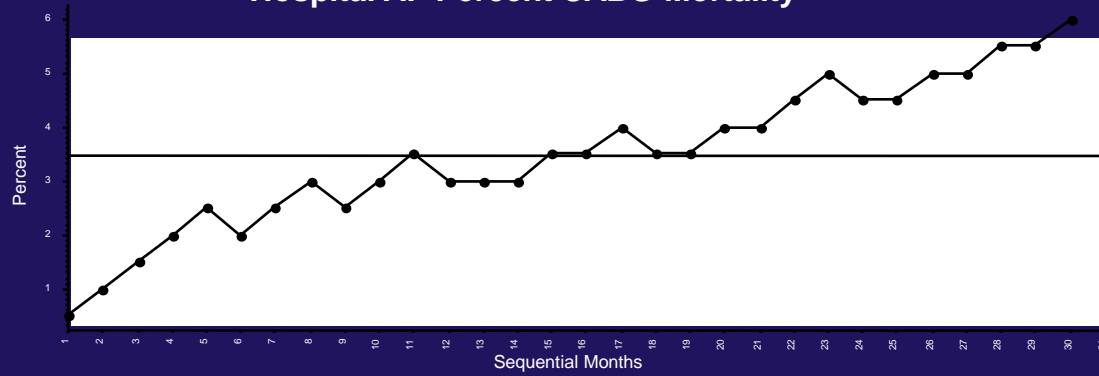


... and now?

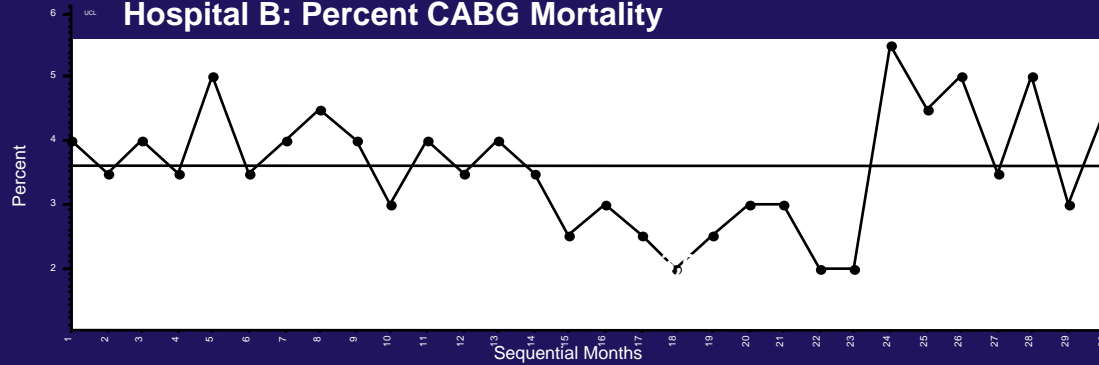
Would you still choose the same hospital?

Data in a histogram

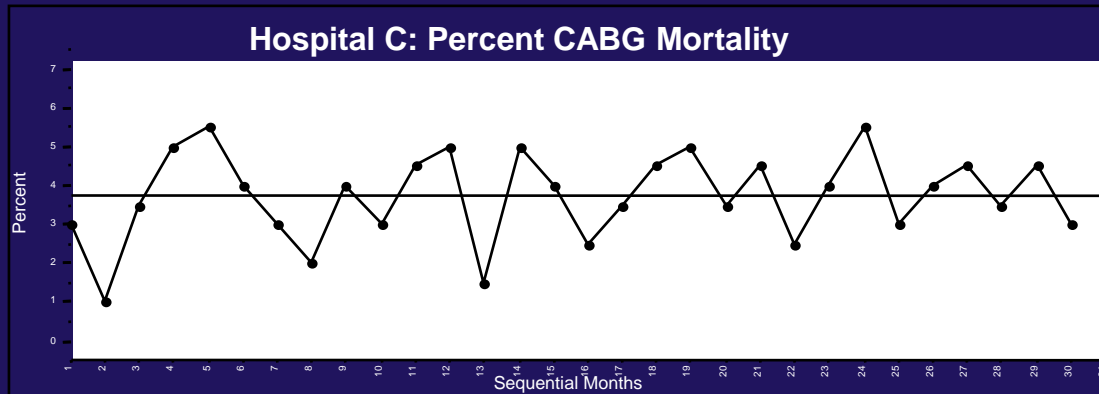
Hospital A: Percent CABG Mortality



Hospital B: Percent CABG Mortality



Hospital C: Percent CABG Mortality



Would you still choose the same hospital?

Data over time

Building fluency with data analysis...

Learning how to improve...

Changing all our internal and external reporting

Making access to data analysis easier



Improvement
Leaders' 
Programme

Improvement
Coaching 
Programme

ntro

Psychology trainees – One year programme of learning. Embedded into QI projects
 Nursing students – Intro to QI delivered within undergraduate and postgrad syllabus, embedded into QI project teams during student placements
 Psychiatry trainees – Pocket QI at start of placement. Embedded into QI projects

3424 completed Pocket QI so far, 1933 are currently at ELFT.
 1hr session for all staff at induction.

1531 graduates from Improvement Leaders' Programme (ILP) in 15 'waves'. 828 graduates currently at ELFT.

326 QI coaches trained, 203 are currently at ELFT. New cohort trained annually.

Senior leaders in each directorate sponsor QI work. All complete the ILP, and 150 have completed the Senior Clinical Leaders programme

Currently 11 IHI improvement Advisors (IAs)

All Executives have completed or completing ILP
 Regular Board development on QI

Bespoke QI learning for service users and carers.
 268 attended so far.

Estimated number needed to train = 6000
 Needs = introduction to QI & systems thinking, identifying problems, how to get involved, behaviours linked to improvement

Needs = Model for improvement, PDSA, measurement and using data, leading teams, running projects effectively, quality control

Needs = deep understanding of method & tools, understanding variation, coaching teams

Needs = Model for improvement, PDSA, measurement & variation, scale-up and spread, leadership for improvement, quality management, system leadership

Needs = deep statistical process control, deep improvement methods, effective plans for implementation & spread

Needs = setting direction and big goals, executive leadership, oversight of improvement, understanding variation

Needs = introduction to QI, how to get involved in improving a service, practical skills for QI

Working upstream



Experts by experience

All staff

Staff involved in or leading QI projects

QI coaches

Sponsors

Internal experts (IAs)

Board

Experts by experience

Experts by experience



Board reporting...

Table 1. All medication errors per directorate for Quarters 1 and 2 (2012)

Directorate	Quarter 1 2012/13 (harm)	Quarter 2 2012/13 (harm)	Quarter 3 2012/13 (harm)	Q3 High risk medication (harm)
City & Hackney	17 (0)	17 (1)	11 (0)	0
Newham	13 (1)	9 (0)	6 (0)	1 (0)
Tower Hamlets	11 (0)	18 (1)	10 (0)	0
Forensic Services	11 (0)	14 (0)	10 (0)	0
MHCOP	6 (0)	6 (0)	6 (0)	0
Specialist Services	2 (0)	4 (0)	3 (0)	0
Community Health Newham	3 (0)	3 (0)	3 (0)	0
Total	63 (1)	71 (2)	52 (0)	1 (0)

Figure 1. Trust wide SULSA scores across the ten standards for Quarter 2 (July – Sept 2012)

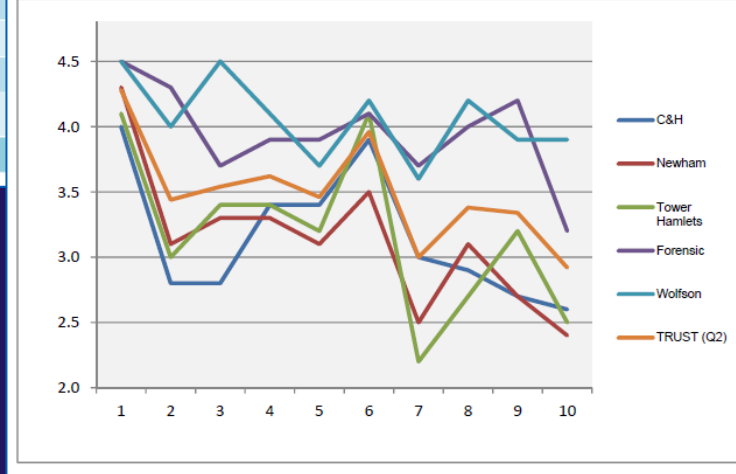


Table 4. Trust wide data – Summary

		City & Hackney (n=46)	Newham (n=27)	Tower Hamlets (n=42)	Trust (n=115)
Question 1: Have you been given information about your medication?	Y	63%	59%	48%	57%
	N	33%	37%	50%	40%
	DK	4%	4%	2%	4%
Question 2: Was this during a conversation with a member of staff?	Y	63%	52%	45%	54%
	N	28%	37%	48%	37%
	DK	9%	11%	7%	9%
Question 3: Was this written	Y	41%	37%	33%	37%

Table 2. Selected CQUINs and borough completion rates

CQUIN Type	Description	CH % Complete	NH % Complete	TH % Complete	MHCOP % Complete	TW % Complete
1C - GPIR	Patient with health condition and GPIR completed or in date	93.9 %	85.3%	74%	82.3%	83.9%
1D - MEDR	Latest MEDR Doc attached within 72 hours of Admission	87.6%	92.3%	96.1%	98.5%	93.6%
1E & 3D - NODF	Latest NODF Doc attached within 1 Weeks of Discharge	90.5%	99.1%	91.7%	92.2%	93.4%
1F - CPAT/ARIS/CPAP/MDTR	CPA Document (CPAT/ARIS/CPAP/MDTR) was attached within 2 weeks of the CPA Review	91.1%	79.4%	91.2%	94.9%	89.2%

Question		City & Hackney (n=47)	Newham (n=36)	Tower Hamlets (n=37)	Trust (n=120)
1: Variety of food available at each meal		3.1	3.6	3.1	3.3
2: Variety of food availability throughout the day		3.2	3.1	3.2	3.2
3: Please rate how easy the menu is to understand		4.3	4.0	4.3	4.2
4: Please rate how easy it is to order what you want from the menu		4.0	4.1	4.0	4.1
5: How often did you receive what you ordered?		3.4	3.8	3.4	3.5
6: How well do you feel that the food meets your nutritional needs		3.0	3.6	3.2	3.3
7: Please rate the courtesy and friendliness of the staff who serve the food		4.1	4.2	3.8	4.1
8: Would you prefer your main meal to be served at:	Lunchtime	49%	50%	24%	42%
	Evening	38%	31%	49%	39%
9: How would you rate the portion size		3.5	3.9	3.6	3.7
10: How would you rate the presentation of the food		3.4	3.7	3.3	3.4
11: Overall enjoyment of the meal		3.0	3.1	3.1	3.1
12: Dietary requirement	Yes	28%	42%	44%	35%
	No	72%	58%	56%	63%
13: Dietary requirement -type	Halal	6%	19%	14%	13%
	Kosher	2%	0%	0%	1%
	Diabetic	0%	0%	8%	3%
	Vegetarian	11%	11%	11%	11%
	Other	9%	11%	11%	10%

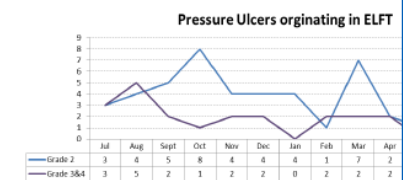
Table 3. Incident data (July to September 2012)

Main MH Contract Indicator	Indicator Detail and Rationale	Trust wide		City and Hackney		Newham		Tower Hamlets	
		Current Performance	Change since July 2012	Current Performance	Change since July 2012	Current Performance	Change since July 2012	Current Performance	Change since July 2012
Patient Safety Incidents	Number of incidents *	35.7	↓	31.1	↑	43.1	↓	40.4	↓

* expressed as percentage per 1000 bed days – Whole Trust

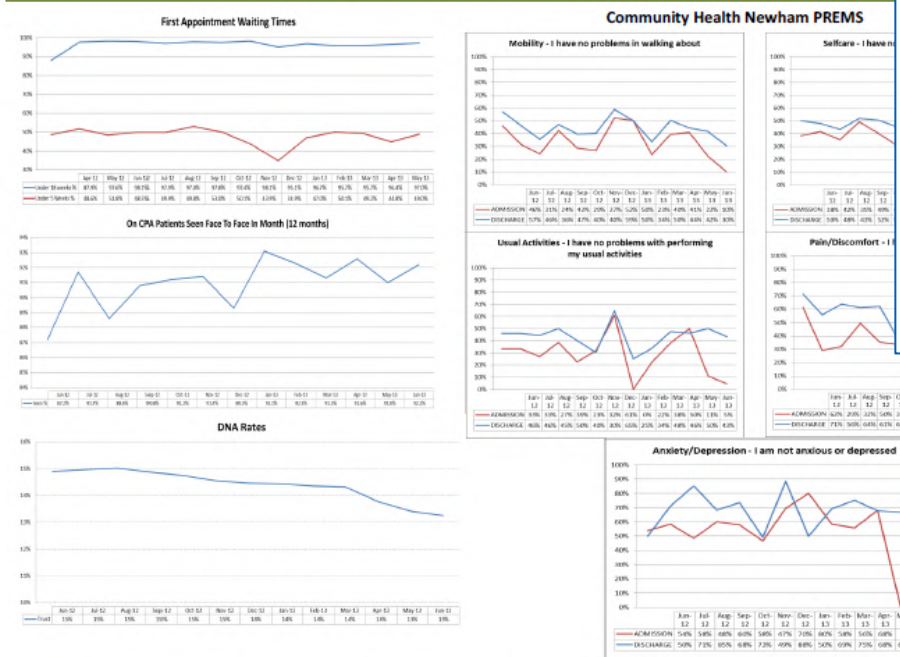
information?	N	52%	56%	55%	54%	
	DK	7%	7%	12%	9%	
Question 4: Who gave you this information?	A	26%	30%	35%	31%	
	B	35%	30%	20%	29%	
	C	11%	0%	7%	6%	
A - Doctor	D - Don't know	D	4%	15%	8%	9%
	E - Other	E	24%	25%	22%	24%
B - Nurse		Y	52%	70%	48%	55%
		N	39%	22%	31%	32%
C - Pharmacist		DK	9%	7%	21%	13%
		Y	63%	78%	50%	62%
Question 5: Was the information clear and easy to understand?	N	26%	0%	40%	25%	
	DK	11%	22%	10%	13%	

Safety



Chairman: Marie Gabriel

Clinical Effectiveness



Chairman: Marie Gabriel

4

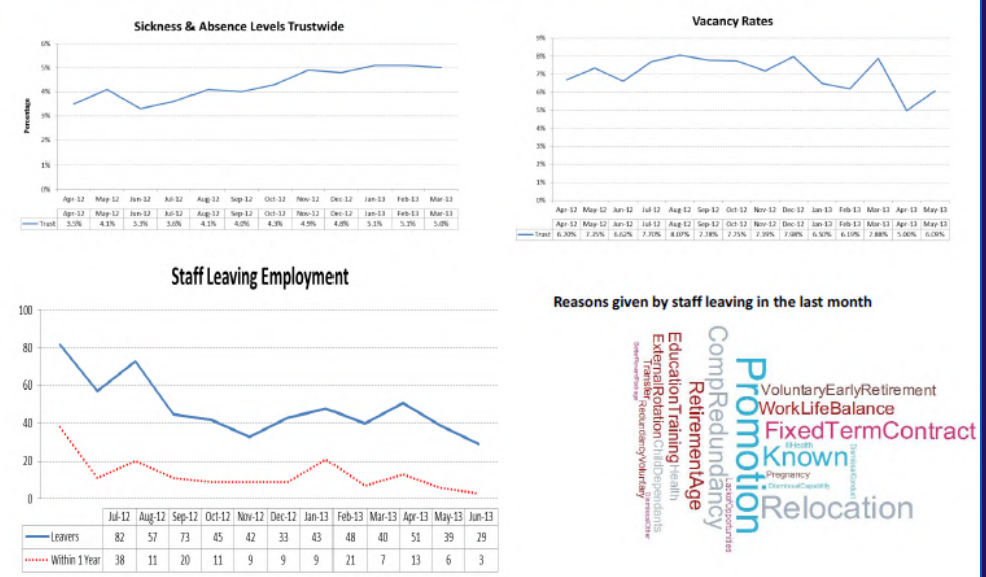
Chief Executive: Dr Robert Dolan

Patient Experience



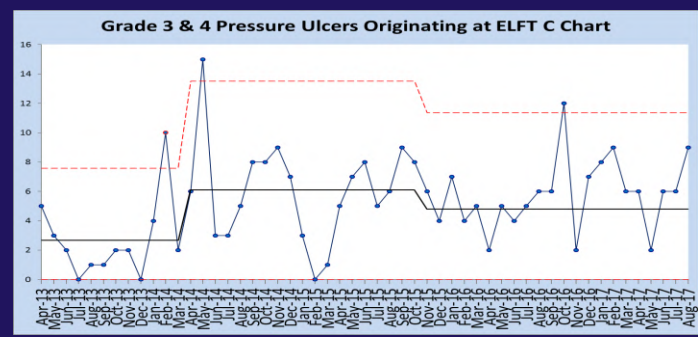
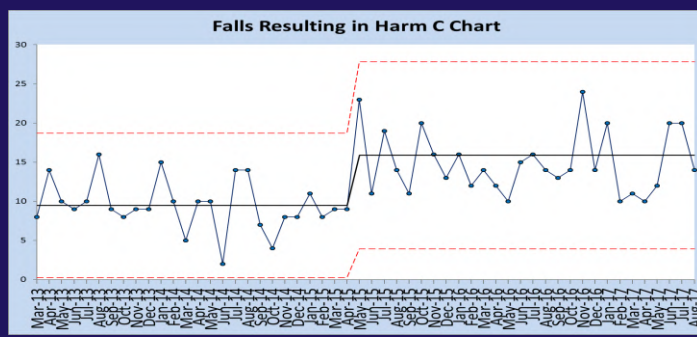
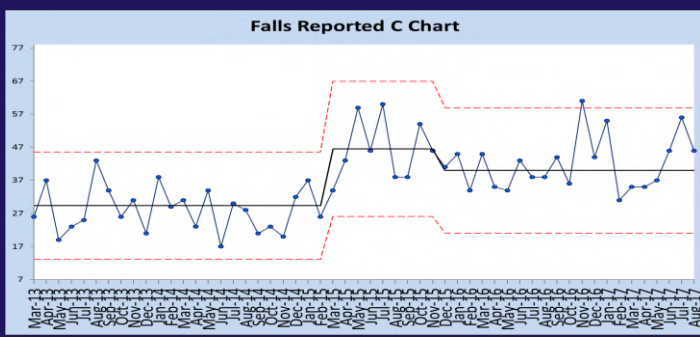
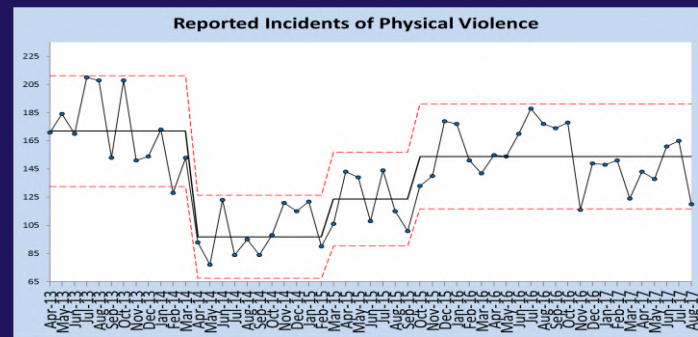
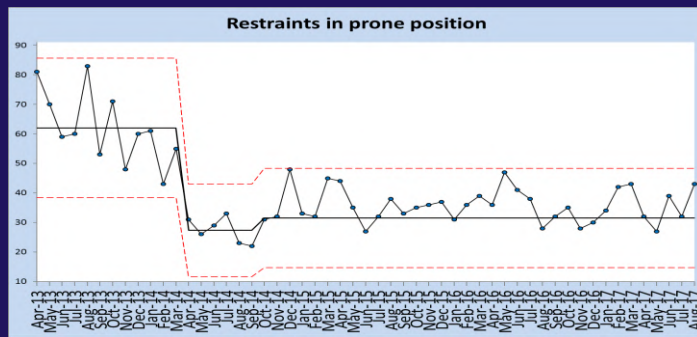
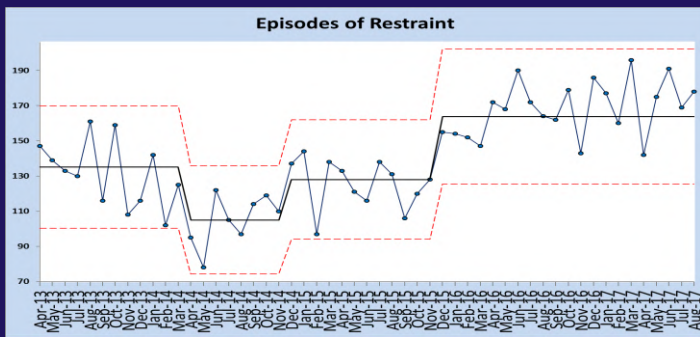
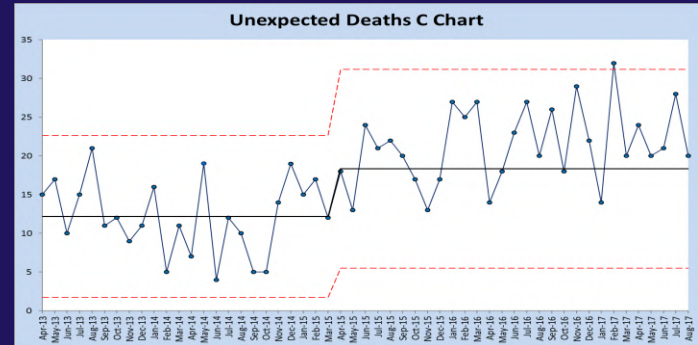
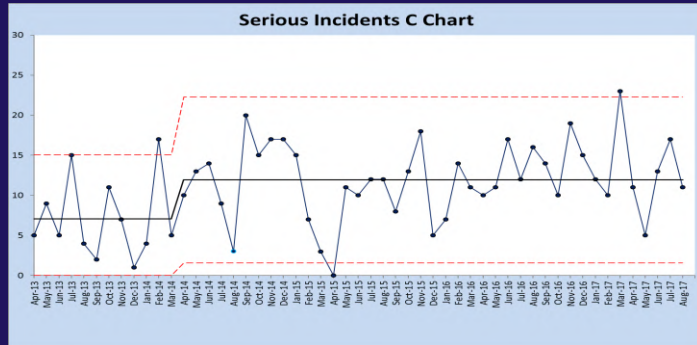
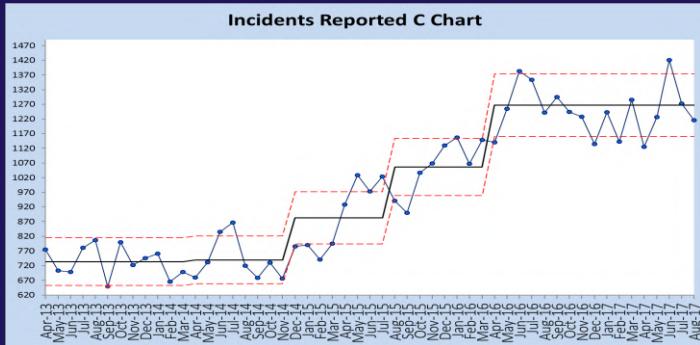
Friends and Family Report is being piloted in Newham Inpatient Services and data should be available by August 2013

Staff Engagement

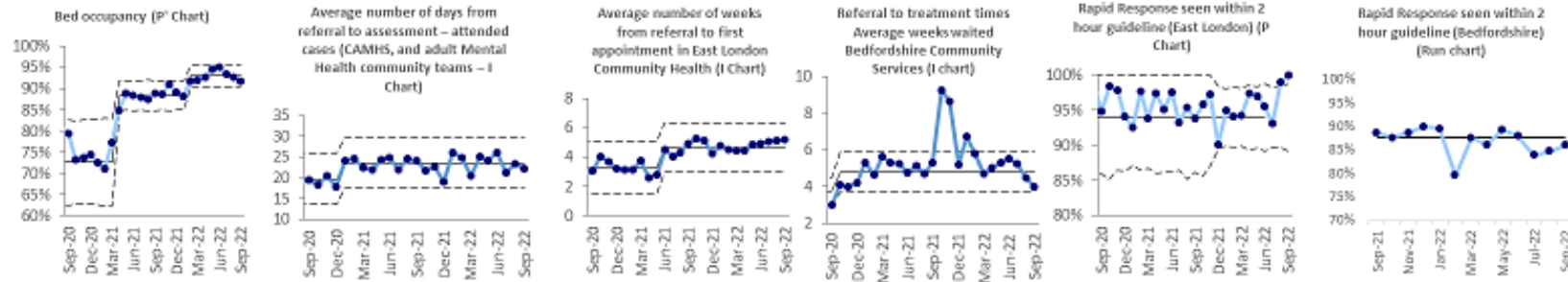


Safety

trust wide including Beds and Luton



Access and Responsiveness

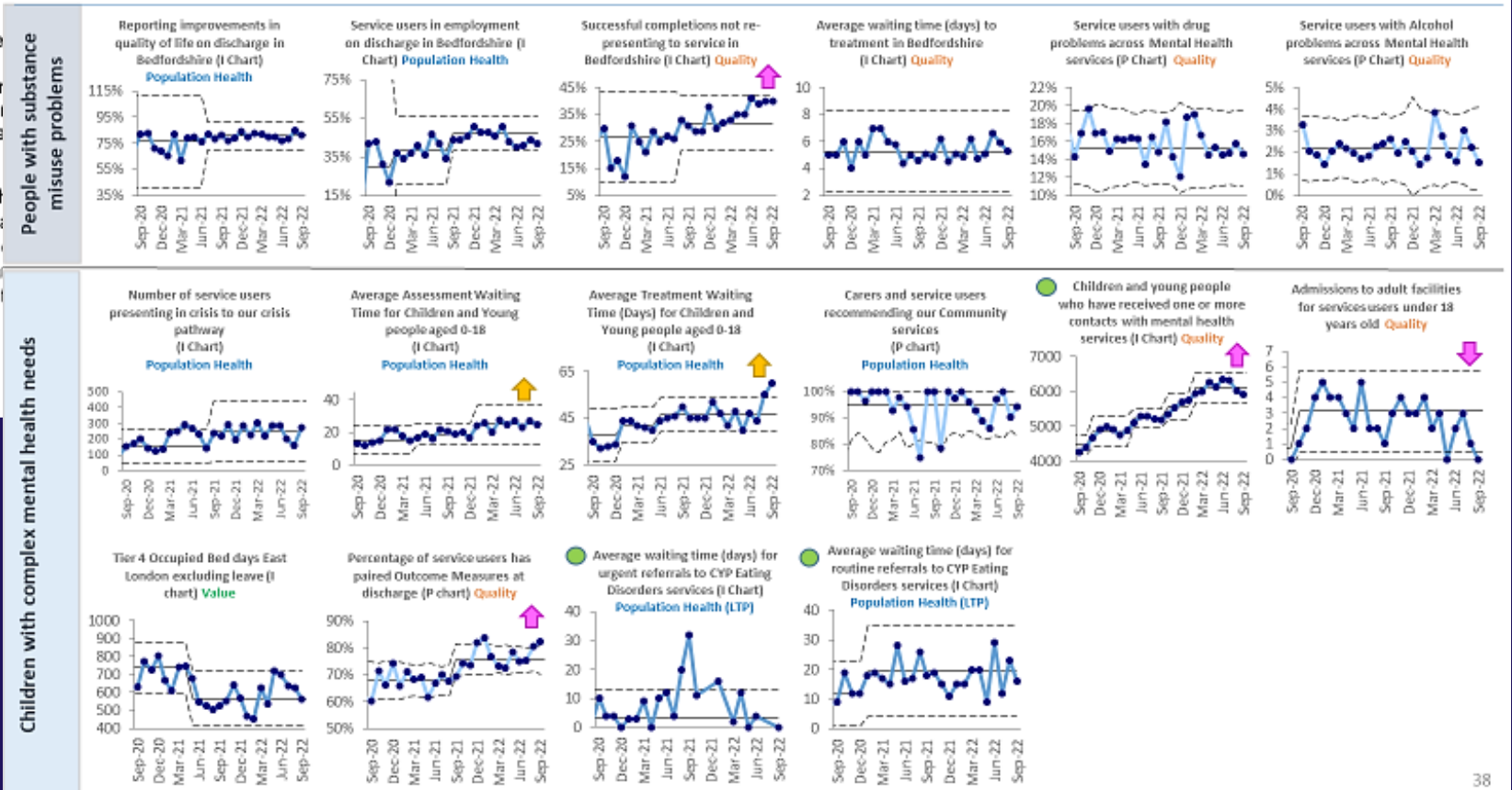


Although bed occupancy remains high across all inpatient services, we have seen a decrease in bed occupancy for four consecutive months. Tower Hamlets and City & Hackney are seeing a reduction in bed occupancy, thought to be related to the impact of several initiatives described in the previous report, for example the focused effort on accelerating discharge for service users with the longest length of stay. Services a manage mental health difficulties sooner in the community.

The Trust, in collaboration with London regional team and South London and Maudsley beds for the region in preparation for winter. All London Trusts will have access to this be responsible for managing access. Bedfordshire and Luton have similar arrangements throughout the winter. Recent investigations have highlighted that a sizable proportion catchment area. Teams are reviewing all out-of-area activity to identify themes and capacity to manage this cohort of service users.

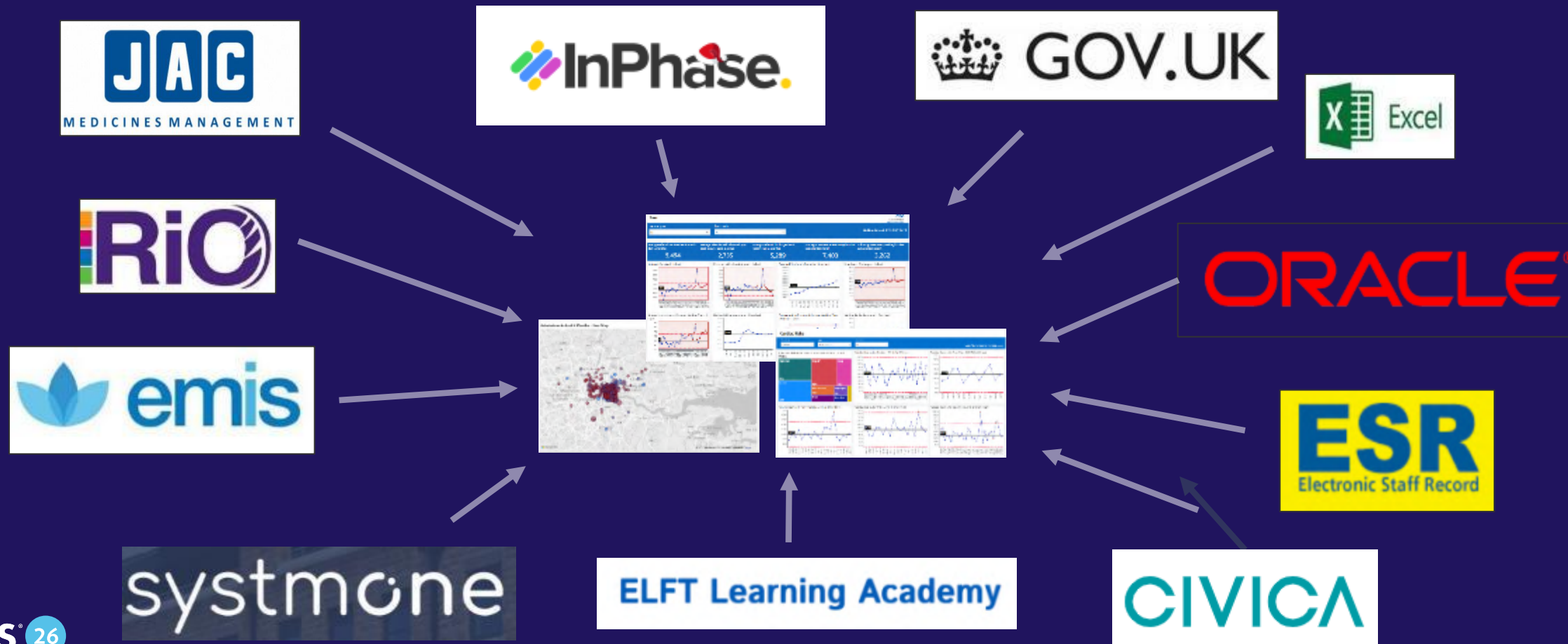
Responsiveness of the ELFT Rapid Response Team continues to remain stable, which is above the national 70% target. All services have seen an increase in referral, frequent contact and intensive support from teams. As part of enhancing the urgent wards to support people at home, including care homes. The falls service is a new team. In a virtual ward, support can include remote monitoring using apps, technology platform involve face-to-face care from multi-disciplinary teams based in the community.

Appendix 1: System Performance dashboard Long Term Plan (●) Special cause variation (↑↓) and when it's of potential concern (⬆️⬆️)



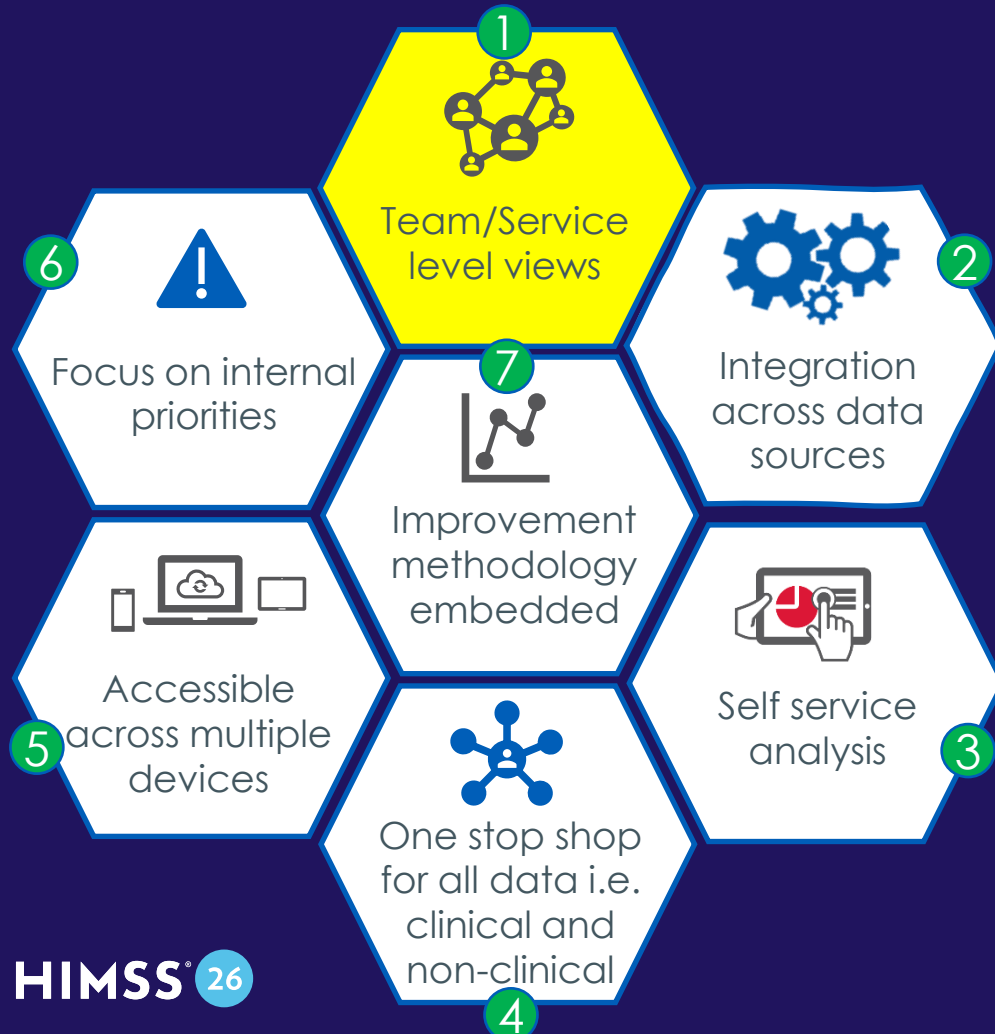
Integrated data warehouse

Integrated reporting aims to bring all the data together in one place together so we can get a **holistic picture of our services**.



Design principles

We design our dashboards so that every service team and ward can see their individual data by using filters.



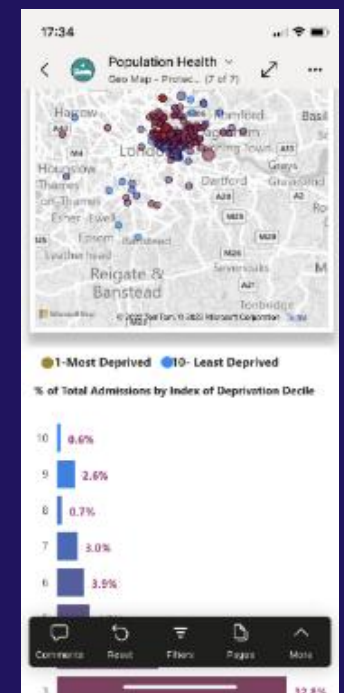
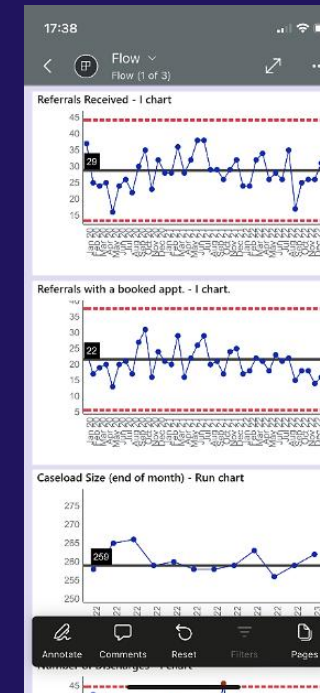
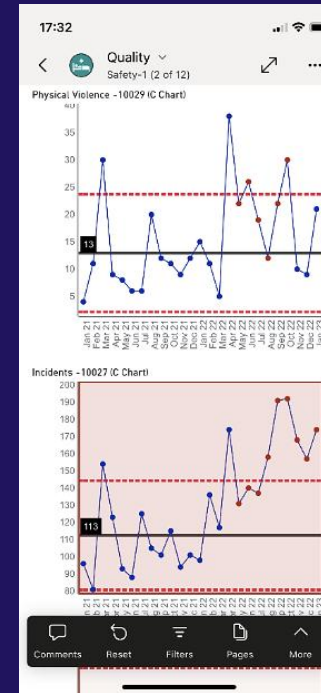
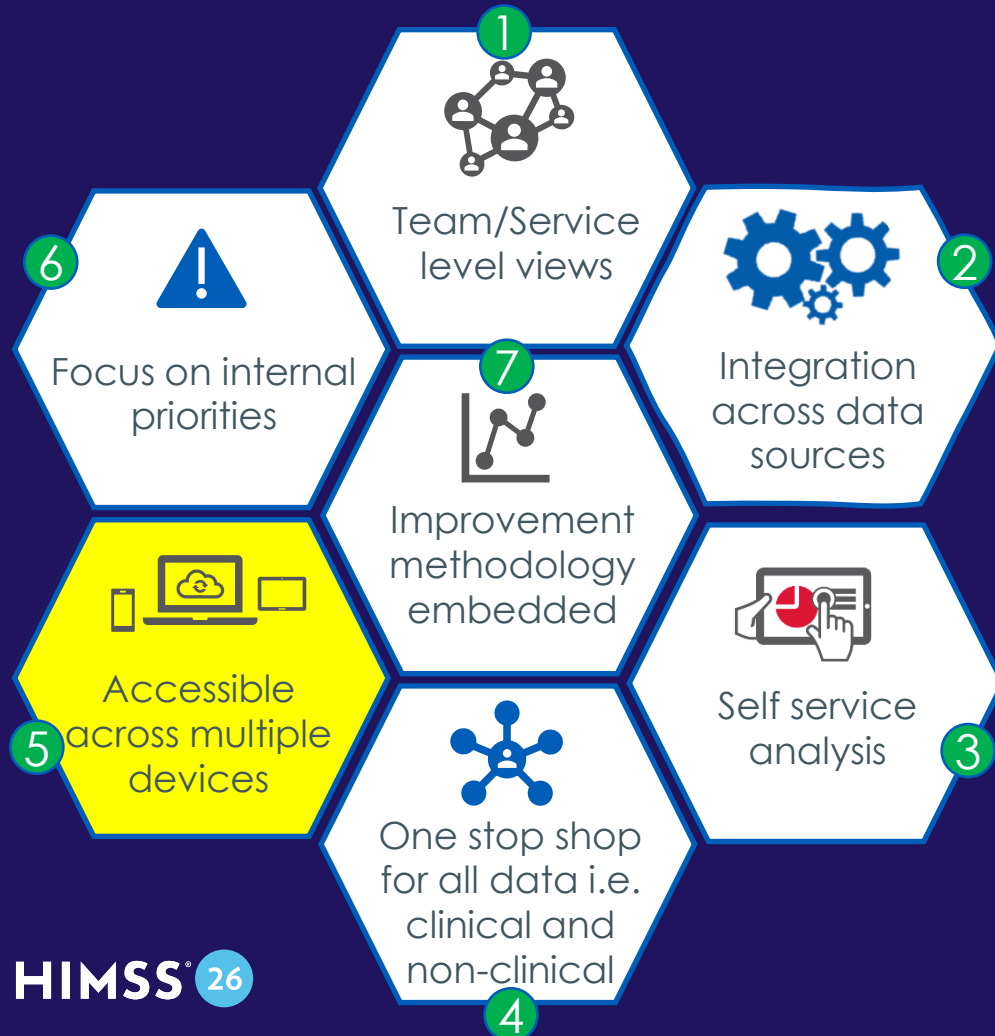
Incidents Overview

Directorate: Tower Hamlets | Ward: All | Measure: All

Ward	Apr	May	Jun	Jul	Aug-24
TH Brick Lane Ward					69
TH Globe Ward					45
TH Lea Ward					92
TH Leadenhall Ward					41
TH Millharbour PICU Ward					59
TH Roman Ward					54
TH Rosebank Ward	84	68	77	71	117

Incidents by D...
by service user o...

You can access the dashboards on the move with dedicated mobile page designs.

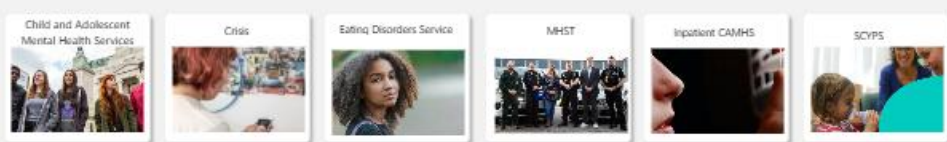


Power BI

Adult Mental Health Service



Children's Services



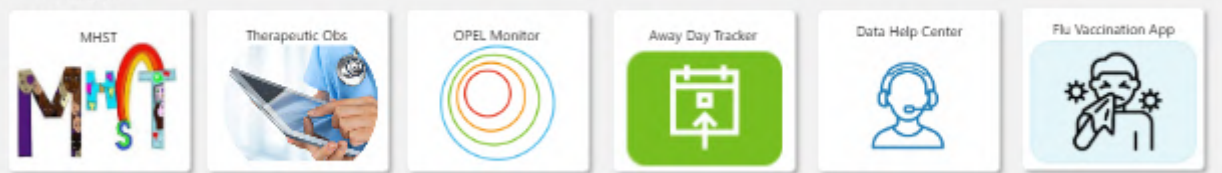
Community Health Services



Corporate Analytics

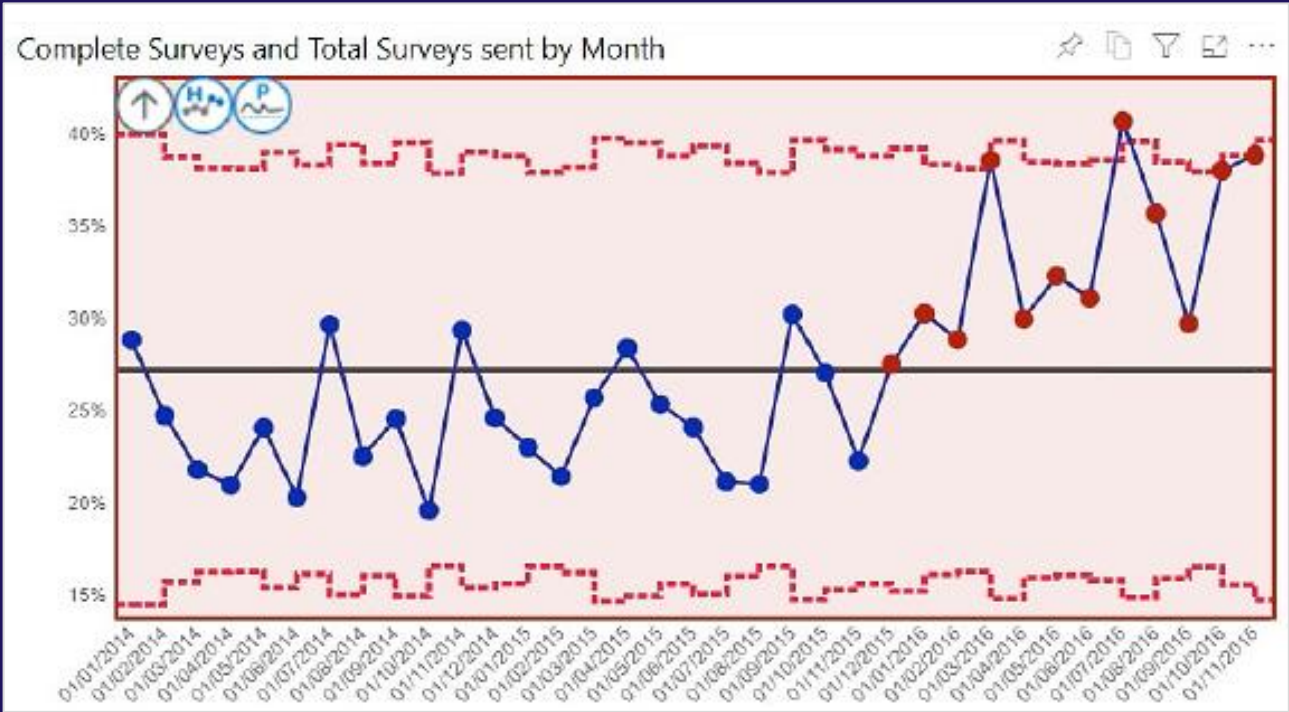
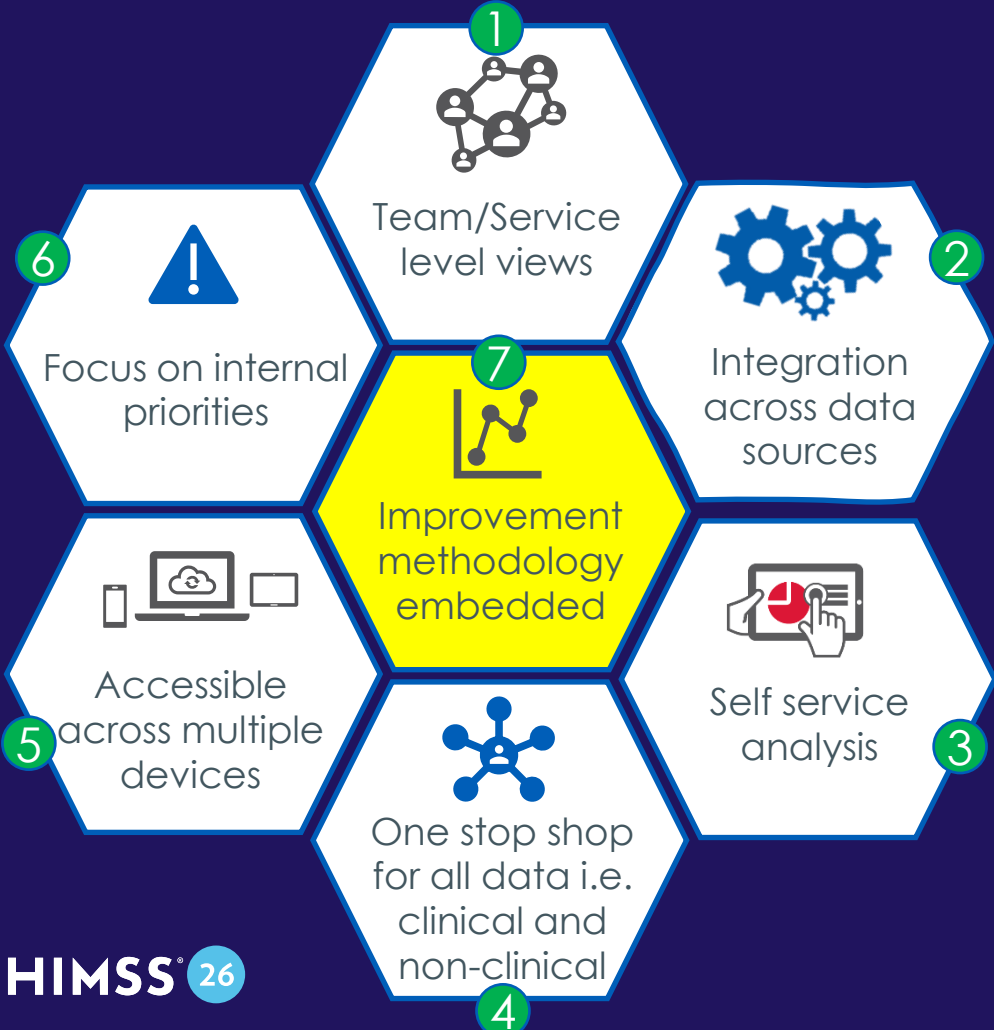


Power Apps



32 Power BI apps covering clinical and corporate services, 5 Power Apps.

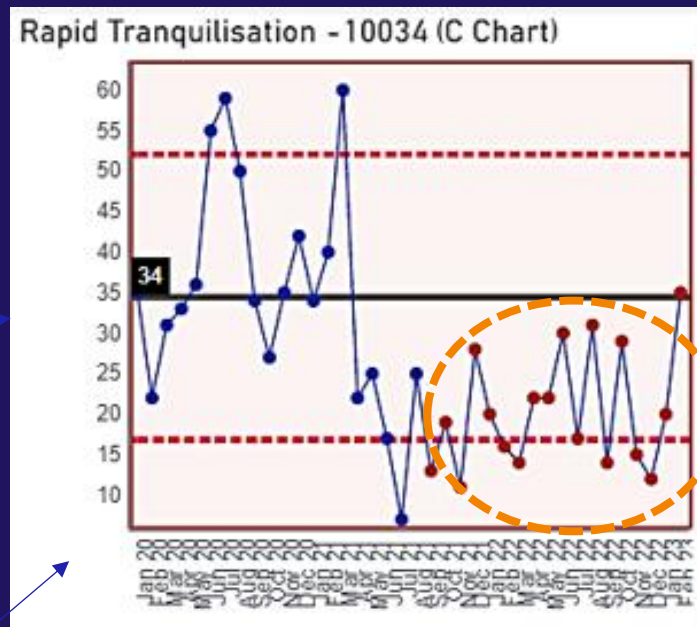
There are Statistical Process Control charts (more than 100,000!) throughout the dashboards which automatically highlight when a measure is in special cause variation.



Wards breathing in data and finding stories!



"We noticed that the use of rapid tranquiliser had reduced a lot on the ward, but the incidents of violence and aggression were still the same."



We asked 'why have we not used so much rapid tranquiliser?' It turned out that staff were fearful of using it because of the policy had changed. So we were able to provide training."

Maham Shahzad, Clinical Nurse Manager at City and Hackney.

Task Management Ward Screen

- Easy to access data
- Makes tasks transparent
- Prompts questions
- Reduces workload

"It **makes transparent the tasks to be done.**

And if not, **prompts the question** Why? What's getting in the way?"

**Rubel Miah,
Ward Admin**

"For me, I've been checking in every morning when I come in to get some sense of what's happening on the ward. It's been very useful. And **it's great to be able to so easily get data to present** during away-days."

Samson Uwimana, Modern Matron

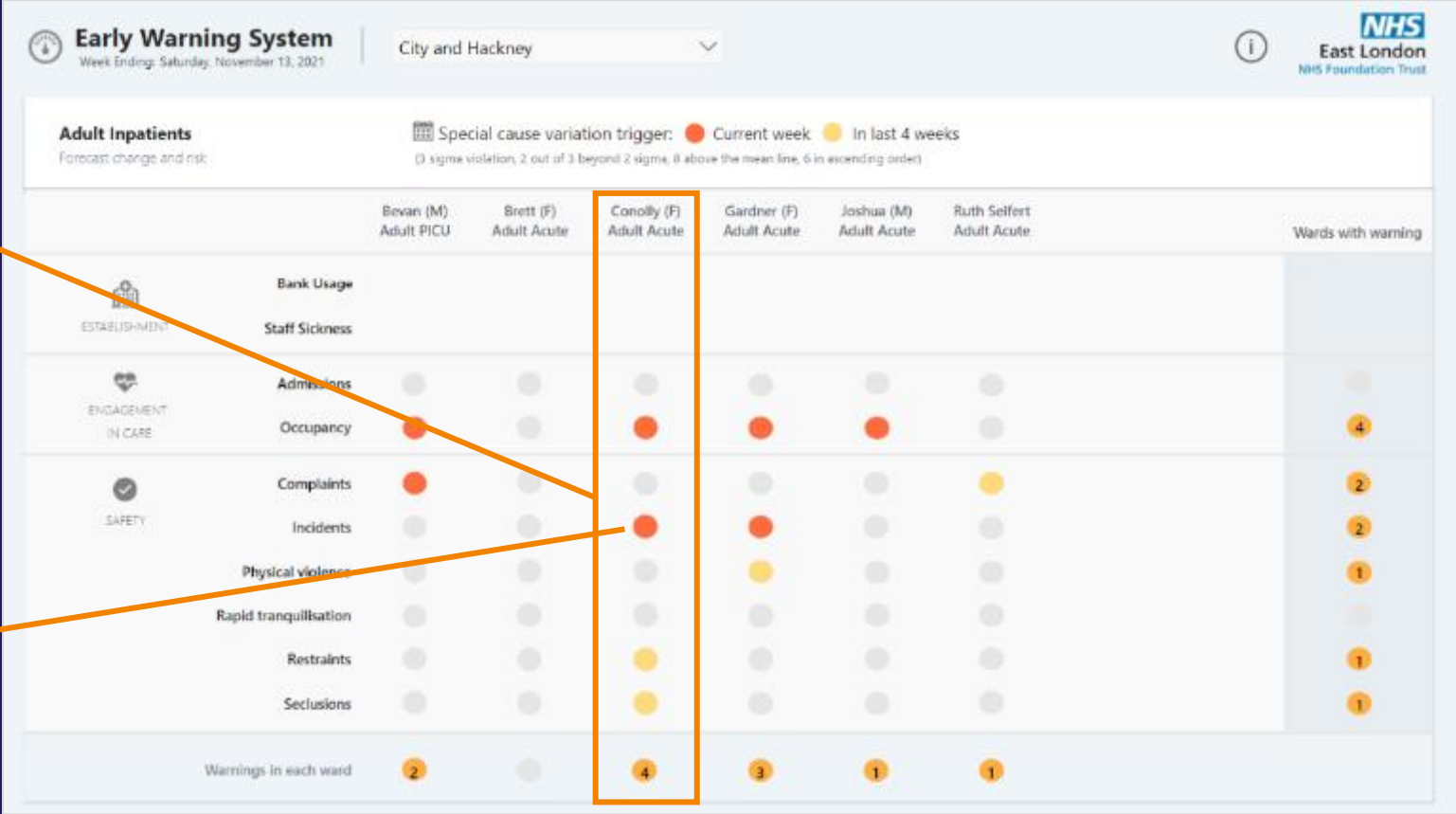
"It **has massively reduced our workload** in terms of the audit. It used to take four hours on a night shift to complete. Now, the information is all available in the task view. Without the need to refer to RiO, it now takes me about an hour."

Alice Jefferson-Perry, Clinical Practice Lead

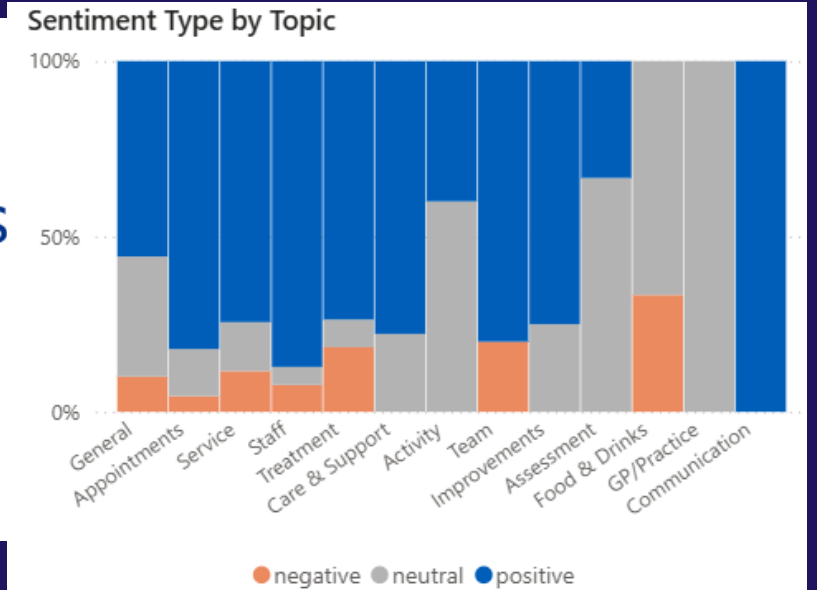
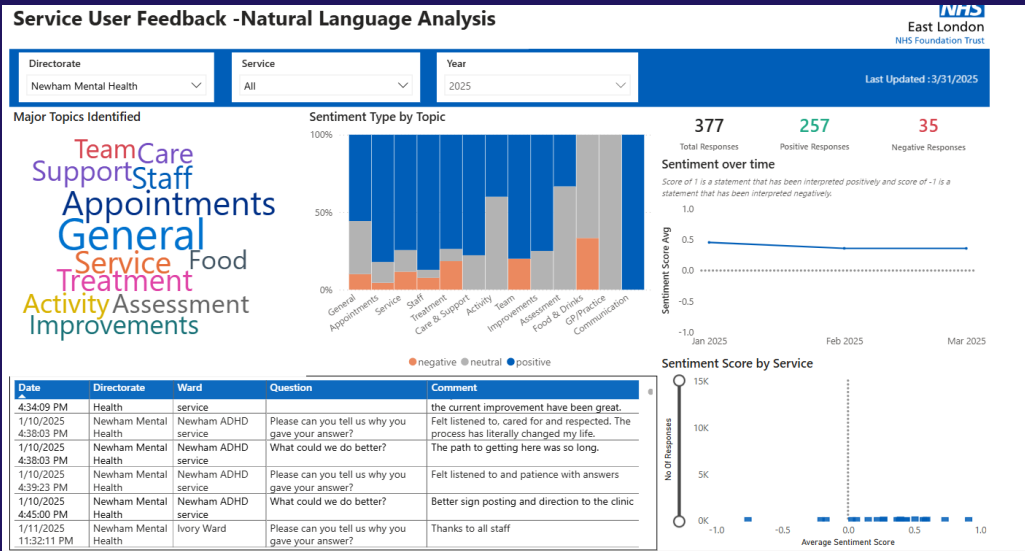


Early Warning System

Across the top of the page we can see **which wards are under pressure** and drill through to the time series graph underneath



Natural Language Processing – patient feedback



Artificial intelligence groups the free text answers into themes and sentiment (negative, neutral or positive feedback) and allows the user locate the comment responsible.

Question	Comment
What could we do better?	The food isn't that great. Too many carbs. We need more fruit on the ward.

Please can you tell us why you gave your answer?	Helped me understand my problems better and find a solution together. Dr. ***** has been very kind and helpful, as well as very understanding helping me to get through my problems.
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Non-Attendance Prediction

Appointment Attendance Prediction

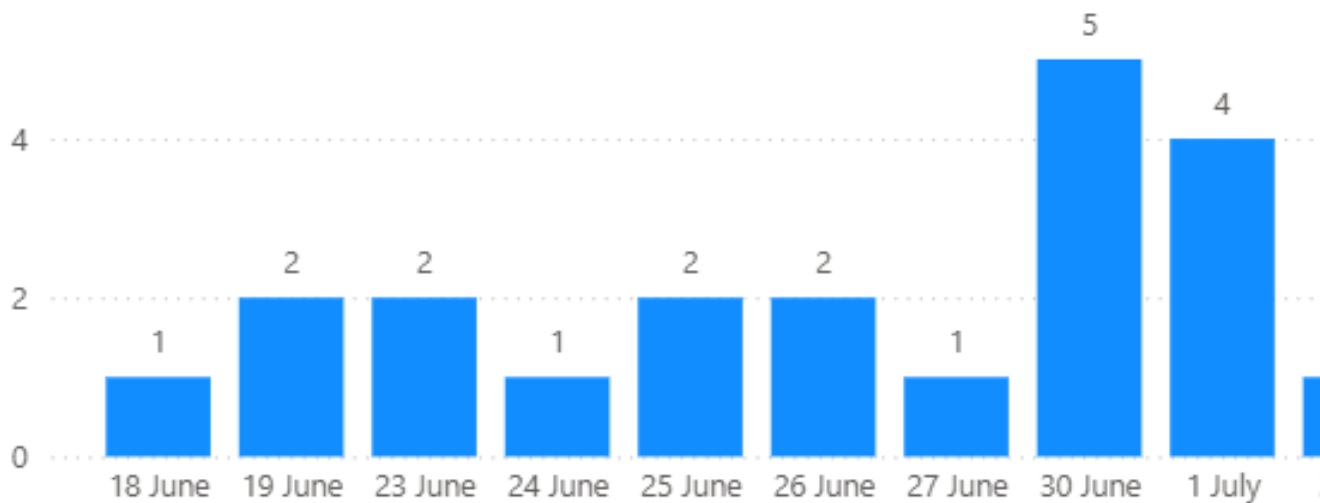
Predicting future appointments that may result in a Non-Attendance



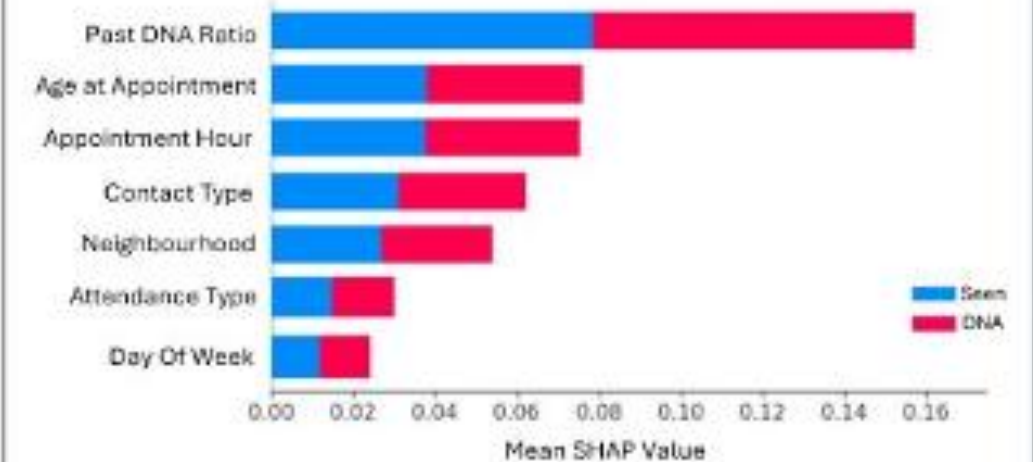
East London

Team	Clinic	HCP
TH PCN2 Bethnal Green Neigh... ▾	All ▾	All ▾

Number of appointments likely to be missed



Top contributors to the Tower Hamlets Bethnal Green NMHT Predictor Model based on Mean SHAP Value



The Mean SHAP value for a feature indicates its average marginal contribution to the model's output. A positive value suggests the feature generally increases the output, while a negative value suggests it decreases it.

Artificial intelligence identifies the key contributing factors of missed appointments at a clinic level and uses this to predict which appointments will be missed in the next 2 weeks – from which the patient details can be obtained.



DATA &
ANALYTICS

EAST LONDON NHS FOUNDATION TRUST

NHS

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ANALYTICS MATURITY ASSESSMENT MODEL (AMAM)

Build advanced analytics and transform care delivery—all while tracking outcomes.

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Your AMAM journey

Explore the stages of the new AMAM and get a sense for how we'll guide you towards advanced analytics.

STAGE 0

Laying the groundwork

We'll meet you at your current level of data utilization and infrastructure, and get it aligned with crucial government mandates and regulatory policy.

STAGE 1

Building capacity for analytics

You'll set up secure collection, storage, and management for your data, while considering risks, regulatory policy, and the tools you'll need to scale your usage.

STAGE 2

Starting development of analytics strategy

You'll establish a clear analytics strategy for the organization, set roles and responsibilities, and align the strategy with your leadership's top-level goals.

STAGE 3

Integrating data into clinical workflows

You'll bring data from multiple sources into operational and clinical workflows—and earn board-level buy-in for your analytics strategy.

STAGE 4

Fostering analytics literacy

You'll focus on analytics literacy, continuous improvement, and patient-centered learning—including regular audits and testing.

STAGE 5

Data stewardship and security

You'll start to evaluate your data infrastructure content for bias, fairness, and equity to your analytics performance and strategy.

STAGE 6

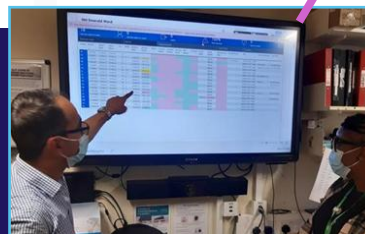
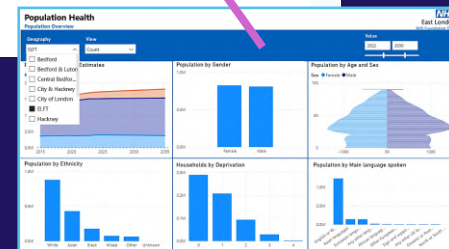
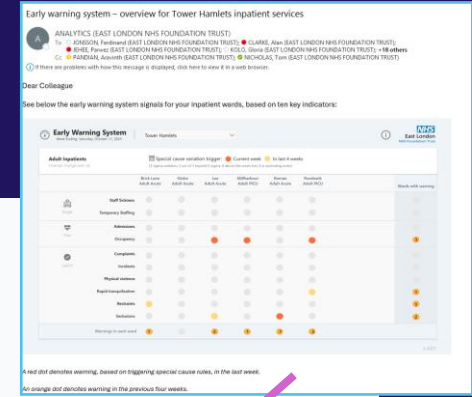
Real-time data and responsible analytics

You'll deliver data to provider teams and operational leaders in real-time—and introduce AI to predict risks and outcomes.

STAGE 7

Population-level predictive modelling

You'll be able to proactively monitor outcomes to inform equitable care programs that align with population-level health needs.



Conclusions and learning...

People come to work in healthcare to do a good job, and to try to make things better

- build an analytics plan that follows on from giving people what they need to achieve this

Changing culture takes time

- have clear design principles, build from team up, and capture stories about impact

Data can reinforce power hierarchies

- Make all data transparent, and align with clinical and quality leadership in the executive team