Overview

On 6th February the Prime Minister asked Professor Sir Bruce Keogh to review the quality of the care and treatment being provided by those hospital trusts in England that have been persistent outliers on mortality statistics. The 14 trusts which fall within the scope of this review were selected on the basis that they have been outliers for the last two consecutive years on either the Summary Hospital Mortality Index or the Hospital Standardised Mortality Ratio.

These two measures are being used as a ‘smoke alarm’ for identifying potential quality problems which warrant further review. No judgement about the actual quality of care being provided to patients is being made at this stage, or should be reached by looking at these measures in isolation.

The review will follow a three stage process:

**Stage 1** – Information gathering and analysis

**Stage 2** – Rapid Responsive Review

**Stage 3** – Risk summit

This data pack forms one of the sources within the information gathering and analysis stage.

Information and data held across the NHS and other public bodies has been gathered and analysed and will be used to develop the Key Lines of Enquiry (KLOEs) for the individual reviews of each Trust. This analysis has included examining data relating to clinical quality and outcomes as well as patient and staff views and feedback. A full list of evidence sources can be found in the Appendix.

Given the breadth and depth of information reviewed, this pack is intended to highlight only the exceptions noted within the evidence reviewed in order to inform Key Lines of Enquiry.
United Lincolnshire Hospitals NHS Trust

Context
A brief overview of the Lincolnshire area and United Lincolnshire Hospitals NHS Trust. This section provides a profile of the area, outlines performance of local healthcare providers and gives a brief introduction to the Trust.

Mortality
An indication of the Trust’s mortality data based on the HSMR and SHMI indicators. This section identifies the key areas within the Trust which are outliers.

Patient Experience
A summary of the Trust’s patient experience feedback from a range of sources. This section takes data from the annual patient experience surveys.

Safety and Workforce
A summary of the Trust’s safety record and workforce profile.

Clinical and Operational Effectiveness
A summary of the Trust’s clinical and operational performance based on nationally recognised key performance indicators. This section compares the Trust’s performance to other national trusts and targets and includes patient reported outcome measures (PROMs).

Leadership and Governance
An indication of the Trust’s leadership and their governance procedures. This section identifies any recent changes in leadership, current top risks to quality and outcomes from external reviews.
Context

Overview:
This section provides an introduction to the Trust, providing an overview, health profile and an understanding of why the Trust has been chosen for this review.

Review Areas:
To provide an overview of the Trust, we have reviewed the following areas:

- Local area and market share;
- Health profile;
- Service overview; and
- Initial mortality analysis.

Data Sources:

- Trust’s Board of Directors meeting 30th Jan, 2013;
- Department of Health: Transparency Website, Dec 12;
- Healthcare Evaluation Data (HED);
- NHS Choices;
- Office of National Statistics, 2011 Census data;
- Index of Multiple Deprivation, 2011;
- © Google Maps;
- Public Health Observatories – Area health profiles; and
- Background to the review and role of the national advisory group.

Summary:
United Lincolnshire Hospitals NHS Trust in Lincolnshire serves a population of 700,000, which makes the Trust substantially larger than the size recommended by the Royal College of Surgeons. 2.4% of Lincolnshire’s population belong to non-White ethnic minorities. Smoking in pregnancy and drug misuse are among the most prominent health and social problems in Lincolnshire.

The Trust has three main hospital sites, Grantham and District Hospital, Pilgrim Hospital, and Lincoln County Hospital. The Trust has a total of 1187 beds. It has a 78% market share of inpatient activity within a 5 mile radius of the Trust sites. However, the Trust’s market share falls to 74% within a radius of 10 miles, and 49% within a radius of 20 miles.

The East Midlands Ambulance service fail to meet the national average performance for both proportion of calls responded to within 8 minutes and 19 minutes.

Finally, United Lincolnshire’s HSMR level has been above the expected level for the last 2 years and the Trust was therefore selected for this review.

All data and sources used are consistent across the packs for the 14 trusts included in this review.
**Trust Overview**

United Lincolnshire is not currently a Foundation Trust. The Trust services a population in Lincolnshire of approximately 700,000 people and has three hospitals: one acute hospital (Grantham and District Hospital), and two district general hospitals (Pilgrim Hospital and Lincoln County Hospital). The Trust provides a number of services at community hospitals within the area. The Trust has a total bed occupancy in line with the national average. It offers a substantial range of services, and, in 2012, the Trust had 657,315 outpatient attendances and 157,391 inpatient attendances. The day case rate over the same time period was 82%.

### United Lincolnshire Hospitals NHS Trust

<table>
<thead>
<tr>
<th>District General Hospitals</th>
<th>Pilgrim Hospital, Lincoln County Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Hospitals</td>
<td>Grantham and District Hospital</td>
</tr>
</tbody>
</table>

Source: NHS Choices

### Finance Information

<table>
<thead>
<tr>
<th>Year</th>
<th>Income</th>
<th>Expenditure</th>
<th>EBITDA</th>
<th>Net surplus (deficit)</th>
</tr>
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<tbody>
<tr>
<td>2011–2012</td>
<td>£408m</td>
<td>£415m</td>
<td>£17m</td>
<td>-£7m</td>
</tr>
<tr>
<td>2012–2013</td>
<td>£423m</td>
<td>£428m</td>
<td>£17m</td>
<td>-£5m</td>
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</table>

Source: United Lincolnshire Hospitals NHS Trust Annual Plan 2012/13

A map of Pilgrim, Lincoln County, and Grantham and District Hospitals are included in the Appendix.

### Trust Status

Not currently a Foundation Trust

<table>
<thead>
<tr>
<th>Number of Beds and Bed Occupancy</th>
<th>(Oct12-Dec12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beds Available</td>
<td>Percentage Occupied</td>
</tr>
<tr>
<td>Total</td>
<td>1187</td>
</tr>
<tr>
<td>General and Acute</td>
<td>1084</td>
</tr>
<tr>
<td>Maternity</td>
<td>103</td>
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Source: Department of Health: Transparency Website

### Inpatient/Outpatient Activity

<table>
<thead>
<tr>
<th>Inpatient Activity</th>
<th>Elective</th>
<th>Day Case Rate: 82%</th>
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<tr>
<td>Total</td>
<td>78,126</td>
<td></td>
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<tr>
<td>Non-Elective</td>
<td>79,265</td>
<td></td>
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<tr>
<td>Total</td>
<td>157,391</td>
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</table>

<table>
<thead>
<tr>
<th>Outpatient Activity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>657,315</td>
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</table>

Source: Healthcare Evaluation Data (HED)

### Departments and Services

- Accident & Emergency, Anaesthesia Services, Breast Surgery, Cardiology, Children’s & Adolescent Services, Dermatology, Diabetic Medicine, Diagnostic Physiological Measurement, ENT, Endocrinology and Metabolic Medicine, Gastrointestinal and Liver Services, General Medicine, General Surgery, Geriatric Medicine, Gynaecology, Haematology, Infectious Diseases, Maternity Service, Nephrology, Neurology, Occupational Health Services, Older People’s Services, Ophthalmology, Oral and Maxillofacial Surgery, Orthopaedics, Paediatrics Services, Pain Management, Psychology Services, Respiratory Medicine, Rheumatology, Sleep Medicine, Stroke Services, Urology, Vascular Surgery
The graphs show the relative size of United Lincolnshire against national trusts in terms of inpatient and outpatient activity. United Lincolnshire is a large sized trust for both measures of activity, relative to the rest of England. Of the 14 trusts selected for this review, it is the largest for both inpatient and outpatient spells. General Medicine and General Surgery are the largest inpatient specialties while Ophthalmology and Trauma & Orthopaedics are the largest for outpatients.

### Top 10 Inpatient Treatment Specs as a % of Total Inpatient Activity

- General Medicine: 19%
- General Surgery: 12%
- Obstetrics: 8%
- Trauma and Orthopaedics: 7%
- Urology: 5%
- Paediatrics: 5%
- Clinical Oncology: 4%
- Ophthalmology: 4%
- Clinical Haematology: 4%
- Gynaecology: 4%

### Bottom 10 Inpatient Treatment Specialties and Spells

- Plastic Surgery: 25
- Oral Surgery: 75
- Diagnostic Imaging: 99
- Endocrinology: 258
- Geriatric Medicine: 305
- Vascular Surgery: 345
- Critical Care Medicine: 397
- Clinical Immunology and Allergy: 433
- Midwife Episode: 469
- Neurology: 528

### Top 10 Outpatient Treatment Specs as a % of Total Outpatient Activity

- Ophthalmology: 13%
- Trauma and Orthopaedics: 11%
- Cardiology: 6%
- Obstetrics: 5%
- Dermatology: 5%
- Gynaecology: 5%
- Ear, Nose & Throat (ENT): 4%
- Urology: 4%
- Clinical Oncology: 4%
- Paediatrics: 3%

Source: Healthcare Evaluation Data (HED); Jan 12-Dec 12
Lincolnshire Area Overview

Lincolnshire is not a particularly deprived region of England. Over 50s in this region constitute a higher proportion of both male and female populations, compared to their proportion of the English population as a whole. In Lincolnshire, smoking in pregnancy is significantly more common than the national average, while drug misuse is significantly more prevalent around Lincoln and Boston than in England as a whole. The ethnic composition of the local population is less varied than in England as whole; White and Black Caribbean, White and Asian, Indian, and Other Asian constitute the largest minorities.

Lincolnshire Area Demographics

<table>
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<tr>
<th>Age Group</th>
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<th>Female/ENG</th>
<th>Male/LIN</th>
<th>Male/ENG</th>
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<td>10-19</td>
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<td>20-29</td>
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<td>60-69</td>
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<td>70-79</td>
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<th></th>
<th>20%</th>
<th>15%</th>
<th>10%</th>
<th>5%</th>
<th>0%</th>
<th>5%</th>
<th>10%</th>
<th>15%</th>
<th>20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female/LIN</td>
<td></td>
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<tr>
<td>Male/LIN</td>
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</tbody>
</table>

FACT BOX

- **Population**: 700,000
- **IMD**: Of 149 English unitary authorities, Lincolnshire is the 95th most deprived.
- **Ethnic diversity**: In Lincolnshire, 2.4% belong to non-White minorities, including 0.3% White and Black Caribbean, 0.3% White and Asian, 0.3% Indian, and 0.3% Other Asian.
- **Rural or Urban**: Lincolnshire is a rural region.
- **Smoking in pregnancy**: In Lincolnshire, smoking in pregnancy is significantly more common than in England as a whole.
- **Drug misuse**: In parts of Lincolnshire, particularly Lincoln and Boston, drug misuse is significantly more common than in England as a whole.

*It is worth noting that the percentage of the population that is made up of non-British EU nationals is 3% for Lincolnshire and 10% for Boston, compared to a 2% national average.*

Source: Office of National Statistics, Census 2011; IMD Source: Index of Multiple Deprivation, 2010
Lincolnshire Area Geographic Overview

The map on the right shows the geographic location of the main sites for the Trust. Lincolnshire is a rural area located in the East Midlands.

Market share analysis indicates from which GP practices the referrals that are being provided for by the Trust originate. High mortality may affect public confidence in a Trust, resulting in a reduced market share as patients may be referred to alternative providers.

The wheel on the left shows the market share of United Lincolnshire Hospitals NHS Trust. From the wheel it can be seen that United Lincolnshire has a 78% market share of inpatient activity within a 5 mile radius of the Trust.

As the size of the radius is increased, the market share falls to 74% within 10 miles and 49% within 20 miles.

The wheel shows that the main competitors in the local area are Nottingham University Hospitals NHS Trust, Sherwood Forest Hospitals NHS Foundation Trust, and Northern Lincolnshire and Goole Hospitals NHS Foundation Trust.

Source: Healthcare Evaluation Data (HED), Dec 11 – Nov 12

Source: © Google Maps
Lincolnshire’s Health Profile

Health Profiles, depicted on this slide and the following, are designed to help local government and health services identify problems in their areas, and decide how to tackle these issues. They provide a snapshot of the overall health of the local population, and highlight potential differences against regional and national averages.

The graph shows the levels of deprivation in Boston, Lincoln and South Kesteven compared nationally.

The tables below outline Boston, Lincoln and South Kesteven’s health profile information in comparison with the rest of England.

1. Community indicators show a higher than expected level of deprivation within the Lincoln area as well as a high proportion of children in poverty. Statutory homelessness is high in South Kesteven.

Source: Public Health Observatories – area health profiles
Lincolnshire’s Health Profile

2. Smoking in pregnancy is more prevalent in all three areas than the national average. There is also a high level of teenage pregnancy in Lincoln and Boston. The number of alcohol related hospital stays in Lincoln was also above the expected range.

3. Within adults’ health and lifestyle, the only red flag appeared in physically active adults in Boston. However, it should be noted that a number of indicators were below the national average but were still within the expected range.

Source: Public Health Observatories – area health profiles
Lincolnshire’s Health Profile

4. Lincoln is performing below the expected range on a number of disease and poor health indicators. These include hospital stays for self-harm, alcohol related hospital stays, drug misuse and acute STIs. Boston also has a high level of drug misuse as well as a high number of people diagnosed with diabetes.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Area</th>
<th>Local No / ...</th>
<th>Local Value</th>
<th>England Avg</th>
<th>England Worst</th>
<th>Current Performance</th>
<th>England Best</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease and poor health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Incidence of malignant melanoma</td>
<td>South Kesteven CD</td>
<td>23</td>
<td>16.2</td>
<td>13.6</td>
<td>26.0</td>
<td>○</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Lincoln CD</td>
<td>12</td>
<td>15.3</td>
<td>13.6</td>
<td>26.8</td>
<td>○</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Boston CD</td>
<td>11</td>
<td>15.9</td>
<td>13.6</td>
<td>26.8</td>
<td>○</td>
<td>2.7</td>
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<tr>
<td>Hospital stays for self-harm</td>
<td>South Kesteven CD</td>
<td>101</td>
<td>147.9</td>
<td>212.0</td>
<td>509.0</td>
<td>○</td>
<td>49.6</td>
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<tr>
<td></td>
<td>Lincoln CD</td>
<td>417</td>
<td>447.4</td>
<td>212.0</td>
<td>509.8</td>
<td>○</td>
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<td>Boston CD</td>
<td>97</td>
<td>191.2</td>
<td>212.0</td>
<td>508.8</td>
<td>○</td>
<td>49.6</td>
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<tr>
<td>Hospital stays for alcohol related illness</td>
<td>South Kesteven CD</td>
<td>2,791</td>
<td>1,572</td>
<td>1,895</td>
<td>3,276</td>
<td>○</td>
<td>910</td>
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<td>Lincoln CD</td>
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<td>2,241</td>
<td>1,895</td>
<td>3,276</td>
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<td>910</td>
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<td></td>
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<td>1,394</td>
<td>1,805</td>
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<td>910</td>
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<td>Drug misuse</td>
<td>South Kesteven CD</td>
<td>543</td>
<td>6.5</td>
<td>6.9</td>
<td>30.2</td>
<td>○</td>
<td>1.3</td>
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<tr>
<td></td>
<td>Lincoln CD</td>
<td>1,332</td>
<td>22.1</td>
<td>8.9</td>
<td>30.2</td>
<td>○</td>
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<tr>
<td></td>
<td>Boston CD</td>
<td>435</td>
<td>11.8</td>
<td>8.9</td>
<td>30.2</td>
<td>○</td>
<td>1.3</td>
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<tr>
<td>People diagnosed with diabetes</td>
<td>South Kesteven CD</td>
<td>6,741</td>
<td>5.4</td>
<td>5.5</td>
<td>8.1</td>
<td>○</td>
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<td></td>
<td>Boston CD</td>
<td>3,833</td>
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<td>5.5</td>
<td>8.1</td>
<td>○</td>
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<td>New cases of tuberculosis</td>
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<td>4</td>
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<td></td>
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<td>3</td>
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<td>Acute sexually transmitted infection</td>
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<td>522</td>
<td>775</td>
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<td></td>
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<td>1,253</td>
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<td>2,276</td>
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<td>152</td>
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<td></td>
<td>Boston CD</td>
<td>318</td>
<td>539</td>
<td>775</td>
<td>2,276</td>
<td>○</td>
<td>152</td>
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<td>Hip fracture in 65s and over</td>
<td>South Kesteven CD</td>
<td>139</td>
<td>411</td>
<td>452</td>
<td>655</td>
<td>○</td>
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<td></td>
<td>Lincoln CD</td>
<td>99</td>
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<td>452</td>
<td>655</td>
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<tr>
<td></td>
<td>Boston CD</td>
<td>83</td>
<td>499</td>
<td>452</td>
<td>655</td>
<td>○</td>
<td>324</td>
</tr>
</tbody>
</table>

Source: Public Health Observatories – area health profiles
### Lincolnshire’s Health Profile

5. Life expectancy in Lincoln and Boston is lower than the national average. Lincoln also has a higher number of smoking related deaths than the national average. Early deaths due to heart disease are higher in Lincoln and Boston but there are a higher number of road injuries and deaths in South Kesteven.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Area</th>
<th>Local No/...</th>
<th>Local Value</th>
<th>England Average</th>
<th>England Worst</th>
<th>Current Performance</th>
<th>England Best</th>
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<tbody>
<tr>
<td>Excess winter deaths</td>
<td>South Kesteven CD</td>
<td>73</td>
<td>18.7</td>
<td>18.7</td>
<td>35.0</td>
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<td></td>
<td>Lincoln CD</td>
<td>49</td>
<td>18.5</td>
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<td></td>
<td>Boston CD</td>
<td>34</td>
<td>15.3</td>
<td>18.7</td>
<td>35.0</td>
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<tr>
<td>Life expectancy – male</td>
<td>South Kesteven CD</td>
<td>79.5</td>
<td>70.6</td>
<td>73.6</td>
<td>85.1</td>
<td>85.1</td>
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<td></td>
<td>Lincoln CD</td>
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<td>78.6</td>
<td>73.6</td>
<td>85.1</td>
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<td></td>
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<td>73.6</td>
<td>85.1</td>
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<td>Life expectancy – female</td>
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<td>6</td>
<td>4.8</td>
<td>4.6</td>
<td>9.3</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boston CD</td>
<td>4</td>
<td>4.8</td>
<td>4.6</td>
<td>9.3</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>Smoking related deaths</td>
<td>South Kesteven CD</td>
<td>204</td>
<td>1.8</td>
<td>2.11</td>
<td>372</td>
<td>125</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lincoln CD</td>
<td>159</td>
<td>2.6</td>
<td>2.11</td>
<td>372</td>
<td>125</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boston CD</td>
<td>118</td>
<td>2.2</td>
<td>2.11</td>
<td>372</td>
<td>125</td>
<td></td>
</tr>
<tr>
<td>Early deaths: heart disease and st...</td>
<td>South Kesteven CD</td>
<td>92</td>
<td>54.8</td>
<td>67.3</td>
<td>123.2</td>
<td>35.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lincoln CD</td>
<td>66</td>
<td>79.4</td>
<td>67.3</td>
<td>123.2</td>
<td>35.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boston CD</td>
<td>68</td>
<td>87.1</td>
<td>67.3</td>
<td>123.2</td>
<td>35.5</td>
<td></td>
</tr>
<tr>
<td>Early deaths: cancer</td>
<td>South Kesteven CD</td>
<td>165</td>
<td>100.8</td>
<td>110.1</td>
<td>159.1</td>
<td>77.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lincoln CD</td>
<td>110</td>
<td>131.5</td>
<td>110.1</td>
<td>159.1</td>
<td>77.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boston CD</td>
<td>88</td>
<td>111.6</td>
<td>110.1</td>
<td>159.1</td>
<td>77.9</td>
<td></td>
</tr>
<tr>
<td>Road injuries and deaths</td>
<td>South Kesteven CD</td>
<td>69</td>
<td>52.3</td>
<td>44.3</td>
<td>128.8</td>
<td>14.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lincoln CD</td>
<td>33</td>
<td>36.9</td>
<td>44.3</td>
<td>128.8</td>
<td>14.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boston CD</td>
<td>31</td>
<td>52.5</td>
<td>44.3</td>
<td>128.8</td>
<td>14.1</td>
<td></td>
</tr>
</tbody>
</table>

Source: Public Health Observatories – area health profiles
To give an informed view of the Trust’s performance it is important to consider the service levels of non-acute local providers. For example, slow ambulance response times may increase the risk of mortality.

The graphs on the right represent some key performance indicators for England’s Ambulance services. The East Midlands Ambulance service fail to meet the national average performance for both proportion of calls responded to within 8 minutes and 19 minutes.

Source: Department of Health: Transparency Website Dec 12
**Why was United Lincolnshire chosen for this review?**

Based on the Summary Hospital level Mortality Indicator (SHMI) and Hospital Standardised Mortality Ratio (HSMR), 14 trusts were selected for this review. The table includes information on which trusts were selected. An explanation of each of these indicators is provided in the Mortality section. Where it does not include the SHMI for a trust, it is because the trust was selected due to a high HSMR as opposed to its SHMI. The SHMI for all 14 trusts can be found in the following pages.

Initially, five hospital trusts were announced as falling within the scope of this investigation based on the fact that they had been outliers on SHMI for the last two years (SHMI data has only been published for the last two years).

Subsequent to these five hospital trusts being announced, Professor Sir Bruce Keogh took the decision that those hospital trusts that had also been outliers for the last two consecutive years on HSMR should also fall within the scope of his review. The rationale for this was that it had been HSMR that had provided the trigger for the Healthcare Commission’s initial investigation into the quality of care provided at Mid Staffordshire Hospitals NHS Foundation Trust.

United Lincolnshire has been above the expected level for HSMR over the last 2 years and was therefore selected for this review. It should be noted that the SHMI was identified as higher than expected, but is not included on this table as this was not the reason the Trust was selected for review.

<table>
<thead>
<tr>
<th>Trust</th>
<th>SHMI 2011</th>
<th>SHMI 2012</th>
<th>HSMR FY 11</th>
<th>HSMR FY 12</th>
<th>Within Expected?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basildon and Thurrock University Hospitals NHS Foundation Trust</td>
<td>1</td>
<td>1</td>
<td>98</td>
<td>102</td>
<td>Within expected</td>
</tr>
<tr>
<td>Blackpool Teaching Hospitals NHS Foundation Trust</td>
<td>1</td>
<td>1</td>
<td>112</td>
<td>114</td>
<td>Above expected</td>
</tr>
<tr>
<td>Buckinghamshire Healthcare NHS Trust</td>
<td>1</td>
<td>1</td>
<td>112</td>
<td>110</td>
<td>Above expected</td>
</tr>
<tr>
<td>Burton Hospitals NHS Foundation Trust</td>
<td>1</td>
<td>1</td>
<td>112</td>
<td>112</td>
<td>Above expected</td>
</tr>
<tr>
<td>Colchester Hospital University NHS Foundation Trust</td>
<td>1</td>
<td>1</td>
<td>107</td>
<td>102</td>
<td>Within expected</td>
</tr>
<tr>
<td>East Lancashire Hospitals NHS Trust</td>
<td>1</td>
<td>1</td>
<td>108</td>
<td>103</td>
<td>Within expected</td>
</tr>
<tr>
<td>George Eliot Hospital NHS Trust</td>
<td></td>
<td></td>
<td>117</td>
<td>120</td>
<td>Above expected</td>
</tr>
<tr>
<td>Medway NHS Foundation Trust</td>
<td></td>
<td></td>
<td>115</td>
<td>112</td>
<td>Above expected</td>
</tr>
<tr>
<td>North Cumbria University Hospitals NHS Trust</td>
<td></td>
<td></td>
<td>118</td>
<td>118</td>
<td>Above expected</td>
</tr>
<tr>
<td>Northern Lincolnshire And Goole Hospitals NHS Foundation Trust</td>
<td></td>
<td></td>
<td>116</td>
<td>118</td>
<td>Above expected</td>
</tr>
<tr>
<td>Sherwood Forest Hospitals NHS Foundation Trust</td>
<td></td>
<td></td>
<td>114</td>
<td>113</td>
<td>Above expected</td>
</tr>
<tr>
<td>Tameside Hospital NHS Foundation Trust</td>
<td>1</td>
<td>1</td>
<td>101</td>
<td>102</td>
<td>Within expected</td>
</tr>
<tr>
<td>The Dudley Group Of Hospitals NHS Foundation Trust</td>
<td></td>
<td></td>
<td>116</td>
<td>111</td>
<td>Above expected</td>
</tr>
<tr>
<td>United Lincolnshire Hospitals NHS Trust</td>
<td></td>
<td></td>
<td>113</td>
<td>111</td>
<td>Above expected</td>
</tr>
</tbody>
</table>

Band 1 – ‘higher than expected’

Source: Background to the review and role of the national advisory group Financial years 2010-11, 2011-12
Why was United Lincolnshire chosen for this review?

The way that levels of observed deaths that are higher than expected deaths can be understood is by using HSMR and SHMI. Both compare the number of observed deaths to the number of expected deaths. This is different to avoidable deaths. An HSMR and SHMI of 100 means that there is exactly the same number of deaths as expected. This is very unlikely so there is a range within which the variance between observed and expected deaths is statistically insignificant. On the Poisson distribution, appearing above and below the dotted red and green lines (95% confidence intervals), respectively, means that there is a statistically significant variance for the trust in question.

The funnel charts for 2010/11 and 2011/12, the period when the trusts were selected for review, show that United Lincolnshire’s SHMI is statistically above the expected range, supported by the time series which shows the SHMI being higher than the expected for much of the time period. United Lincolnshire’s HSMR is above the expected range, and the time series largely supports this.
Mortality
**Mortality**

**Overview:**

This section focuses upon recent mortality data to provide an indication of the current position. All 14 trusts in the review have been analysed using consistent methodology.

The measures identified are being used as a ‘smoke alarm’ for highlighting potential quality issues. No judgement about the actual quality of care being provided to patients is being made at this stage, nor should it be reached by looking at these measures in isolation.

**Review areas**

To undertake a detailed analysis of the trust’s mortality, it is necessary to look at the following areas:

- Differences between the HSMR and SHMI;
- Elective and non-elective mortality;
- Specialty and Diagnostic groups; and
- Alerts and investigations.

**Data sources**

- Healthcare Evaluation Data (HED);
- Health & Social Care Information Centre – SHMI and contextual indicators;
- Dr Foster – HSMR; and
- Care Quality Commission – alerts, correspondence and findings.

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**Summary:**

The Trust has an overall HSMR of 112 for the period January 2012 to December 2012, meaning that the number of actual deaths is higher than the expected level. This is statistically above the expected range.

Further analysis of this demonstrates that non-elective admissions are the primary contributing factor to this figure, again with a HSMR of 112, also above the expected range. Elective admissions are within the expected range at 80.

United Lincolnshire has a SHMI of 109 for the period December 2011 to November 2012, which is above the expected range (using Healthcare Evaluation data). However, the official SHMI produced by HSCIC is within the expected range (at 110 for the period October 2011 to September 2012).

Similar to HSMR, non-elective admissions are seen to be contributing primarily to the overall Trust SHMI.

United Lincolnshire had nine high mortality alerts for diagnostic groups since 2007.

Common themes arising from responses to the CQC from the Trust include fluid balance issues, delays in implementing treatment plans, clinical documentation issues and delay in the implementation of the Liverpool Care Pathway, failure to escalate the deteriorating patient and risk of falls in hospital.

All data and sources used are consistent across the packs for the 14 trusts included in this review.
## Mortality Overview

The following overview provides a summary of the Trust’s key mortality areas:

<table>
<thead>
<tr>
<th>Mortality Area</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall HSMR</td>
<td>Elective mortality (SHMI and HSMR)</td>
</tr>
<tr>
<td>Overall SHMI*</td>
<td>Non-elective mortality (SHMI and HSMR)</td>
</tr>
<tr>
<td>Weekend or weekday mortality outliers</td>
<td>Palliative care coding issues</td>
</tr>
<tr>
<td>Emergency specialty much worse than expected (CQC)</td>
<td>30-day mortality following specific surgery / admissions</td>
</tr>
<tr>
<td>Emergency specialty worse than expected (CQC)</td>
<td>Mortality among patients with diabetes</td>
</tr>
<tr>
<td>Diagnosis group alerts to CQC</td>
<td>Mortality in low-risk groups</td>
</tr>
<tr>
<td>Diagnosis group alerts followed up by CQC</td>
<td></td>
</tr>
</tbody>
</table>

### SHMI*

- **Outside expected range of the HSCIC for Mar 11 – Sep 12**
- **Outside expected range based on Poisson distribution for Dec 11 – Nov 12**
- **Within expected range**

*The detailed following analysis on SHMI is based upon a narrower set of confidence intervals compared to the Random effects model, which the HSCIC use to report whether the SHMI is within, below or above the expected range and was the range used to select the 14 trusts for this review. The narrower range is used here to increase the sensitivity to the data and serves to give an earlier warning for the purposes of this review.*

Source: Healthcare Evaluation Data (HED)
Health & Social Care Information Centre – SHMI and contextual indicators, Dr Foster – HSMR,
Care Quality Commission – alerts, correspondence and findings
**HSMR Definition**

**What is the Hospital Standardised Mortality Ratio?**

The Hospital Standardised Mortality Ratio (HSMR) is an indicator of healthcare quality that measures whether the mortality rate at a hospital is higher or lower than you would expect. Like all statistical indicators, HSMR is not perfect. If a hospital has a high HSMR, it cannot be said for certain that this reflects failings in the care provided by the hospital. However, it can be a warning sign that things are going wrong.

**How does HSMR work?**

The HSMR is a ratio of the observed number of in-hospital deaths at the end of a continuous inpatient spell to the expected number of in-hospital deaths (multiplied by 100) for 56 specific CCS groups; in a specified patient group. The expected deaths are calculated from logistical regression models taking into account and adjusting for a case-mix of: age band, sex, deprivation, interaction between age band and co-morbidities, month of admission, admission method, source of admission, the presence of palliative care, number of previous emergency admissions and financial year of discharge.

**How should HSMR be interpreted?**

Care is needed in interpreting these results. Although a score of 100 indicates that the observed number of deaths matched the expected number in order to identify if variation from this is significant confidence intervals are calculated. A Poisson distribution model is used to calculate 95% and 99.9% confidence intervals and only when these have been crossed is performance classed as higher or lower than expected.
**SHMI Definition**

**What is the Summary Hospital-level Mortality Indicator?**

The Summary level Hospital Mortality Indicator (SHMI) is a high level hospital mortality indicator that is published by the Department of Health on a quarterly basis. The SHMI follows a similar principle to the general standardised mortality ratio; a measure based upon a nationally expected value. SHMI can be used as a potential smoke alarm for potential deviations away from regular practice.

**How does SHMI work?**

1. Deaths up to 30 days post acute trust discharge are considered in the mortality indicator, utilising ONS data
2. The SHMI is the ratio of the Observed number of deaths in a Trust vs. Expected number of deaths over a period of time
3. The Indicator will utilise 5 factors to adjust mortality rates by
   a. The primary admitting diagnosis;
   b. The type of admission;
   c. A calculation of co-morbid complexity (Charlson Index of co-morbidities);
   d. Age; and
   e. Sex.
4. All inpatient mortalities that occur within a Hospital are considered in the indicator

**How should SHMI be interpreted?**

Due to the complexities of hospital care and the high variation in the statistical models used all deviations from the expected range are highlighted using a Random Effects funnel plot.
### Some key differences between SHMI and HSMR

<table>
<thead>
<tr>
<th>Indicator</th>
<th>HSMR</th>
<th>SHMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are all hospital deaths included?</td>
<td>No, around 80% of in hospital deaths are included, which varies significantly dependent upon the services provided by each hospital</td>
<td>Yes all deaths are included</td>
</tr>
<tr>
<td>When a patient dies how many times is this counted?</td>
<td>If a patient is transferred between hospitals within 2 days the death is counted multiple times</td>
<td>1 death is counted once, and if the patient is transferred the death is attached to the last acute/secondary care provider</td>
</tr>
<tr>
<td>Does the use of the palliative care code reduce the relative impact of a death on the indicator?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Does the indicator consider where deaths occur?</td>
<td>Only considers in-hospital deaths</td>
<td>Considers in-hospital deaths but also those up to 30 days post discharge anywhere too.</td>
</tr>
<tr>
<td>Is this applied to all health care providers?</td>
<td>Yes</td>
<td>No, does not apply to specialist hospitals</td>
</tr>
</tbody>
</table>
The Trust’s SHMI for the 12 months from Dec 11 to Nov 12 is 109, which means, as shown below, it is statistically above the expected range and so classified as an outlier, based on the 95% confidence interval of the Poisson distribution.

The time series show no real trend month-on-month; however, the SHMI does fluctuate between 99 and 120. There is a decreasing trend year-on-year.

SHMI funnel chart – 12 months

SHMI Statistics

This slide demonstrates the number of mortalities in and out of hospital for United Lincolnshire.

As SHMI includes mortalities that occur within the hospital and outside of it for up to 30 days following discharge, it is imperative to understand the percentage of deaths which happen inside the hospital compared to outside. This may contribute to differences in HSMR and SHMI outcomes.

The data shows that 71.9% of SHMI deaths occur in hospital at United Lincolnshire, which is less than the national average of 73.3%.

Mortality - SHMI Tree

Mortality trees provide a breakdown of SHMI into elective and non-elective admissions. The SHMI score for non-elective admissions has a greater impact on the overall indicator due to a higher number of expected deaths.

The tree shows that United Lincolnshire has a SHMI of 109 which is above the expected range.

The number of observed deaths are highlighted as being above the expected level in General Medicine for both elective and non-elective admissions, as well as Medical Oncology for elective admissions, and Critical Care Medicine and Thoracic Medicine for non-elective admissions. These are potential areas for review.

Key:
- Diagnosis (100; 1)
- SHMI Observed deaths that are higher than the expected

Source: Healthcare Evaluation Data (HED). Dec 11 – Nov 12
The SHMI sub-tree highlights the specialties for non-elective admissions with a statistically higher SHMI than expected and highlights the diagnostic groups with at least four more observed deaths than expected. When identifying areas to review, it is important to consider the number of deaths as well as the SHMI.

Within non-elective admissions, General Medicine has the highest number of greater than expected deaths, which are outlined on the next page. For non-elective admissions, Critical Care Medicine had 70 more observed deaths than expected and acute cerebrovascular disease accounted for 15 of these.

**Key**

- **SHMI** Observed deaths that are higher than the expected
- **Higher than expected (above the 95th confidence interval)**
- **Within expected range**
- **Lower than expected (below the 95th confidence interval)**

**Source:** Health Evaluation Data (HED) – Dec 2011 – Nov 2012

The diagnostic groups with 1 to 3 more observed deaths than the expected are listed in the Appendix.
Within non-elective admissions, General Medicine has the highest number of greater than expected deaths (325). These are spread across a large range of diagnostic groups. The diagnostic groups with the highest number of greater than expected deaths are urinary tract infections (32), septicaemia (20), acute bronchitis (18), acute cerebrovascular disease (15), and pneumonia (15).

<table>
<thead>
<tr>
<th>Treatment Specialty</th>
<th>Diagnostic Groups</th>
<th>Observed deaths that are higher than the expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall (109; 288)</td>
<td>General Medicine (115; 325)</td>
<td></td>
</tr>
<tr>
<td>Non-elective (109; 288)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key**

Diagnosis (100; 1)  
SHMI Observed deaths that are higher than the expected

The diagnostic groups with 1 to 3 more observed deaths than the expected are listed in the Appendix.
The Health and Social Care Information Centre (HSCIC) publish the SHMI quarterly. This official statistic covers March 2011 to September 2012 using a model based on a 3-year dataset refreshed quarterly. The earliest publication was in October 2011, for the period from April 2010 to March 2011.

The HSCIC produce two sets of upper and lower limits. One set uses 99.8% control limits from an exact Poisson distribution based on the number of expected deaths. The other set uses a Random effects model applying a 10% trim for over-dispersion, based on the standardised Pearson residual for each provider excluding the top and bottom 10% of scores. This latter set is broader than the Poisson and is the one against which the HSCIC report whether the SHMI is within, below or above the expected range.

The SHMI for United Lincolnshire was 110 in the year to Sept 12 (England baseline = 100) and on this basis has been within the expected range throughout (although above the Poisson-based upper limit).
**HSMR overview**

The Trust's HSMR for the 12 months from Jan 12 to Dec 12 is 112, which means, as shown below, it is above the expected range and so classified as an outlier.

The time series show a no real trend for HSMR year-on-year; however, there was a drop and subsequent rise in HSMR in 2009/2010. The month-on-month time series shows a general decreasing trend from April 2012.

**HSMR funnel plot – 12 months**

**Month-on-month time series**

**Year-on-year time series**

The table to the right shows United Lincolnshire’s HSMR broken down by admission type.

The breakdown illustrates the overall HSMR is 112 which is above the expected range. The table identifies that elective admissions have an HSMR within the expected range, whereas non-elective admissions have an HSMR above the expected range.

Despite having an HSMR of 198, mortality for elective weekend admissions is identified as being within the expected range. This is due to low levels of activity of this type, which allow the HSMR to be inflated by a small number of observed deaths above those expected.

Mortality from both week and weekend admissions are highlighted as being above the expected level, due to the high non-elective admissions.

### HSMR Statistics

<table>
<thead>
<tr>
<th>HSMR</th>
<th>Weekend</th>
<th>Week</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td>198</td>
<td>75</td>
<td>80</td>
</tr>
<tr>
<td>Non-elective</td>
<td>123</td>
<td>109</td>
<td>112</td>
</tr>
<tr>
<td>All</td>
<td>123</td>
<td>108</td>
<td>112</td>
</tr>
</tbody>
</table>


**Key – colour by alert level:**

- **Red** – Higher than expected (above the 95% confidence interval)
- **Blue** – Within expected range
- **Green** – Lower than expected (below the 95th confidence interval)
**HSMR CCS Diagnostic Group Overview**

The darker colour boxes have the highest HSMR while the size of the boxes represent the number of observed deaths that are higher than the expected deaths. The larger and darker boxes within the tree plot will highlight potential areas for further review.

From this tree plot it is clear that the following areas have the greatest number of above expected deaths:

- **Pneumonia (except that caused by tuberculosis or sexually transmitted disease)** (HSMR of 109, and 35 observed deaths that are higher than the expected);

- **Chronic obstructive pulmonary disease and bronchiectasis (133, 26)**

- **Acute cerebrovascular disease (109, 17); and**

- **Other perinatal conditions (212, 17).**

The tree shows that the HSMR for United Lincolnshire is 112, which is above the expected range. When breaking this down by admission type, it is clear that it is driven by non-elective admissions, which have the same HSMR and are also above the expected range.

Within non-elective admissions Critical Care Medicine, General Medicine, Thoracic Medicine, and Obstetrics have the highest number of observed deaths above the expected level.
The HSMR sub-tree indicates the specialties with a statistically higher HSMR than expected and with diagnostic groups with at least four more observed deaths than expected. When identifying areas to review, it is important to consider the number of deaths as well as the HSMR.

The sub-tree indicates that General Medicine, Critical Care Medicine, Obstetrics and Thoracic Medicine have the highest number of observed deaths greater than expected. At a diagnostic group level, pneumonia had the highest number of more observed deaths than expected (33).

### Treatment Specialties
- **Critical Care Medicine (286; 55)**
- **Obstetrics (2231; 28)**
- **Thoracic Medicine (229: 15)**
- **General Medicine (114: 193)**

### Diagnostic Groups

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Observations</th>
<th>Expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal pain</td>
<td>(402; 5)</td>
<td></td>
</tr>
<tr>
<td>Acute bronchitis</td>
<td>(124; 13)</td>
<td></td>
</tr>
<tr>
<td>Aspiration pneumonitis; food/vomitus</td>
<td>(121; 8)</td>
<td></td>
</tr>
<tr>
<td>Cancer of breast</td>
<td>(278; 6)</td>
<td></td>
</tr>
<tr>
<td>Cancer of bronchus; lung</td>
<td>(115; 4)</td>
<td></td>
</tr>
<tr>
<td>Cancer of ovary</td>
<td>(345; 4)</td>
<td></td>
</tr>
<tr>
<td>Cancer of prostate</td>
<td>(274; 8)</td>
<td></td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease and bronchiectasis</td>
<td>(552; 7)</td>
<td></td>
</tr>
<tr>
<td>Pneumonia (except that caused by tuberculosis or sexually transmitted disease)</td>
<td>(283; 8)</td>
<td></td>
</tr>
<tr>
<td>Other perinatal conditions</td>
<td>(2546; 30)</td>
<td></td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease and bronchiectasis</td>
<td>(552; 7)</td>
<td></td>
</tr>
<tr>
<td>Pneumonia (except that caused by tuberculosis or sexually transmitted disease)</td>
<td>(283; 8)</td>
<td></td>
</tr>
<tr>
<td>Septicemia (except in labor)</td>
<td>(253; 4)</td>
<td></td>
</tr>
<tr>
<td>Skin and subcutaneous tissue infections</td>
<td>(143; 6)</td>
<td></td>
</tr>
<tr>
<td>Septicemia (except in labor)</td>
<td>(126; 19)</td>
<td></td>
</tr>
<tr>
<td>Pneumonia (except that caused by tuberculosis or sexually transmitted disease)</td>
<td>(104; 14)</td>
<td></td>
</tr>
<tr>
<td>Pneumonia (except that caused by tuberculosis or sexually transmitted disease)</td>
<td>(104; 14)</td>
<td></td>
</tr>
<tr>
<td>Chronic ulcer of skin</td>
<td>(236; 6)</td>
<td></td>
</tr>
<tr>
<td>Deficiency and other anemia</td>
<td>(134; 5)</td>
<td></td>
</tr>
<tr>
<td>Gastrointestinal hemorrhage</td>
<td>(118; 4)</td>
<td></td>
</tr>
<tr>
<td>Intestinal obstruction without hernia</td>
<td>(210; 5)</td>
<td></td>
</tr>
<tr>
<td>Liver disease; alcohol-related</td>
<td>(156; 9)</td>
<td></td>
</tr>
<tr>
<td>Other lower respiratory disease</td>
<td>(143; 4)</td>
<td></td>
</tr>
<tr>
<td>Other upper respiratory disease</td>
<td>(329; 6)</td>
<td></td>
</tr>
<tr>
<td>Peripheral and visceral atherosclerosis</td>
<td>(211; 5)</td>
<td></td>
</tr>
<tr>
<td>Pneumonia (except that caused by tuberculosis or sexually transmitted disease)</td>
<td>(104; 14)</td>
<td></td>
</tr>
<tr>
<td>Senility and organic mental disorders</td>
<td>(219; 15)</td>
<td></td>
</tr>
<tr>
<td>Septicemia (except in labor)</td>
<td>(126; 20)</td>
<td></td>
</tr>
<tr>
<td>Skin and subcutaneous tissue infections</td>
<td>(143; 6)</td>
<td></td>
</tr>
<tr>
<td>Syncope</td>
<td>(150; 4)</td>
<td></td>
</tr>
<tr>
<td>Urinary tract infections</td>
<td>(116; 13)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Healthcare Evaluation Data (HED). Dec 11 – Nov 12
The diagnostic groups with 1 to 3 more observed deaths than the expected are listed in the Appendix.
**HSMR – Dr Foster**

The HSMR time series for United Lincolnshire Hospitals NHS Trust from Dr Foster shows an above expected HSMR since 2008/09. This measures the observed in-hospital death rate against an expected value based on all the data for that year. An HSMR (or SHMI) of 100 means that there is exactly the same number of deaths as expected. The HSMR is classified as above expected if the lower 95% confidence limit exceeds 100, which was the case throughout this period.

The latest SHMI published by the HSCIC, for Oct 11 to Sept 12, is higher than the Dr Foster HSMR for the same period (and above expected using a 95% confidence interval), which may be due to a number of factors.

Dr Foster have made the following adjustments to show differences explained by these factors:

- **Adjustment for palliative care:** used the SHMI observed deaths but changed expected deaths to take account of palliative care.
- **Adjustment for in-hospital deaths:**
  - Removed out-of-hospital deaths from the observed figure, and
  - Reduced expected deaths to only those in-hospital.

The remaining variances are largely due to:

- **The scope of deaths included** (SHMI covers all deaths whereas HSMR covers areas accounting for an average of around 80% of deaths), and
- **The definition of spells**, which includes those provider(s) the death attributes to.

Source: Dr Foster HSMRs, HSCIC SHMI
Coding

Diagnosis coding depth has an impact on the expected number of deaths. A higher than average diagnosis coding depth is more likely to collect co-morbidity which will influence the expected mortality calculation.

When looking at the depth of coding for United Lincolnshire, it is apparent that for elective admissions, the Trust has been consistently performing below the national average. The average diagnosis coding depth for non-elective admissions has also been close to the national average and the most recent quarter shows the trust is above the national average and the average of the 14 trusts in this review.

Palliative care

Accurate coding of palliative care is important for contextualising SHMI and HSMR. HSMR takes into account that a patient is receiving palliative care, but SHMI does not.

United Lincolnshire make below average use of palliative care coding on admissions (using diagnosis codes rather than treatment specialty), although not significantly so.

Source: Health & Social Care Information Centre – SHMI contextual indicators
Care Quality Commission findings

Care Quality Commission (CQC) review mortality alerts for each trust on an ongoing basis. These alerts, which indicate observed deaths significantly above expected for specialties or diagnoses, come from different sources based on either HSMR or SHMI. Where these appear unexplained, CQC correspond with the Trust to agree any appropriate action.

For United Lincolnshire, the common themes that have arisen across the patient groups alerting since 2007 are elderly care, respiratory medicine (with a recent outlier alert for COPD) and emergency care.

Common themes arising from responses to the CQC from the Trust include Fluid balance issues, delays in implementing treatment plans, clinical documentation issues and delay in the implementation of the Liverpool Care Pathway, failure to escalate the deteriorating patient and risk of falls in hospital.

Through correspondence with CQC regarding a number of different outlier alerts, the Trust identified a range of areas for improvement and set out actions to address these. Most of these are likely to affect patients across the trust, rather than a specific clinical area:

- Use of the Liverpool care pathway
- Senior review, particularly post operatively
- Risk of falls in hospital
- Patient monitoring, including failure to escalate deteriorating patients
- Fluid balance monitoring
- Delays in implementing treatment plans

Source: Care Quality Commission – alerts, correspondence and findings

<table>
<thead>
<tr>
<th>Emergency specialty groups much worse than expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep 11 to Aug 12</td>
</tr>
<tr>
<td>Gastroenterology and hepatology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emergency specialty groups worse than expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep 11 to Aug 12</td>
</tr>
<tr>
<td>Respiratory</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diagnosis group alerts (2007 to date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alerts to CQC</td>
</tr>
<tr>
<td>Alerts followed up by CQC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recent diagnosis group alerts pursued by CQC</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPD or bronchitis (Jul-11)</td>
</tr>
<tr>
<td>Complex elderly with haematology, infection, poisoning or non-specific diagnosis (Nov-11)</td>
</tr>
<tr>
<td>Therapeutic ops on jejunum and ileum (Apr-12)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Any related patient groups alerting more than once since 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapeutic operations on jejunum and ileum</td>
</tr>
<tr>
<td>Pneumonia</td>
</tr>
</tbody>
</table>
SMRs for Diagnostic and Procedure groups – Dr Foster

The standardised mortality ratio (SMR) is used to calculate the mortality rate for diagnosis and procedure groups. This is available for the 56 diagnosis groups that are included in the HSMR and the 96 procedure groups that are part of the Real Time Monitoring system.

SMRs are not yet remodelled for the year but are projected, rebased estimates. SMRs are classified as above expected if their lower 95% confidence limit exceeds 100 (excluding those with fewer than four more observed deaths than expected).

From Apr 12 to Mar 13, there were seven diagnosis groups and one procedure group with above expected SMRs, which may highlight potential areas for review. There were three diagnosis groups with above expected mortality for weekend admissions but not for weekday ones: Acute myocardial infarction, Other lower respiratory disease and Intestinal obstruction without hernia, but only the last of these had a high SMR overall.

CUSUM alerts show how many early warning flags arose within the diagnosis and procedure groups during the year. These are based on cumulative sum statistical process control charts with 99% thresholds that trigger alerts once breached. The same groups may alert multiple times.

During the year, United Lincolnshire had two CUSUM alerts for other perinatal conditions and one each for cancer of ovary, intestinal obstruction without hernia, liver disease, alcohol-related, and senility and organic mental disorders. It also had alerts for four procedure groups that did not have a high SMR.

<table>
<thead>
<tr>
<th>Apr 2012 to Mar 2013</th>
<th>Diagnosis groups</th>
<th>Procedure groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMRs above expected</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>CUSUM alerts</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diagnosis groups with SMRs above expected</th>
<th>SMR</th>
<th>Obs – Exp deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer of ovary</td>
<td>205</td>
<td>7</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease and bronchiectasis</td>
<td>124</td>
<td>20</td>
</tr>
<tr>
<td>Gastrointestinal haemorrhage</td>
<td>144</td>
<td>11</td>
</tr>
<tr>
<td>Intestinal obstruction without hernia</td>
<td>147</td>
<td>13</td>
</tr>
<tr>
<td>Liver disease, alcohol-related</td>
<td>169</td>
<td>11</td>
</tr>
<tr>
<td>Other perinatal conditions</td>
<td>274</td>
<td>20</td>
</tr>
<tr>
<td>Senility and organic mental disorders</td>
<td>196</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedure groups with SMRs above expected</th>
<th>SMR</th>
<th>Obs – Exp deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other drainage of peritoneal cavity</td>
<td>160</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: Dr Foster HSMR, SMRs, CUSUM alerts
Mortality – other alerts

United Lincolnshire Trust was rated “high” for mortality among diabetic patients, in a report published by the Yorkshire and Humber Public Health Observatory (YHPHO) and the National Diabetes Information Service.

The Health and Social Care Information Centre publish 30-day mortality rates following certain types of surgery or admission to hospital. These are not casemix adjusted, but the rates may be compared over time.

United Lincolnshire’s 30-day Stroke mortality is high and improving substantially below the national average in the data to 2010-11 (published in Feb 2013).

Variable Life Adjusted Display (VLAD) charts are produced by the HSCIC to visualise the cumulative number of “statistical lives gained” over a period. A downward trend indicates a run of more deaths than expected compared to the national baseline and one with a sustained downward trend and multiple dips to the lower control limit may warrant further investigation.

United Lincolnshire had such a VLAD charts for one diagnosis groups in the year to June 2012: Pneumonia.

In addition, United Lincolnshire had high excess deaths for Pneumonia (46 deaths, 11% more than expected) and Acute cerebrovascular disease (32 deaths, 15% more than expected) in the HSCIC’s SHMI to September 2012.

Source: Health & Social Care Information Centre – SHMI and contextual indicators; Dr Foster – HSMR.
Patient Experience
**Patient Experience**

**Overview:**

The following section provides an insight into the Trust’s patient experience.

**Review Areas:**

To undertake a detailed analysis of the Trust’s Patient Experience it is necessary to review the following areas:

- Patient Experience, and
- Complaints.

**Data Sources:**

- Patient Experience Survey;
- Cancer Patient Experience Survey;
- Peoples’ Voice Summary; and
- Complaints data.

**Summary:**

Of the 9 measures reviewed within Patient Experience and Complaints, this Trust was rated ‘red’ on seven measures.

The Trust was below average on the inpatient survey, with concerns focusing on staff to patient communication. On the cancer survey, overall standards of care were poorly rated by patients. The Trust’s Friends and Family Test scores show a marked decline, with scores falling in the early part of 2013.

More than two-thirds of comments on CQC’s patient voice monitoring data were negative, with a focus on lack of professionalism and over-emphasis on meeting targets or meeting requirements for visits.

PEAT data shows the Trust rated as ‘acceptable’ for environment across all sites. Acceptable in this context is a relatively low rating. The Trust also has ‘acceptable’ marks for respect & dignity at the Louth site.

Complaints show a higher than average percentage relating to clinical aspects of care and, whilst the Ombudsman currently rates the Trust as A-rated, the expectation is that they will be downgraded at the next review. The report noted a high incidence of complaints converting into complaints to the Ombudsman and some indications that the Trust was struggling to manage the volume of complaints.
**Patient Experience**

This page shows the Patient Experience measures which are considered to be the most pertinent for this review. Further analysis, where relevant, is detailed in the following pages.

<table>
<thead>
<tr>
<th>Patient Experience</th>
<th>Outside expected range</th>
<th>Within expected range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEAT: privacy and dignity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complaints about clinical aspects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ombudsman’s rating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEAT: environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEAT: food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friends and family test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient voice comments</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Inpatient Experience Survey

United Lincolnshire performs above average on survey questions relating to the length of time spent on waiting lists, but below average on those relating to patient involvement in decision-making, information provided on post-discharge danger signals and medication side-effects, and the clarity of doctors’ responses to patient questions.

<table>
<thead>
<tr>
<th>Access and Waiting</th>
<th>Overall</th>
<th>Length of time spent on waiting list</th>
<th>Length of time to be allocated a bed on a ward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alteration of admission date by hospital</td>
<td>Below expected range</td>
<td>Within expected range</td>
<td>Above expected range</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Safe, High Quality, Coordinated Care</th>
<th>Overall</th>
<th>Delay of patient discharge</th>
<th>Information provided on post-discharge danger signals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency of staff communication</td>
<td>Above expected range</td>
<td>Below expected range</td>
<td>Within expected range</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Better Information, More Choice</th>
<th>Overall</th>
<th>Staff communication on purpose of medication provided</th>
<th>Staff communication on medication side-effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient involvement in decision-making</td>
<td>Below expected range</td>
<td>Within expected range</td>
<td>Below expected range</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Building Closer Relationships</th>
<th>Overall</th>
<th>Clarity of nurses’ responses to important questions</th>
<th>Language used by nurses in front of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarity of doctors’ responses to important questions</td>
<td>Above expected range</td>
<td>Below expected range</td>
<td>Within expected range</td>
</tr>
<tr>
<td>Language used by doctors in front of patients</td>
<td>Below expected range</td>
<td>Above expected range</td>
<td>Within expected range</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clean, Comfortable, Friendly Place to Be</th>
<th>Overall</th>
<th>Hospital food</th>
<th>Degree of privacy provided</th>
<th>Level of respect shown by staff</th>
<th>Overall staff effort to ease pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient noise levels at night</td>
<td>Above expected range</td>
<td>Below expected range</td>
<td>Within expected range</td>
<td>Below expected range</td>
<td>Below expected range</td>
</tr>
<tr>
<td>Staff noise levels at night</td>
<td>Above expected range</td>
<td>Below expected range</td>
<td>Within expected range</td>
<td>Below expected range</td>
<td>Below expected range</td>
</tr>
<tr>
<td>Hospital/ward cleanliness</td>
<td>Above expected range</td>
<td>Below expected range</td>
<td>Within expected range</td>
<td>Below expected range</td>
<td>Below expected range</td>
</tr>
</tbody>
</table>

Source: Patient Experience Survey 2012/13
Patient experience and patient voice

Inpatient Survey

The national inpatient survey 2012 measures a wide range of aspects of patient experience. A composite ‘overall measure’ is calculated for use in the Outcomes Framework. This measure uses a pre-defined selection of 20 survey questions to rate the Trust on aspects including access to services, co-ordination of care, information & choice, relationship with staff and the quality of the clinical environment.

- England Average: 76.5
- United Lincolnshire: 73.8 (two standard deviations below average)

Cancer Survey

- Of 58 Questions, 22 were in the ‘bottom 20%’ whilst only 2 were in the ‘top 20%. Negative scores related to overall care, and care and treatment for inpatient, outpatient and day case care.

Patient Voice

- The quality risk profiles compiled by the Care Quality Commission collate comments from individuals and various sources. In the two years to 31st January 2013, there were 241 comments on United Lincks of which 165 were negative (68%). Concerns include a focus on targets (staff asked to stop tasks that would not be assessed by CQC), lack of professionalism (notes not filled in), lack of organisation.

Friends and Family Test

- United Lincks has shown a decline in scores for the Midlands & East FFT. Scores declined to 63 in February 2013, placing the Trust in the bottom quartile.

Patient Environment Action Team (PEAT)

- PEAT scores for Environment are routinely shown as ‘acceptable’ across all sites – this is a low rating on this indicator. Louth was also recorded at this level for privacy and dignity in 2012.

Overall patient experience score: Inpatients 2012

Complaints Handling

- Data returns to the Health and Social Care Information Centre showed 704 written complaints in 2011-12. The number of complaints is not always a good indicator, because stronger Trusts encourage comments from patients. However, central returns are categorised by subject matter against a list of 25 headings. For this Trust, 73% of complaints related to clinical treatment (compared to the national average of 47%).

- A separate report by the Ombudsman rates the Trust as A-rated for satisfactory remedies and low-risk of non-compliance. The reported noted a high incidence of complaints converting into complaints to the ombudsman and some indications that the Trust was struggling to manage the volume of complaints.
Safety and workforce
Safety and Workforce

Overview:
The following section provides an insight into the Trust’s workforce profile and safety record. This section outlines whether the Trust is adequately staffed and is safely operated.

Review Areas:
To undertake a detailed analysis of the Trust’s Safety and Workforce it is necessary to review the following areas:

- General Safety;
- Staffing;
- Staff Survey;
- Litigation and Coroner; and
- Analysis of patient safety incident reporting.

Data Sources:
- Safety Thermometer, Apr 12 – Mar 13;
- Litigation Authority Reports;
- GMC Evidence to Review 2013;
- National Staff Survey 2011, 2012;
- 2011/12 Organisational Readiness Self-Assessment (ORSA);
- National Training Survey, 2012; and
- NHS Hospital & Community Health Service (HCHS), monthly workforce statistics.

All data and sources used are consistent across the packs for the 14 trusts included in this review.
**Safety**

This page shows the safety measures which are considered to be the most pertinent for this review. Further analysis, where relevant, is detailed in the following pages.

<table>
<thead>
<tr>
<th>General Safety Measures</th>
<th>Outcome 1 (R17) Respecting and involving people who use services</th>
<th>Clinical negligence scheme payments</th>
<th>Rule 43 coroner reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting of patient safety incidents</td>
<td>Number of harm incidents reported as 'moderate, severe or death' from April '11 to March '12</td>
<td>207</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of ‘never events’ (2009-2012)</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

- **Specific safety measures**
  - Medication error
  - Pressure ulcers
  - MRSA
  - “Harm” for all four Safety Thermometer Indicators
  - C diff

- **Litigation and Coroner**
  - Clinical negligence scheme payments
  - Rule 43 coroner reports

- **Outside expected range**
- **Within expected range**
Safety Analysis

The Trust has reported more patient safety incidents than similar trusts. Organisations that report more incidents may have a stronger and more effective safety culture. United Lincolnshire has a rate of 6.4 for its patient safety incident reporting per 100 admissions.

The rate of medication errors for United Lincolnshire is 6.51, which is more than two standard deviations below the mean rate of 7.17 for all acute trusts.

The Trust’s performance is in the bottom third of the national distribution for MRSA rates over the three year period. The infection rate for 2012 places them close to the average for all trusts.

| Rate of reported patient safety incidents per 100 admissions (April – September 2012) |
|---------------------------------|---------------------------------|
| United Lincolnshire | Median rate for large acutes |
| 6.4 | 6.2 |

Source: incidents occurring between 1 April 2012 to 30 September 2012 and reported to the National Reporting and Learning System

| Rate of medication errors per 1,000 bed days (October 2011 – March 2012) |
|---------------------------------|---------------------------------|
| United Lincolnshire | Mean rate for all acute |
| 6.51 | 7.17 |

Source: Acute Trust Quality Dashboard Winter 2012/13

MRSA 2010 - 2012
Combined z score of rates per bed day over the 3 separate years with the value 2 added so that all values are shown as positive

Bed days: Department of Health: Unify2 data collection - KH03
Since 2009, 12 ‘never events’ have occurred at United Lincolnshire, classified as that because they are incidents that are so serious they should never happen.

The patient safety incidents reported are broken down into five levels of harm below, ranging from ‘no harm’ to ‘death’. 71% of incidents which have been reported at United Lincolnshire have been classed as ‘no harm’, with 23% ‘low’, 5% ‘moderate’, 1% ‘severe’ and eight occurrences classified as ‘death’.

When broken down by category, the most regular occurrences of patient incident at United Lincolnshire are in ‘patient accident’ and ‘treatment, procedure’.

### Never Events Breakdown (2009-2012)

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained foreign object post-operation</td>
<td>4</td>
</tr>
<tr>
<td>Wrong site surgery</td>
<td>3</td>
</tr>
<tr>
<td>Wrong implant/prosthesis</td>
<td>2</td>
</tr>
<tr>
<td>Transfusion of ABO-incompatible blood components</td>
<td>2</td>
</tr>
<tr>
<td>Maladministration of potassium containing solutions</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>


### Breakdown of patient incidents by incident type

- **Medical device / equipment**: 97
- **Consent, communication,**...**: 99
- **All others categories**: 152
- **Infrastructure**: 159
- **Documentation**: 199
- **Clinical assessment**: 210
- **Access, admission, transfer,**...**: 252
- **Medication**: 385
- **Implementation of care and**...**: 386
- **Treatment, procedure**: 500
- **Patient accident**: 1179

Source: National Patient Safety Agency (NPSA) Apr 11 – Mar 12
A definition of serious harm is given in the Appendix.
Pressure Ulcers
This slide outlines the total number of pressure ulcers and the number of new pressure ulcers broken down by category for the last 12 months. Due to the effects of seasonality on hospital acquired pressured ulcer rates, the national rate has been included which allows a comparison that takes this into account. This provides a comparison against the national rate as well as the 14 trusts selected for the review.

The Trust's new pressure ulcer rate decreased from May 2012 to take them below the national average rate in August 2012. However, a recent increase in March 2013 took them back up above the national rate.

The total pressure ulcer prevalence rate was below the national average for 11 of the 12 months shown. However, in the most recent month, the Trust had a higher prevalence rate than the national average.

**New pressure ulcer analysis**

<table>
<thead>
<tr>
<th>Category 2</th>
<th>Category 3</th>
<th>Category 4</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr-12</td>
<td>2.8%</td>
<td>2.9%</td>
<td>2.3%</td>
</tr>
<tr>
<td>May-12</td>
<td>1.5%</td>
<td>1.2%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Jun-12</td>
<td>1.4%</td>
<td>0.7%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Jul-12</td>
<td>1.4%</td>
<td>0.8%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Aug-12</td>
<td>2.1%</td>
<td>2.0%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Sep-12</td>
<td>3.0%</td>
<td>2.9%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Oct-12</td>
<td>4.0%</td>
<td>3.9%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Nov-12</td>
<td>5.0%</td>
<td>4.9%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Dec-12</td>
<td>6.0%</td>
<td>5.9%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Jan-13</td>
<td>7.0%</td>
<td>6.9%</td>
<td>6.8%</td>
</tr>
<tr>
<td>Feb-13</td>
<td>8.0%</td>
<td>7.9%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Mar-13</td>
<td>9.0%</td>
<td>8.9%</td>
<td>8.8%</td>
</tr>
</tbody>
</table>

**Total pressure ulcer prevalence percentage**

<table>
<thead>
<tr>
<th>Category 2</th>
<th>Category 3</th>
<th>Category 4</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr-12</td>
<td>5.8%</td>
<td>5.5%</td>
<td>5.4%</td>
</tr>
<tr>
<td>May-12</td>
<td>6.5%</td>
<td>6.5%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Jun-12</td>
<td>5.5%</td>
<td>5.5%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Jul-12</td>
<td>5.4%</td>
<td>5.4%</td>
<td>5.4%</td>
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<tr>
<td>Aug-12</td>
<td>5.3%</td>
<td>5.3%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Sep-12</td>
<td>5.2%</td>
<td>5.2%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Oct-12</td>
<td>5.1%</td>
<td>5.1%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Nov-12</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Dec-12</td>
<td>4.9%</td>
<td>4.9%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Jan-13</td>
<td>4.8%</td>
<td>4.8%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Feb-13</td>
<td>4.7%</td>
<td>4.7%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Mar-13</td>
<td>4.6%</td>
<td>4.6%</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

Source: Safety Thermometer Apr 12 to Mar 13
Litigation and Coroner

Clinical negligence scheme analysis

United Lincolnshire’s Clinical Negligence payments have exceeded contributions to the ‘risk sharing scheme’ for two of the last 3 years. Payouts exceeded contributions by a total of £4.9m over this period.

The Trust’s Finance department show a slight variation from the figures; they have reported contributions to the risk sharing scheme of £10m in 2010/11 and £9m in 2012/13.

Coroners’ Rule

Coroners rule 43 reports flagged two items:

i) To consider a review of the falls risk assessment policy and whether the hospital's computer system could be programmed to set an alert on patient records to ensure that on handover and/or when a new user logs on that staff are aware a risk assessment has not been carried out and for this alert to remain on the record until the risk assessment has been completed.

ii) To consider whether scans should be reviewed by a radiologist and if no local expert is available obtaining an opinion from a teaching hospital.

Clinical negligence payments

<table>
<thead>
<tr>
<th></th>
<th>2009/10</th>
<th>2010/11</th>
<th>2011/12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payouts (£000s)</td>
<td>4,749</td>
<td>7,838</td>
<td>15,166</td>
</tr>
<tr>
<td>Contributions (£000s)</td>
<td>6,630</td>
<td>7,536</td>
<td>8,671</td>
</tr>
<tr>
<td>Variance between payouts and contributions (£000s)</td>
<td>1,881</td>
<td>-302</td>
<td>-6,495</td>
</tr>
</tbody>
</table>

Source: Litigation Authority Reports
**Workforce**

This page shows the workforce measures which are considered to be the most pertinent for this review. Further analysis, where relevant, is detailed in the following pages.

<table>
<thead>
<tr>
<th>Workforce Indicators</th>
<th>Measures</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTE nurses per bed day</td>
<td>Sickness absence- Overall</td>
<td>Medical Staff to Consultant Ratio 2.66</td>
</tr>
<tr>
<td>Spells per WTE staff</td>
<td>Sickness absence- Medical</td>
<td>Nurse Staff to Qualified Staff Ratio 2.28</td>
</tr>
<tr>
<td>Vacancies - medical</td>
<td>Sickness absence - Nursing staff</td>
<td>Non-clinical Staff to Total Staff Ratio 0.34</td>
</tr>
<tr>
<td>Vacancies - Non-medical</td>
<td>Sickness absence - Other staff</td>
<td>Consultant Productivity (FTE/Bed Days) 534</td>
</tr>
<tr>
<td>Consultant appraisal rates</td>
<td>Staff leaving rates</td>
<td>Nurse Hours per Patient Bed Day 7.18</td>
</tr>
<tr>
<td>Agency spend</td>
<td>Staff joining rates</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staff Surveys and Deanery</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response Rate from National Staff Survey 2012</td>
<td>Overall Rate of Patient Safety Concerns</td>
</tr>
<tr>
<td>Staff Engagement from NSS 2012</td>
<td>Care of patients / service users is my organisation’s top priority</td>
</tr>
<tr>
<td>Training Doctors – “undermining” indicator</td>
<td>I would recommend my organisation as a place to work</td>
</tr>
<tr>
<td>GMC monitoring under “response to concerns process”</td>
<td>If a friend or relative needed treatment: I would be happy with the standard of care provided by this organisation</td>
</tr>
</tbody>
</table>

- **Outside expected range**
- **Within expected range**
**General Medical Council (GMC) National Training Scheme Survey 2012**

The below summarises the output from the General Medical Council National Training Scheme 2012 Survey Results. Given the volume of data only specialties with red outliers are noted below (where those specialties also have green outliers, they are included).

| Acute Internal Medicine |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Overall satisfaction    | ○               | Induction        | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |
| Clinical supervision    | ○               | Undermining      | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |
| Workload                | ○               | Access to educational resource | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |
| Handover                | ○               | Local teaching   | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |
| Adequate experience     | ○               | Study leave      | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |
| Educational supervision | ○               | Regional teaching | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |
| Feedback                | ○               |                   | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |

| General Practice |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Overall satisfaction | ○               | Induction        | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |
| Clinical supervision | ○               | Undermining      | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |
| Workload            | ○               | Access to educational resource | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |
| Handover            | ○               | Local teaching   | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |
| Adequate experience | ○               | Study leave      | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |
| Educational supervision | ○               | Regional teaching | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |
| Feedback            | ○               |                   | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               | ○               |

- **Green outlier**
- **Within expected range**
- **Red outlier**
The GMC Survey results continue as follows.

### Obstetrics and Gynecology

<table>
<thead>
<tr>
<th>Overall satisfaction</th>
<th>Induction</th>
<th>Red outlier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical supervision</td>
<td>Undermining</td>
<td>Red outlier</td>
</tr>
<tr>
<td>Workload</td>
<td>Access to educational resource</td>
<td>Red outlier</td>
</tr>
<tr>
<td>Handover</td>
<td>Local teaching</td>
<td></td>
</tr>
<tr>
<td>Adequate experience</td>
<td>Study leave</td>
<td></td>
</tr>
<tr>
<td>Educational supervision</td>
<td>Regional teaching</td>
<td></td>
</tr>
<tr>
<td>Feedback</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Pediatrics

<table>
<thead>
<tr>
<th>Overall satisfaction</th>
<th>Induction</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical supervision</td>
<td>Undermining</td>
<td></td>
</tr>
<tr>
<td>Workload</td>
<td>Access to educational resource</td>
<td></td>
</tr>
<tr>
<td>Handover</td>
<td>Local teaching</td>
<td></td>
</tr>
<tr>
<td>Adequate experience</td>
<td>Study leave</td>
<td></td>
</tr>
<tr>
<td>Educational supervision</td>
<td>Regional teaching</td>
<td>Green outlier</td>
</tr>
<tr>
<td>Feedback</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Green outlier](image)

![Within expected range](image)

![Red outlier](image)
The GMC Survey results continue as follows.

<table>
<thead>
<tr>
<th>Overall satisfaction</th>
<th>Induction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical supervision</td>
<td>Undermining</td>
</tr>
<tr>
<td>Workload</td>
<td>Access to educational resource</td>
</tr>
<tr>
<td>Handover</td>
<td>Local teaching</td>
</tr>
<tr>
<td>Adequate experience</td>
<td>Study leave</td>
</tr>
<tr>
<td>Educational supervision</td>
<td>Regional teaching</td>
</tr>
<tr>
<td>Feedback</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall satisfaction</th>
<th>Induction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical supervision</td>
<td>Undermining</td>
</tr>
<tr>
<td>Workload</td>
<td>Access to educational resource</td>
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<tr>
<td>Handover</td>
<td>Local teaching</td>
</tr>
<tr>
<td>Adequate experience</td>
<td>Study leave</td>
</tr>
<tr>
<td>Educational supervision</td>
<td>Regional teaching</td>
</tr>
<tr>
<td>Feedback</td>
<td></td>
</tr>
</tbody>
</table>

In addition to the green outliers displayed, Anaesthetics has one green outlier for handover.

- **Green outlier**
- **Within expected range**
- **Red outlier**
Workforce Analysis

The Trust has a patient spell per whole time equivalent rate of 26, which is a slightly above average capacity in relation to the other trusts in this review and nationally.

The consultant appraisal rate of United Lincolnshire is 69.8%.

United Lincolnshire’s staff joining rate is 5.7% which is lower than the regional median of 5.9%. Also, the leaving rate of 7.5% is higher than the East Midlands SHA median.

The data shows that the agency staff costs, as a percentage of total staff costs, is higher than the median within the region.

<table>
<thead>
<tr>
<th>Agency Staff (2011/12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Lincolnshire</td>
</tr>
<tr>
<td>£13.9m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staff Turnover (Sep 11 – Sep 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Lincolnshire</td>
</tr>
<tr>
<td>Joining Rate</td>
</tr>
<tr>
<td>5.7%</td>
</tr>
<tr>
<td>Leaving Rate</td>
</tr>
<tr>
<td>7.5%</td>
</tr>
</tbody>
</table>

Source: Health and Social Care Information Centre (HSCIC)

WTE nurses per bed day December 2012

<table>
<thead>
<tr>
<th>United Lincolnshire</th>
<th>National Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.51</td>
<td>1.96</td>
</tr>
</tbody>
</table>

Source: Acute Trust Quality Dashboard, Methods Insight

Spells per WTE for Acute Trusts

Consultant appraisal rate, 2011/12

Source: 2011/12 Organisational Readiness Self-Assessment (ORSA)
Data based on the appraisal year from April 2011 to March 2012
Workforce Analysis continued...

United Lincolnshire’s total sickness absence rate is higher than the East Midlands Strategic Health Authority average and the national average. This pattern of exceeding the national average is replicated in the more granular medical, nursing, and other staff categories.

United Lincolnshire has a medical staff to consultant ratio that is above the national average, while its nurse staff to qualified staff ratio is below the average for all English trusts. The Trust’s registered nurse hours to patient day ratio is also below the national mean.

The Trust’s consultant productivity rate is above the national average.

<table>
<thead>
<tr>
<th>Sickness Absence Rates</th>
<th>(2011-2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>United Lincolnshire</td>
</tr>
<tr>
<td>All Staff</td>
<td>5.05%</td>
</tr>
</tbody>
</table>

Source: Health and Social Care Information Centre (HSCIC)

<table>
<thead>
<tr>
<th>Sickness Absence Rates by Staff Category</th>
<th>(Dec 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>United Lincolnshire</td>
</tr>
<tr>
<td>Medical Staff</td>
<td>1.4%</td>
</tr>
<tr>
<td>Nursing Staff</td>
<td>7.7%</td>
</tr>
<tr>
<td>Other Staff</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

Source: Acute Trust Quality Dashboard, Methods Insight

<table>
<thead>
<tr>
<th>Staff Ratios</th>
<th>United Lincolnshire</th>
<th>National Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Staff to Consultant Ratio</td>
<td>2.66</td>
<td>2.59</td>
</tr>
<tr>
<td>Nurse Staff to Qualified Staff Ratio</td>
<td>2.28</td>
<td>2.50</td>
</tr>
<tr>
<td>Non-Clinical Staff to Total Staff Ratio</td>
<td>0.34</td>
<td>0.34</td>
</tr>
<tr>
<td>Registered Nurse Hours to Patient Day Ratio *</td>
<td>7.18</td>
<td>8.57</td>
</tr>
</tbody>
</table>

Source: Electronic Staff Record (ESR) April 13
* Patient Bed Days Data: Healthcare Evaluation Data Apr 12 – Mar 13

<table>
<thead>
<tr>
<th>Staff Productivity</th>
<th>United Lincolnshire</th>
<th>National Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultant Productivity (Spells/FTE)</td>
<td>534</td>
<td>492</td>
</tr>
</tbody>
</table>

Source: Electronic Staff Record (ESR) April 13

Workforce indicator calculations are listed in the Appendix.
Note: ESR Data only includes substantive staff.
United Lincolnshire’s response rate to the staff survey has fallen below average in 2012. The staff engagement score, when compared with trusts of a similar type is also below average but has improved slightly from 2011. United Lincolnshire is in the bottom 5% for all three organisational questions from the staff survey and significantly different from the national average.

<table>
<thead>
<tr>
<th>National Staff Survey results</th>
<th>United Lincolnshire 2011</th>
<th>Average for all trusts 2011</th>
<th>United Lincolnshire 2012</th>
<th>Average for all trusts 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response rate</td>
<td>50%</td>
<td>50%</td>
<td>46%</td>
<td>50%</td>
</tr>
<tr>
<td>Overall staff engagement</td>
<td>3.42</td>
<td>3.62</td>
<td>3.49</td>
<td>3.69</td>
</tr>
<tr>
<td>Care of patients/service users is my organisation's top priority</td>
<td>54%</td>
<td>69%</td>
<td>52%</td>
<td>63%</td>
</tr>
<tr>
<td>I would recommend my organisation a place to work</td>
<td>45%</td>
<td>52%</td>
<td>48%</td>
<td>55%</td>
</tr>
<tr>
<td>If a friend or relative needed treatment, I would be happy with the standard of care provided by this organisation</td>
<td>54%</td>
<td>62%</td>
<td>55%</td>
<td>60%</td>
</tr>
</tbody>
</table>

Source: National Staff Survey 2011, 2012
Deanery

The Trust has been subject to enhanced monitoring since 2010, following a visit looking at the Foundation Programme. The concerns were about the clinical supervision and workload of Foundation Doctors in surgical posts. Subsequent investigations raised a number of patient safety concerns, across three sites. The withdrawal of Foundation Doctors was considered, but improvements were apparent. All the three main sites in the Trust are being closely monitored by both the GMC and the Deanery.

National Training Scheme (NTS) Outliers – Programme Groups by Trust/Board between 2010-12

Several programmes reported a high number of below outliers between 2010 and 2012, indicative of the concerns at the Trust. F1s in Anaesthetics recorded the most above outliers in the same period, although all of the above outliers were recorded in 2012. Perceptions of training have improved at the trust, as demonstrated by the increase in above outliers recorded in 2012 (14), compared to 2010 (1).

NTS 2012 Patient Safety Comments

26 doctors in training commented, representing 9.12% of respondents. This was nearly double the national average of 4.7%. Their concerns, which were raised in relation to specific training posts, and may apply to a single or multiple departments, related to:

- Poor handover;
- Lack of medical staff;
- Lack of midwives;
- Locum staff of variable ability;
- Lack of senior and middle grade supervision, especially at night and on weekends;
- A lack of continuity of care from “Senior Decision Maker” system; and
- Nurses and healthcare assistant lack competence in ABC approach of patients.

Source: GMC evidence to Review 2013
Deanery Reports

The East Midlands Healthcare Workforce Deanery reported concerns against United Lincolnshire Hospitals NHS Trust in the 2011 Deanery Report, and further concerns were raised in the 2012 Deanery Report. Concerns about workload and supervision in the surgical directorate (Core Surgical Training and General Surgery) were reported in both 2011 and 2012 at the Lincoln County Hospital. At Grantham Hospital, concerns relating to senior support for doctors in training were raised in Core Medical Training. Concerns about unfilled vacancies and working beyond competencies were reported in both 2011 and 2012 at the Pilgrim Hospital for Medical specialties. Concerns in respect of patient and trainee safety were also identified by the NMC and CQC in Medicine which was reported by the Deanery in both 2011 and 2012. Overall, specialities including General Surgery and Medicine appeared to have persistent concerns.

Monitored under the response to concerns process?

United Lincolnshire Hospitals NHS Trust has been monitored through the response to concerns process since November 2010. After concerns were raised during a GMC Foundation Programme visit to Lincoln County Hospital, the East Midlands Deanery alerted the GMC in November 2010 that Foundation Doctors in surgical posts were still having issues with clinical supervision and workload. Further concerns were raised when the NMC withdrew student nurses from Pilgrim Hospital in August 2011.

The October 2012 Deanery Report highlighted persistent issues at the Trust (specifically Grantham and District Hospital) particularly around support of doctors in training in the Emergency Department.

Deanery Action

Lincoln County Hospital

The Deanery confirmed there were issues around Foundation Doctors working in surgical posts without adequate clinical supervision, with responsibility for too many patients, and issues with Working Time Regulation reporting. The Deanery and the GMC met with Trust and Deanery Senior team in December 2010 after Deanery visit to site to discuss the issues.

The Deanery undertook five further visits in 2011. The withdrawal of Foundation doctors in training was considered, but by October 2011 it was confirmed that the action plan was progressing and the trainee experience was improving. An unannounced Deanery visit in February 2012 further confirmed improvement in February 2012. Doctors in training confirmed that they are no longer working in wards without adequate supervision, and they have a more equitable workload.

The Deanery is still closely monitoring the site.

Source: GMC evidence to Review 2013
Deanery Action continued....

Pilgrim Hospital

The Deanery conducted a full quality review of training in all specialties after student nurses were removed from the site by the Nursing and Midwifery Council in July 2011.

A Deanery/GMC visit in December 2011 indicated issues in the medical wards with organisation of beds, continuity of care, and Foundation Doctors working beyond competency.

The Deanery undertook five further visits in 2012 and confirmed that rotas had been reorganised to ensure appropriate workload and supervision for trainee doctors, who are also now receiving appropriate education. However, this site has persistent recruitment issues and is therefore being closely monitored to ensure arrangements are sustainable.

Grantham and District Hospital

Deanery quality management activity indicated that there were issues with handover and clinical supervision in medical and emergency medicine posts.

The Deanery met with the Trust in November 2012 to discuss the issues. An action plan dated February 2013 indicated that there is now 24/7 middle grade cover, and the rota has been revised to improve handover. The Deanery continues to closely monitor the site.

GMC Action

Lincoln County Hospital

- GMC Foundation Programme visit in 2010,
- Two joint GMC/Deanery visits, and
- Deanery Reports and Trust action plans monitored.

Pilgrim Hospital

- Four joint GMC/Deanery visits, and
- Deanery Reports and Trust action plans monitored.

Grantham and District Hospital

- Deanery Reports and Trust action plans monitored

Source: GMC evidence to Review 2013
For doctors undertaking training at United Lincolnshire, 94% reported never being made to feel undermined. This is in-line with the national average of 94%.

Source: National Training Survey 2012
Clinical and operational effectiveness
Clinical and Operational Effectiveness

Overview:

The following section provides an insight into the Trust’s clinical and operational performance based on nationally recognised key performance indicators.

Review Areas:

To undertake a detailed analysis of the Trust’s clinical and operational performance it is necessary to review the following areas:

- Clinical Effectiveness;
- Operational Effectiveness; and
- Patient Reported Outcome Measures (PROMs) for the review areas.

Data Sources:

- Clinical Audit Data Trust, CQC Data Submission;
- Healthcare Evaluation Data (HED), Jan – Dec 2012;
- Department of Health;
- Cancer Waits Database, Q3, 2012-13; and
- PROMs Dashboard.

Summary:

A review of the national diabetes inpatient audit showed that United Lincolnshire has high rates of severe hypoglycaemic episodes and low rates of patients receiving a foot risk assessment in 2012. They were also an outlier for the percentage of discharged patients who are prescribed beta blockers following a myocardial infarction and for the proportion of operations within 36 hours following hip fracture.

The Trust sees 93.7% of A&E patients within 4 hours which is below the 95% target level. The percentage of patients seen within 4 hours was relatively consistent during 2012. 90.6% of patients start treatment within the 18 week target time which is above the target level. This has been a consistent trend from April 2012 to March 2013.

United Lincolnshire’s crude readmission rate is 11.3% with their standardised readmission rate showing a level of performance that is statistically within the expected range. The Trust’s average length of stay is shorter than that of the national average.

United Lincolnshire cancelled 2.4% of elective operations in Q4 2012-13 (1.8% in Q3), considered to be a higher rate than expected. The Trust also had above expected cancellations in Q4 2011-12.

The PROMs dashboard shows that there has been some decline in performance for United Lincolnshire.
### Clinical and Operational Effectiveness

This page shows the Clinical and Operational Effectiveness measures which are considered to be the most pertinent for this review. Further analysis, where relevant, is detailed in the following pages.

<table>
<thead>
<tr>
<th>Clinical Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neonatal – women receiving steroids</td>
</tr>
<tr>
<td>Adult Critical care</td>
</tr>
<tr>
<td>Diabetes safety/ effectiveness</td>
</tr>
<tr>
<td>PROMS safety/ effectiveness</td>
</tr>
<tr>
<td>Joints – revision ratio</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operational Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTT Waiting Times</td>
</tr>
<tr>
<td>Emergency readmissions</td>
</tr>
<tr>
<td>Cancer Waits</td>
</tr>
<tr>
<td>A&amp;E Waits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROMS Dashboard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hip Replacement EQ-5D</td>
</tr>
<tr>
<td>Knee Replacement EQ-5D</td>
</tr>
<tr>
<td>Varicose Vein EQ-5D</td>
</tr>
</tbody>
</table>
Clinical Effectiveness: National Clinical Audits

The National Clinical Audits provide a valuable source of evidence on clinical effectiveness. These two tables show the clinical audit results considered as part of this review.

<table>
<thead>
<tr>
<th>Clinical Audit</th>
<th>Safety Measure</th>
<th>Effectiveness Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>Proportion with medication error</td>
<td>Proportion of women receiving antenatal steroids</td>
</tr>
<tr>
<td></td>
<td>Proportion experiencing severe hypoglycaemic episode</td>
<td></td>
</tr>
<tr>
<td>Elective Surgery</td>
<td>Proportion of patient reported post-operative complications</td>
<td>Proportion foot risk assessment</td>
</tr>
<tr>
<td>Adult Critical Care (ICNARC CMPD)</td>
<td>Proportion of night-time discharges</td>
<td>Standardised hospital mortality ratio</td>
</tr>
<tr>
<td>Coronary angioplasty</td>
<td></td>
<td>Proportion receiving primary PCI within 90 mins</td>
</tr>
<tr>
<td>Peripheral vascular surgery</td>
<td></td>
<td>Elective abdominal aortic aneurysm post-op mortality</td>
</tr>
<tr>
<td>Carotid interventions</td>
<td></td>
<td>Proportion having surgery within 14 days of referral</td>
</tr>
<tr>
<td>Acute Myocardial Infarction</td>
<td></td>
<td>Proportion discharged on beta-blocker</td>
</tr>
<tr>
<td>Acute Stroke</td>
<td></td>
<td>Proportion compliant with 12 indicators</td>
</tr>
<tr>
<td>Heart Failure</td>
<td></td>
<td>Proportion referred for cardiology follow up</td>
</tr>
<tr>
<td>Bowel cancer</td>
<td></td>
<td>90 day post-op mortality</td>
</tr>
<tr>
<td>Hip Fracture</td>
<td></td>
<td>30 day mortality</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion operations within 36 hrs</td>
</tr>
<tr>
<td>Elective surgery (PROMS)</td>
<td></td>
<td>Mean adjusted post-operative score</td>
</tr>
<tr>
<td>Severe Trauma</td>
<td></td>
<td>Proportion surviving to hospital discharge</td>
</tr>
<tr>
<td>Hip, knee and ankle</td>
<td></td>
<td>Standardised revision ratio</td>
</tr>
<tr>
<td>Lung Cancer</td>
<td></td>
<td>Proportion small cell patients receiving chemotherapy</td>
</tr>
</tbody>
</table>
**Clinical effectiveness: Clinical Audits**

**National Diabetes Inpatient Audit 2012**

The national diabetes inpatient audit assesses a range of measures. Graphs rank the percentage of patients with diabetes at each hospital that reported that they:

- received a foot risk assessment during their stay;
- experienced a severe hypoglycaemic episode (<3mmol/L); and
- experienced at least one medication error.

The red lines in each graph shows where specific hospitals within United Lincolnshire are ranked.

**Severe Hypoglycaemic Episode 2012**

**Lincoln County Hospital:**

**Received a foot risk assessment during the hospital stay 2012**

**Grantham and District Hospital:**

**Received a foot risk assessment during the hospital stay 2012**


Note: Caution should be borne when looking at the data for some sites in these summaries as they may be based on a small sample of inpatients with diabetes. This means that a small variation would have a substantial impact on the indicators presented.
Clinical effectiveness: Clinical Audits

In the National Clinical Audit for Acute Myocardial Infarction, a key measure of effectiveness is the percentage of discharged patients who are prescribed beta blockers.

On this measure, Pilgrim Hospital was outside the control limits and is therefore an outlier. Local data from the Trust indicates that this has improved to 92%. However, this has not been independently validated.
In the National Hip Fracture Database, a key measure of effectiveness is the proportion of operations within 36 hours.

On this measure, the Pilgrim Hospital was outside the lower control limits, operating on 54% of patients within 36 hours, in comparison to a national average of 69%.
Operational Effectiveness – Cancelled operations (elective)

The number of last minute cancellations of elective operations for non-clinical reasons is expressed as a percentage of all elective General and Acute admissions in CQC’s QRP.

United Lincolnshire cancelled 2.4% of elective operations in Q4 2012-13 (1.8% in Q3), considered to be a higher rate than expected. The Trust also had above expected cancellations in Q4 2011-12.

Source: CQC Quality and Risk Profiles, from Department of Health Quarterly Activity Return
**PROMs Dashboard**

**PROMs Dashboard Analysis:**

The PROMs dashboard shows that there has been some decline in performance for United Lincolnshire.

United Lincolnshire has one instance of being below the lower 99.8% control limit and a further 2 instances of being between two and three standard deviations below the average for England.

Source: PROMs Dashboard and NHS Litigation Authority
Operational Effectiveness – A&E wait times and Referral to Treatment (RTT) times

A&E wait times and RTT times may indicate the effectiveness with which demand is managed.

United Lincolnshire sees 93.7% of A&E patients within 4 hours which is below the 95% target level. The time series graph shows that this has been a consistent trend from July 2012 to December 2012.

90.6% of patients are seen within the 18 week target time which meets the target level. In addition, the time series shows that United Lincolnshire has been consistently performing above the target rate.

A&E Percentage of Patients Seen within 4 Hours

United Lincolnshire 93.7%


United Lincolnshire 4 Hour A&E Waits


Referral to Treatment (Admitted)

United Lincolnshire 90.6%

Source: Department of Health. Feb 13

United Lincolnshire Referral to Treatment Performance

Source: Department of Health. Apr 12 – Feb 13
Readmission rates may indicate the appropriateness of treatment offered, whilst average length of stay may indicate the efficiency of treatment.

United Lincolnshire’s crude readmission rate is among the average readmission rates of the trusts in the review as well as nationally, at 11.3%.

The standardised readmission rate, most importantly, accounts for the trust’s case mix and shows United Lincolnshire is statistically within the expected range.

United Lincolnshire’s average length of stay is 4.46 days, which is shorter than the national mean average of 5.2 days.

Source: Healthcare Evaluation Data (HED); Jan 12 – Dec 12
Leadership and governance
Leadership and governance

Overview:
This section provides an indication of the Trust’s governance procedures.

Review Areas:
To provide this indication of the Trust’s leadership and governance procedures we have reviewed the following areas:

• Trust Board;
• Governance and clinical structure; and
• External reviews of quality.

Data Sources:
• Board and quality subcommittee agendas, minutes and papers;
• Quality strategy;
• Reports from external agencies on quality;
• Board Assurance Framework and Trust Risk Register; and
• Organisational structures and CVs of Board members.

Summary:
The Trust Board has two interim positions (Director of Nursing and Director of HR) and an Acting Director of Finance. The Trust recently appointed a new Director of Performance Improvement and Deputy Chief Executive.

The Governance Committee (a sub-committee of the Board, chaired and attended by Non-Executive Directors), provides assurance to the Board on quality governance. At an operational level, quality governance is overseen by the Quality and Safety Committee, which is chaired by the Medical Director.

The Trust set up the pan-Trust Mortality Reduction Board in 2010. In 2012 a new system introduced site-based mortality reduction committees at main hospital sites, which report into the pan-Trust Mortality Reduction Board.

Recent reviews by the CQC identified minor concerns in relation to two outcomes; staffing, and the care & welfare of people who use services. This represents an improvement on the Trust’s CQC inspections in prior years, which had identified a number of major concerns.

Key risks for the Trust relate to service provision, demand and sustainability, mortality, staffing and skills, lack of whole system provision, progress reliability, patient records and culture.
Leadership and governance

This page shows the latest rating against regulatory standards, the items rated ‘red’ or ‘amber’ below are discussed in more detail in the following pages.

<table>
<thead>
<tr>
<th>Leadership and governance</th>
<th>Monitor governance risk rating</th>
<th>n/a</th>
<th>Monitor finance rating</th>
<th>n/a</th>
<th>CQC Outcomes:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Outcome 13 (minor concerns)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Outcome 4 (minor concerns)</td>
</tr>
</tbody>
</table>

**Governance risk rating**

- **Red** - Likely or actual significant breach of terms of authorisation
- **Amber-red** - Material concerns surrounding terms of authorisation
- **Amber-green** - Limited concerns surrounding terms of authorisation
- **Green** - No material concerns

**Financial risk rating**

Rated 1-5, where 1 represents the highest risk and 5 the lowest
Leadership and governance

Trust Board

All positions in the Trust Board are permanent, with the exception of the Director of Nursing, and the Director of Human Resources, which are interim roles. The Board’s most recent appointment is the Director of Performance Improvement (and Deputy Chief Executive) who was appointed in January 2013 from the role of Director of Finance.

Governance and clinical structures

There is an overarching Governance Committee that has delegated responsibility from the Trust Board to provide assurance on the quality and effectiveness of services provided by the Trust and to ensure risks to the delivery of quality are identified and appropriately mitigated. The Governance Committee has a Non-Executive chair and two other Non-Executive members.

The Quality & Safety Committee reports to the Governance Committee, which is responsible for the operational oversight of quality. The Quality & Safety Committee is chaired by the Medical Director.

The Trust set up the pan-Trust Mortality Reduction Board in 2010, chaired by the Deputy Medical Director (Governance). In 2012, the systems for mortality review were changed in recognition of the continuing high mortality ratios at the Trust. The new system introduced site-based mortality reduction committees at main hospital sites, and a pan-Trust Mortality Reduction Board to which site committees report.

Strategy

The Trust’s quality strategy sets out four ambitions:

• Patient safety: no avoidable harm to our patients;
• Clinical effectiveness: the right treatment at the right time, every time;
• Excellence in experience: why go anywhere else; and
• Continuous improvement and cultural change: always in the lead.

External reviews and regulation

Recent reviews by the Care Quality Commission at the Pilgrim Hospital and the Lincoln County Hospital found that the Trust was not meeting two outcomes; care and welfare of people who use services (Pilgrim Hospital only) and staffing (Pilgrim Hospital and Lincoln County Hospital). In all cases these were found to have a minor impact. The findings of the CQC demonstrate improvements on the findings from previous CQC reviews, which we set out on the following pages.

The Trust has also had a number of external reviews, which are summarised in the following pages.

A diagram of board members and committee structures can be found in the Appendix.
**Top risks to quality**

The table includes the top risks and significant challenges to quality identified by the Trust.

<table>
<thead>
<tr>
<th>Trust identified risks</th>
<th>Trust response</th>
</tr>
</thead>
</table>
| Service provision, demand and sustainability | Patient flow through the Trust is central to ensuring that our patients are treated in the right place at the right time with the right procedures or processes. Managing this requires a meaningful match between the capacity of the clinical services we offer and the demands of commissioners and patients. Like many Trusts, ULHT experiences the consequences of when failures in supply/demand fail to match. The most obvious example of this is seen in the overload of basic care elements such as bed occupancy; this Trust’s bed occupancy is always greater than expectations and often close to 100%. The consequences are well-recognised: patients will be “outliers” in areas where their appropriate treatment may be compromised. The Trust continues to face demand pressures with year-on-year increases in activity. In 2012/13, two key issues were:  
  - 7% over-performance in non-elective activity  
  - Higher acuity of presenting patients through our emergency departments  

The rise in non-elective activity (total increase 2008/9 to 2012/13 of 17%) has serious consequences in terms of creating outliers on wards and cancellation of elective operations. There is a concern under these circumstances relating to the rising safety risks and poor experience for patients waiting for elective procedures. |

| Mortality                                                                 | The Trust’s high mortality ratios are a significant concern and the subject of constant attention and analysis. The Trust state that they have a number of concerns regarding mortality levels that are closely linked to the staffing issues described above. In particular, they are aware that mortality rates are higher during weekends. Relative risks for all diagnoses increase by 7.7% at weekends for Lincoln County Hospital and by 22% at weekends for Pilgrim Hospital Boston, according to detailed analysis by Dr Foster Intelligence. By implication, they believe that similar concerns are likely to exist at nights. Whilst they have made good progress toward developing 24/7 cover in critical care outreach, consultant cover and other key areas this is not yet fully established across the Trust. |


### Top risks to quality

The table includes the top risks and significant challenges to quality identified by the Trust.

<table>
<thead>
<tr>
<th>Trust identified risks</th>
<th>Trust response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staffing and skills</td>
<td>All care in the complex and interconnected systems within an acute Trust are delivered by our staff. Many factors contribute to risk in this area – some of them unique to our demographic and geographic situation. Key issues for the Trust are as follows:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Nursing staff levels.</strong> We have conducted a detailed review and consultation with regard to safe and sustainable nursing staff levels. The Review has identified that in light of the increasing dependency and acuity of our patients staff levels are now not adequate in some areas.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Medical staff levels.</strong> The link between medical staff levels and patient safety is generally recognised, as indicated by the recent review of shortages of doctors in Trusts currently under scrutiny for their above average mortality ratios. On average, Trusts in this group had 20% fewer consultants per bed than others. In part, this is driven by difficulties in recruitment – as described below.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Recruitment.</strong> This Trust has a historical problem with recruitment and consequently has comparatively high numbers of locum doctors, substantive doctors with high PAs and significant levels of additional sessional work. At present, there are many locum doctors working within the Trust. Recruitment of nursing staff presents similar problems and the Trust can therefore have a higher reliance on the use of agency and bank staff. The consequences of reliance on locum, bank and agency staff are significant at the front line of care, as is the reliance at one of our site (Pilgrim Hospital Boston) on high numbers of newly qualified nursing staff.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Capabilities.</strong> Closely related to difficulties in recruitment are issues of competence and capability. Appraisal rates have improved recently and stand currently at over 80% for medical staff. One of the unknowns we face is the impact of the medical revalidation process on the level of retraining and additional support the Trust may need to provide to individual doctors to maintain their registration.</td>
</tr>
</tbody>
</table>
### Top risks to quality

The table includes the top risks and significant challenges to quality identified by the Trust.

<table>
<thead>
<tr>
<th>Trust identified risks</th>
<th>Trust response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of whole system provision</td>
<td>Other concerns in this regard are addressed elsewhere, but the range and capacity of services in the community – especially for elderly patients at the end of their lives – has a material effect on both Trust admissions and Trust mortality. This is a whole system issue with effects on mortality and the experience of patients that cannot be underestimated – further details are set later in this document.</td>
</tr>
<tr>
<td>Progress reliability</td>
<td>Our strategic goals in quality and safety focus on the need to increase assurance of the reliability of key processes of care – not in the form of retrospective audit but in usable data targeted at improvement cycles. We have been able to develop this so far in ward processes such that every adult inpatient ward has a public display of 50 indicators. Over the 15 months since the introduction of the Safety and Quality Dashboard, as it is known, mean reliability of ward processes has increased from 55% to 80% - representing good progress in our quality journey. Our key risk here therefore relates not to nursing processes but to medical processes such as time to diagnosis, time to and frequency of senior review, response to escalation, accuracy of prescriptions and so on. We plan to introduce live dashboards to cover this during 2013/14. These will form the basis of improvement programmes for medical staff and in addition mitigates the risks of lack of assurance for medical processes.</td>
</tr>
<tr>
<td>Patient records</td>
<td>Despite introducing changes in 2010/11 based on our review of patient notes (“Take Note”), there are risks associated with the continued reliance on the use of paper based records and the absence of an EPR in an organisation that provides clinical services across three sites. These risks relate to the availability and completeness of medical records. In nursing, we have recently introduced new risk assessment materials which will support care process reliability; in medicine we need to address problems in assuring the availability and completeness of records, together with their upkeep and ownership.</td>
</tr>
</tbody>
</table>
**Top risks to quality**

The table includes the top risks and significant challenges to quality identified by the Trust.

<table>
<thead>
<tr>
<th>Trust identified risks</th>
<th>Trust response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture</td>
<td>There is a clear evidence base on the link between levels of staff satisfaction/morale and the quality of patient care. During the past year, the Trust has conducted detailed diagnostic exercises of both our organisational culture and our safety culture. The findings have been mixed, but the Board sees deficiencies in these areas as of fundamental concern with multiple effects on performance. This has led to the development of the Organisational Development strategy and implementation plan, which includes programmes emphasising leadership development, listening and learning, safe behaviour and staff engagement. Safety culture across the Trust has been assessed through the “Safety Culture Index”, for which ULHT was the pilot site nationally. We found that our safety culture was generally in the centre of the distribution, with some positive and negative outliers on the key scales. Learning behaviour in all professions was found to be strong, providing evidence of good attitudes and practices in clinical staff; coping with workload and participation in decision-making were less favourably reported. The Board is clear that changing an organisational culture is a long-term programme of work requiring sustained activity, engagement and focus.</td>
</tr>
</tbody>
</table>
Leadership and governance

External reviews

Recent CQC inspections at both the Pilgrim Hospital and Lincoln Country Hospital have identified a small number of minor concerns. These are:

- Care and welfare of people who use services (Pilgrim Hospital only); and
- Staffing (Pilgrim Hospital and Lincoln County Hospital).

This position represents an improvement on previous inspections; inspections of both locations in 2011 had identified a number of major concerns.

The Trust is not currently a foundation trust, however, in December 2012 the Board conducted a self-assessment of its performance against Monitor’s quality governance framework. The Board self-assessed a score of 14.0 (aspirant trusts must receive a score of 3.5 or lower to be authorised as a foundation trust). This score included two ‘reds’ (does not meet expectations for the following areas):

- Is the Board sufficiently aware of potential risks to quality?
- Are there clearly defined, well understood processes for escalating and resolving issues and for managing quality performance?

An independent assessment in March 2013 scored the Trust as 9.5, with an improvement in the area “Are there clearly defined, well understood processes for escalating and resolving issues and for managing quality performance?” The Trust continues to undertake actions to improve its quality governance performance.

In addition the Trust has commissioned an assessment against the Board Governance Assurance Framework (BGAF); which was carried out by McKinsey & Co in March 2013 and a review of financial reporting procedures (HDD1); carried out by PWC in March 2013. The HDD1 review identified a number of actions relating to governance, including the need to appoint a Non-Executive Director with a clinical background, the finalisation of a Board development programme and reviewing the Board Assurance Framework to make it more concise and to enhance the assurance the Board receives. These reviews have been drawn together in a comprehensive improvement plan.

Cost Improvement Programme

In 2012/13, the Trust achieved cost improvement savings of £14.5m. The Trust plans to save £26.4m in 2013/14 through cost improvement programmes, although £4.2m of these savings are currently unidentified.

Each CIP must have a quality impact assessment completed. This assesses the potential impact on areas including patient and staff safety, patient experience, quality of care, patient outcomes and workforce.
Appendix
Trust Map – Pilgrim Hospital

Source: United Lincolnshire Hospitals NHS Trust website
Trust Map – Lincoln County Hospital

Source: United Lincolnshire Hospitals NHS Trust website
Trust Map – Grantham and District Hospital

United Lincolnshire Hospitals NHS Trust

Source: United Lincolnshire Hospitals NHS Trust website
**Serious harm definition**

A serious incident requiring investigation is defined as an incident that occurred in relation to NHS-funded services and care resulting in one of the following:

- **Unexpected or avoidable death of one or more patients, staff, visitors or members of the public;**
- **Serious harm to one or more patients, staff, visitors or members of the public or where the outcome requires life-saving intervention, major surgical/medical intervention, permanent harm or will shorten life expectancy or result in prolonged pain or psychological harm (this includes incidents graded under the NPSA definition of severe harm);**
- **A scenario that prevents or threatens to prevent a provider organisation’s ability to continue to deliver healthcare services, for example, actual or potential loss of personal/organisational information, damage to property, reputation or the environment, or IT failure;**
- **Allegations of abuse;**
- **Adverse media coverage or public concern about the organisation or the wider NHS; and**
- **One of the core set of "Never Events" as updated on an annual basis.**

Source: UK National Screening Committee
## Workforce Indicator Calculations

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Numerator / Denominator</th>
<th>Calculation</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTE nurses per bed day</td>
<td>Numerator</td>
<td>Nurses FTE’s</td>
<td>Acute Quality Dashboard</td>
</tr>
<tr>
<td></td>
<td>Denominator</td>
<td>Total number of Bed Days</td>
<td></td>
</tr>
<tr>
<td>Spells per WTE staff</td>
<td>Numerator</td>
<td>Total Number of Spells</td>
<td>HED ESR</td>
</tr>
<tr>
<td></td>
<td>Denominator</td>
<td>Total number of WTE’s</td>
<td></td>
</tr>
<tr>
<td>Medical Staff to Consultant Ratio</td>
<td>Numerator</td>
<td>FTEs whose job role is ‘Consultant’</td>
<td>ESR</td>
</tr>
<tr>
<td></td>
<td>Denominator</td>
<td>FTEs in ‘Medical and Dental’ Staff Group</td>
<td></td>
</tr>
<tr>
<td>Nurse Staff to Qualified Staff Ratio</td>
<td>Numerator</td>
<td>FTEs in ‘Nursing &amp; Midwifery Registered’ Staff Group</td>
<td>ESR</td>
</tr>
<tr>
<td></td>
<td>Denominator</td>
<td>FTEs of Additional Clinical Services – 85% of bands 2, 3 and 4</td>
<td></td>
</tr>
<tr>
<td>Non-clinical Staff to Total Staff Ratio</td>
<td>Numerator</td>
<td>FTEs not in ‘Nursing and Midwifery Registered’, ‘Additional Clinical Services,’ ‘Allied Health Professionals’ or ‘Medical and Dental’ staff groups</td>
<td>ESR</td>
</tr>
<tr>
<td></td>
<td>Denominator</td>
<td>Sum of FTEs for all staff groups</td>
<td></td>
</tr>
<tr>
<td>Consultant Productivity (Spells/FTE)</td>
<td>Numerator</td>
<td>Number of Inpatient Spells</td>
<td>HED ESR</td>
</tr>
<tr>
<td></td>
<td>Denominator</td>
<td>FTEs whose job role is ‘Consultant’</td>
<td></td>
</tr>
<tr>
<td>Nurse hours per patient day</td>
<td>Numerator</td>
<td>Nurse FTEs multiplied by 1522 (calculated number of hours per year which takes into account annual leave and sickness rates)</td>
<td>ESR</td>
</tr>
<tr>
<td></td>
<td>Denominator</td>
<td>Total Bed Days</td>
<td>HED</td>
</tr>
</tbody>
</table>

Note: ESR Data only includes substantive staff.
Board members

Paul Richardson
Chairman

Jane Lewington
Chief Executive

Kevin Turner
Director of Performance Improvement / Deputy Chief Executive

Michelle Rhodes
Director of Operations

Ian Warren
Interim Director of Human Resources

Eiri Jones
Interim Director of Nursing

Keith Brown
Non-Executive Director

Tim Staniland
Non-Executive Director

Nick Muntz
Non-Executive Director

Keith Darwin
Non-Executive Director

Penny Owston
Non-Executive Director

Source: Trust website "http://www.ulh.nhs.uk/about_us/trust_board/management_structure.asp"
Committee structure

TRUST COMMITTEE STRUCTURE

TRUST BOARD

Executive Team

Governance Committee

Audit & Assurance Committee

Remuneration Committee

Charitable Funds Committee

Estates Committee

Performance Clinics

Service Delivery Directorate

Nursing & Patient Services Directorate

Quality & Safety Committee

Associated Governance Reporting Committees

Business Units

Hospital Management Groups

Branch Governance Committees

* See separate structure chart for detail

Source: "Summary of your quality governance arrangements" - Trust submission
Quality and Safety Committee

QUALITY & SAFETY COMMITTEE

Clinical Ethics Committee
Drug & Therapeutics Committee
Safeguarding Committee
Infection Prevention & Control Committee
Radiological Protection Committee
CQC Compliance/Assurance Sub Groups
Decontamination Committee
CQC Compliance/Assurance Committee
Clinical Effectiveness Steering Committee
Clinical Records Committee
Dignity in Care Committee

Cardiac Board
R & D Committee
Blood Transfusion Committee
Deteriorating Patient Board

Point of Care Testing Committee
Trust Interventional Procedures & NICE Implementation Committee
VTE Committee
Mortality Reduction Committee

Stroke Board
Sharing the Lessons Learned Forum

Incident Review Group

Source: "Summary of your quality governance arrangements" - Trust submission
### Data Sources

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### SHMI Appendix

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<thead>
<tr>
<th>Admission Method</th>
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### HSMR Appendix

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<th>Diagnostic Group</th>
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## HSMR Appendix

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### Higher than Expected Diagnostic Groups
#### HSMR / SHMI Summary (Nonelective)

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