Enhancing the Quality of Heart Failure Care

Collaborative learning event
Wednesday 15th March 2017
Welcome & introductions

Peter Carpenter
Director of Improvement
KSS AHSN
Housekeeping

- Wifi code: CP190317
- Tweet about your day!: @KSSAHSN #ksssheartfailure
- Please take time to visit the exhibition stands – we have Medtronic, Servier, Novartis, Roche and Qardio here today
- No planned fire drills – if the alarm sounds please exit through the fire doors to the front of the hotel
- Lunch will be served in the Cube restaurant with desserts in the EXPO lobby
Exploring the Acute EQ Dashboard reports and an overview of the information they provide

Dr Richard Blakey & Jen Bayly
Collaborative working with coding teams

Denise Blackman
Clinical Coding Trust Lead
East Kent Hospitals University NHS FT
Clinical Coding – an overview

Denise Blackman ACC
Head of Clinical Coding
## Weekly Bills of Mortality

### LONDON week ending 31st January 1634

#### The Diseases and Casualties this week

<table>
<thead>
<tr>
<th>Disease/Condition</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abortive</td>
<td>2</td>
</tr>
<tr>
<td>Aged</td>
<td>36</td>
</tr>
<tr>
<td>Bedridden</td>
<td>1</td>
</tr>
<tr>
<td>Bloody flux</td>
<td>1</td>
</tr>
<tr>
<td>Bruised</td>
<td>1</td>
</tr>
<tr>
<td>Cancer</td>
<td>1</td>
</tr>
<tr>
<td>Chilbed</td>
<td>3</td>
</tr>
<tr>
<td>Chrisoms</td>
<td>19</td>
</tr>
<tr>
<td>Consumption</td>
<td>77</td>
</tr>
<tr>
<td>Convulsions</td>
<td>44</td>
</tr>
<tr>
<td>Cough</td>
<td>2</td>
</tr>
<tr>
<td>Dropsie</td>
<td>1</td>
</tr>
<tr>
<td>Executed</td>
<td>33</td>
</tr>
<tr>
<td>Feaver</td>
<td>10</td>
</tr>
<tr>
<td>Flox and smallpox</td>
<td>5</td>
</tr>
<tr>
<td>Found dead in the street (an infant)</td>
<td>1</td>
</tr>
<tr>
<td>French pox</td>
<td>1</td>
</tr>
<tr>
<td>Gripping in the guts</td>
<td>13</td>
</tr>
<tr>
<td>Jaundies</td>
<td>1</td>
</tr>
<tr>
<td>Infants</td>
<td>18</td>
</tr>
<tr>
<td>Killed with a fall</td>
<td>3</td>
</tr>
<tr>
<td>Murthered</td>
<td>1</td>
</tr>
<tr>
<td>Overlaid</td>
<td>2</td>
</tr>
<tr>
<td>Plague</td>
<td>0</td>
</tr>
<tr>
<td>Quinsie</td>
<td>1</td>
</tr>
<tr>
<td>Rickets</td>
<td>8</td>
</tr>
<tr>
<td>Rising of the lights</td>
<td>8</td>
</tr>
<tr>
<td>Scowerening</td>
<td>1</td>
</tr>
<tr>
<td>Scurvey</td>
<td>2</td>
</tr>
<tr>
<td>Stillborn</td>
<td>9</td>
</tr>
<tr>
<td>Stone</td>
<td>1</td>
</tr>
<tr>
<td>Stopping of the stomach</td>
<td>3</td>
</tr>
<tr>
<td>Suddenly</td>
<td>6</td>
</tr>
<tr>
<td>Teeth</td>
<td>16</td>
</tr>
<tr>
<td>Winde</td>
<td>3</td>
</tr>
<tr>
<td>Worms</td>
<td>1</td>
</tr>
<tr>
<td><strong>Christened</strong></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>107</td>
</tr>
<tr>
<td>Female</td>
<td>109</td>
</tr>
<tr>
<td>In all</td>
<td>216</td>
</tr>
<tr>
<td><strong>Buried</strong></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>213</td>
</tr>
<tr>
<td>Females</td>
<td>196</td>
</tr>
<tr>
<td>In all</td>
<td>409</td>
</tr>
</tbody>
</table>
Formal Definition

Clinical Coding is the translation of medical terminology that describes a patient's complaint, problem, diagnosis, treatment or other reason for seeking medical attention into code that can then be easily tabulated, aggregated and sorted for statistical analysis in an efficient and meaningful manner.

Clinical Coders Do It In 13 Minutes

Provide a finished piece of coding by:

- Unfathmoning clinical information
- Deciphering hand written notes
- EDN vs. case notes
- Checking previous attendances to clarify comorbidities
- Assigning tentative codes
- Considering the rules and standards governing code usage
- Reordering the sequencing to reflect the main condition treated/investigated
- Identifying procedures and interventions
- Pressing ‘file’ and moving onto the next episode
Striking An Equal Balance

Statistical:
- HSMR, SHMI, RAMI
- Epidemiology
- Clinical outcomes
- Benchmarking

Financial:
- Payment by Results
- Reference costs/tariff setting
- Contract negotiations
- CQUINS
Familiar Facial Expressions

The three stages
Clinical Documentation

How you can help us:

• Depth of documentation
• Representative of the actual clinical state and free of ambiguity
• Avoidance using ‘impression’ or ‘?’ – use ‘treat as’ or ‘probable’
• Sequencing of conditions being treated/investigated – secondary to…..
• Translation of clinical results into confirmed diagnoses
• Abbreviations – MS – mitral stenosis, multiple sclerosis
• Relevant comorbidities
Heart Failure Codes

I50.0 Congestive Heart Failure
Congestive heart disease
Right ventricular failure (secondary to left heart failure)

I50.1 Left Ventricular Failure
Cardiac asthma
Left heart failure
Oedema of lung With mention of heart disease
Pulmonary oedema NOS or heart failure

I50.9 Heart Failure, unspecified

I11.0 Hypertensive heart disease with (congestive) heart failure

Hypertensive heart failure
East Kent’s Approach

• Collaboration with the Heart Failure Nurse Specialists on each of the 3 main sites
• Longstanding collaboration with Clinical Audit Department
• Joint discussion to determine primary ‘clinical’ diagnosis and a primary ‘coding classification’ diagnosis
• Providing feedback to the internal Heart Failure meetings
Thank you for listening

Any Questions?
Refreshment break

Opportunity to visit EXPO stands in the lobby
‘Hints and tips’ presentation: Identifying patients for CRT devices

Helen Simpson
Patient Access Specialist
Medtronic
DEVICES FOR HEART FAILURE

ENHANCING THE QUALITY OF HEART FAILURE CARE

MARCH 2017

HELEN SIMPSON
PATIENT ACCESS SPECIALIST
HINTS AND TIPS

- Identification of patients who fit NICE device criteria (ICD/CRT)
- Device diagnostics to improve QOL and reduce hospitalisations
- Education resources for Health Care Professionals and patients
Identify and refer eligible CRT and ICD patients at the touch of a button according to the latest guidelines.

Available on: www.screenlinkcalculator.com
UNMET NEED

- Hospitals are burdened by follow-ups, and burden will only increase!

«While there will always be more patients to manage, there will never be more time to manage them»

(Gimbel, 2012, HeartRhythm)
Partners-HF trial showed that monthly review of HF device diagnostic data identified patients at higher risk of HF hospitalizations within the subsequent month.

N = 706 patients
Monthly Evaluations = 5693
HF Events = 78

P < 0.0001
Hazard Ratio = 5.5 (95% CI: 3.4 – 8.8)

+ Diagnostic
TWO diagnostic criteria met
- Fluid Index ≥ 100
- Fluid Index ≥ 60
- Avg. Activity < 1 hr/day
- Avg night HR > 85 bpm
- HRV < 60 ms
- % V pacing < 90%
- One or more shocks
- AF > 6 hrs
- AF > 23 hrs & VR-AF > 90 bpm

TRIAGE-HF

Combines multiple device diagnostic parameters in order to provide a more concise & integrated HF diagnostic summary

Inputs to Bayesian model:
- OptiVol Fluid Index
- Night Heart Rate (NHR)
- Patient Activity (ACT)
- Heart Rate Variability (HRV)
- Arrhythmia/Pacing Combination (VT Episodes, Shocks, AF burden, V rate during AF, % pacing)

Which patient has the highest risk of a Heart Failure event in the next 30 days?
Our algorithm’s development and validation evidence was published in EHJ.

Development and validation of an integrated diagnostic algorithm derived from parameters monitored in implantable devices for identifying patients at risk for heart failure hospitalization in an ambulatory setting

Martin R. Cowie¹,²*, Shantanu Sarkar³, Jodi Koehler³, David J. Whellan⁴, George H. Crossley⁵, Wai Hong Wilson Tang⁶, William T. Abraham⁷, Vinod Sharma³, and Massimo Santini⁸

¹National Heart and Lung Institute, Imperial College, London, UK; ²Imperial College London, Royal Brompton Hospital, Sydney Street, London SW3 6HP, UK; ³Medtronic Inc., Moundsview, MN, USA; ⁴Thomas Jefferson University, Philadelphia, PA, USA; ⁵St. Thomas Research Institute and University of Tennessee College of Medicine, Nashville, TN, USA; ⁶The Cleveland Clinic, Cleveland, OH, USA; ⁷The Ohio State University, Institute of Cardiology, Columbus, OH, USA; and ⁸San Filippo Neri Hospital, Rome, Italy

Received 12 October 2012; revised 21 January 2013; accepted 21 February 2013

Conclusion

An HF score based on implantable device diagnostics can identify increased risk for HF hospitalization in the next 30 days.
It was further established in the context of the large, multicenter, randomized RAFT clinical trial.
FREDA’S STORY
EDUCATIONAL RESOURCES

- Health Care Professionals – Medtronic Academy - www.medtronicacademy.com
- Patients – booklets

Thank you
Community EQ dashboard reports

Dr Richard Blakey
Enhancing Quality Lead for KSS, KSS AHSN
Primary Care Heart Failure Lead
Community heart failure dashboard slides (Anonymised)

AHSN Heart Failure & AF Programme Lead: Jen Bayly
AHSN Clinical Lead: Richard Blakey (GPwSI in heart failure)

Data June 2015 – January 2017

Slides updated March 2017 by Justin Roccliffe (AHSN Analyst)
Summary position using the active caseload

KSS AHSN - EQ Community Heart Failure Dashboard

**No of patients referred to your service since 1st June 2015 who have not yet been discharged:**

- **2878**

**% patients in active caseload who were seen within two weeks of referral being received by your organisation:**

- **56%**

**Patients in Active Caseload where Echo result confirms LVSD and who are currently on at least a 50% dose of either an ACEI or ARB:**

- **41%**

**Patients in Active Caseload where Echo result confirms LVSD and who are currently on at least a 50% dose of Beta Blocker:**

- **29%**

**Total through new Dashboard:**

- **6417**
Summary position using the active caseload

KSS AHSN - EQ Community Heart Failure Dashboard

Total through new Dashboard 6417
Active caseload

KSS AHSN - EQ Community Heart Failure Dashboard

Case load overview for KSS for the active caseload for the period of June 2015 - January 2017

Discharges June 2015 - January 2017: 2973

Active caseload: 2878

Additional referrals June 2015 - January 2017: + 5851

LVSD, Age and Gender Split

0 500 1000 1500 2000 2500

LVSD

No LVSD

Male Below 75: 138
Male 75 or over: 298
Female Below 75: 67
Female 75 or over: 213

Male Below 75: 600
Male 75 or over: 726
Female Below 75: 254
Female 75 or over: 468
Assessment of the active caseload (non-discharged patients)

KSS AHSN - EQ Community Heart Failure Dashboard

Referral Received to Assessment within 2 weeks for KSS for the Active caseload for the period of June 2015 - January 2017

Exclusions - (Active caseload)

Reasons for not meeting this measure

Referral Received to Assessment within 2 weeks trend since programme was updated in June 2015
ACE/ARB – Part 1

KSS AHSN - EQ Community Heart Failure Dashboard

*LVSD is a patient whose LVEF is < 40%

LVSD confirmed Patients on ACE Inhibitor or ARB

LVSD confirmed Patients on at least 50% of ACE Inhibitor or ARB
Beta Blocker - Part 1

KSS AHSN - EQ Community Heart Failure Dashboard

*LVSD is a patient whose LVEF is < 40%

LVSD confirmed Patients on Beta Blocker

Please scroll down for Exclusions

LVSD confirmed Patients on at least 50% Dose of Beta Blocker
MRA usage split drug, exclusions, LVSD and breathlessness

KSS AHSN - EQ Community Heart Failure Dashboard

*LVSD is a patient whose LVEF is < 40%

Patients on Aldosterone Antagonist (MRA) for KSS for the Active caseload for the period of June 2015 - January 2017

MRA Split by Drug

- SPIRONOLACTONE
- EPLERENONE

MRA Split by LVSD

- No LVSD
- LVSD

MRA split by breathlessness (Non-LVSD Patients Only)

- NYHA IV
- NYHA III
- NYHA II

MRA split by breathlessness (LVSD Patients Only)

- NYHA IV
- NYHA III
- NYHA II
Anti-coagulant usage for patients with Atrial Fibrillation

KSS AHSN - EQ Community Heart Failure Dashboard

Patients with Atrial Fibrillation for KSS for the Active caseload for the period of June 2015 - January 2017

Population with Atrial Fibrillation: 37%
Population with AF on an anti-coagulant: 82%

Anti-Coagulant Drug Split

<table>
<thead>
<tr>
<th>Drug</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warfarin</td>
<td>600</td>
</tr>
<tr>
<td>Dabigatran</td>
<td>100</td>
</tr>
<tr>
<td>Rivaroxaban</td>
<td>50</td>
</tr>
<tr>
<td>Apixaban</td>
<td>20</td>
</tr>
<tr>
<td>Edoxaban</td>
<td>10</td>
</tr>
<tr>
<td>None</td>
<td>0</td>
</tr>
</tbody>
</table>

Anti-coagulant Exclusions

- Clinical contraindication: 40
- Patient intolerant: 5
- Declined by patient: 10

Summary

Caseload
Symptoms & Diagnoses
Assessment
ACEI / ARB
Beta Blocker
MRA Usage
Ivabradine Usage
References
Instructions
Usage of the drug Ivabradine

KSS AHSN - EQ Community Heart Failure Dashboard

Percentage of Patients using Ivabradine for KSS for the Active caseload for the period of June 2015 - January 2017

Number of Patients using Ivabradine for KSS for the Active caseload for the period of June 2015 - January 2017
<table>
<thead>
<tr>
<th>Provider</th>
<th>GPPs</th>
<th>LVSD/All cause</th>
<th>Population</th>
<th>Bands 7 - 4</th>
<th>Bands 3 - 2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Surrey Health</td>
<td>32</td>
<td></td>
<td>303,434</td>
<td>1.8</td>
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<td>1.8</td>
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<tr>
<td>East Sussex Healthcare NHS Trust</td>
<td>56</td>
<td></td>
<td>367,290</td>
<td>9.5</td>
<td>2.4</td>
<td>11.8</td>
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<tr>
<td>East Sussex Healthcare NHS Trust East</td>
<td>33</td>
<td></td>
<td>183,000</td>
<td>3.77</td>
<td>0.55</td>
<td>4.32</td>
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<tr>
<td>East Sussex Healthcare NHS Trust West</td>
<td>23</td>
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<td>184,290</td>
<td>4.69</td>
<td>1.3</td>
<td>5.99</td>
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<tr>
<td>First Community Health and Care</td>
<td>18</td>
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<td>179,822</td>
<td>1</td>
<td>0.5</td>
<td>1.5</td>
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<tr>
<td>Kent Community Health</td>
<td>143</td>
<td></td>
<td>1,173,622</td>
<td>17.8</td>
<td>3.2</td>
<td>20.95</td>
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<tr>
<td>Kent Community Health - East</td>
<td>82</td>
<td>All cause</td>
<td>694,439</td>
<td>13.6</td>
<td>3.15</td>
<td>16.75</td>
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<tr>
<td>Kent Community Health - West</td>
<td>70</td>
<td>All cause</td>
<td>479,183</td>
<td>4.2</td>
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<td>Sussex Community NHS Foundation Trust</td>
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<td>1,355,880</td>
<td>4.56</td>
<td>1.4</td>
<td>5.96</td>
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<td>Sussex Community NHS Foundation Trust Brighton</td>
<td>47</td>
<td>All cause</td>
<td>310,702</td>
<td>3</td>
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<td>3.6</td>
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<td>365,371</td>
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<td>0</td>
<td>0</td>
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<td>Sussex Community NHS Foundation Trust Coastal</td>
<td>53</td>
<td></td>
<td>511,265</td>
<td></td>
<td>0</td>
<td>0</td>
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<td>Sussex Community NHS Foundation Trust East</td>
<td>20</td>
<td>LVSD</td>
<td>168,542</td>
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<td>0.8</td>
<td>2.36</td>
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<tr>
<td>Virgin Care</td>
<td>50</td>
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<td>462,045</td>
<td>4.4</td>
<td>1.0</td>
<td>5.4</td>
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<tr>
<td>Virgin Care NW</td>
<td>42</td>
<td></td>
<td>366,753</td>
<td>3.6</td>
<td>1</td>
<td>4.6</td>
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<td>Virgin Care SW</td>
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<td></td>
<td>95,292</td>
<td>0.8</td>
<td></td>
<td>0.8</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>39.0</td>
<td>8.4</td>
<td>47.4</td>
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</table>
## Community HF nurses by population

<table>
<thead>
<tr>
<th>Trust</th>
<th>Population</th>
<th>Band 4-7 Pop’n /WTE</th>
<th>Band 2-3 Pop’n/WTE</th>
<th>Total Pop’n/WTE</th>
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<tbody>
<tr>
<td>CSH</td>
<td>303,434</td>
<td>168,574</td>
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<td>168,574</td>
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<tr>
<td>ESHT</td>
<td>367,290</td>
<td>58,578</td>
<td>282,530</td>
<td>48,776</td>
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<tr>
<td>FCH</td>
<td>179,822</td>
<td>179,822</td>
<td>89,991</td>
<td>119,881</td>
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<tr>
<td>KCH</td>
<td>1,172,622</td>
<td>65,993</td>
<td>366,757</td>
<td>55,972</td>
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<tr>
<td>SCNFT(exc Coastal)</td>
<td>844,615</td>
<td>185,222</td>
<td>603,296</td>
<td>141,713</td>
</tr>
<tr>
<td>SCNFT (Coastal)</td>
<td>511,265</td>
<td>255,632</td>
<td>n/a</td>
<td>255,632</td>
</tr>
<tr>
<td>VC</td>
<td>462,045</td>
<td>105,010</td>
<td>462,045</td>
<td>85,564</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,841,093</td>
<td>98,490</td>
<td>457,273</td>
<td>81,036</td>
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</tbody>
</table>
WHAT IS GOING ON IN PRIMARY CARE?
• 2001 NSF CHD and PCGs in existence
• 2004 PCTs (SDWPCT)
• 2005 less SHAs
• 2006 less PCTs (ESDWPCT)
• 2010 Lansley white paper
• 2012 Health & Social Care Act
• 2013 CCGs
• 2015 Co-commissioning
• 2016 STPs
• 2017 end of Admission Avoidance DES
• 2018 ?end of QOF
Vulnerable 2%
Personalised Care Planning
Over 75 admission avoidance
DES
Vulnerable 2%

Personalised Care Planning

Over 75 admission avoidance

DES

1/4/2017
The death of QOF
The death of QOF
How will we monitor quality?
What could replace the QOF?

The ideas that CCGs have on how to use QOF funding differently include incentivising:

- Longer appointments
- Quarterly reports
- Sharing patient records
- Focusing on one particular chronic disease
- Opening up practice books
- SPQS (Somerset Practice Quality Scheme Model)
<table>
<thead>
<tr>
<th>CCG</th>
<th>%HF</th>
<th>register</th>
<th>points</th>
<th>exceptions</th>
<th>LVSD ACE+BB</th>
<th>% register on intervention</th>
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<tbody>
<tr>
<td>NHS ASHFORD CCG</td>
<td>0.60</td>
<td>767</td>
<td>100.00</td>
<td>97</td>
<td>158</td>
<td>20.5</td>
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<tr>
<td>NHS BRIGHTON AND HOVE CCG</td>
<td>0.53</td>
<td>1,636</td>
<td>94.77</td>
<td>156</td>
<td>201</td>
<td>12.3</td>
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<tr>
<td>NHS CANTERBURY AND COASTAL CCG</td>
<td>0.66</td>
<td>1,464</td>
<td>100.00</td>
<td>215</td>
<td>371</td>
<td>25.3</td>
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<tr>
<td>NHS EASTBOURNE, HAILSHAM AND SEAFORD CCG</td>
<td>1.13</td>
<td>2,180</td>
<td>99.45</td>
<td>333</td>
<td>588</td>
<td>27.0</td>
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<tr>
<td>NHS COASTAL WEST SUSSEX CCG</td>
<td>0.88</td>
<td>4,505</td>
<td>97.70</td>
<td>596</td>
<td>749</td>
<td>16.6</td>
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<tr>
<td>NHS CRAWLEY CCG</td>
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<td>760</td>
<td>100.00</td>
<td>52</td>
<td>110</td>
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<td>NHS DARTFORD, GRAVEHAM AND SWANLEY CCG</td>
<td>0.58</td>
<td>1,444</td>
<td>98.34</td>
<td>163</td>
<td>342</td>
<td>23.7</td>
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<td>NHS EAST SURREY CCG</td>
<td>0.61</td>
<td>1,101</td>
<td>100.00</td>
<td>139</td>
<td>182</td>
<td>16.5</td>
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<tr>
<td>NHS GUILDFORD AND WAVERLEY CCG</td>
<td>0.55</td>
<td>1,222</td>
<td>100.00</td>
<td>117</td>
<td>176</td>
<td>14.4</td>
</tr>
<tr>
<td>NHS HASTINGS AND ROTHER CCG</td>
<td>1.05</td>
<td>1,879</td>
<td>99.61</td>
<td>219</td>
<td>321</td>
<td>17.1</td>
</tr>
<tr>
<td>NHS MEDWAY CCG</td>
<td>0.75</td>
<td>2,215</td>
<td>99.52</td>
<td>252</td>
<td>604</td>
<td>27.2</td>
</tr>
<tr>
<td>NHS HORSHAM AND MID SUSSEX CCG</td>
<td>0.72</td>
<td>1,690</td>
<td>100.00</td>
<td>221</td>
<td>260</td>
<td>15.4</td>
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<tr>
<td>NHS NORTH WEST SURREY CCG</td>
<td>0.53</td>
<td>1,947</td>
<td>98.00</td>
<td>167</td>
<td>276</td>
<td>14.2</td>
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<tr>
<td>NHS SOUTH KENT COAST CCG</td>
<td>0.70</td>
<td>1,419</td>
<td>98.79</td>
<td>155</td>
<td>288</td>
<td>20.3</td>
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<tr>
<td>NHS SURREY HEATH CCG</td>
<td>0.51</td>
<td>482</td>
<td>100.00</td>
<td>38</td>
<td>51</td>
<td>10.6</td>
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<tr>
<td>NHS SWALE CCG</td>
<td>0.86</td>
<td>951</td>
<td>99.77</td>
<td>121</td>
<td>225</td>
<td>23.7</td>
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<tr>
<td>NHS THANET CCG</td>
<td>0.86</td>
<td>1,237</td>
<td>97.76</td>
<td>166</td>
<td>287</td>
<td>23.2</td>
</tr>
<tr>
<td>NHS SURREY DOWNS CCG</td>
<td>0.52</td>
<td>1,581</td>
<td>98.69</td>
<td>191</td>
<td>205</td>
<td>13.0</td>
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<tr>
<td>NHS WEST KENT CCG</td>
<td>0.65</td>
<td>3,134</td>
<td>99.73</td>
<td>408</td>
<td>825</td>
<td>26.3</td>
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<tr>
<td>NHS HIGH WEALD LEWES HAVENS CCG</td>
<td>0.73</td>
<td>1,227</td>
<td>99.92</td>
<td>170</td>
<td>188</td>
<td>15.3</td>
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</table>
### QOF KSS 2015-16

<table>
<thead>
<tr>
<th>KSS Population</th>
<th>4,725,563</th>
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<tbody>
<tr>
<td>Heart failure register</td>
<td>32,841 (0.70%)</td>
</tr>
<tr>
<td>Heart failure register from 1/4/2006</td>
<td>25,805 (0.55%)</td>
</tr>
<tr>
<td>HF patient exception reported all measures</td>
<td>3,976</td>
</tr>
<tr>
<td>Coded HF and exception reported for echo or specialist</td>
<td>1,135</td>
</tr>
<tr>
<td>HF from 1/4/2006 LVSD (expected 50% of total)</td>
<td>9,911 (0.21%)</td>
</tr>
<tr>
<td>LVSD from 1/4/2006 on ACE/ARB</td>
<td>8309</td>
</tr>
<tr>
<td>LVSD from 1/4/2006 on ACE/ARB + BB</td>
<td>6,407</td>
</tr>
<tr>
<td>% of population from 1/4/2006 on ACE/ARB + BB at any dose for HF (target 0.5%)*</td>
<td>0.14%</td>
</tr>
<tr>
<td>Average QOF achievement for HF</td>
<td>98.86%</td>
</tr>
</tbody>
</table>
SHCCG
Prev. 0.51%
QOF points 98.69%
Exceptions 7.23%
%reg. ACE + BB 10.6%

G&WCCG
Prev. 0.55%
QOF points 100%
Exceptions 8.16%
%reg. ACE+BB 14.4%

SDCCG
Prev. 0.52%
QOF points 98.69%
Exceptions 10.65%
%reg. ACE+BB 13.0%

NWSCCG
Prev. 0.53%
QOF points 98%
Exceptions 7.49%
%reg. ACE + BB 14.2%

ESCCG
Prev. 0.61%
QOF points 100%
Exceptions 10.09%
%reg. ACE+BB 16.5%
<table>
<thead>
<tr>
<th>HF register</th>
<th>32,841</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 2006 so not included in QOF audit</td>
<td>7,036</td>
</tr>
<tr>
<td>Exception reported</td>
<td>3,976</td>
</tr>
<tr>
<td>After 2006 expected LVSD not coded</td>
<td>2,992</td>
</tr>
<tr>
<td>LVSD not on ACE and BB</td>
<td>3,504</td>
</tr>
<tr>
<td>Before 2006 + Expected LVSD + those not on ACE &amp; BB</td>
<td>17,508</td>
</tr>
</tbody>
</table>
QOF HF 98.86%

HF coded before 2006
Exception reporting
HF code and normal echo
Under recording of LVSD
What happens to the registers after QOF?

- Will GPs need to keep their disease registers after QOF is gone?
- Are CCGs going to produce a local quality monitoring system for LTCs?
- Will it fall to AHSNs?
- Where is the capacity role for industry?
- HF Alliance??

‘Hints and tips’ presentation: A case study of using Entresto in practice

Emma Guha
Lead Heart Failure Nurse
Hampshire Hospital
Sacubitril/Valsartan (Entresto)

Hints and tips for initiation

Emma Guha
Lead HF Specialist Nurse

Hampshire Hospitals NHS Foundation Trust

Basingstoke and North Hampshire NHS Foundation Trust
Sacubitril/Valsartan (Entresto)

• Sacubitril- blocks the activity of neprilysin

• Neprilysin responsible for the breakdown of B type natriuretic peptide (BNP)

• Increased levels of BNP promote sodium and water excretion & relax blood vessels

• Valsartan- angiotensin II receptor blocker

• Angiotensin II - potent vasoconstrictor and helps formation of aldosterone

• BNP is not a suitable biomarker in patients taking Entresto
Paradigm-HF (what you need to know)

- Sacubitril/valsartan compared to Enalapril (US Gold Standard)
  - 8442 patients
  - More effective than Enalapril in Reduction in CVS & All-Cause Mortality & HF Hospitalisation
  - Well tolerated - minimal levels of renal dysfunction
Licensed in the UK for:
- LVEF <35%
- NYHA II-IV
- Already taking a stable dose of ACEi/ARB
- eGFR >30ml/min and lack of hyperkalaemia and no allergies to ACEI/ARB
- Treatment should be initiated by a HF specialist and have access to a HF multi-disciplinary team
- 36 hour wash-out period for ACEI/ARB
- Recommended starting dose 49/51mg twice daily
- The dose should be doubled at 2-4 weeks to the target dose of 97/103mg twice daily
- There is a 24/26mg tablet for those with hypotension (SBP <100mmHg) and renal dysfunction (eGFR 30-60ml/min) or who are taking lower dose of ACEI/ARB
- Cost per pack of 28 tablets is approximately £45
Hampshire Hospitals NHS FT experience

• Suitable patients are identified by cardiologists or heart failure specialist nurses.

• Discussed at the weekly heart failure MDT

• Those considered will have been on maximum tolerated standard HF therapy for 3 months and will have undergone repeat echocardiogram which confirms LVEF remains 35% or less

• The patient is fully informed and written advice & wallet sized card provided by Novartis is given

• Primary care notified of initiation of Entresto & termination of ACE/ARB (Novartis information for prescribers included with letter)

• Logged on local database

• Reviewed every 2-4 weeks with Us&Es 2 weeks following initiation and again following up-titration

• When on stable maintenance dose prescribing transferred to primary care
Case -1

• 52 Year old male
• Dilated Cardiomyopathy - following pneumonia
• Commenced on Ramipril, Bisoprolol and Eplerenone & up-titrated to maximum doses over 5 months
• Echocardiogram LVEF 30-35% 3 months later
• ICD implanted (Narrow QRS & ventricular arrhythmias)
• Remained NYHA class III
• BP 110/60, Pulse 55bpm SR
• eGFR 70
• Identified as suitable for Entresto
• Started on 49/51mg 4 weeks later up-titrated to 97/103mg
• 3 months later NYHA class II
• Echocardiogram LVEF 52%
Case -2

- 86 Year old female
- LVEF - 20%
- On Ramipril 10mg, Bisoprolol 7.5mg, Spironolactone 25mg, Furosemide 40mg
- NYHA class III, euvolaemic
- BP 160/70, pulse 85bpm AF
- eGFR 45
- Identified as suitable for Entresto
- started on 49/51mg
- 4 weeks later up-titrated to 97/103mg
- NYHA class III, Furosemide reduced to 20mg daily
Summary

• Before considering Entresto patients must be on maximum tolerated HF therapy & consider repeat echocardiogram

• Multidisciplinary team meetings are useful for discussing and identifying patients

• A checklist is helpful to show that your patients meets the criteria

• Fully inform the patient

• Notify primary care-remember they may not have come across the drug before

• Close monitoring during initiation & up-titration should be done by heart failure specialist

• When on a stable dose prescribing is passed to primary care
‘Hints and tips’ presentation:
Qardio MD eco system for remote management of patients

Steve Maccalease
Head of Sales EMEA
Qardio
QARDIO™

Enhancing the Quality of Heart Failure Care
15th March 2017
QARDIO

THE SOLE PLAYER COVERING ALL KEY HEART HEALTH BIOMETRICS

SMART HEALTH PLATFORM INTEGRATING WITH DOCTORS AND PROVIDERS
BASED ON OLD TECHNOLOGY

COMPLETELY DISCONNECTED FROM MODERN LIFE

TODAY’S HEALTH MONITORING

WITH PRODUCT LIFECYCLES THAT LAST DECADES

NEVER WITHIN REACH
AT QARDIO
WE BELIEVE THAT PEOPLE DESERVE
A BETTER WAY TO MONITOR THEIR HEALTH

THAT IS
EASIER + SMARTER + AFFORDABLE
QARDIO INTEGRATED SOLUTION

QardioArm

QardioBase

QardioCore

QardioCloud

Patient & Family

Doctors

Healthcare Providers
WORKING WITH LEADING MEDICAL INSTITUTIONS

Powering their research in hypertension and diabetes
Continuous EKG / ECG Monitor

QARDIO™ ARM
Wireless Blood Pressure Monitor

QARDIO™ BASE
Smart Scale and Body Analyzer

QARDIO™ CORE
Continuous EKG / ECG Monitor
Medical Grade Accuracy
BP & Heart Rate
Relaxation Mode
Irregular Heart Beat Detection
Charts & Graphs
Multiple Users

BP MONITOR PATIENTS ACTUALLY USE
QARDIO APP FEATURES

- Detects Irregular Heart Beat
- Easy-to-Understand Visualisation
- Set Reminders
- Geo Track BP with Places
- Share Your Data Automatically
- Activity View Encourages Adherence
- Personal Slideshow for Relaxation and Accuracy
WEIGHT MANAGEMENT REDEFINED

Weight & BMI

Smart Feedback

Multiple Users

Full Body Composition

Haptic & Safe Mode

Pregnancy Mode
QARDIOBASE
Smart Scale and Body Analyzer

WEIGHT MANAGEMENT
BMI, BODY COMPOSITION
DATA SHARING
MULTIPLE USERS

SLEEK DESIGN
PREGNANCY MODE
SMART FEEDBACK
SMART MODES
QARDIO CORE

MEDICAL GRADE ECG UNLIKE ANY OTHER

Continuous ECG

Activity Tracking

Body Temperature

Heart Rate & HR Variability

Galvanic Skin Response

Respiratory Rate

© 2012-2015 Qardio, Inc. All rights reserved – Confidential
Six Subsystem layers of QardioCore's next generation sensor system make this possible.
## The Qardio Tracking Ecosystem

<table>
<thead>
<tr>
<th>Feature</th>
<th>Icon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Pressure</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Heart Rate</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Continuous EKG/ECG</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Respiratory Rate</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Weight Management</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Body Temperature</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Symptom Tracking</td>
<td><img src="image" alt="Icon" /></td>
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<tr>
<td>Medicine Compliance</td>
<td><img src="image" alt="Icon" /></td>
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<tr>
<td>Activity Compliance</td>
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</tr>
<tr>
<td>Activity Tracking</td>
<td><img src="image" alt="Icon" /></td>
</tr>
</tbody>
</table>
THE ABC OF HEART HEALTH
HARNESSING SECURE ENCRYPTED DATA FOR HEART HEALTH MANAGEMENT
# QardioMD Heart failure Benefits

## BENEFITS TO PATIENTS

- Reduced visits to hospital for lifestyle advise and drug management
- Peace of mind in knowledge that a Dr is continually monitoring remotely
- Empowered patient to send as much data as required to feel reassured
- Easy to stay in touch with Dr via Qardio app

## BENEFITS TO DOCTORS

- Remotely monitor patient giving improved drug / lifestyle compliance
- Free up valuable consultation time with QardioMD managing your patients
- Reduce community / hospital visits
- Improved efficiency
- Improve outcomes by more effective continuous monitoring
3X NORMAL PATIENT COMPLIANCE = 3X MORE DATA

% OF PATIENTS WITH PRESCRIPTION FOR DAILY MEASUREMENTS ACTUALLY MEASURING BLOOD PRESSURE AT LEAST TWICE A WEEK
JOIN THE HEART HEALTH REVOLUTION
Lunch

Lunch served in the Cube restaurant

Opportunity to visit EXPO stands in the lobby
EQ Data update

Richard Lee-Wright
Head of Informatics
KSS AHSN
EQ Heart Failure Update

Richard Lee-Wright

15th March 2017
Using your EQ dashboard reports to strengthen services in Acute and Community settings

**Acute**
- To more **effectively monitor and measure quality** and **drive improvement** in hospital care.
- **Provides data evidence from the dashboard** to present to senior managers/finance managers to strengthen case for additional staff and/or more service support.

**Community**
- **Access to timely data** that allows for feedback to improve the service.
- Gives an up to date view of the service and highlights when the service is under pressure (staff off sick etc).
- To more **effectively monitor and measure quality** and **drive improvement** in the community setting.
NHFA Hospital data and HES data

- **New provider** is Harvey Walsh (Provide HES data for a range of health providers).
- More **robust** than previous supplier.
- Able to provide a more **comprehensive dataset**.

Whilst the data validation for Admissions is improving there is **still room for improvement** with the minimum target being 70%.

For example
For 16/17 Q1 the range between Trusts was 61%-118% of HES patients captured in the NHFA. For 16/17 Q2 the range between Trusts was 65%-118% of HES patients captured in the NHFA.
What does the data on the dashboards tell you?

- **Quality (Process Measures)**
  - How you’re performing.
  - Whether you’re improving.

- **Outcomes (Admissions, LOS, Mortality)**
  - The difference you’re making.
  - How you compare to other Trusts in the region.

- **Finance (BPT, Outcome value modelling)**
  - Early calculations based on 16/17 Q1 & Q2 data.

<table>
<thead>
<tr>
<th>Attainment</th>
<th>NHFA patients</th>
<th>HES patients</th>
<th>Range of potential lost income through non compliance of BPT</th>
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</thead>
<tbody>
<tr>
<td>TRUST 1</td>
<td>118%</td>
<td>279</td>
<td>£35,297 - £150,397</td>
</tr>
<tr>
<td>TRUST 2</td>
<td>98%</td>
<td>301</td>
<td>£42,163 - £179,650</td>
</tr>
<tr>
<td>TRUST 3</td>
<td>88%</td>
<td>361</td>
<td>£54,931 - £234,055</td>
</tr>
<tr>
<td>TRUST 4</td>
<td>63%</td>
<td>225</td>
<td>£47,650 - £203,031</td>
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<td>TRUST 5</td>
<td>101%</td>
<td>317</td>
<td>£44,678 - £190,369</td>
</tr>
<tr>
<td>TRUST 6</td>
<td>71%</td>
<td>206</td>
<td>£41,118 - £175,199</td>
</tr>
<tr>
<td>TRUST 7</td>
<td>90%</td>
<td>141</td>
<td>£23,132 - £98,562</td>
</tr>
<tr>
<td>TRUST 8</td>
<td>70%</td>
<td>166</td>
<td>£35,435 - £150,986</td>
</tr>
<tr>
<td>TRUST 9</td>
<td>65%</td>
<td>296</td>
<td>£62,733 - £267,299</td>
</tr>
</tbody>
</table>

Using the BPT top-up (+MFF) for each of the 5 new HRGs provides the range of additional income impact for each trust based on the first half of FY 2016/17.
Group work and discussion (acute and community)
Refreshment break

Please bring your refreshments back to the tables
Sharing ideas, action plans and discussion as a collaborative group
Summary, next steps and close

Jen Bayly
Heart Failure & Atrial Fibrillation Programme Lead
KSS AHSN