

**‘You matter, we care’**

Trust Board Meeting (Part 1)	Date: December 2013
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<b>Title:</b>	Clinical Intelligence report – Inpatient services
<b>Item:</b>	BD/13/271

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<b>History:</b>	<i>Deferred from Q&amp;S November 19<sup>th</sup> 2013</i>
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<b>This report is for:</b>	
Decision	x
Discussion	x
To Note	

<b>Executive summary of key issues:</b>
<p>The use of trust wide electronic systems has facilitated the accumulation of large volumes of information in the data warehouse. If the trust is able to ‘mine’ the information and triangulate the outputs with other sources, we will be able to identify top performing teams and teams working at full capacity. We can then offer targeted, supportive interventions.</p> <p>All information will be available in real time as a Team Outcome report through the interactive Clinical Intelligence application. Teams and individuals will be able to view, download as required and use in supervision as well as follow the links to supporting data. Information will include absolute results, trends and benchmarks against measures taken from HONOS, patient risk scores, rate of admissions, length of stay, temporary staff use, staff sickness and MHA detentions, or others as indicated by clinical priorities.</p> <p>Relevant aspects of clinical intelligence will be summarised for review through Quality &amp; Standards, ESEC and Finance &amp; Planning committees and further work is planned to use clinical outcome and performance intelligence to improve our understanding of reference costs.</p> <p>The methodology and information on inpatient services are presented below. The full collection of charts is appended for information on this occasion only.</p>

This report addresses these Strategic Priorities:	
We will deliver the best care	X
We will support and develop our staff	
We will continually improve what we do	X
We will use our resources wisely	
We will be future focussed	

## 1. Introduction

Many factors impact on our workforce and systems and hence impact on the quality of care delivered. The datasets discussed below may serve as proxy measures of staff workload *intensity* and workload *capacity* and so offer an approximation of the functional status of the overall care pathway or system.

## 2. Methodology

Ideally, a quantitative, natural science methodology attempts to identify causal links between antecedents (the independent variables) and consequences (the dependent variables).

Independent variables, e.g.,

- Patient-specific measures, e.g. those which reflect the mental state, degree of functional impairment, and risk behaviours.
- Organisational factors, e.g. bed numbers, work force numbers, sickness rates

Dependent variables, e.g.,

- Clinical activities, staff assessments, decisions and interventions.

In reality, the relationships between these variables is complex, for example, staff sickness may be both independent of, and dependent on, patient-specific measures such as acuity of symptoms.

Thus data is viewed within a descriptive framework. There are few national benchmarks hence the main comparative statistics will be peer comparison (comparing like teams) and self-comparison (comparing results for the same team over time).

## 3. Data

Data can be drawn automatically from several trust-wide systems, including the electronic patient record (RiO), the cluster allocation tool (CAST), the electronic staff record, (ESR) and Rosterpro.

Variable	Measure	What it reveals
Patient level scores	HoNOS score	A higher score reflects increasing severity of symptoms & functional impairment
	Risk screen score	A higher score reflects an increasing risk of hazardous outcomes as assessed by staff
Ward and Team level averages	Temporary staff use	Percentage of temporary staff on shift
	Staff sickness rates	Percentage staff absence, includes long

		and short term absence.
	MHA detentions	Percentage of admissions under S2 and S3. Proxy for severity of patient presentation and workload from tribunals
	Rate of admissions	The number of admissions per day

Detailed explanations and charts for each measure are shown in Appendix 1: Clinical Intelligence full report.

#### 4. Analysis

Current **HoNOS scores** show considerable variation between patients but no significant variation between service settings, although there is a trend for higher HoNOS scores in PICU settings. This implies that, apart from PICU, the acuity of patient symptoms is similar across all inpatient wards.

HoNOS score *trends* show that the severity of presentation (or acuity) of admissions has increased over 2 years. HoNOS scores demonstrate that patients admitted to acute adult wards today show similar acuity to those who reached the threshold for admission to PICU two years ago.

**Risk screen scores** show differences between service settings, with lowest scores older adult functional wards and highest scores for PICU. This is an expected finding. Trends in this measure over time, for a service or ward, would suggest either changes in a given population, or a change in practice within a staff group. Risk screen scores have been largely stable over 2 years, with the exception of an upwards trend for inpatient rehabilitation wards.

Patients detained under the **MHA** have increased from 50% to 70% on adult wards and from >90% to 100% in PICU over two years.

The **rate of admissions** has remained steady while **length of stay** has reduced significantly over 2 years. There has been a 15% reduction in the number of occupied beds in the trust over this time. These trends have considerable impact on workload intensity.

**Staff sickness levels** vary significantly between wards, with some showing continuing upward trends over 2 years.

Percentage of **temporary staff** on shift varies significantly between wards and over time.

## 5. Conclusion

Juniper and Sycamore are identified as wards where workload intensity is highest, and where full workload capacity is being reached. There is potential for a similar picture in Beechlydene. Results from other quality measures, for example mock CQC inspections and IQ results, are congruent and offer a degree of validation. It is proposed that these clinical intelligence measures (plus others as appropriate) are a valuable addition to current information.

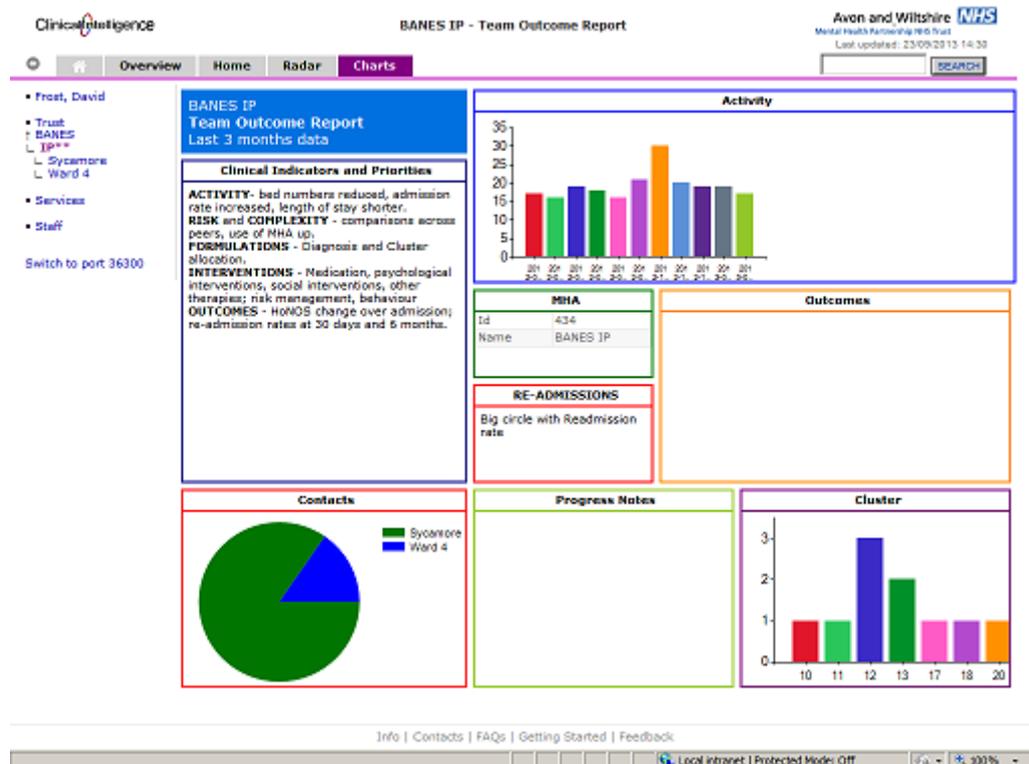
## 6. Next steps

It is proposed to make a Team Outcome Report available through the Clinical Intelligence application for teams to view their performance. Measures, including national and trust-wide benchmarks where possible, will include:

- Activity – Length of stay in days over last two years (to show trend)
- MHA – number of Section 2 and 3 and AWOL
- Re-admissions – the readmission rate
- Outcomes – HoNOS score change between admission and discharge
- Contacts – by profession group
- Progress Notes – by professional group
- Clusters – distribution

Comparison of team & service performance against reference costs will enhance understanding of where improvements can be made.

A mock Team Outcome report is included below. Further work is underway to produce a similar dashboard for community services.



## Appendix 1: Summary report and Commentary

SOURCE	RiO					RostaPro		IQ September 2013		
	HoNOS outliers	Average Risk Score outliers	LOS outliers	Detained S2 & S3 (%) 09/12 to 09/13	Admissions Per bed, per week. 09/12 to 09/13	Temporary staff (%) trend	Sickness trend (2 years)	Total sickness (%)	Supervision (%) last 30 days, accessed 02.11.13	F&F
<b>Juniper</b>			high	61	0.67	↗	↗↗	17.67	45.9	-25
<b>Sycamore</b>	high	high	high	71	0.71	↗	↗↗	22.15	73.3	-33
<b>Imber</b>		low	high	62	0.68			14.81	60	No result given
<b>Beechlydene</b>	low			63	0.92	↗	↗	7.27	67.6	0
<b>Oakwood</b>				70	Not available			2.56	59.5	No returns
<b>Silver Birch</b>				80	0.56			13.17	67.6	0
<b>Lime</b>				71	0.70			6.00	61.8	42
<b>Applewood</b>		low		56	0.66			6.11	88.2	44

### Commentary

Initial findings suggest that the intensity of the work on inpatient units has increased over the past 2 years. Shorter admissions, increasing acuity and more detained patients mean that staff are required to spend more time working at 'peak capacity', with less time for respite and recovery. Some predicted outcomes of 'system stress', namely increased rates of sickness, are evident in the most stressed wards. **Juniper and Sycamore show greatest numbers of outliers against these measures and are deemed to be under greatest stress, with greatest risks for quality of care.**

