RCPsych Demand and Capacity work
Dr Andy Moore, Consultant Psychiatrist, Devon Partnership Trust

Better Data, Better Care: Understanding & using data for quality improvement.
Friday 22 February 2019, Royal College of Psychiatrists, London
Outline

• Intro
• Demand and Capacity:
  • Important?
  • Where now?
    • History and resources
    • Drivers
    • Barriers
  • GAF approach
    • Education
    • Research
    • Development
• Broader Informatics contexts
  • Systems
  • Visuals
• Fantasy informatics.
• End.

Aims

• Inform
• Inspire
• Invite
General Adult Faculty Priorities

• Whole services approach
• Core Services
• Capacity
• Continuity of care
## General Adult Faculty Executive Committee

<table>
<thead>
<tr>
<th>Member</th>
<th>Year of joining</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Lenny Cornwall</td>
<td>2015 (E)</td>
<td>Chair</td>
</tr>
<tr>
<td>Dr William Boland</td>
<td>2017 (E)</td>
<td>Vice Chair</td>
</tr>
<tr>
<td>Dr Safi Afghan</td>
<td>2015 (E)</td>
<td>Financial Officer</td>
</tr>
<tr>
<td>Dr Alessandro Colasanti</td>
<td>2017 (C)</td>
<td>Academic Secretary</td>
</tr>
<tr>
<td>Dr Andrea Malizia</td>
<td>2017 (E)</td>
<td>Academic Secretary</td>
</tr>
<tr>
<td>Dr Nozomi Akanuma</td>
<td>2017 (E)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Daniel Armstrong</td>
<td>2017 (E)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Jim Crabb</td>
<td>2017 (C)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Oliver Dale</td>
<td>2017 (E)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Sudipto Das</td>
<td>2015 (E)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Subodh Dave</td>
<td>2015 (E)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Michael Doherty</td>
<td>2015 (E)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Marcella Fok</td>
<td>2016 (C)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Nora Gribbin</td>
<td>2016 (C)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Saloni Gupta</td>
<td>2018 (C)</td>
<td>PTC Rep</td>
</tr>
<tr>
<td>Dr Sumeet Gupta</td>
<td>2017 (E)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Rosarii Harte</td>
<td>2018 (C)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Mrs Jacqui Jamieson</td>
<td>2017 (C)</td>
<td>User/Carer Representative</td>
</tr>
<tr>
<td>Mrs Kate King</td>
<td>2017 (C)</td>
<td>User/Carer Representative</td>
</tr>
<tr>
<td>Dr Imran Malik</td>
<td>2017 (E)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Rowan McLean</td>
<td>2017 (C)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Andrew Moore</td>
<td>2017 (E)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Balarao Oruganti</td>
<td>2015 (C)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Russell Razzaque</td>
<td>2017 (E)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Jonathan Scott</td>
<td>2015 (E)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Indira Vinjamuri</td>
<td>2018 (C)</td>
<td>Committee Member</td>
</tr>
<tr>
<td>Dr Latha Weston</td>
<td>2017 (E)</td>
<td>Committee Member</td>
</tr>
</tbody>
</table>
“a great weakness of mental health services today is that we do not have models of capacity and demand that tell us, even broadly, what resource input is needed, for example, for CMHTs to function normally”

Stuart Bell, CEO of Oxford Health Trust
General Adult Faculty Annual Conference, Oct 2018
NHS operational productivity: unwarranted variations

Mental health services
Community health services
Coming soon...

General Adult Faculty’s
Acute Care Survey 2017
Sometimes, even if I stand in the middle of the room, no one acknowledges me.
Psychiatry has an advantage over other medical disciplines in that its skills are ones that can be practised in almost any setting. Although this is a truism it is worth repeating as psychiatry is still strongly associated with hospital treatment in the public mind. This view is endorsed by the activities of most psychiatrists, who spend their working lives in psychiatric hospitals or in extensions of them such as out-patient clinics or day hospitals. The reasons for this are at least partly historical. The great mental hospital building programme of the 19th century was planned deliberately to set up hospitals in isolated areas away from the centre of the community they served (Scull, 1979). Many countries are still left with this legacy of mental quarantine and find it difficult to overcome its geographical handicaps. Although it is appreciated that more patients can be treated successfully outside hospital it is often easier to follow the maxim, "in doubt don't keep them out" and admit patients who seem to need further assessment. This is understandable whilst most personnel are based within the hospital and is certainly easier than setting up alternative systems of care away from the hospital base.

Over the past 40 years the disadvantages of a number of hospitals have been perceived as out-dated anachronisms that need replacement rather than reform, and their importance as the cornerstone of care for the seriously ill and underprivileged has been underestimated. It was therefore unrealistic to expect that State hospitals would close once facilities for community care improved. Unfortunately, the CMHC's were viewed inevitably as competitors by the State hospital rather than partners in a comprehensive psychiatric service. Although in principle they are a major advance on traditional systems of psychiatric care (Jones, 1979) in practice they have fallen far short of expectation. They are unduly selective, failing in particular to serve the chronically ill and the elderly, are isolated from the mainstream of psychiatry and therefore unpopular with psychiatrists, and ineffective, both in reducing admissions to State hospitals and implementing the preventive psychiatry programmes that were envisaged when they were set up (Fink & Weinstein, 1979; Winslow, 1979; Clare, 1980; Mollica, 1980; Donovan, 1982).

It is reassuring that these dashed hopes have not led planners of mental health services to abandon community initiatives and to fall back on the old hospitals as the only satisfactory means of providing care.
NHS Funding Allocations: Clinical Commissioning Groups

Overall health funding levels

Percentage change in aggregate mental health planned spend as proportion of overall CCG allocation from 15/16 to 16/17 (%) – STPs only

Mental health funding changes
Total Real Investment in Adult Mental Health services 2001/02 to 2011/12 (at 2011/12 pay and price levels)

<table>
<thead>
<tr>
<th>Year</th>
<th>Reported Investment</th>
<th>Estimated Unreported Investment</th>
<th>Total Investment</th>
<th>Annual Increase</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001/02</td>
<td>4.002</td>
<td>0.160</td>
<td>4.162</td>
<td>0.460</td>
<td>11.1%</td>
</tr>
<tr>
<td>2002/03</td>
<td>4.348</td>
<td>0.274</td>
<td>4.622</td>
<td>0.191</td>
<td>4.1%</td>
</tr>
<tr>
<td>2003/04</td>
<td>4.773</td>
<td>0.040</td>
<td>4.814</td>
<td>0.550</td>
<td>11.4%</td>
</tr>
<tr>
<td>2004/05</td>
<td>5.309</td>
<td>0.055</td>
<td>5.364</td>
<td>0.339</td>
<td>6.3%</td>
</tr>
<tr>
<td>2005/06</td>
<td>5.442</td>
<td>0.262</td>
<td>5.703</td>
<td>0.108</td>
<td>1.9%</td>
</tr>
<tr>
<td>2006/07</td>
<td>5.618</td>
<td>0.194</td>
<td>5.812</td>
<td>0.274</td>
<td>4.7%</td>
</tr>
<tr>
<td>2007/08</td>
<td>6.066</td>
<td>0.019</td>
<td>6.085</td>
<td>0.210</td>
<td>3.4%</td>
</tr>
<tr>
<td>2008/09</td>
<td>6.249</td>
<td>0.046</td>
<td>6.295</td>
<td>0.341</td>
<td>5.4%</td>
</tr>
<tr>
<td>2009/10</td>
<td>6.298</td>
<td>0.338</td>
<td>6.636</td>
<td>0.058</td>
<td>0.9%</td>
</tr>
<tr>
<td>2010/11</td>
<td>5.780</td>
<td>0.914</td>
<td>6.694</td>
<td>-0.066</td>
<td>-1.0%</td>
</tr>
<tr>
<td>2011/12</td>
<td>5.717</td>
<td>0.912</td>
<td>6.629</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Increase in the 10 years 2001/02 to 2011/12: 2.467, 59.3%
Reported investment in priority areas 2002/03 to 2010/12

Real Term Investment at 2011/12 levels

<table>
<thead>
<tr>
<th></th>
<th>Assertive Outreach</th>
<th>Crisis Resolution / Home Treatment</th>
<th>Early Intervention in Psychosis</th>
<th>Total in £ millions</th>
<th>% real increase per year</th>
<th>Actual Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002/03</td>
<td>77.5</td>
<td>38.2</td>
<td>8.0</td>
<td>123.6</td>
<td>49%</td>
<td>60.8</td>
</tr>
<tr>
<td>2003/04</td>
<td>95.5</td>
<td>73.2</td>
<td>15.7</td>
<td>184.4</td>
<td>47%</td>
<td>86.9</td>
</tr>
<tr>
<td>2004/05</td>
<td>112.9</td>
<td>130.3</td>
<td>28.1</td>
<td>271.3</td>
<td>11%</td>
<td>38.9</td>
</tr>
<tr>
<td>2005/06</td>
<td>118.0</td>
<td>180.5</td>
<td>48.7</td>
<td>347.2</td>
<td>15%</td>
<td>75.9</td>
</tr>
<tr>
<td>2006/07</td>
<td>122.2</td>
<td>206.5</td>
<td>57.4</td>
<td>386.1</td>
<td>10%</td>
<td>46.3</td>
</tr>
<tr>
<td>2007/08</td>
<td>157.5</td>
<td>235.2</td>
<td>76.1</td>
<td>448.8</td>
<td>9%</td>
<td>62.8</td>
</tr>
<tr>
<td>2008/09</td>
<td>140.8</td>
<td>254.8</td>
<td>99.5</td>
<td>495.2</td>
<td>0%</td>
<td>46.3</td>
</tr>
<tr>
<td>2009/10</td>
<td>141.1</td>
<td>259.9</td>
<td>107.3</td>
<td>518.4</td>
<td>-3%</td>
<td>23.2</td>
</tr>
<tr>
<td>2010/11</td>
<td>138.6</td>
<td>266.1</td>
<td>104.1</td>
<td>520.0</td>
<td>0%</td>
<td>1.6</td>
</tr>
<tr>
<td>2011/12</td>
<td>126.8</td>
<td>254.6</td>
<td>109.3</td>
<td>480.7</td>
<td>-6%</td>
<td>-29.3</td>
</tr>
</tbody>
</table>

Real term increase 2002/03 to 2011/12 in £ millions

367.1
In 2016/17, Trusts reported an average spend on Community Mental Health Services of £5.3 million per 100,000 population. This is a 15% decrease on the investment levels reported in 2012/13 (£6.239m per 100,000 population), and should also be considered alongside wider NHS price index changes during this period (estimated at 1% per annum). The decrease in spend is therefore greater when assessed in real terms.
Demand Expectations

Funding (health and social care)

Commissioning

2000-10 2011-18

(IT)

2011-2018

The Perfect Storm
### Mental Health Inpatient and Community – 2016 findings

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bed occupancy still rising</strong></td>
<td>Bed occupancy in adult acute beds is now 94%, the highest figure for 5 years.</td>
</tr>
<tr>
<td><strong>Length of Stay increasing</strong></td>
<td>Admissions to adult acute beds stay on average 33 days. This figure is increasing each year.</td>
</tr>
<tr>
<td><strong>Psychosis dominates beds</strong></td>
<td>62% of bed days are occupied by patients experiencing a psychosis.</td>
</tr>
<tr>
<td><strong>Emergency readmissions improving</strong></td>
<td>Emergency readmissions to adult acute beds are at their lowest level in years.</td>
</tr>
<tr>
<td><strong>Use of the Mental Health Act</strong></td>
<td>35% of admissions are detentions under the MH Act. In 2012 this figure was 25%.</td>
</tr>
<tr>
<td><strong>Unknown patients</strong></td>
<td>16% of admissions to beds are for people not previously known to mental health services.</td>
</tr>
<tr>
<td><strong>Community caseloads</strong></td>
<td>More people are receiving support from community teams than in previous years.</td>
</tr>
</tbody>
</table>
| **Community activity**                        | More community contacts are being delivered per capita, especially in older people's services.

### Bank and Agency

- Of total pay costs – 12% goes on bank staff
- 8% goes on agency staff

### Many quality measures stable

- There has been no increase in serious incidents, violence or complaints this year.

### Costs rising

- The annual cost of providing an adult acute bed is now 6% higher than in 2015.

---

**THE FIVE YEAR FORWARD VIEW FOR MENTAL HEALTH**

---

**The NHS Long Term Plan**

- #NHSLongTermPlan
- www.longtermplan.nhs.uk
Complexity

Fear
Fingertips suite of tools
(fingertips.phe.org.uk)
Making data count
#plottheddots
Context Matters
Service capability = 

Capacity
Competence
Confidence
Conduct
Commissioned work
Actual work
Emergency care - a point in time might look something like this

Demand to Access

Lets focus on the acute hospital
Service Delivery Proposal

Delivering analysis and reporting to help understand patient flow, demand and capacity at South London and Maudsley NHS Foundation Trust

Graham Crawford, Anne-Marie Morgan
31st October 2018

• EDUCATION
• RESEARCH
• DEVELOPMENT
Severe Mental Illness

Up to 25yrs reduced life-expectancy!
Is it time to start using the emoji in biomedical literature?

In the present, emoji are becoming more prevalent in biomedical literature. They are used to express emotions, thoughts, and feelings in a concise and visually appealing manner. However, their use in academic writing is still controversial. Some researchers argue that emoji can make scientific communication more engaging and relatable, while others believe they can detract from the严肃ness of scientific discourse.

For example, a recent study by Dr. Juan Renteria and colleagues investigated the use of emoji in academic publications. The study found that the usage of emoji varied across different fields and journals. In some cases, the use of emoji was associated with a higher number of citations. However, in other cases, the use of emoji was not significantly correlated with citation counts. The study also highlighted the potential for emoji to be misinterpreted or misunderstood, leading to miscommunication in scientific discourse.

Overall, the use of emoji in biomedical literature is a topic值得 continued research and discussion. It is important to consider the potential benefits and drawbacks of using emoji in academic writing, and to develop guidelines for their appropriate use. This will help ensure that emoji are used in a way that enhances communication and engagement in scientific discourse.
Clinical Input, Activity and Output (CIAO) Report

Input

Context:
- Service configuration

Demand related:
- Population factors: total served, demographic (e.g. BME), deprivation index and morbidity (e.g. patients on GP SMI registers) measures.
- Referrals in; made and accepted (total, and broken down by source)
- Clinical income measures e.g. average HoNOS “in”

Capacity related:
- Staffing profiles: managerial, medical, nursing, OT, support workers, A&C etc
- Vacancy and sickness rates.
- Financial input (total, and broken down by staff and other costs)

Activity

- Caseload: team total and average individual clinician
- Cluster profile (and diagnostic profile?)
- Contact information: team total and average individual clinician
- Average Length of Stay in team
- Escalation rates
  - To CRHTTs, inpatient admissions and IPP
  - MHAAAs
- Proxy workload factors, e.g. patients on...
  - CPA
  - CTO
  - Clozapine
  - S117 aftercare
  - Mental health related social care package
  - MoJ conditional discharge

Output

- Waiting list: total and times (referral to treatment)
- Discharges
- Re-referrals within one year
- Clinical outcome measures e.g. HoNOS “out”
- F&F Test
- Other quality measures (linked to “Outcome measures” work)
Summary

- R ealise and Recognise
- S ynthesise and Systematise
- V isualise
- P ublicise
Thank you for watching, and watch out for that Survey Monkey!

Contact Details:

• Dr Andrew Moore
• andrew.moore7@nhs.net