Learning Health Systems

“Every patient contact is an opportunity for learning...”

John Robson; GP, Reader QMUL
Barts and the London School of Medicine and Dentistry
Clinical Effectiveness Group

STP: Seven CCGs: Newham, Tower Hamlets, City & Hackney, Waltham Forest + Barking & Dagenham, Redbridge, Havering

Pop: 2M  250 general practices: 1000+ GPs.

C&Hackney, Tower Hamlets and Newham among highest performing CCGs in England.
Learning Health System is built on.....

• Trust
• Reciprocity
• Clinically focussed digital infrastructure

Friedman; Wachter Review 2016
Learning Health System

• Every patient contact is available to learn from
• Best practice immediately available
• Improvement is continuous
• This happens routinely and efficiently
• This is part of a culture

BI & Research

Wachter Review; Friedman 2016
Our learning health system

Practice teams

RAG chart showing practice current performance

Consultant Diabetes

Guideline
LHS at scale: elements of success

1. Trusted Data Access
2. Clinical Health Data Science
3. Practice Focused Clinical Utilities
4. Public Health Commissioning Research
Clinically + academically connected

- Staff ~ 30 funded by CCGs and research
- Clinically connected to 2M and 250 GP practices – full STP footprint
- Most successful QI in UK – rank 1st, 2nd or 3rd in 25% of 60 QOF measures
- Extensive Public Health and Commissioning support
- CEG links primary care data to research studies
- University based, AHSN/UCLP connected

- Discovery – links to integrated hospital and GP data
East London Practices – Exceptional QOF success: trajectory of change

C&H and TH 1st, 2nd in 25% QOF metrics; Newham top 10%

C&H 2013
21st COPD FEV1
41st AF anticoagulated
148th Diabetes BP
181st Diabetes chol

C&H 2014
1st AF anticoagulated *
1st Diabetes foot exam
2nd CHD BP
2nd Stroke BP
* with exceptions

C&H 2015
1st BP target CHD, Stroke, PAD, CKD
1st AF anticoagulated (with exceptions)
1st COPD x spiro, MRC, FEV1
1st Asthma review
1st Diabetes exam
2nd Diabetes education
2nd Dementia review
3rd Hypn BP
3rd Diabetes BP

C&H 2016
1st AF Anticoagulated (with exceptions)
1st CHD BP
1st HYPTN BP
1st PVD BP
1st Stroke BP
1st Asthma 3Q

1st COPD Spirom
1st COPD MRC
1st COPD FEV1
1st Diab BP
1st Diab exam
1st Smoking advice
2nd Diab Chol
2nd Dementia
Public health use of practice level data

Figure X: Recorded smoking prevalence by GP practice and Neighbourhood (aged 20 plus; CEG 2017)

Figure 30: Prevalence of Type 2 Diabetes in City and Hackney patients by migration status (aged 20+, 2017)

Source: Clinical Effectiveness Group
East London CCGs – Highest /capita spend all CCGs in England

Lipid-regulating drugs ADQ/STAR PU (CCG prescribing trend compared - nationally)
Prescribing Trend Comparison - ENGLAND - PU 13 FY 2015-16

- Tower Hamlets
- Newham
- C&Hackney
- Average
- England
CHD BP <150/90mmHg
QOF 2015 All CCGs in England

Index Multiple Deprivation 2015
## Kaiser Permanente S. California. Vs East London
### 2015 Top 10% USA

#### 2015 HEDIS vs QOF data without exceptions

<table>
<thead>
<tr>
<th>Service</th>
<th>Kaiser</th>
<th>Tower Hamlets</th>
<th>C&amp;Hackney</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes HbA1c &lt;9%</td>
<td>76%</td>
<td>80%</td>
<td>81%</td>
</tr>
<tr>
<td>COPD Spirometry</td>
<td>81%</td>
<td>82%</td>
<td>89%</td>
</tr>
<tr>
<td>Child imms 2yrs</td>
<td>89%</td>
<td>94%</td>
<td>90%</td>
</tr>
</tbody>
</table>
## Improvement Tower Hamlets 2015-16

<table>
<thead>
<tr>
<th>Tower Hamlets</th>
<th>Q1 2015</th>
<th>Q3 2016</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;75 CVD or diabetes high intensity statin</td>
<td>33.8%</td>
<td>42.3%</td>
<td>+28%</td>
</tr>
<tr>
<td>LAA Insulin T2 D</td>
<td>4.7%</td>
<td>4.1%</td>
<td>-11%</td>
</tr>
<tr>
<td>CVD on long term NSAIDs</td>
<td>2.7%</td>
<td>2.2%</td>
<td>-18%</td>
</tr>
<tr>
<td>ceph/quin/co-amox (as % all Antibiotics)</td>
<td>17.5%</td>
<td>9.7%</td>
<td>-45%</td>
</tr>
</tbody>
</table>
PULSE CHECKS > 65 years

Waltham Forest 2016

Newham 2016
CKD eGFR surveillance
<table>
<thead>
<tr>
<th>Date</th>
<th>Consultation Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-Nov-2015</td>
<td>Telephone consultation (JUBILEE STREET PRACTICE)</td>
</tr>
<tr>
<td>History</td>
<td>Renal opinion on ems cross org notes thinks better to stay off ACEI as risk outweigh benefits</td>
</tr>
<tr>
<td>Problem</td>
<td>Acute kidney injury (Review)</td>
</tr>
<tr>
<td>Comment</td>
<td>Thanks for the referral. Postural drop and clinical evidence</td>
</tr>
<tr>
<td></td>
<td>- Postural drop and clinical evidence.</td>
</tr>
<tr>
<td></td>
<td>- Hypotensive on admission, and membrandisch swollen.</td>
</tr>
<tr>
<td></td>
<td>- PCP back up and slicing to 61, with best 75.</td>
</tr>
<tr>
<td></td>
<td>- FFS proteinuria, with an ACR of only 6 (90mg/24h) off an ACEI, the patient likely doesn’t need to re-start - particularly as his BP control is good at 128/70</td>
</tr>
<tr>
<td></td>
<td>- I think the risk of re-starting his ACEI for early minor proteinuria drawbacks, I think probably outweigh any minor benefits. Would be worth checking his U&amp;E in another 3-6 months, and if back at baseline, all well and good.</td>
</tr>
</tbody>
</table>

**Renal opinion visible in GP record**
Achieving successful improvement

It’s a system not a plug-in!
**Capable**
- Evidence
- Stakeholders
- Consensus
- Guidance and KPIs
- Education

**Actionable**
- IT support
- On screen prompts
- Script switch
- Trigger tools
- Patient recall and review lists

**Motivated**
- Financial targets
- Dashboards
- Peer performance

---

Learning

---

CEG Clincial Effectiveness Group
Atrial fibrillation
Improving anticoagulation: update

Key messages

- People with atrial fibrillation on aspirin, clopidogrel or no antithrombotic medication should be reviewed to assess suitability of anticoagulation.

- Warfarin or new oral anticoagulants may be suitable after an informed discussion with the patient.

- Aspirin does not significantly reduce stroke in atrial fibrillation. At older ages bleeding may result in net harm.

Aim of the guideline

Only half the people with atrial fibrillation are on anticoagulants which reduce strokes by 64%.

This guidance aims to increase the use of anticoagulants and reduce the inappropriate use of antiplatelet agents.

What this guidance covers

The guidance concerns antithrombotic agents for the treatment of non-valvular atrial fibrillation. It is consistent with NICE Guidance.

See 2014 NICE AF guideline 180
guidance.nice.org.uk/cg180
Self monitoring blood glucose type 2 diabetes
All type 2 diabetics excluding insulin

% of patients


Newham
City and Hackney
Tower Hamlets
**ACTION**

- Web enabled - Single systems for IT
- IT decision support - Decision analysis capability
- Locally engineered
- CCG, GP provider, public health facing
- Academically supported

And also facilitated
Facilitation + Analysis
MOTIVATE – Dashboards in near real time

How am I driving? 81%     How far to go? 28 more patients
Practice level trends x CCG x practices

% AF, CHADSVASC ≥ 1 (or no CHADSVASC recorded) on anticoagulants

% AF, CHADSVASC ≥ 1 (or no CHADSVASC recorded) on antiplatelets (excl anticoag)

Practices: Jubilee Street Practice
Percentage: 80.0%
Date: Sep 2016

Legends
- TO...
- Chirp Street Health Centre
- Jubilee Street Practice

Docklands Med...
East One Health
Globe Town Su...
Gough Walk (D...
Grove Road Su...
Harford Health...
Harley Grove ...
Health E1
Island Health
Island Medical ...
Jubilee Street ...
Limehouse Pra...
Merchant Stree...
Pollard Row Su...
Ruston Street ...
Spitalfields Pra...
St Andrews He...
St Katharine D..
St Pauls Way ...
St Stephens H...
Stroudley Walk
Strouds Place
It’s a system... not a plug-in ....

- **CHOOSE WISELY** – clinical engagement; quick wins
- **GUIDELINES**
- **TEMPLATES**: Multimorbid smart templates
- **FACILITATION** workshops, in-practice, telephone support
- **TOOLS**: AF-APL  HF-APL  eGFR
- **SEARCHES** - practice searches and patient recall
- **DASHBOARDS** – including PROMIS; LTCs
Research collaborations

- East London Genes and Health, NHS Health Checks
- Liver disease, CVD
- HIV screening, Latent TB screening trial
- Asthma, Childhood obesity, Diabetes

New Funding

- CRUK lung cancer care pathways
- ESRC antibiotic resistance
- NIHR methodology grant
- MRC Rutherford fellowships
- LHCR
- HDRUK
The result – A learning health system

- Diabetes
- CVD
- Imms
- COPD

2008 bottom quartile performance

4 yrs top in UK and London
THIS IS LEADING NOWHERE