

# CCG improvement and assessment framework 2017/18: Methodology Manual



**NHS England INFORMATION READER BOX****Directorate**

Medical	<b>Operations and Information</b>	Specialised Commissioning
Nursing	Trans. & Corp. Ops.	Strategy & Innovation
Finance		

**Publications Gateway Reference:****08248**

<b>Document Purpose</b>	Resources
<b>Document Name</b>	CCG IAF Methodology Manual
<b>Author</b>	NHS England
<b>Publication Date</b>	12 July 2018
<b>Target Audience</b>	CCG Clinical Leaders, CCG Accountable Officers, CSU Managing Directors, Care Trust CEs, Foundation Trust CEs, Medical Directors, Directors of PH, Directors of Nursing, NHS England Regional Directors, NHS England Directors of Commissioning Operations, All NHS England Employees, Directors of HR, Directors of Finance, Allied Health Professionals, GPs, Communications Leads, Emergency Care Leads, Directors of Children's Services, NHS Trust CEs
<b>Additional Circulation List</b>	NHS England Directors of Commissioning Operations
<b>Description</b>	To summarise the methods used in the production of indicators and ratings in the CCG IAF.
<b>Cross Reference</b>	N/A
<b>Superseded Docs (if applicable)</b>	N/A
<b>Action Required</b>	N/A
<b>Timing / Deadlines (if applicable)</b>	<b>None</b>
<b>Contact Details for further information</b>	CCG Assessment Team Operations & Information NHS England Skipton House

**Document Status**

This is a controlled document. Whilst this document may be printed, the electronic version posted on the intranet is the controlled copy. Any printed copies of this document are not controlled. As a controlled document, this document should not be saved onto local or network drives but should always be accessed from the intranet.

## **Methodology manual for the CCG improvement and assessment framework 2017/18**

Publication Gateway reference number: 08248

Version number: 1.2

First published: July 2018

Prepared by: NHS England analytical team

Classification: OFFICIAL

This document can be made available in alternative formats, such as easy read or large print, and may be available in alternative languages, upon request. Please contact 0300 311 22 33 or email [england.contactus@nhs.net](mailto:england.contactus@nhs.net)

## Contents

<b>Purpose</b> .....	<b>1</b>
<b>Introduction</b> .....	<b>1</b>
<b>Indicators</b> .....	<b>1</b>
Time period .....	1
Frequency .....	1
Timeliness .....	2
Standardisation and risk adjustment .....	2
Assurance .....	2
<b>Indicator banding</b> .....	<b>2</b>
Measures of deviation .....	2
Transformation and z scores .....	2
Over-dispersion .....	3
Scores and thresholds .....	3
Missing data .....	5
Extreme values .....	5
<b>Aggregation of domain-weighted scores</b> .....	<b>5</b>
Aggregation and weighting .....	5
Assessment ratings .....	6
Choice of thresholds .....	6
<b>Presentation and visualisation</b> .....	<b>7</b>
MyNHS .....	7
Data tool .....	7
Underlying data .....	7
Disclosure control .....	7
Revisions .....	7
<b>Annex A: Overview of process</b> .....	<b>8</b>
<b>Annex B: Indicator specification</b> .....	<b>9</b>

## Purpose

To summarise the methods used in the production of indicators and ratings in the CCG IAF.

## Introduction

The CCG Improvement and Assessment Framework (CCG IAF) assists improvement alongside the statutory assessment function of NHS England (NHSE). It aligns with NHSE's Mandate and planning guidance, with the aim of unlocking change and improvement in a number of key areas. This approach aims to reach beyond CCGs, enabling local health systems and communities to assess their own progress from ratings published online.

The Framework includes a set of 51 indicators and, at the end of the financial year, there is a process to derive an overall year-end assessment for each CCG. A high level summary of the process can be found in Annex A.

## Indicators

The list of indicators used is in the spreadsheet in Annex B. Further detail about the indicators is in the "Technical annex 2017/18" document available in the "Framework documents" section at:

<https://www.england.nhs.uk/commissioning/ccg-assess/>

The main considerations when selecting and defining indicators were:

### Time period

In deciding what time period should be used for an indicator, the aim was to provide denominators large enough to reliably identify statistically significant differences in performance.

For example, for an indicator with an average CCG proportion of 0.4 (40%) based on an average of about 400 individuals per year, the standard error of a typical CCG's value based on 3 months' data is estimated as  $\sqrt{((0.4 \times (1-0.4))/100)} = 0.048$ . This would allow a difference of about 10 percentage points from a reference indicator value (e.g. a standard) to be identified as statistically significant.

If opinion was that a difference of 5 percentage points from standard was the minimum material difference and there was a need to identify such differences, then indicator values based on a quarter's data would not meet the need, as many CCGs would have values which were materially but not statistically significantly different from the standard. In such circumstances, use of 12 months' rather than 3 months' data was considered, as this would halve the estimated standard error, and allow such differences to be identified. If quarterly results were important, then use of a rolling twelve months' data recalculated every 3 months was considered.

### Frequency

Once the required time period has been identified, the frequency was chosen to meet business needs, with the use of rolling data periods where needed.

## Timeliness

The most recent available data were used and indicators were aligned as closely as possible with the 2017/18 financial year. The exact time periods used for each indicator are provided in the table at Annex B.

## Standardisation and risk adjustment

Where needed, indicators were standardised or risk adjusted to provide a fair assessment of CCGs.

## Assurance

The NHS Digital document below was used as a guide to ensure indicators selected for the framework were fit for purpose:

<https://files.digital.nhs.uk/B2/D99FE9/Application%20Guidance.docx>

## Indicator banding

The general approach to indicator banding is set out below. Annex B contains specifics for each indicator. **All scores were calculated on a scale of 0 (bad) to 2 (good).**

## Measures of deviation

Where there was an agreed national standard, target, ambition or trajectory (as detailed in Table 1), deviation was measured relative to the standard, target, ambition or trajectory value. Otherwise, deviation from the England mean value was measured.

## Transformation and z scores

z scores were calculated for most indicators where this was possible, using transformation where necessary to stabilise the variance.

- **For proportions** (equivalently percentages), the arcsin $\sqrt{\phantom{x}}$  transformation was used:

$$z = 2\sqrt{n} (\arcsin\sqrt{r/n} - \arcsin\sqrt{p})$$

where the observed proportion had numerator  $r$  and denominator  $n$ , and  $p$  was the England mean proportion, or the value of the standard. The standard error in this case was:

$$s = 1 / (2\sqrt{n})$$

- **For rates**, the  $\sqrt{\phantom{x}}$  transformation was used:

$$z = 2(\sqrt{O} - \sqrt{E})$$

where  $O$  was the observed count and  $E$  was the expected count if the England mean rate was applied. The standard error in this case was:

$$s = 1 / (2\sqrt{E})$$

- Otherwise, where available, the value of the standard error  $s$  was used, or an estimate:

$$s = \frac{(ucl - lcl)}{(2 \times 1.96)}$$

where  $ucl$  and  $lcl$  were the upper and lower 95% confidence limits, respectively. Here,  $z$  was the deviation from the England mean or standard, divided by  $s$ .

- **Where z scoring was unsuitable**, bandings were derived directly on the same 0-2 scale:
  - RAG ratings: Red = 0, Amber = 1, Green = 2 (or Red = 0, Amber = 0.67, Green = 1.33, Green star = 2 where there was a four point scale).
  - Y/N ratings (where Y was good) were scored Y = 2, N = 0.
  - A direct relationship with “good”/“bad” was used where possible – e.g. a percentage based on a score of 0-15, where below 10 was “bad”, would have scored 0% to 66.7% as 0, between 66.7% and 83.3% as 1, and above 83.3% as 2.
  - Otherwise, quartiles or deciles were used, with the lowest scored 0, the highest 2, and others 1.

### Over-dispersion

For most indicators where  $z$  scores were used, over-dispersion corrections were applied<sup>1</sup>. A random effects model was used, whereby excess variation in the CCG indicator values was assumed to be due to shortcomings in the risk adjustment processes. In calculating the over-dispersion parameter  $\tau^2$ , 10% of the CCG data values were winsorised (their values reset to the 10<sup>th</sup> or 90<sup>th</sup> percentile values) at each end of the distribution.  $z$  scores were then rescaled by multiplying by  $\sqrt{s^2/(s^2 + \tau^2)}$  where  $s$  was the standard error of the data point.

Over-dispersion corrections were not applied to indicators where there were agreed standards or targets (listed in the table below) as CCGs were expected to meet these irrespective of variation which might form part of a risk adjustment process. Corrections were applied, however, where there were national ambitions or trajectories which applied primarily at the national level, rather than being expected to be met by each CCG regardless.

For a small number of indicators, over-dispersion corrections were not applied due to the fact that the data needed to calculate them were unavailable.

### Scores and thresholds

Where  $z$ -scores were available, they were converted to scores as follows:

- If  $z < -1.96$ , score 0: CCGs which were outliers in a negative direction.
- If  $-1.96 \leq z < 1.96$ , score 1: CCGs which were within the expected range.
- If  $z \geq 1.96$ , score 2: CCGs which were outliers in a positive direction.

<sup>1</sup> The calculation and application of the over dispersion parameter used the method described in Spiegelhalter, D.J (2005) [Funnel plots for comparing institutional performance. *Statistics in Medicine* 24:1185-1202].

In this case, a large positive z corresponds to a “good” indicator value – the scale was reversed where necessary so that a score of 2 was always the “best”.

Where agreed standards (or targets, ambitions or trajectories) had been used in constructing the z scores, an alternative scoring system was used to distinguish between:

- If  $z < -1.96$ , score 0: CCGs which were outliers in a negative direction.
- If  $-1.96 \leq z < 0$ , score 0.75: CCGs which were within the expected range but had not met the standard.
- If  $0 \leq z < 1.96$ , score 1.25: CCGs which were within the expected range and had met the standard.
- If  $z \geq 1.96$ , score 2: CCGs which were outliers in a positive direction.

The indicators affected are listed in Table 1 below. Changes (by exception) were agreed between the relevant clinical panel and NHS England. Again, the scale was reversed if needed so that a score of 2 was best.

**Table 1: Indicators with standards, trajectories, targets or ambitions**

Ref	Name	Standard, trajectory, target and ambition values
Standards		
107a	Antimicrobial resistance: appropriate prescribing of antibiotics in primary care	1.161 (target)
107b	Antimicrobial resistance: appropriate prescribing of broad spectrum antibiotics in primary care	10% (target)
122a	Cancers diagnosed at early stage	53.5% (trajectory)
122b	People with urgent GP referral having first definitive treatment for cancer within 62 days of referral	85% (standard)
123a	Improving Access to Psychological Therapies – recovery	50% (standard)
123c	People with first episode of psychosis starting treatment with a NICE-recommended package of care treated within 2 weeks of referral	50% (standard)
124a	Reliance on specialist inpatient care for people with a learning disability and/or autism	TCP <sup>2</sup> specific (trajectory)
125d	Maternal smoking at delivery	9.7% (trajectory)

<sup>2</sup> TCP targets apply to Transforming Care Partnerships; achievement is measured at TCP level and attributed to each of its constituent CCGs.



126a	Estimated diagnosis rate for people with dementia	66.7% (standard)
127c	Percentage of patients admitted, transferred or discharged from A&E within 4 hours	95% (standard)
129a	Patients waiting 18 weeks or less from referral to hospital treatment	92% (standard)
<b>Others</b>		
122c	One-year survival from all cancers	72.3% (trajectory)
125a	Neonatal mortality and stillbirths	0.67% (ambition)

### Missing data

Indicators were only used in the assessment if values for the majority of CCGs were available. One indicator, 123e: Mental health crisis team provision, was excluded because data were not available at the time of assessment.

In cases where there were missing or seriously incomplete data for individual CCGs and these represented a failing on the part of the CCG (for example, a failure to encourage adequate participation in the diabetes clinical audit), CCGs were given a banding of 0 for the indicator(s) in question. Otherwise, they were given a central banding of 1.

### Extreme values

Extreme values were checked and, if found to be errors, treated as missing (as detailed above). Then, all indicators were checked visually using funnel plots, to ensure calculations had not been skewed by any remaining extreme values. Note that if over-dispersion corrections were used as part of a z-scoring process for the indicator, such values were included in the portion of the distribution which was winsorised prior to calculating the corrections.

### Aggregation of domain-weighted scores

Once each indicator had been banded for each CCG on the 0-2 scale, they were aggregated at CCG level into three separate “domains” (listed below), which were each weighted. These “domain-weighted scores” formed the basis for application of thresholds between final rating categories. Note that the scores themselves are not made public as this would imply a “league table”, which is a more subtle classification than is justified by the data.

### Aggregation and weighting

The three domains and their weights are listed below. The table at Annex B details the domain to which each indicator was assigned.

- Quality of leadership (indicator 165a): 25%
- Finance (indicator 141b): 25%

- The remaining performance and outcomes measures: 50%

For each CCG, the aggregated score  $S$  was constructed as:

$$S = \sum w_i(S_i/d)$$

where the weighting for the domain to which the indicator belonged was  $w_i$ , the CCG banding for the indicator was  $S_i$  (a value between 0 and 2), and  $d$  was the denominator, i.e. the overall count of indicators in the weighting domain (this was 1 for Leadership, 1 for Finance, and 48 for the remainder<sup>3</sup>). A worked example is provided at Step 3 of Annex A.

### Assessment ratings

CCGs were ranked by their overall scores and divided into four distinct categories:

- Outstanding
- Good
- Requires improvement
- Inadequate

### Choice of thresholds

The thresholds between categories were defined such that they would, where possible, separate CCGs with meaningful differences in their overall scores. In addition, unless there were compelling reasons otherwise, it was expected that there would be more CCGs in the middle two categories than in the two extremes.

The following overarching principles were applied:

- **Between Requires improvement and Good:** If a CCG was performing relatively well overall, their weighted score would be expected to be greater than 1. If every indicator value for every CCG were within a mid-range of values, not significantly different from its set reference point, each indicator for that CCG would be scored as 1, resulting in an average (mean) weighted score of 1. This was therefore selected as an appropriate threshold between the two middle categories “good” and “requires improvement”.
- **Between Good and Outstanding:** The 50% weighting afforded to the Finance and Leadership indicators, which are both discrete (with 3 and 4 categories, respectively), resulted in a series of natural breaks in the distribution. In examining the 2017/18 scoring distribution, a natural break was identified at 1.45. This was therefore selected as the threshold between the top and second categories.
- **Between Inadequate and Requires improvement:** CCGs were rated in the bottom category if they were rated “Red” on both the Finance and Leadership indicators.

---

<sup>3</sup> One indicator, 123e: Mental health crisis team provision, was excluded from the domain because data were not available at the time of assessment.

## **Presentation and visualisation**

### **MyNHS**

The indicator set, including the end-of-year ratings is published on MyNHS at:

<https://www.nhs.uk/service-search/performance-indicators/organisations/ccg-better-care>

The indicators are presented by theme (Better Health, Better Care, Sustainability and Leadership) and area. The published CCG IAF is refreshed quarterly, although not all individual indicators are updated. The overall assessment scores are updated annually.

### **Data tool**

NHS England and CCGs are able to interrogate indicators in detail using the interactive CCG IAF dashboard, which is produced and circulated by NHS England alongside each quarterly indicator refresh.

### **Underlying data**

Most indicators are formed by secondary analyses of pre-published data. The CCG IAF is not intended as a vehicle for first publication. An extract containing the underlying data values is however released on NHS England's website each quarter at:

<https://www.england.nhs.uk/commissioning/ccg-assess/iaf/>

### **Disclosure control**

For the majority of indicators, which are formed from secondary analyses of pre-published data, issues of disclosure control do not arise. However, in rare cases where the IAF is the vehicle for publication of new and primary data, compliance is ensured with the NHS Anonymisation Standard detailed at:

<https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/standards-and-collections/isb1523-anonymisation-standard-for-publishing-health-and-social-care-data>

### **Revisions**

Where updated indicator values become available, indicators are reissued as part of the next regular quarterly release. In the event that significant errors which are material at a national level and which go beyond the level of revisions normally expected from quarter to quarter come to light, consideration is given to issue of a special revision. Advice on these matters is sought where required from the NHS England Lead Official for Statistics.

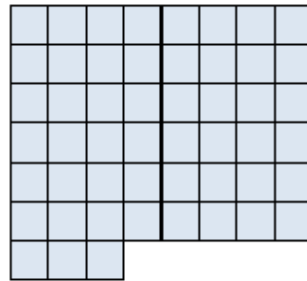
# Annex A: Overview of process

## Deriving the CCG IAF assessment ratings

### Step 1:

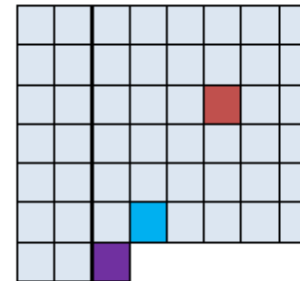
Indicators selected and calculated

There are 51 indicators in the 2017/18 CCG IAF...



...of which, 50 are included in the end of year rating

(1 indicator, **Mental health crisis team provision**, is excluded because data are not yet available)

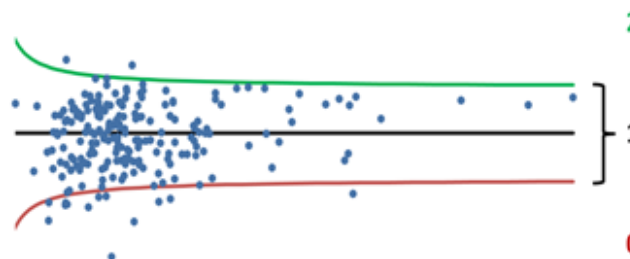


Values are derived for each CCG for each indicator. There is 1 indicator in the **Finance** domain and 1 for **Quality of leadership**.

### Step 2:

Indicators banded

Measure of deviation ("z-score") calculated for each CCG value. Outlying CCGs assigned to bands with scores of 0 (worst) to 2 (best).



The process is repeated for all 50 available indicators (example scores shown for **Anytown CCG**).

1	1	1	1	0	1	0	2
1	1	2	1	1	1	0	1
1	1	1	2	1	1	1	1
1	1	1	2	1	2	1	1
0	1	1	1	1	2	1	1
1	1	1	2	0	2	0	1
2	0	1					

### Step 3:

Weights applied, average score calculated

Weightings set to:

- Finance: 25%
- Leadership: 25%
- The rest: 50%

Bandings for each domain are summed and divided by the count of indicators in that domain, then multiplied by the relevant weighting.

#### Worked example for Anytown CCG

Overall score calculated for CCG as sum of:

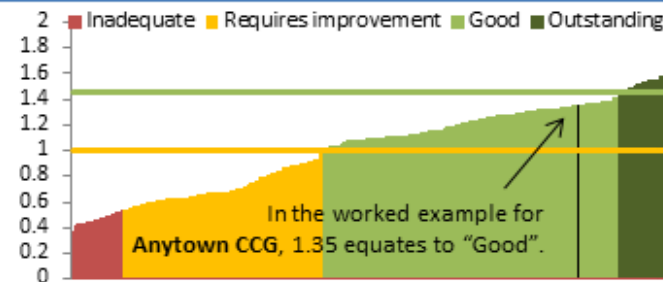
- [Finance] 25% \* (2 / 1 indicator)
- + [Leadership] 25% \* (1.333 / 1 indicator)
- + [The rest] 50% \* (49.5 / 48 indicators)

**= score of 1.35**  
(out of a possible 2)

### Step 4:

Scores plotted and rating thresholds set

The distribution of average scores (out of 2) is plotted for all 207 CCGs. The threshold between "Requires Improvement" and "Good" is then set at the mid-point of 1; for "Outstanding" it is set at a natural break at the upper end of the distribution and for "Inadequate" an auto-rule is applied to include all CCGs whose Finance and Leadership ratings are both Red. In the example shown, there is a step change at 1.45 which forms the lower threshold for "Outstanding".



# Annex B: Indicator specification

Description								Outlier calculation					Banding								
Ref	Name	Assessment domain	Domain weighting	Time period	Indicator type	Required direction	Included	z-scored	Deviation from	Methodology	Winsorisation level	Over-dispersion	Band 0 if	Band 0.5 if	Band 0.67 if	Band 0.75 if	Band 1 if	Band 1.25 if	Band 1.33 if	Band 1.5 if	Band 2 if
102a	Percentage of children aged 10-11 classified as overweight or obese	Other	50%	2014/15 to 2016/17	Proportion	Low	Yes	Yes	England mean	arcsinv	10%	Random effects	z≥1.96				-1.96≤z<1.96				z<-1.96
103a	Diabetes patients that have achieved all the NICE recommended treatment targets: three (HbA1c, cholesterol and blood pressure) for adults and one (HbA1c) for children	Other	50%	2016-17	Proportion	High	Yes	Yes	England mean	arcsinv	10%	Random effects	z<-1.96				-1.96≤z<1.96				z≥1.96
103b	People with diabetes diagnosed less than a year who attend a structured education course	Other	50%	2016-17 (2015 cohort)	Proportion	High	Yes	Yes	England mean	arcsinv	10%	Random effects	z<-1.96				-1.96≤z<1.96				z≥1.96
104a	Injuries from falls in people aged 65 and over	Other	50%	17-18 Q3 (12 month rolling)	Rate	Low	Yes	Yes	England mean	√	10%	Random effects	z≥1.96				-1.96≤z<1.96				z<-1.96
105b	Personal health budgets	Other	50%	17-18 Q4	Rate	High	Yes	No					dist from plan<-25%				-25%<dist from plan<-10%				dist from plan>-10%
106a	Inequality in unplanned hospitalisation for chronic ambulatory care sensitive and urgent care sensitive conditions	Other	50%	17-18 Q3 (12 month rolling)	Slope	Low	Yes	Yes	England mean				z≥1.96				-1.96≤z<1.96				z<-1.96
107a	Antimicrobial resistance: appropriate prescribing of antibiotics in primary care	Other	50%	Jan-18 (12 month rolling)	Rate	Low	Yes	Yes	Target	√			z≥1.96			Not at target and not scoring 0				At target and not scoring 2	z<-1.96
107b	Antimicrobial resistance: appropriate prescribing of broad spectrum antibiotics in primary care	Other	50%	Jan-18 (12 month rolling)	Proportion	Low	Yes	Yes	Target	arcsinv			z≥1.96			Not at target and not scoring 0				At target and not scoring 2	z<-1.96
108a	The proportion of carers with a long term condition who feel supported to manage their condition	Other	50%	2017	Rate	High	Yes	Yes	England mean	√			z<-1.96				-1.96≤z<1.96				z≥1.96
121a	Provision of high quality care: hospital	Other	50%	17-18 Q4	Score	High	Yes	No					score<55.5%				55.5%≤score<66.7%				score≥66.7%
121b	Provision of high quality care: primary medical services	Other	50%	17-18 Q4	Score	High	Yes	No					score<55.5%				55.5%≤score<66.7%				score≥66.7%
121c	Provision of high quality care: adult social care	Other	50%	17-18 Q4	Score	High	Yes	No					score<55.5%				55.5%≤score<66.7%				score≥66.7%
122a	Cancers diagnosed at early stage	Other	50%	2016	Proportion	High	Yes	Yes	Trajectory	arcsinv			z<-1.96			Not at standard and not scoring 0				At standard and not scoring 2	z≥1.96
122b	People with urgent GP referral having first definitive treatment for cancer within 62 days of referral	Other	50%	17-18 Q1 to 17-18 Q4	Proportion	High	Yes	Yes	Standard	arcsinv			z<-1.96			Not at standard and not scoring 0				At standard and not scoring 2	z≥1.96
122c	One-year survival from all cancers	Other	50%	2015	Rate	High	Yes	Yes	England mean	√			z<-1.96			Not at standard and not scoring 0				At standard and not scoring 2	z≥1.96
122d	Cancer patient experience	Other	50%	2016	Score	High	Yes	Yes	England mean				z<-1.96				-1.96≤z<1.96				z≥1.96
123a	Improving Access to Psychological Therapies – recovery	Other	50%	Feb-18 (3 month rolling)	Proportion	High	Yes	Yes	Target	arcsinv			z<-1.96			Not at standard and not scoring 0				At standard and not scoring 2	z≥1.96

Description								Outlier calculation					Banding								
Ref	Name	Assessment domain	Domain weighting	Time period	Indicator type	Required direction	Included	z-scored	Deviation from	Methodology	Winsorisation level	Over-dispersion	Band 0 if	Band 0.5 if	Band 0.67 if	Band 0.75 if	Band 1 if	Band 1.25 if	Band 1.33 if	Band 1.5 if	Band 2 if
123b	Improving Access to Psychological Therapies – access	Other	50%	Feb-18 (3 month rolling)	Proportion	High	Yes	Yes	England mean	arcsin√	10%	Random effects	z<-1.96				-1.96≤z<1.96				z≥1.96
123c	People with first episode of psychosis starting treatment with a NICE-recommended package of care treated within 2 weeks of referral	Other	50%	Mar-18 (12 month rolling)	Proportion	High	Yes	Yes	Target	arcsin√			z<-1.96			Not achieving standard and not scoring 0		Achieving standard and not scoring 2			z≥1.96
123d	Children and young people's mental health services transformation	Other	50%	Dec-17 (12 month rolling)	Proportion	High	Yes	Yes	England mean	arcsin√	10%	Random effects	z<-1.96				-1.96≤z<1.96				z≥1.96
123f	Mental health out of area placements	Other	50%	Feb-18 (3 month rolling)	Rate	Low	Yes	No					rate>200				200>rate≥10				score<10
123e	Mental health crisis team provision	Other	50%	n/app	Proportion	High	No														
124a	Reliance on specialist inpatient care for people with a learning disability and/or autism	Other	50%	17-18 Q4	Rate	Low	Yes	Yes	Trajectory	√			z≥1.96			Not achieving target and not scoring 0		Achieving target and not scoring 2			z<-1.96
124b	Proportion of people with a learning disability on the GP register receiving an annual health check	Other	50%	2016-17	Proportion	High	Yes	Yes	England mean	arcsin√	10%	Random effects	z<-1.96				-1.96≤z<1.96				z≥1.96
124c	Completeness of the GP learning disability register	Other	50%	2016-17	Proportion	High	Yes	Yes	England mean	arcsin√	10%	Random effects	z<-1.96				-1.96≤z<1.96				z≥1.96
125d	Maternal smoking at delivery	Other	50%	17-18 Q1 to 17-18 Q3	Proportion	Low	Yes	Yes	Trajectory	arcsin√			z≥1.96			Not achieving target and not scoring 0		Achieving target and not scoring 2			z<-1.96
125a	Neonatal mortality and stillbirths	Other	50%	2016	Proportion	Low	Yes	Yes	England mean	arcsin√			z≥1.96				-1.96≤z<1.96				z<-1.96
125b	Women's experience of maternity services	Other	50%	2017	Score	High	Yes	Yes	England mean				z<-1.96				-1.96≤z<1.96				z≥1.96
125c	Choices in maternity services	Other	50%	2017	Score	High	Yes	Yes	England mean				z<-1.96				-1.96≤z<1.96				z≥1.96
126a	Estimated diagnosis rate for people with dementia	Other	50%	Mar-18	Rate	High	Yes	Yes	Target	√			z<-1.96			Not achieving standard and not scoring 0		Achieving standard and not scoring 2			z≥1.96
126b	Dementia care planning and post-diagnostic support	Other	50%	2016-17	Proportion	High	Yes	Yes	England mean	arcsin√	10%	Random effects	z<-1.96				-1.96≤z<1.96				z≥1.96
127b	Emergency admissions for urgent care sensitive conditions	Other	50%	17-18 Q3 (12 month rolling)	Rate	Low	Yes	Yes	England mean	√	10%	Random effects	z≥1.96				-1.96≤z<1.96				z<-1.96
127c	Percentage of patients admitted, transferred or discharged from A&E within 4 hours	Other	50%	Apr-17 to Mar-18	Proportion	High	Yes	Yes	Standard	arcsin√			z<-1.96			Not achieving standard and not scoring 0		Achieving standard and not scoring 2			z≥1.96
127e	Delayed transfers of care per 100,000 population	Other	50%	Apr-17 to Mar-18	Rate	Low	Yes	Yes	England mean	√	10%	Random effects	z≥1.96				-1.96≤z<1.96				z<-1.96

Description								Outlier calculation					Banding										
Ref	Name	Assessment domain	Domain weighting	Time period	Indicator type	Required direction	Included	z-scored	Deviation from	Methodology	Winsorisation level	Over-dispersion	Band 0 if	Band 0.5 if	Band 0.67 if	Band 0.75 if	Band 1 if	Band 1.25 if	Band 1.33 if	Band 1.5 if	Band 2 if		
127f	Population use of hospital beds following emergency admission	Other	50%	17-18 Q3 (12 month rolling)	Rate	Low	Yes	Yes	England mean	v	10%	Random effects	z≥1.96									z<-1.96	
105c	Percentage of deaths with three or more emergency admissions in last three months of life	Other	50%	2017	Proportion	Low	Yes	Yes	England mean	arcsin√			z≥1.96									z<-1.96	
128b	Patient experience of GP services	Other	50%	2017	Proportion	High	Yes	Yes	England mean	arcsin√	10%	Random effects	z<-1.96									z≥1.96	
128c	Primary care access – percentage of registered population offered full extended access	Other	50%	Jan-18	Proportion	High	Yes	No					proportion<33.3%				33.3%≤proportion<66.6%					proportion≥66.6%	
128d	Primary care workforce	Other	50%	Sep-17	Rate	High	Yes	Yes	England mean	v	10%	Random effects	z<-1.96									z≥1.96	
129a	Patients waiting 18 weeks or less from referral to hospital treatment	Other	50%	Mar-18	Proportion	High	Yes	Yes	Standard	arcsin√			z<-1.96			Not achieving standard and not scoring 0						Achieving standard and not scoring 2	z≥1.96
130a	Achievement of clinical standards in the delivery of 7 day services	Other	50%	2017	Score	High	Yes	No					score = 0	score = 1			score = 2				score = 3	score = 4	
131a	Percentage of NHS Continuing Healthcare full assessments taking place in an acute hospital setting	Other	50%	17-18 Q1 to 17-18 Q4	Proportion	Low	Yes	Yes	England mean	arcsin√	10%	Random effects	z≥1.96									z<-1.96	
132a	Evidence that sepsis awareness raising amongst healthcare professionals has been prioritised by the CCG	Other	50%	2017	RAGG*	High	Yes	No					red		amber						green	green star	
141b	In-year financial performance	Finance	25%	17-18 Q4	RAG	High	Yes	No					red				amber					green	
144a	Utilisation of the NHS e-referral service to enable choice at first routine elective referral	Other	50%	Feb-18	Rate	High	Yes	No					rate<0.8									0.8≤rate<1	rate≥1
162a	Probity and corporate governance	Other	50%	17-18 Q4	RAG	High	Yes	No					red									amber	green
163a	Staff engagement index	Other	50%	2017	Score	High	Yes	No					score<3.75									3.75≤score<3.85	score≥3.85
163b	Progress against the Workforce Race Equality Standard	Other	50%	2017	Score	Low	Yes	No								lower quartile	middle two quartiles					upper quartile	
164a	Effectiveness of working relationships in the local system	Other	50%	17-18	Score	High	Yes	No					score<60									60≤score<70	score≥70
166a	Compliance with statutory guidance on patient and public participation in commissioning health and care	Other	50%	2017	RAGG*	High	Yes	No					red		amber							green	green star
165a	Quality of CCG leadership	Leadership	25%	17-18 Q4	RAGG*	High	Yes	No					red		amber							green	green star