

Annex to the consultation: changes to the way CQC regulates, inspects and monitors care services

# Proposed model for intelligent monitoring and expert judgement in acute NHS trusts

June 2013











## The Care Quality Commission is the independent regulator of health and adult social care in England.

#### Our purpose:

We make sure health and social care services provide people with safe, effective, compassionate, high-quality care and we encourage care services to improve.

#### Our role:

We monitor, inspect and regulate services to make sure they meet fundamental standards of quality and safety and we publish what we find, including performance ratings to help people choose care.

#### **Our principles:**

- We put people who use services at the centre of our work.
- We are independent, rigorous, fair and consistent.
- We have an open and accessible culture.
- We work in partnership across the health and social care system.
- We are committed to being a high performing organisation and apply the same standards of continuous improvement to ourselves that we expect of others.
- We promote equality, diversity and human rights.

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## Introduction

- ▶ We are making significant changes to how we monitor, inspect and regulate care services to make sure they provide people with safe, effective, compassionate, high-quality care. This document focuses on the changes we are making to how we will monitor NHS acute services. It sets out our initial proposals for key indicators which we call 'tier one' indicators for NHS acute hospitals. We will monitor these indicators as part of our surveillance process to help us decide where and what to inspect. We want to test and develop these indicators with as wide a range of stakeholders as possible.
- ▶ The surveillance process will not draw definitive conclusions about the quality provided in a hospital, but will raise questions about the quality of care provided. The indicators will be used as 'smoke detectors' which will start to sound if a hospital is outside the expected range of performance or is showing declining performance over time for one or more indicators. We will then assess what the most appropriate response should be.
- ▶ We have set out our model of surveillance of the quality and safety of care in NHS acute hospitals in our main consultation document, *A new start: Consultation on changes to the way CQC regulates, inspects and monitors care services* at www.cqc.org.uk/inspectionchanges. This sets out how we will organise the potentially unlimited set of indicators that we could monitor in relation to hospitals into three tiers. Tier one from this model are those indicators we consider to be the most important for monitoring risks to the quality of care in acute hospital services.

- ➤ We have identified this set of indicators by looking at the key quality and safety issues for NHS hospitals and identifying the data there is available to measure them. We have based them around the five main questions we will ask about services:
- Are they safe?
- Are they effective?
- Are they caring?
- Are they responsive to people's needs?
- Are they well-led?

We recognise that there is also a range of information sources that may cut across more than one of these questions. For example, comments submitted via the 'Share Your Experience' form on CQC's website could relate to any of the above questions. We have presented these mainly textual sources under the heading of 'qualitative intelligence'.

▶ We first describe the principles behind the selection of these indicators, and an overview of the methodology we have used to identify each set of indicators for each of the five questions. Figure 1 provides an overview of the tier one indicators.



FIGURE 1: OVERVIEW OF 'TIER ONE' INDICATORS FOR NHS ACUTE TRUSTS

\* Additional indicators in development to ensure coverage of the identified 57 clinical areas.

# Development approach

- ▶ In order to identify the most important indicators for inclusion in this model, we have started by defining an ideal set of areas or dimensions for each of the five questions we will ask about services - are they safe, effective, caring, responsive and well-led? We have then identified datasets and existing indicators by testing their suitability using a set of principles (set out in table 1). These principles represent a high bar for any indicator to pass. In the short term, the indicators may not be sufficiently well defined to pass each of these principles. We have therefore been pragmatic in defining the first set of indicators. We also recognise that the analysis of the data will not be right all of the time – it may produce 'false positives' and 'false negatives'.
- ▶ While we have grouped our indicators around the five main questions we will ask about services, we recognise that many indicators will cut across more than one or all of those questions, for example the Friends and Family Test.
- ▶ We have undertaken some initial engagement with a number of NHS trusts and experts in the field of quality measurement. We will continue to engage with the widest range of stakeholders possible to help inform the content and use of the first set of indicators. We will also work to improve the robustness of the indicators through time, for example by working with NHS England and with the Royal Colleges to access information from clinical audits.

**TABLE 1: PRINCIPLES FOR THE DEVELOPMENT OF INDICATORS** 

<b>Pragmatic</b> : The indicator must cover the key elements of each of the five key questions as far as possible, keeping as close as possible to the remaining principles.	<b>Effective</b> : The indicator should be targeted in a way that it does not disincentivise behaviour on a personal, hospital or system level.
<b>Relevant</b> : 'Measures the correct thing' – the indicator should meaningfully measure the performance quality of a defined service area.	<b>Actionable</b> : The result of the indicator can be used to make operational or management decisions.
<b>Robust</b> : The indicator is derived from data which is difficult or undesirable to manipulate, e.g. legal penalties or financial consequences.	<b>Scientifically sound</b> : 'Measures correctly' – the indicator should have high specificity and sensitivity, and should be scientifically defined to give valid and reliable results.
<b>Timely</b> : Data should be available on a sufficiently timely basis (frequent) to allow a response in an appropriate timeframe (time-lag), e.g. monthly.	<b>Comparable</b> : The indicator can be compared internally (to previous time periods) and externally (to other providers).
<b>Clinically accepted</b> : The indicator should be recognised as valid and relevant by the clinical community, e.g. in medical literature, by medical bodies.	<b>Easily gathered</b> : Data should be simple, quick to collect and minimise the regulatory burden, e.g. collected routinely from existing clinical or administrative systems.

#### **Safety indicators**

We first identified all safety indicators that exist today within the NHS. We also looked at international systems to check whether they measured safety in a way that we could learn from. We also considered the issues that could potentially discourage the reporting of safety issues and took this into account in the selection of indicators for this domain. This has meant that as far as possible we have avoided including indicators that are based on voluntary data collections.

- ► Having identified a full list of available indicators, we then filtered against three criteria:
- Is there a strong incentive to report the information (such as a legal requirement)?
- Is the indicator robustly reported today?
- Does the indicator cover a reasonably wide definition of safety within the trust?

#### **Effectiveness indicators**

▶ Effectiveness is complex to measure given the wide range of clinical specialities within an NHS acute trust and the range of outcomes that can be measured. In addition, there are a huge number of areas for which national datasets are not yet available and where definitions of outcomes of treatment are debated. For the purposes of the monitoring model we have focused our measurement on risks of harm from poor quality care and treatment. Our approach is to use indicators that are clinically relevant rather than relying on overall hospital measures alone. We have defined the clinical areas we will focus on in the first set of indicators and then we have defined indicators for each of these areas

#### **Defining clinical areas**

▶ We started by identifying the main causes of mortality in hospitals in England. We then combined this analysis with the clinical areas that account for the highest number of patients treated each year in hospitals in England. We looked at these two indicators overall and also for maternity, children, mental health and older patients. The latter group were selected as they are more vulnerable in hospital settings than the general patient population. From this analysis we concluded that it would be reasonable to focus on the first 50% of activity and mortality, as this provided significant coverage of clinical services within an NHS trust. We then refined the list of

clinical areas using multiple reference sources, including:

- German Inpatient Quality Indicator system (also used in Switzerland and Austria)
- Dr Foster alert categories
- Existing NHS groupings (e.g. CCS and HRG sub-categories)
- Testing with clinicians.
- ► The resulting clinical areas are shown in table 2.

#### **TABLE 2: PRIORITISED CLINICAL AREAS**

#### Clinical areas

#### Trust level

- 1. Mortality at a trust level
- 2. Weekend mortality
- 3. Sepsis

#### **Cross-cutting areas**

- 4. Intensive care
- 5. A&E and trauma care
- 6. Anaesthetics and surgical services
- 7. Diagnostics
- 8. End of life care
- 9. OT/Physio/SALT/Nutrition

#### **Specific pathways**

- 10. Elderly pathway
- 11. Paediatric pathway
- 12. Cancer pathway (excl. surgery)

#### Cardiac conditions and care

- 13. Acute myocardial infarction
- 14. Heart failure
- 15. Cardiac surgery
- 16. Cardiac arrhythmia
- 17. Pacemakers & defibrillation
- 18. Cardiac ablation

#### **Stroke**

19. Stroke

## Nervous system conditions and care

- 20. Craniotomy
- 21. Epilepsy
- 22. Parkinson's

#### Neck & Head & ENT

- 23. Procedures on the ear, nose and throat
- 24. Procedures on the head and neck

#### Respiratory conditions and care

- 25. Pneumonia
- 26. Chronic obstructive pulmonary disease
- 27. Lung resection
- 28. Asthma

## Gastro-intestinal tract conditions and care

- 29. Cholecystectomy
- 30. Herniotomy
- 31. Resections of the colon and rectum
- 32. Gastric and oesophageal resections
- 33. Pancreatic and liver resections
- 34. Conditions of the upper GI tract

#### Vascular conditions and care

- 35. Carotid vascular surgery
- 36. Aneurysms
- 37. Lower limb bypass graft
- 38. Lower limb angioplasty
- 39. Amputation

#### Maternity and women's health

- 40. Delivery
- 41. Newborns

42. Procedures on the female reproductive organs

### Musculo-skeletal conditions and interventions

- 43. Elective hip surgery
- 44. Elective knee surgery
- 45. Spine and back
- 46. Fracture of neck and femur

#### **Urogenitary care and conditions**

- 47. Nephrectomy and partial nephrectomy
- 48. Cystectomy and bladder procedures
- 49. Procedures on the prostate
- 50. Renal failure

## Endocrine, metabolic and nutritional disorders

- 51. Diabetes
- 52. Malnutrition and dehydration

#### Haemotology

53. Anaemia

## Ophthalmological conditions and care

54. Cataract surgery

#### Skin conditions and care

55. Skin diseases

#### Mental health

- 56. Depressive disorders
- 57. Psychoses

#### Defining indicators for each clinical area

- ▶ For each of these clinical areas, we identified the key risks of harm that we could potentially measure. We prioritised indicators based on whether there were clearly defined outcomes and by using the principles set out in table 1 above. In general, mortality indicators meet these criteria better than other indicators of clinical effectiveness as mortality is routinely recorded and available from administrative data. We propose to measure mortality for all clinical areas where this appears to be a good measure of the effectiveness of care.
- ► To identify indicators for clinical areas where mortality is not an appropriate measure of effectiveness, we compiled a list of measures used in national and international systems. We identified over 2,000 indicators from across the UK, US, German and Australian health systems and from speaking to clinicians. We prioritised indicators from this very long list using our indicator development principles (in table 1) and the following questions:
- Does the indicator measure an outcome for the patient as opposed to a process?
- Does the indicator relate to avoidable morbidity?
- Does the indicator measure serious long-term consequences?
- Does the indicator measure a leading cause of morbidity?
- ▶ We have identified approximately 200 potential indicators across the clinical areas. However, the vast majority of these indicators are either not measured in the NHS today, or are not measured in a way that meets the criteria we have laid out. Therefore, we have identified an initial set of indicators and we will continue to develop indicators for all of the identified clinical areas. We propose to use emergency readmission rates for those clinical areas where there is no data for the more specific clinical indicators we have identified.

▶ In the longer term we will work with partners in order to develop better measures of effectiveness. In particular, we would like to make greater use of national clinical audits and to work with NHS England and the Royal Colleges to make more of this information available.

#### **Caring indicators**

- ► For these indicators we have focused on an individual's experience of the care that they receive rather than an institutional or process view of people's experiences. We have identified questions from the National Inpatient Survey and from the Friends and Family Test as the most reliable measures of caring. In order to have indicators for this domain that are relevant, timely and comparable, we would like to work with NHS England to explore how we can increase the frequency, consistency and granularity of the results. We would also like to propose that the following question is included in future: "Did you experience any problems with the quality of care you received in hospital that were not resolved?"
- ▶ It is important to note that there are other aspects of caring that are picked up within the qualitative indicators, such as themes from complaints, which are set out in the indicator listing below.

#### Responsiveness indicators

▶ To measure responsiveness, we have identified four potential areas to assess: access to services, discharge from services, responsiveness to individual patient needs (e.g. individual care plans) and responsiveness to the community's needs (e.g. integration with primary/community services). We identified that access to, and discharge from services are currently the areas of responsiveness that are most amenable to indicators.

#### Well-led indicators

▶ To identify indicators for this domain we started by creating a long list of potential indicators based on sources of organisational stress, internal indicators of stress and external indicators of stress. We then identified the list by applying the indicator principles and comparing these with indicators of poor quality. However, there appeared to be few clear correlations. We will, over time, refine this list based on our findings.

## Qualitative indicators – cross-cutting all domains

▶ In parallel with the development of indicators for the domains described above, we have identified a range of sources of qualitative intelligence that will be included as tier one indicators of risks to quality of care. Each individual piece of intelligence from these sources may relate to different aspects of each of the five domains of quality, so we have grouped them together. These sources will be treated as equally important to the domain level indicators above.

# **Proposed indicators**

► Tables 3-8 below set out our proposed indicator sets for each of our five key questions as well as for cross-cutting qualitative information sources.

**TABLE 3:** SAFETY – PROPOSED SET OF FIRST INDICATORS

	Dimension	Indicators	
А	Deaths in low risk conditions/ procedures	Dr Foster deaths in low risk conditions (e.g. asthma)	
		Short list of key low risk procedures/conditions (e.g. Hernia repair)	
В	Never events	Never events	
С	Under-reporting	Under-reporting of safety incidents for which reporting legally required	
D	Avoidable infections	C. Diff incidence	
		MRSA incidence	
		MSSA incidence	
		E.coli incidence	

 TABLE 4: EFFECTIVENESS (BY TRUST AND CLINICAL LEVEL)

		Dimension	
Group	Clinical area	E. Proposed indicator – mortality rates	F. Proposed indicator – non-mortality
Trust level	Mortality at a trust level	<ol> <li>Summary hospital mortality indicator</li> <li>Hospital standardised mortality ratio (HSMR)</li> </ol>	
	Weekend mortality	<ol> <li>HSMR on weekdays</li> <li>HSMR on weekends</li> </ol>	
	Sepsis	Sepsis (primary or secondary diagnosis code)	
Cross-cutting areas	Intensive care	<ol> <li>Mechanical respiration &gt;24         hours (excluding new borns)</li> </ol>	
	A&E and trauma care	1. Pelvic fracture	
	Anaesthetics and surgical services	Vascular surgery (30 day mortality)	<ol> <li>Surgical site infection – Hemiarthroplasty</li> <li>Surgical site infection – Hip Prosthesis</li> <li>Surgical site infection – Knee Prosthesis</li> </ol>
	Diagnostics		
	End of life care		
	Occupational therapy/ Physiotherapy/ Speech and language therapy/Nutrition		
Specific pathways	Elderly care pathway	<ol> <li>Primary diagnosis of pneumonitis</li> <li>Acute Myocardial Infarction</li> <li>Pneumonia</li> <li>Septicaemia</li> <li>Chronic obstructive pulmonary disease</li> <li>Fractured neck of femur (FNOF)</li> <li>Heart failure</li> <li>Colorectal surgery (within 12 months of procedure date)</li> <li>Dementia patients (primary or secondary diagnosis code)</li> </ol>	

		Dimension	
Group	Clinical area	E. Proposed indicator – mortality rates	F. Proposed indicator – non-mortality
	Paediatric pathway	<ol> <li>Post-operative deaths in children (all procedures)</li> <li>Pneumonia (primary diagnosis), without cystic fibrosis diagnosis; or with tumour</li> <li>Cardiac interventions in children and young adults (under 30 years)</li> </ol>	
	Cancer pathway (excl. surgery)		
Cardiac conditions and care	Acute myocardial infarction	Acute Myocardial Infarction     (AMI)	
	Heart failure	1. Heart failure	
	Cardiac surgery	<ol> <li>Aortic valve replacement without open heart surgery</li> <li>Isolated coronary surgery with AMI</li> <li>Isolated coronary surgery without AMI</li> <li>Coronary angioplasty (PTCA)</li> </ol>	
	Cardiac arrhythmia		
	Pacemakers & defibrillation		
	Cardiac ablation		
Stroke	Stroke	1. Stroke (primary diagnosis)	1. % of patients scanned within 1 hour
Nervous system conditions and care	Craniotomy	<ol> <li>Craniotomy for cerebral bleeding</li> <li>Craniotomy for meningioma</li> <li>Craniotomy for other conditions</li> </ol>	
	Epilepsy		<ol> <li>Emergency readmission         <ul> <li>% within 30 days</li> <li>following discharge –</li> <li>Epilepsy</li> </ul> </li> <li>Mean length of stay         <ul> <li>(LOS) for patients</li> <li>admitted for Epilepsy</li> </ul> </li> </ol>

		Dimension	
Group	Clinical area	E. Proposed indicator – mortality rates	F. Proposed indicator – non-mortality
	Parkinson's		
Head & neck ENT	Procedures on the ear, nose and throat		
	Procedures on the head and neck		
Respiratory conditions and care	Pneumonia	Pneumonia – (primary diagnosis)	
	Chronic obstructive pulmonary disease	Chronic obstructive pulmonary disease (primary diagnosis) without tumour (bronchial carcinoma)	
	Lung resection	Partial resection of lung for carcinoma of the lung	
	Asthma		<ol> <li>Emergency readmission – % within 30 days following discharge – Asthma</li> <li>Mean length of stay (LOS) for patients admitted for Asthma</li> </ol>
Gastro- intestinal tract conditions and care	Cholecystectomy		
	Herniotomy		<ol> <li>Proportion of patients whose mobility decreases after hernia</li> <li>Proportion of patients whose pain/discomfort has increased after hernia</li> </ol>
	Resections of the colon and rectum	<ol> <li>Colon resection of carcinoma without complications.</li> <li>Rectum resections of carcinoma (cancer)</li> <li>Colorectal resections, with diverticula without abscess / perforation</li> <li>Post-operative mortality within 90 days for patients who had returned to theatre within 28 days of the primary surgery</li> </ol>	

		Dimension	
Group	Clinical area	E. Proposed indicator – mortality rates	F. Proposed indicator – non-mortality
	Gastric and oesophageal resections	Complex interventions in the oesophagus	
	Pancreatic and liver resections	2. Total pancreatic resections	
	Conditions of the upper GI tract	<ol> <li>Ulcers of stomach, duodenum or jejunum</li> <li>Gastro-intestinal haemorrhage</li> </ol>	
Vascular conditions and care	Carotid vascular surgery	1. Carotid endarterectomy	
	Aneurysms	<ol> <li>Aortic aneurysm, no abdominal rupture, open surgery</li> <li>Aortic aneurysm, no abdominal rupture, endovascular intervention</li> <li>Clip and coil aneurysms, intracranial</li> </ol>	
	Lower limb bypass graft	<ol> <li>Operations on lower limb arteries with claudication</li> <li>Operations on lower limb arteries with rest pain</li> <li>Operations on lower limb arteries with necrosis or gangrene</li> </ol>	
	Lower limb angioplasty		
	Amputation	<ol> <li>Amputation of the foot, no trauma</li> <li>Lower limb amputation, no trauma</li> </ol>	
Maternity and women's health	Delivery		Proportion of women     experiencing 3rd or 4th     degree perennial tears
	Newborns		
	Procedures on the female reproductive organs		

		Dimension	
Group	Clinical area	E. Proposed indicator – mortality rates	F. Proposed indicator – non-mortality
Musculo- skeletal conditions and interventions	Elective hip surgery		<ol> <li>Proportion of patients     whose mobility decreases     after hip surgery</li> <li>Proportion of patients     whose pain/discomfort     has increased after hip     surgery</li> </ol>
	Elective knee surgery		<ol> <li>Proportion of patients     whose mobility decreases     after knee surgery</li> <li>Proportion of patients     whose pain/discomfort     has increased after knee     surgery</li> </ol>
	Spine and back		3 7
	Fracture of neck of femur	Fractured neck of femur –     primary diagnosis	
Urogenitary care and conditions	Nephrectomy and partial nephrectomy	1. Nephrectomy	
	Cystectomy and bladder procedures	Cystectomy (removal of the bladder) – simple	
	Procedures on the prostate		
	Renal Failure	Acute renal failure (primary diagnosis)	
Endocrine, metabolic and nutritional disorders	Diabetes		<ol> <li>Emergency readmission</li> <li>% within 30 days</li> <li>following discharge</li> </ol>
	Malnutrition and dehydration		
Haemotology	Anaemia		
Ophthalmolo- gical conditions and care	Cataract surgery		
Skin conditions and care	Skin diseases		
Mental Health	Depressive disorders		
	Psychoses		

**TABLE 5:** CARING DOMAIN

		Dimension	Existing inpatient survey questions to be used in the short/medium term
	G	Overall experience	How was your overall experience?
			How likely are you to recommend our ward/A&E Department to friends and family if they need similar care and treatment (Friends and Family Test)
		Trusting relationships	Did you have confidence in the nurses and doctors treating you?
		Involvement in decision making	Were you involved as much as you wanted to be in your treatment and care?
		Compassionate care	Did you find someone on the hospital staff to talk to about your worries and fears?
		Meeting physical	Did you get enough help from staff to eat your meals?
		needs	Do you think the hospital staff did everything they could to help control your pain?
		Treatment with dignity and respect	Overall, did you feel you were treated with respect and dignity while you were in the hospital?

#### **TABLE 6: RESPONSIVENESS DOMAIN**

	Dimension	Indicators
Н	Access measures	A&E waiting times under 4 hours
		Referral to treatment times under 18 weeks: admitted pathway
		Referral to treatment times under 18 weeks: non-admitted pathway
		Diagnostics waiting times: patients waiting over 6 weeks for a diagnostic test
		All cancers: 62 day wait for first treatment from urgent GP referral
		All cancers: 62 day wait for first treatment from NHS cancer screening referral
		All cancers: 31 day wait from diagnosis
		The proportion of patients whose operation was cancelled
		The number of patients not treated within 28 days of last minute cancellation due to non-clinical reason
1	Discharge and integration	Ratio of the total number of days delay in transfer from hospital to the total number of occupied beds

#### **TABLE 7:** WELL-LED

	Dimension	Indicators
J	Staff surveys	NHS staff survey – responses to question asking if "Care of patients is top priority?"
		Junior doctor survey – overall satisfaction score
		Survey of trainee nurses (TBD)
K	Staffing	Staff sickness rates
L	Utilisation	Bed occupancy
М	M Monitor ratings (NHS TDA to be developed)	Governance risk rating of red
		Financial risk rating of 1 or 2

#### TABLE 8: QUALITATIVE INTELLIGENCE (CROSS-CUTTING OUR FIVE KEY QUESTIONS)

	Dimension	Indicators
N	Complaints and	Complaints submitted to providers
	whistleblowing	Complaints investigated by the Ombudsman
		DH Ministerial correspondence unit – number and themes of complaints/ whistleblowing reports
		Number and themes of complaints made to CQC National Customer Service Centre
		Whistleblowing reports made to CQC National Customer Service Centre
0	Safeguarding	Incidents related to abuse
Р	Negative	Negative comments submitted via 'Share Your Experience' form on CQC website
	comments on social media	Number and themes of negative comments on NHS Choices and Patient Opinion
Q	Outputs from inspections	Views of inspector
		Comments from patient and staff interviews
		Findings from partner organisations, including from Quality Surveillance Groups (QSG)
R	Media	Press articles (local and national)
		Social media comments
S	Disruption to	Changes in control
	management	Unplanned changes in leadership
Т	Patient and user	Healthwatch recommendations to CQC
	representatives	Other patient organisation recommendations to CQC
U	Strategic partners	Intelligence from Monitor/NHS TDA/NHS England
		Output from Quality Surveillance Groups (QSGs)

# Consultation questions

- A1. Do you agree with the principles that we have set out for assessing indicators?
- A2. Do you agree with the indicators and sources of information?
- A3. Are there any additional indicators that we should include as 'tier one' indicators?
- A4. Do the proposed clinical areas broadly capture the main risks of harm in acute trusts? If not, which key areas are absent?
- A5. Do you agree with our proposal to include more information from National Clinical Audits once it is available?
- A6. Do you agree with our approach of using patient experience as the focus for measuring caring?

The consultation closes on **Monday 12 August 2013**. Please see the main consultation document at **www.cqc.org.uk/inspectionchanges** to read the other questions and for details of how to respond.



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