HEALTH AND ADULT SOCIAL CARE
OVERVIEW AND SCRUTINY COMMITTEE

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HOSPITAL MORTALITY STATISTICS AT MEDWAY NHS FOUNDATION TRUST

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Summary

This report provides an update on hospital mortality statistics for Medway NHS Foundation Trust (MFT) and an overview of clinical governance systems and indicators of clinical quality at the Trust. A Hospital Mortality Working Group has been established to oversee an improvement in the mortality statistics at MFT and provide the Board of MFT assurance that all aspects of quality of care and factors that may affect or contribute to the current mortality rates are addressed.

1. Budget and Policy Framework

1.1 Under Chapter 4 - Rules, paragraph 22.2(c) terms of reference for Health and Adult Social Care Overview and Scrutiny Committee has powers to review and scrutinise matters relating to the health service in the area including NHS Scrutiny

2. Background

2.1 The Health and Adult Social Care Overview and Scrutiny Committee considered a member item report on mortality figures at the Medway NHS Foundation Trust at its meeting on 15 December 2011and asked to have further updates including comparative data for Trusts in similar areas to Medway.

3 Hospital mortality in Medway NHS Foundation Trust

3.1 A report published recently by Dr Foster, a hospital data analysis organisation, showed that Medway NHS Foundation Trust (MFT) had the tenth worst "hospital standardised mortality ratio" (HSMR) in the country (out of 145 hospitals). The HSMR was significantly higher than expected. Since October 2012 MFT and Medway PCT have been working together to understand the causes behind this high HSMR.

3.2 The crude hospital mortality rate in MFT (in the 56 causes used to calculate the HSMR) has been falling over at least the last ten years (Figure 1). At the same time, the hospital mortality rate in England overall has also fallen, and throughout the last 10 years the rate in Medway has been higher than in England. For most of the last 10 years MFT has been around five years behind the England average, however, recently this has closed to about one year. On another measure of hospital mortality, one that includes deaths in patients 30 days after discharge from hospital (called “SHMI”), the mortality rate for MFT is currently the same as the national rate.

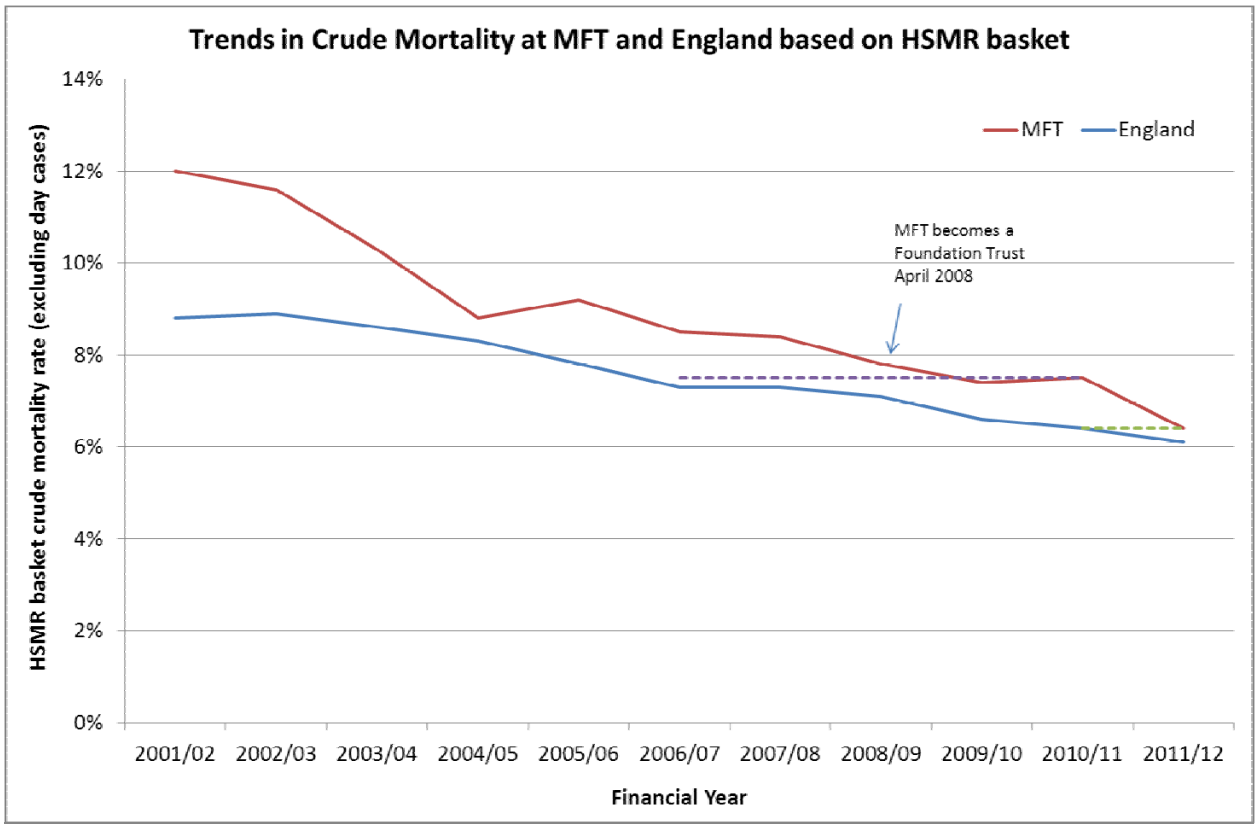

Figure 1

3.3 There are eight Trusts in the same Office for National Statistics (ONS) cluster as MFT (New and Growing Towns). Dr Foster has only made data publicly available for these other Trusts in the last two years. Of the eight trusts:

- Barking, Havering and Redbridge University Hospitals NHS Trust and MFT had a significantly high HSMR in 2010/11
- The Princess Alexandra Hospital NHS Trust and MFT had a significantly high HSMR in 2011/12

- MFT is therefore the only trust in the cluster with an HSMR significantly higher than expected for two years in a row.

  The other Trusts in the ONS cluster are: Great Western Hospitals NHS Foundation Trust; Milton Keynes Hospital NHS Foundation Trust; Peterborough and Stamford Hospitals NHS Foundation Trust; South London Healthcare NHS Trust

What makes HSMR high?

3.4 The HSMR is a ratio: the number of deaths observed divided by the number of deaths that were expected (observed / expected). The number of deaths expected is calculated by applying national mortality rates to the characteristics of patients in MFT, e.g. age, deprivation and risk of death based on what is recorded in the patients' notes.

3.4 If the HSMR is high, then either the number of deaths *observed* is too *high*, the number of deaths *expected* is too *low*, or there is a combination of the two.

Exploration of possible causes

3.5 The Public Health Intelligence Team worked with MFT to explore possible causes of the high HSMR. One cause considered was deprivation. However, the HSMR is adjusted for deprivation, and the distribution of another measure of mortality, the SHMI, shows no link between deprivation and SHMI value.

HSMR in 2011/12

3.6 For each patient it is possible to calculate a risk of death based on a number of variables including their age, diagnosis, co-morbidities (other conditions they have), and the number of previous admissions. Most patients will have a very low risk of death, below 10%, while others, for example those who are very old and seriously ill, will have a higher risk of death, possibly over 90%. Patients can be placed into ten risk groups (0-10%, 10-20% etc. up to 90-100%) and the observed and expected mortality can be calculated for each group.

3.7 In MFT in 2011/12 the observed number of deaths in the higher risk groups was very close to the expected (so the HSMR in the higher risk groups was not high). However, in the lowest risk group (0-10%) the HSMR was high. Comparing the expected rate with other hospitals, such as Maidstone and Tonbridge Wells, and Dartford and Gravesham, suggests that the *expected* rate in MFT may have been be lower than it should have been. Looking at the expected rate over time shows that it has fallen in MFT over the last 10 years, while in Maidstone and Tonbridge Wells it fell, then rose and levelled off (Figure 2).

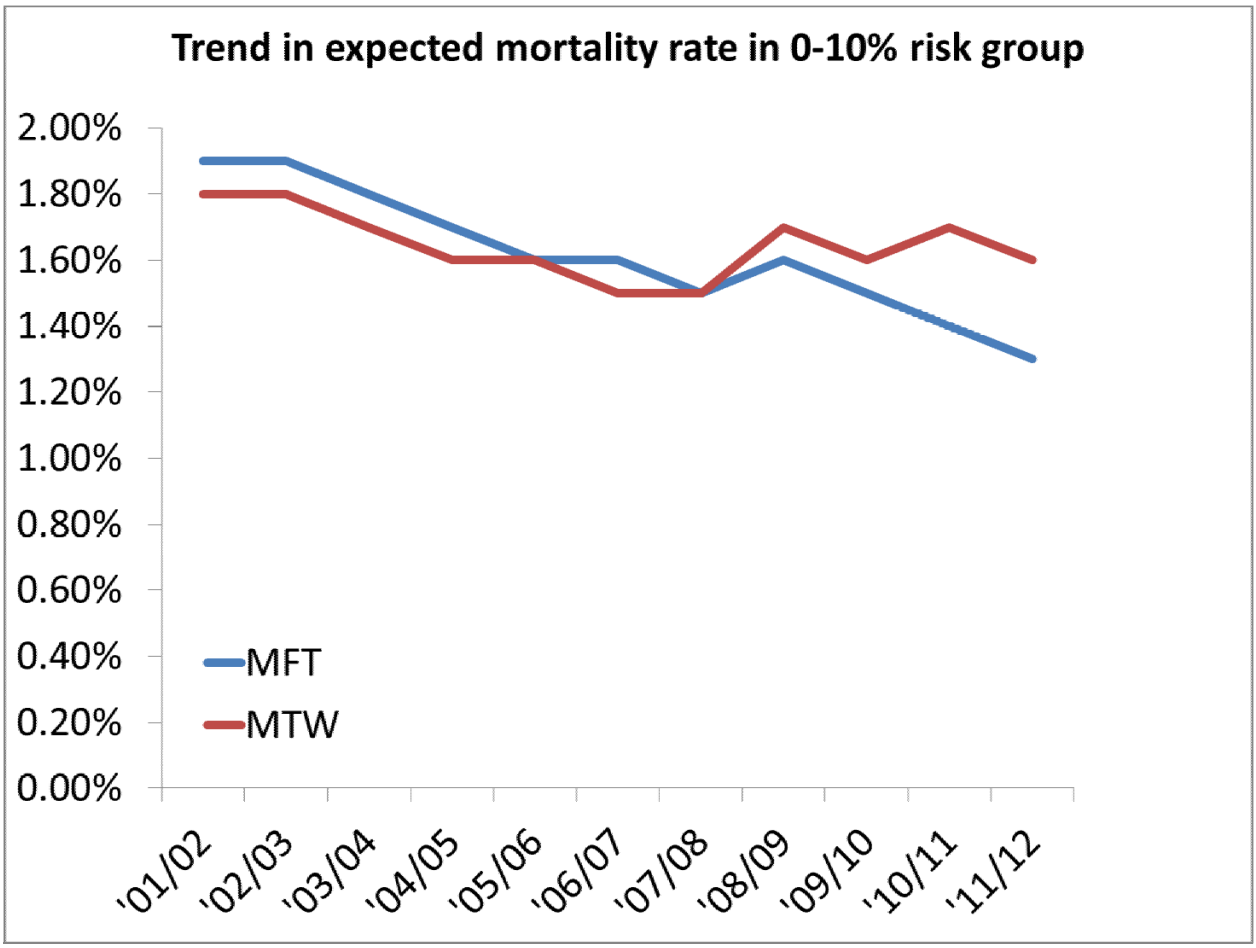

Figure 2

3.8 The calculation of the expected value is complex, but one possible reason for this fall is a relative reduction in how much information about other conditions (co-morbidities) is recorded in the patients' notes. The amount of information recorded has been increasing nationally and in MFT, but if in MFT it has been increasing less rapidly than it has nationally then relatively it would be lower in MFT.

3.9 The HSMR is also higher in the next group (10-20% risk). In this risk group there is no evidence that the expected number is too low, and it looks like the *observed* number is too high.

3.10 Within this 10-20% risk group three diagnosis groups stand out: pneumonia, stroke and fracture of the neck of femur, with 29 more deaths observed than expected.

HSMR in October 2012 (the most recent month for which data are available)

3.11 Whenever we look at HSMR data we are always looking some distance behind us. The HSMR for the year April 2011 to March 2012 was published in November 2012, more than 18 months after the period started. The reason for this delay is that Dr Foster needs to receive data from all hospitals for the financial year and complete its report, and it allows itself about six months to do this.

3.12 The HSMR is available on a monthly basis, but there is still a three month lag (i.e. now we can see data up to October 2012). This monthly HSMR, however, cannot take national falls in mortality into account, and is therefore usually an underestimate. At the end of the financial year the HSMR is “rebased” to take these national changes into account.

3.13 The HSMR for 2012/13 will be published by Dr Foster in November 2013. The data for October 2012 have just become available and Figure 3 shows the HSMR by month in 2011/12 and 2012/13. For the first half of 2012/13 the HSMR was higher in most months than it was in 2011/12 strongly suggesting that MFT was heading for a significant HSMR for the third year in a row. The HSMR for October was, however, much lower and work is underway to determine if this is the result of changes made in response to previous concerns about mortality rates.

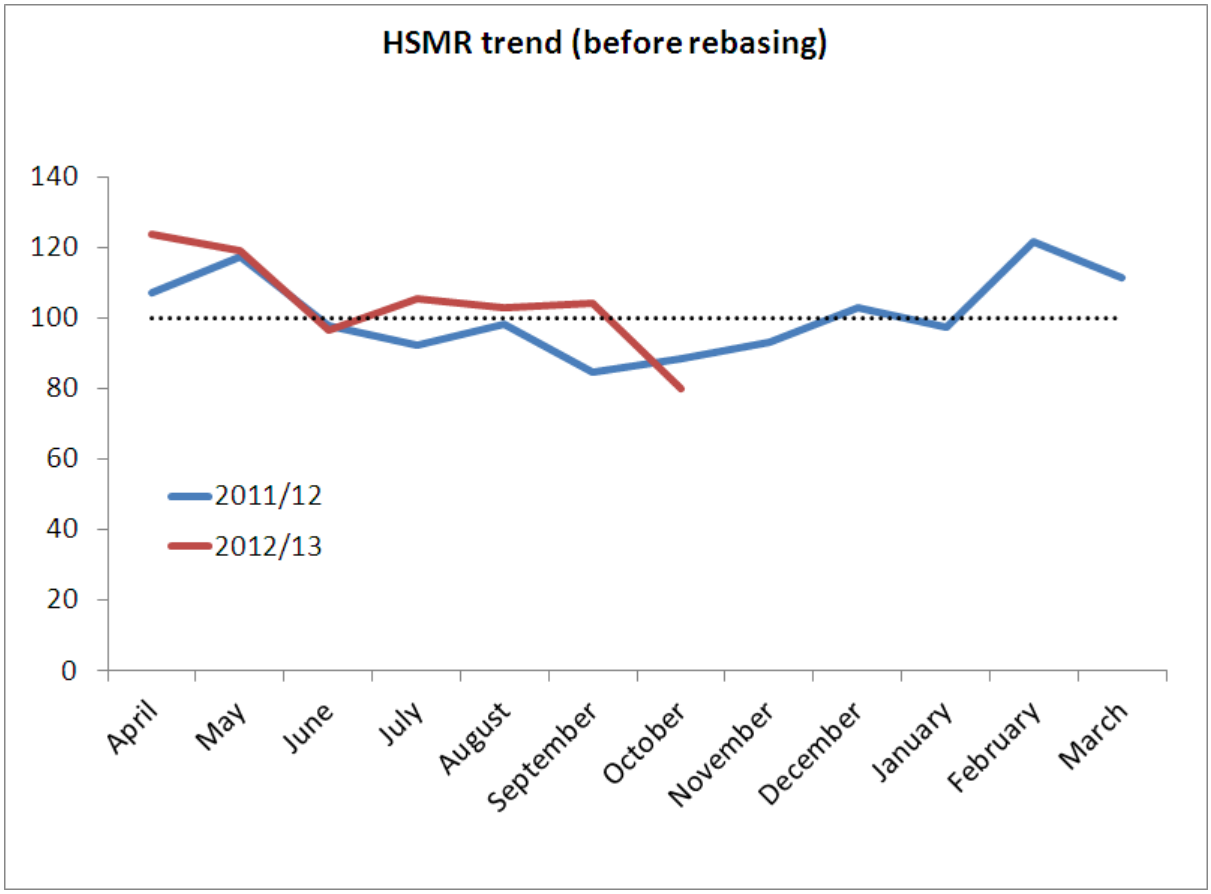

Figure 3

3.14 This highlights three important points:

- When looking at the most recent monthly HSMR we are still looking at three months in the past. This will therefore not reflect any work that has been done since then to reduce mortality.

- With the HSMR in the first half of 2012/13 being higher than it was in 2011/12 it is possible that MFT could do well for the rest of the year and still have a significantly high HSMR published in November 2013. This may cause the public concern even though it may have already been resolved.

- If, however, the HSMR can be maintained at the same level as October 2012 until the end of 2012/13 the annual HSMR for 2012/13 will not be significantly higher than expected.

4. Clinical governance arrangements and quality of care indicators

4.1 The Medical Director of MFT met the Medical Director of NHS South of England (East), Professor William Roche on 23.11.12 to outline the governance arrangements at MFT together with the changes made in the last three years that will be carried forward into the merger with Dartford. Also discussed was a wide range of markers of the quality of clinical care**.** This section provides a summary of the report produced for that meeting.

Governance

4.2 MFT has embraced the concept of "board to ward" governance. The committee structure is designed to emphasise the importance of patient safety and the quality of care. Central to this is the Quality Committee.

4.3 The sub-committees reporting into the Quality Committee cover every aspect of patient safety and the quality of care. Each Board meeting starts with a patient safety story or one about the patient journey and quality of care. These stories are there to emphasise the fact that patient safety and the quality of care are the two top priorities for the Board and for the Trust and are never trumped by finance.

4.4 There are regular visits to clinical areas by executive and non-executive directors to emphasise the "board to ward" nature of governance and to provide assurance to the non executives that the executive is performing well.

4.5 The Trust appointed an Executive Director for Governance in 2010 in response to having conditions on its registration with the CQC at that time. This has supported a progressive strengthening of governance througout the Trust. The designate Board structure has a Director of Strategy and Governance who has been appointed following external interview and will commence in March 2013.

4.6 The current situation for governance is as follows:

4.6.1 The Trust is fully compliant with all CQC Standards.

4.6.2 There is a quarterly governance review of every directorate against CQC Standards. This involves a governance panel of the executives chaired by the Director of Governance and each directorate is represented by its Governance Lead, Clinical Director and General Manager. Their compliance with all aspects of CQC conditions is RAG rated and there is an action plan for any CQC regulation which is not green. Each action plan has a completion date and is reviewed at subsequent governance panels.

4.6.3 As part of the preparation for the integration with Dartford, the Trust has produced a full response to the Clinical Governance Due Diligence Report from Vincent Burnett and updated it in September 2012.

4.6.4 The Trust attained CNST (Clinical Negligence Scheme for Trusts) level 2 compliance in September 2010 and compliance with NHS Litigation Authority level 2 in November 2011

4.6.5 There have been three Governance Away Days attended by all directorates. The principal outcome from the most recent event is that each directorate has now produced its own quality and governance strategy for the next year.

4.6.6 The Trust has benchmarked itself against the Monitor Quality Governance Framework following a visit to Southampton Hospital which was recommended by Monitor as an exemplar.

4.6.7 The Safety and Quality Committees each produce dashboards covering all aspects of safety and quality of care which are updated monthly.

4.6.8 Each directorate now has a Governance, Safety and Audit lead, each of whom has 4 hours per week specifically allocated in their job plans to these roles. Each attends the appropriate committee meetings. Each directorate has governance meetings which are minuted which cover all aspects of patient safety and quality of care.

4.7 **Audit** The Trust has a very active audit programme which the Trust uses to drive improvement in patient care. Audit activity is reported both to the Quality Committee and to the Audit Committee and hence, to the Board. The Trust's audit programme and department were recently reviewed by South Coast Audit which has produced a favourable report on the quality of audits within the Trust and, in particular, has commented on the structure of an Audit, Governance and Safety lead within each directorate which it feels is an exemplar of good practice

4.8 **Serious Incidents** The SI system has been greatly strengthened with additional training in Root Cause Analysis for fifty people across the Trust. The results of SI investigations are shared with the Commissioners and are all automatically registered with STEIS a system used to record serious incidents. The quality of the SI reports has improved progressively, although there is still an issue about timeliness. The embedding into practice of lessons learned, undoubtably remains the most challenging aspect of Serious Incident investigation. This is the rational for having the interaction between the Safety, Audit and Governance leads, so that changes in practice can be evidenced and audited.

4.9 **Patient Safety** There is a large and comprehensive Patient Safety Programme which includes a "Think Sepsis" programme which was introduced early in 2012. It is worthy of note that the Trust has recently received a "cusum alert" for deaths from septicaemia (except in childbirth) from Imperial College and CQC. The Trust had already identified unrecognised sepsis as a cause of patient deterioration through its own incident reporting system before it was alerted to a potential problem with sepsis by an external agency and had already started a programme of work to improve the management of patients with sepsis.

4.10 **Safety Alerts** The Trust has robust systems for ensuring that all safety alerts are acted upon as promptly as possible. If there is any delay actioning these safety alerts, they go onto directorate risk registers A good example is the safety alert for spinal needles; this could not be acted upon until manufacturers had produced needles of an appropriate design to prevent inadvertent intrathecal injection of cytotoxics such as vincristine.

4.11 **National Guidelines** All NICE guidance, CEPOD (Confidential Enquiry into Perioperative Deaths) recommendations etc. are collated centrally and cross referenced with directorates, specialties and clinicians.

4.12 **Consultant Appraisal and Revalidation** The Trust has been running Enhanced Revalidation for the last two years in paper format and is currently moving to a fully electronic format. The Trust is making the appropriate investment for this to happen. The Trust status for this enhanced revalidation is green and it is intended that the Trust will provide a full suite of information on activity, complications, performance metrics, complaints and SIs for each consultant to inform the appraisal process. The Board has recently had a presentation on Revalidation from from the Deputy Medical Director emphasising the Board's responsibility to support this process.

4.13 **HSMR** HSMR has been a significant problem for the Trust for a number of years and, indeed, caused Monitor to defer foundation trust status for 6 months in 2008. HSMR is monitored closely by the Trust and each month an HSMR report is generated for the Trust by Dr Foster giving a detailed breakdown of the HSMR data by specialty and detailing any areas where there may have been deficiencies in care or there appear to be inconsistencies in the coding process.

4.14 Up until recently, the Medical Director has reviewed the case notes personally to look at the quality of care and the coding has been reviewed by the Coding Manager. More recently in September 2012, as part of the drive to move governance more firmly into the directorates, the process has changed. The critical steps are as follows:

- Each month, a Dr Foster report is generated by the Trust and circulated to the Medical Director and the Clinical Directors
- Patients and case notes that need to be reviewed are identified and the case notes are pulled
- Each patient has their coding reviewed to ensure accuracy and any amendments are made to SUS and HES as needed by the Coding Manager
- The notes are then passed to the relevant directorate/CD with a copy of the HSMR report so that the nature of the queries is clear to the reviewers
- The notes and the patient's management are reviewed by the directorates Safety and Governance Leads
- A concise and factual report is forwarded to the Medical Director

4.15 Any case where there is any apparent shortcoming in care is treated as a serious incident and a report prepared and the case, lessons learned and any recommendations, are discussed in the directorate governance meeting and minuted. This report also goes to the Medical Director.

4.16 If there are any systemic failures identified either in the coding process or in patient care, they are rapidly addressed.

4.17 This process is completed within the month so that the work is completed before the next HSMR report is generated. This work should be regarded as a routine part of the Governance and Safety Leads job description.

4.18 **Mortality Alerts** The Trust has received 2 previous "cusum" (trend) alerts from Imperial College and CQC, one for deaths from pneumonia and one for deaths from acute renal failure-unspecified. In both instances, the Trust performed an in depth review of the deaths and did not find any underlying issues with care. Both reports were accepted by CQC.

4.19 The Trust has recently recieved a third "cusum" alert for deaths from septicaemia (except in childbirth). The Trust has agreed with CQC that this report will be finalised by the end of January 2013.

4.20 **Quality of Care** There is a large range of clinical data to give insight into the quality of care across the Trust:

4.20.1 **Enhancing Quality Programme**: The Trust is part of the national Enhancing Quality programme for pneumonia, heart failure and the hip and knee pathway – these have shown year on year improvement and performance comparable to or better than peer. The data sets for these pathways are being enlarged in 2013/14 and will include patient satisfaction. The Trust is currently setting up the EQ pathway for Acute Kidney Injury and a Trust Lead has been appointed.

4.20.2 **MINAP** (a national audit of standards of care for patients who have had a heart attack): The Trust's cardiologists participate in the provision of the PCI (primary angioplasty) service at Ashford Hospital where the great majority of patients with acute ST elevation myocardial infarcts (heart attacks) are taken by ambulance. The number of patients receiving acute treatment at the Trust is small. Performance in the MINAP metrics is excellent.

4.20.3 **ICNARC** (national audit of outcomes for patients admitted to intensive care): ICU outcomes are comparable to or better than peers.

4.20.4 **SINAP** (national audit of stroke care): These data are shared with Medway Community Healthcare – good performance in the most important metrics but overall, slightly mixed. The Trust achieved just over 70% of its quality markers in the last 2 quarters.

4.20.5 **Patient Falls**: There has been a progressive reduction in the number of patient falls and the Trust employs a Specialist Nurse Falls Practitioner who conducts root cause analyses into all falls resulting in injury and performs an educational role across the Trust. There is a group of patients who have repeated falls, many of whom have dementia. The Trust is planning to link the management of falls in this group with implementation of the National Dementia Strategy. This will include reviewing the fabric and layout of the wards to see if it is possible to reduce the harm from falls.

4.20.6 **Pressure Ulceration**: The Trust has shown a progressive diminution in the number of pressure ulcers. Any grade 3 or 4 pressure ulcer (the most severe grades) is treated as a serious incident. The Tissue Viability Team won a national award this year from the British Journal of Nursing .

4.20.7 **Infection**: The Trust has very low rates of MRSA and Clostridium Difficile infection and is within its very low "stretch" targets. It has the lowest infection rate in the region for C. Difficile and has has only one MRSA bacteraemia which was due to poor blood culture technique by a locum junior doctor rather than a true septicaemia per se.

4.20.8 **Safety Thermometer** : This is a regular survey covering all inpatients across all specialties and services, theatre recovery, critical care areas, neonatal intensive care and post-natal wards to see how many patients are free of the following: falls, venous thrombosis, pressure ulceration and catheter associated urinary tract infection. This is consistently at or above 90%.

4.20.9 **Vascular Surgery**: The data for the Trust from 2008 to 2012, which encompasses all elective procedures for abdominal aortic aneurysm whether operative or EVAR, which is a radiological, non-operative procedure shows that the Trust performs the requisite number of procedures well within the mortality rate specified by the Vascular Society to be a Vascular Centre. The Trust also performs carotid artery surgery. The last 3 years data show zero mortality or post-operative neurological deficit.

4.20.10 **Fractured Neck of Femur**: Medway seems to be admitting similar patients to the national picture i.e. predominantly elderly females although they seem to be younger and perhaps fitter (as assessed by their anaesthetic risk) and the mortality rate bencmarked against the national is higher but not significantly so. Neither the Clinical Indicator Previewer for SHMI Oct 2010-Sept 2011 nor the Mortality Comparator April 2011 – March 2012 show excess mortality and the Trust is within the 95% confidence limits. Nevertheless, the Trust will be reviewing a series of case notes of deceased patients to see if care could have been better and altered the outcome. The Trust is involved in the Enhanced Recovery programme for hips and knees and is performing very well. Mr Sunil Jain from the Trust is the SE Lead for this programme.

4.20.11 **Chronic Obstructive Pulmonary Disease**: The Trust has participated in the British Thoracic Society Non-Invasive Ventilation Audit for the last 2 years. This is included in the Department of Health (DoH) Quality Accounts. The latest data from the Trust show mixed results. The mortality in the patients requiring non-invasive ventilation is higher than the national benchmark but the admission pH shows that the patients were more acidotic than last year and more acidotic than the national benchmark and severe acidosis is a poor prognostic feature. Overall, however, the mortality for COPD is in line with the national average with no excess mortality between April 2011 and March 2012.

4.20.12 **Readmission rates**: Dr Foster data on readmission rates at 28 days (Oct '11-June '12) show that Medway compares very favouably with readmission rates lower than SE comparator trusts apart from MTW and ASP. Readmissions with pulmonary embolus, deep vein thrombosis or sepsis were average for the group.

4.20.13 **Enhanced Recovery Programme**: The Trust is part of the Enhanced Recovery Programme for gynaecology, hips and knees and colorectal surgery. This programme is designed specifically to speed up and improve the recovery of patients after their operations. Before surgery, the patient is told exactly what will happen on each day after the operation and follows a specific regimen to "enhance recovery". The programme was peer reviewed in the Summer with excellent results.

4.20.14 **Cancer Services** The latest National Cancer Inpatient satisfaction survey placed Medway in the top ten most improved Trusts and in the Top 25 for high patient satisfaction. The Medway Cancer Unit was recently awarded a Quality Environment Macmillan Trust Award, one of the first to receive this award. Unfortunately, cancer survival rates in Medway are low and mortality rates high. It is unclear whether this relates to late presentation or treatment or a combination of these factors.

5. Hospital Mortality Working Party

5.1 At the request of the Chief Executive and Chair of MFT a Hospital Mortality Working Party has been established to oversee a reduction in the HSMR and SHMI at Medway NHS Foundation Trust and provide the Board of MFT assurance that all aspects of quality of care and factors that may affect or contribute to the current mortality rates are addressed.

5.2 The membership includes Board and Governing Body representation from MFT, the three North Kent CCGs and the Medical Director from The National Commissioning Board Area Team. It is chaired by the Director of Public Health.

5.3 The group met for the first time on 21 December 2012 and reviewed recent analyses of hospital mortality statistics, clinical quality indicators and governance arrangements at MFT. There was a clear commitment from the group to take further action to improve quality at MFT. Priorities for action include:

- Case note review of second lowest risk decile patients in three conditions identified with higher than expected observed deaths – fractured neck of femur, pneumonia and cerebrovascular disease.
- Review of within seven day readmission cases
- Enhanced mortality review process and reporting to Board
- Coding practice (e.g. expected death profile in lowest risk decile)
- Use the Listening into Action methodology, in which MFT is a national pioneer, to facilitate Patient Safety Conversations with staff and capture ideas on problems and solutions
- Ensure learning from complaints is fully embedded within directorate governance processes
- Produce and promote key messages from the Board to staff about the importance of quality of care

- Ensure that there is a systematic approach to audit with greater alignment between clinical audit activity and quality improvement.

- Consider external exemplar input

- Create project management resource

5.4 The Working Party will meet monthly to oversee progress. On-going monitoring of mortality statistics will continue and after the proposed merger with Darenth Valley Hospital statistics will be monitored separately for the two hospital sites.

6. Risk management

6.1 There are no direct risks to the Council arising from this report.

7. Financial and legal implications

7.1 There are no direct legal or financial implications for the Council arising from this report.

8. Recommendations

8.1 The Committee are asked to consider this report and agree when they would want a further update.

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