Sherwood Forest Hospitals NHS Foundation Trust

Board of Directors Meeting in Private - Cover Sheet

Subject:	Hospital Standardised Mortality Ratio Update	**Date: 4th March 2021**		
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Approved By:	David Selwyn (Medical Director)			
Presented By:	David Selwyn / Nigel Marshall			

Purpose

To provide Trust Board with an update on the Hospital Standardised Mortality Ratio (HSMR) and schedule of work proposed	**Approval**	
	Assurance	
	Update	X
	Consider	

Strategic Objectives

To provide outstanding care	To promote and support health and wellbeing	To maximise the potential of our workforce	To continuously learn and improve	To achieve better value
X			X	

Overall Level of Assurance

	Significant	Sufficient	Limited	None
			X	

Risks/Issues

Financial	**Potentially,**
Patient Impact	**Potentially, dependent on implications**
Staff Impact	**Limited**
Services	**Limited**
Reputational	**Significant, with external regulator interest**

Committees/groups where this item has been presented before

Update to the original HSMR paper presented to Trust Board December 2020.

Executive Summary

This update provides understanding of our current (and latest) HSMR position alongside detail of progress against the previously presented investigative work-plan.

The Trust Hospital Standardised Mortality Ratio (HSMR) remains elevated but recent work has focussed on developing a structured approach to help support greater understanding and provide assurance with regards to potential causation and relevance.

This paper updates on previously shared plans for investigative work to identify causes alongside proposed actions and remedies to address the increased HSMR.

Trust Board is asked to note the update and support the continued investigative work, specifically:

- HSMR remains high (110.5)
- SHMI remains within expected limits (97.72)
- Work to date has focused on:
    - Closer working with Dr Foster to understand data variation, coding issues, application and the relevance of highlighted variation (trends or spikes) against expected or peer groups.
    - Focused reviews of specific areas of interest (or concern) to support understanding of data, identify key themes and help direct clinical teams to consider changes to working practise, where required.
    - Mobilisation of the Structured Judgement Case Review (SJCR) Panel as an extension of the wider Learning from Deaths process in supporting organisational learning and quality assurance.
- The impact of COVID, over the past 12 months, has impacted the data for all peer groups to varying degrees and made interpretation and comparison more challenging.

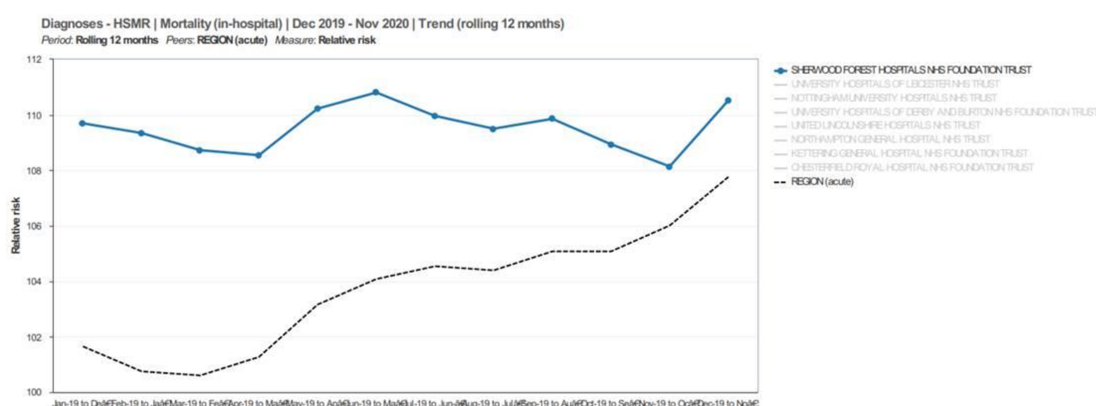
- Any changes, as a result of programme intervention, alongside the way HSMR data is reported means the HSMR will likely remain elevated for the immediate future.

Further update on this work will be provided as agreed via the Quality Committee and quarterly to Trust Board.

HSMR Update:

Background

Sherwood Forest Hospitals NHS Foundation Trust (SFH) had highlighted a rising trend in Hospital Standardised Mortality Ratio (HSMR) over the initial reporting months of 2020. Following this there was a small, but steady, reduction whilst continuing to trigger as statistically high. The latest figures (M8) show a small increase to 110.5 (Normal 100) but the overall trend is one of relative stability and being closer aligned to that of comparative (regional) peers.



Information / data taken from latest Dr Foster Report (February 2021 – M8 (November 2020) data).

The variation appears to be driven by a number of factors (including a reduction in activity and possible change in case-mix) but the impact of COVID activity has made it extremely difficult to understand any definitive cause; added to this the HSMR has been impacted differently for each organisation.

There are 6 significantly high diagnosis groups highlighted by Dr Foster:

1. Chronic obstructive pulmonary disease and bronchiectasis
2. Liver disease, alcohol-related
3. Other inflammatory condition of skin
4. Coma, stupor and brain damage
5. Peripheral and visceral atherosclerosis
6. Viral infection (Covid-19 primary diagnosis)

Diagnosis groups where the Trust remains a persistent outlier include:

- Chronic Liver Disease (alcohol related)

Other diagnosis groups of note:

- COPD and bronchiectasis:
  - Two spikes (April 20 and Sept 20); CUSUM breach Sept 20
  - Low activity but sustained mortality compared to pre-Covid months
  - However, it has been emphasised this relates to small numbers, with 1 case in the November data and a total of 46 over the prior 12 months.
- Since last reporting the 2 focus areas of Fracture Neck of Femur and Gastro-intestinal haemorrhage

are no longer alerting BUT remain subject to scrutiny and are part of the "change management" approach to safe and effective working. Work related to these areas is detailed later in the report.

Basket: **Diagnoses** Metric: **Mortality (in-hospital)** Time period: **Last available 12 months**

Diagnosis group: **Fracture of neck of femur (hip), Gastrointestinal haemorrhage**

Patients: **1,384** Superspells: **1,500 (108.4)** First / Last: **Dec 2019 / Nov 2020** Deaths: **60 (4.0%)** LOS: **10.9**

Expected: **52.0 (3.5%)** O-E: **8.0 (0.5%)** Relative Risk: **115.4 (88.0â€"148.5)** Model: **Month: Aug 2020** C-Statistic: **Multiple**

Diagnosis group	Superspells	% of All	Spells	Observed	Crude rate (%)	Expected	Expected rate (%)	Observed-expected	Relative risk	95% lower confidence limit	95% upper confidence limit
All	1,500	100.0%	1,500	60	4.0%	52.0	3.5%	8.0	115.4	88.0	148.5
Gastrointestinal haemorrhage	961	64.1%	961	28	2.9%	19.7	2.0%	8.3	142.2	94.5	205.5
Fracture of neck of femur (hip)	539	35.9%	539	32	5.9%	32.3	6.0%	-0.3	99.0	67.7	139.8

- Septicaemia
  - Dr Foster continues to monitor and analyse Septicaemia data, both nationally and with other Trusts. We plan to review the relevant data and work with Dr Foster to ensure this continues to be appropriately recognised and managed, acknowledging this is often raised as an outlier in Trusts.

The SMR also remains high at 113.5 and has observed a similar trend to that of the HSMR with a latest small rise over the past month. It continues to be felt that Covid mortality and fall in elective and non-elective activity (denominator) are material contributors to this data trend.

With Covid activity and mortality removed the revised SMR at November would have been 103.5 (as expected) and represents a significant fall and downward trend from the April peak of 109.3. The past years increasing Covid activity together with a lower volume of admissions is having a profound impact on the SMR nationally.

For information (Taken from Dr Foster Glossary):
SMR
A calculation used to monitor death rates. The standardised mortality ratio is the ratio of observed deaths to expected deaths, where expected deaths are calculated for a typical area with the same case-mix adjustment. The SMR may be quoted as either a ratio or a percentage. If the SMR is quoted as a percentage and is equal to 100, then this means the number of observed deaths equals that of expected. If higher than 100, then there is a higher reported mortality ratio.
HSMR
The Hospital Standardised Mortality Ratio is the ratio of observed deaths to expected deaths for a basket of 56 diagnosis groups, which represent approximately 80% of in hospital deaths. It is a subset of all and represents about 35% of admitted patient activity.

Other key points:

- Without Covid -19 activity or mortality, HSMR at December would be 106.4 (previously 106.8)- this is to be taken within the context of a decreasing activity and stable mortality
- SFH continues to be one of, if not, the lowest palliative care coders nationally. Non-elective spells are 1.4 vs. 4.4% (nationally) and non-elective deaths 9.0% vs. 33.5% (nationally). This will have an impact on the HSMR but not SHMI.
- Proportion of HSMR with 20+ comorbidity score is high; 18.8% vs. 14.4% (nationally), suggesting satisfactory co-morbidity coding but may also be, in part, due to deprivation.
- Weekend and week-day mortality are both highlighting as significant.
- The Standardised Hospital Mortality Index (SHMI) is currently 97.72 (prev. 96.97) and within expected range.

Background summary:

- It is still not clear whether the rising trend in HSMR (and our elevated position) may be a result of doing something, not doing something or a result of doing something less quickly than peers. The relationship between the elevated HSMR and SHMI being within expected limits continues to be a key part of focussed discussion with Dr Foster and will guide on-going scrutiny.
- The Trust HSMR remains high, although reports a relatively stable picture (and potential narrowing of variation when compared to peer / regional groups); further investigation is still required to help explain this.

<u>HSMR Workstream Progress</u>

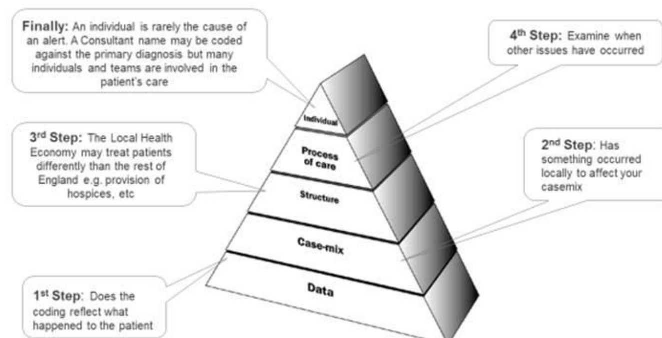
Work continues with Dr Foster to help understand why we may have seen a previous rising trend, generally, but also to consider specific and wider elements:
Eg.

- Case mix- is this substantially different to our peers?
- Has coding had an impact; are we documenting and therefore recording things in the same way?
- Are there areas where we need to re-focus?
- Did we see changes in staffing- could completion of clerking / decision making have been impacted by resource, expertise or changes in rotation doctors etc.?
- Do partner stakeholder management / community provision impact our potential (and therefore determine, in part, the outcome; if so, to what degree?
- Would a lower HSMR (adjusted due to identified areas above) partly alter any trend and thereby provide greater assurance of our working practice?

Dr Foster will continue to maintain a close and regular communicative link with the plan to:

- Aid review and provide recommendations
- Continue monitoring HSMR / SHMI monthly basis
- Review Covid-19 impact on metrics
- Undertake further analysis / monitoring on newly identified areas, for example:
    - COPD analysis
    - Cancer (bronchus / lung)

We are using the data to support review of low volume outlier groups, as identified, and aid work in relation to highlighted themes. The diagram below supports how initial approach of data analysis, coding review, data intelligence (including regional / peer comparison), internal discussion and any initial review fit into a step-wise approach for review of themes and highlighted areas:



Specific Areas of Discussion and Action:

- **Palliative coding**
  - SFH was identified as an outlier (low coding) when compared to peers / national- preliminary data analysis suggests our HSMR could be as low as 96 if this were taken into account or practise reflected increased palliative coding.
  - Underlying reasons for this may be a result of how specialist palliative care involvement is documented and not necessarily an issue around access or quality of care.
  - This is being looked at as part of wider work with Dr Foster and the coding team with regard to general coding, co-morbidities and documentation.
  - Action to date:
    - Evaluation - Clinical lead for End-of-life Care, Dr Foster and coding team continue to evaluate potential impact and present options for consideration / information.

- **Fractured Neck of Femur**
  - Historical outlier, thought to be, in part, as a result of spike in April 2019
  - Review of the cohort (5 cases), relating to the spike, was undertaken and themes / trends highlighted as part of a more detailed report.
  - This included themes around evidence of collaborative decision making (MDT approach), rational for decisions and documentation within the medical record; all towards ensuring patients were managed in the most effective and appropriate way possible (including getting the right patients to theatre and in a timely manner).
    - Note-keeping-
      - The standard of documentation was felt to be poor in several areas, including general record keeping, clarity, accuracy and consistency
      - Rationale for decisions made was generally missing.
  - Action to date:
    - Evaluation Meeting –
      - A first meeting was held at the end of January (consisting of Orthopaedic surgery, Anaesthetics, Ortho-geri (HCOP))
      - This provided an opportunity to discuss previous issues and challenges. There was general agreement with the need to establish a more robust approach to clinical decision making and to demonstrate collaboration of sub-specialties within this process whilst continuing to acknowledge individual responsibility.
      - Representatives from individual teams have agreed to collectively:
        - Carry out a "clinical walkthrough" of the patient journey to identify issues and challenges to effective decision making (within pre-, peri- and post-operative management) with a view to implementing change to resolve these.
        - Produce a joint Standard Operating Procedure (SOP) in relation to standards, roles and responsibilities as part of the MDT approach to working.
      - Further meeting to establish progress has been requested (within 2-4 weeks) and acknowledged by service clinical lead (date is awaited).
    - Note:
      - Medical Examiner scrutiny continues to highlight #NOF cases- although the longer term strategy of developing effective triangulation for decision making is a positive step, there is a need to ensure short term / interim quality and safety is established and monitored.

        - #NOF was discussed at the SJR Panel Planning meeting (02/02/2021) and felt to be an ideal specialty area as first review / presentation topic.
        - The SJR panel (March 2021) is to review the related SJR cases highlighted December 2020 – January 2021.

- **GI bleed**
    - The initial report emphasised questions around coding (and accuracy thereof) in that a number of cases were NOT felt to be a direct result of GI Haemorrhage.
    - Action taken to date:
        - Coding review (using GI haemorrhage as focus)
            - A next-stage review of 15/30 cases from the report found documentation of a primary diagnosis of GI related haemorrhage and therefore supported the fact clinical details were indeed accurately being coded.
            - In 3/15 cases, the clinical rationale and justification for documentation of GI haemorrhage related issues could, however, be open to differing clinical interpretation.
            - Issues and concerns around accurate diagnosis, documentation and resulting coding are also evident in other work areas, besides gastro-enterology, and form part of the wider work related to effective and safe management of the patient in the early stages of admission.

- **Alcohol Liver Disease**
    - The initial speciality case-note review highlighted issues around consistency of access and use of care bundles, timeliness of patient management pathways and documentation.
    - Action to date:
        - Scoping:
            - Microsoft Teams meeting took place (end Jan 2021) to discuss front door and general pathway approach including management bundles, use of clerking work-book, early senior decision making and implementation of established (and new) pathways.
        - Front door system review:
            - A clinical "walkthrough", to gain better understanding, followed by focus task-team for implementation of any changes is currently in process.
            - Review post implementation / mobilisation of any identified changes (as a result of walk-through and further discussion) will follow.
        - Other Action:
            - A focused review of cases (4) identified as sub-optimal management or potentially avoidable (from a recent specialty SJR report) was undertaken.
            - Key themes / principles were discussed and captured with a summary sent to GI Clinical Lead alongside a suggested plan for mobilisation; this will form part of the clinical "walkthrough".

- *****NOTE:***
    - *Both front door systems (rapid assessment, effective use of pathways / bundles and senior decision making) and coding have been identified as key themes within several review areas (and not just gastro-enterology) so is to be considered across an organisational footprint. The current work with front door colleagues is felt to act as an enabler in enhancing, amongst other things, coding accuracy. The approach to high quality documentation is being picked up as part of the front door review but learning and guidance intended to be disseminated wider.*
    - *Dr Foster uses coding from the first episode of care to populate its data profiles and*

resultant HSMR. This, in part, highlights the importance of not only effective documentation but the value of timely and appropriate approach to management of the patient during the initial stages of admission.

- **Other**
  - Chronic Renal Failure (CRF)
    - Dr Foster highlighted CRF as being an outlier
    - The numbers involved were small (4 cases); a first-line coding review was undertaken and these were considered to establish correct coding as per Dr Foster data extraction.
  - Action to date:
    - Review took place January 2021 and confirmed:
      - Accurate coding; 3 of 4 cases demonstrating clear deterioration of existing CRF patients; all had been receiving dialysis but reaching end-stage / EOL.
      - The remaining case appeared to be a result of, what was felt to be, historical coding hierarchy (a primary diagnosis of decompensated heart failure with a background of CKD created a coding of cardio-renal syndrome and subsequently CRF).

- **Structured Judgement Review (SJR) Panel**
  - As per the initial mobilisation plan, the SJR-panel approach to scrutiny and assurance has commenced.
  - Cases for SJR are raised mainly through Medical Examiner scrutiny or by parent specialty.
    - Options for capturing SJRs and ensuring timely and effective completion are being considered and the template finalised.
  - The intention of the SJR panel is to provide improved accountability and assurance:
    - Oversee process; receive presentations, identify issues, concerns or collate themes.
    - Sign-off (or escalate) cases and communicate or signpost any learning
  - Action to date:
    - Trial panel (March 2021) has been arranged to finalise understanding of SJR triggers and process using fractured neck of femur (#NOF) to support.
    - As per long term strategy (highlighted in previous Board report)- full implementation intended by April 2021:
      - Planned formal areas for discussion thus far:
        - Fracture Neck of Femur (#NOF)
        - Hospital Identified Covid Infection
  - Future intention (by 1st April 2021):
    - Training / development session for panel members (March 2021) and inclusion of multi-disciplinary representatives (including Medical, Nursing and Allied-Health-Professionals)
    - Medical Managers meeting- Medical Examiners to present the current ME service provision and how this and the SJR panel approach will align with the wider Learning from Deaths (March 2021- RB (Med Examiner) to lead).
    - The Medical Examiner service has recently been successful in recruiting senior medical colleagues to advertised ME sessions; this provides a more stable Medical Examiner service and maintains the drive for high quality scrutiny and involvement in the wider Learning from Deaths approach.

HSMR Summary Comments:

- Although the latest (M8) HSMR has seen a small rise, there had been an overall steady reduction in HSMR over the previous 3-4 months; this trend may be a result of normal variation but also a reflection of previous “spikes” dropping off reporting and a settling to a more even distribution.

- Reasons for our HSMR continuing at a high level remain unclear but key themes continue to be identified through regular meetings and analysis of data; these, alongside “point spikes” in data are raised and considered within specific discussion at the Learning from Deaths group. Although we have not seen a dramatic reduction in the HSMR, work to date has already identified several processes and aspects of clinical management for improvement. It is felt mobilisation of these will provide benefits in patient care and outcomes.

- Due to the nature of Dr Foster data capture, reporting and therefore observed HSMR value, the reasons and trends will likely be multi-factorial. However, it is felt our methodology for step-wise review helps us gain an improved understanding of the data and should not only provide assurance but is encouraging.

- Key themes to highlight:
  - **Documentation and coding-** identified as a common thread in all areas (through initial scoping, scrutiny, discussion with specialty teams and focused case note reviews). The importance of clear documentation and rationale has been recognised in supporting safe and effective patient management.
  - **Timely intervention and decision making–** prompt and effective initial patient evaluation, leading to early implementation of management bundles, investigation and early senior decision-making (especially within the first 24 hours) is felt to be critical in ensuring the patient starts and follows the most appropriate management pathway for their needs.
  - **Collaborative working-** recognition of the value of strong links and robust implementation of multi-disciplinary working methods. Subsequent discussions and internal challenge has helped highlight areas of clinical practice, particularly multidisciplinary team working, which could be improved. This intelligence has been used to support work with clinical teams as part of direct clinical management and pathway reviews.
  - **Palliative care-** data suggest our actual activity is greater than our documented (or coded); ways to address this and options are being evaluated and worked on.

- There appears to be a general appetite from divisions to not only understand where and why we are outliers but support any changes. There has already been tangible momentum with regard to some of the support and action around front door / clerking and decision-making processes; this, alongside, the evolution and mobilisation of the SJR process (as a part of the wider Learning from Deaths) in Q4 20/21 will hopefully provide more explanation, a robust approach to learning and greater assurance.

- It is felt the structured approach allows the means to challenge internally, discuss in a collaborative manner, identify learning from past cases and showcase a change in culture to that of a more open and transparent approach to learning from deaths.

- It is hoped (and expected) the SJR panel process will be a key part in helping identify themes and learning for improvement- developing and encouraging a culture of clarity, consistency and also transparency can often take time but it is felt the actions taken to support teams in their understanding and application of change has been received in positive light.

<u>Process and Timescales</u>

In keeping with the original plan, the intention is to maintain the approach of:

Short term process: (1-3 months):

- Focused reviews – initial scrutiny, coding review and limited case-note review (where appropriate)
- Completion of review within 3 months of identification, ideally, and within 1 month where simple coding review and no further action.
- Initial feedback would be to the appropriate Specialty team, Learning from Deaths group and, where appropriate, wider communication to other specialty / divisions.

Medium term process (3 months onwards):

- Focused support with specialty areas
- Where suggestions, as a result of initial reviews and analysis, are identified a proposed action plan is to be worked up with intention to, with agreement, mobilise over a clear defined time period. The timescale would depend on factors including impact on job plans, working practise and other elements (eg estates etc).
- Review of actions and impact- this should be carried out by review of data and through analysis with specialist team and reported back to Learning from Deaths group with evidence of impact.

Longer term process:

- SJR panel - is a part of the wider process to support learning from deaths.
- This is on track to mobilise March 2021 with a longer term strategy to develop an on-going cycle of thematic or specialty reviews highlighted through sources such as data analysis, Dr Foster intelligence or quality concerns. In addition it is intended to undertake review and presentation from a "random" cohort of SJR cases as a means of audit and assurance.
- The aim of this process would continue its aims to:
    - provide assurance
    - demonstrate clear systematic methodology for learning from deaths,
    - identify good practice, changes to current practice and understand the impact of any actions
    - effectively communicate and share learning in an open / transparent manner

One of the main routes for improvement is felt to be through developing a culture of clarity, consistency, collaboration and embedding this into the organisation; although recognised this is not a quick-fix it is felt we have the foundations for enabling this and feel encouraged by the positive nature with which the approach has already been received.