CMFT and UHSM response to issues raised by NHS Improvement on Fractured Neck of Femur

Introduction

NHS Improvement provided a note to CMFT and UHSM on 19 June 2016 with suggestions relating to four benefits it did not consider represented improvements for patients or were otherwise insufficiently advanced to assess under the framework for patient benefits.

In the paragraphs below, the Trusts have responded to the suggestions raised by NHS Improvement, and believe that the level of detail in the Fractured Neck of Femur benefits case is comparable with that set out in other patient benefits cases. The Trusts do not consider that there are further grounds for not accepting this benefits case.

Background

In the Patient Benefits Submission (paragraphs 438 – 458), the Trusts have explained that fractured neck of femur (or hip fractures) are cracks or breaks in the top of the thigh bone (femur) close to the hip joint. At present, patients, following initial assessment at A&E, are admitted to a mixed general Orthopaedic ward at each Trust. It is intended, following the merger, for CMFT and UHSM to offer a dedicated femur fracture service to patients at a single hospital site (either of MRI or Wythenshawe hospital sites). International and UK evidence shows that dedicated units reduce length of stay, time to surgery and complications compared to mixed units. A reduced length of stay, as explained in greater clinical detail in the patient stories below, can be expected to improve patient mortality outcomes. In summary, the merger is required before a dedicated unit can be offered because patient flow from both sites needs to be coordinated to support the dedicated resources applied to this important cohort of orthopaedic surgery patients.

NHS Improvement has indicated that greater detail is required to understand how the dedicated femur fracture unit will differ from the existing services offered by the Trusts, the resources required to deliver the proposal, and how the service that patients will receive will improve. Specifically, how:

- the consolidation of staff and patients into a single location increases access to an orthogeriatrician and facilitates delivery of a seven-day service;
- orthogeriatric, therapy and trauma coordinator staff will work differently following the merger and why the consolidation of the existing services enables this;
- consolidation onto a single site will remove the barriers that at present prevent Orthogeriatricians from undertaking daily MDT ward rounds and the enhanced elements of care that have been described already; and
- new dedicated fall assessment/prevention outpatient clinics will represent improvements over existing arrangements at UHSM and what changes CMFT patients might experience as a result of these clinics becoming available.

More broadly, NHS Improvement indicated that it would be helpful to understand how many dedicated theatre lists or operating slots will be established as a result of the dedicated unit and what proportion of patients would be operated on via these dedicated lists. Further, whether patient demand would be sufficient and consistent enough to support dedicated theatre lists. And finally, what causes the existing variation between the Trusts and how the merger would address the identified variation.

In the following paragraphs, the Trusts have further described what an improvement in the access to Orthogeriatrician care is likely to mean, how patient demand will be matched by the dedicated service, and have provided additional commentary (to that contained in the Patient Benefits Submission) on what is likely to cause the existing variation in patient outcomes between the Trusts, and why the merger is the only way to improve care for patients at both Trusts.

1. Improvements in the Availability of Orthogeriatrician Care

NHS Improvement's first tranche of questions seeks greater detail on how the consolidation of staff leads to patients gaining greater access to Orthogeriatricians, how staff will work differently (in ways that cannot be developed at the separate hospital sites), and how specialised outpatient clinics will improve care.

Coordination of Specialist Staff

At present, both Trusts have a very small Orthogeriatric resource to serve large numbers of patients. Paragraph 450 of the Patient Benefits Submission states that CMFT has less than one WTE orthogeriatrician and UHSM has 1.7 WTE's, within larger Orthopaedic teams. Similar to many of the other sub-speciality arrangements described in the Patient Benefits Submission (e.g. Acute Coronary Syndrome, Cardiac Rhythm Management, Acute Aortic Surgery, Stroke, and Head and Neck Cancer) it is a significant operational challenge for clinical departments to coordinate limited sub-specialist skilled staff for improved patient outcomes. This is a feature of the patient benefits case overall and has been discussed previously with NHS Improvement and the CMA.

Paragraph 443 of the Patient Benefits Submission refers to Monitor and NHS England documents that encourage and reward best practice (through the Best Practice Tariff) and specifically for patients to be quickly stabilised upon presentation and receive fast targeted support for rehabilitation following surgery. By combining specialist staff, and placing the patients all in the same place, the staff resource can be scheduled to cover a larger number of patients at critical points in their care pathways (i.e. where at present two specialists are required to be at two sites, instead the same two specialists can be coordinated to cover twice the time-period at the one site, all else being equal). Specialist Orthogeriatrician staff will continue to look after the highest acuity patients over a broader time-period.

By coordinating staff differently (including Advanced Practice Nurses and Allied Health Professionals) more patients will be seen at the critical point in their individual pathway instead of waiting until the next available ward round. In addition, the increased team size means that the service can be delivered more consistently and will not suffer to the same extent when specialist staff require annual leave, sick leave or study leave, which is especially difficult to manage in small teams. Where staff are available more consistently, then more patients receive specialist attention at critical points in the care pathway. Finally, an organisation that has a larger Orthogeriatric team is more attractive when recruiting Orthogeriatricians, given the improved supervision and professional development opportunities (also an area that has been discussed with NHS Improvement and the CMA at different stages through the inquiry process).

Paragraphs 463 and 464 of the Patient Benefits Submission explain why, in the absence of the merger, it would not be possible to coordinate staff and patients onto a single site. In summary, the Trusts have been unsuccessful in attempting to coordinate these types of joint-venture arrangements previously, not least because of the difficulty of agreeing financial allocations when sharing work between NHS organisations.

In respect of MDT ward rounds, at present both UHSM and CMFT provide limited daily orthogeriatric input into the patient pathway. As described above, by coordinating the limited sub-specialist clinical resource at a single site, it will be possible for the Orthogeriatricians to work more often with the Orthopaedic teams. For example, at present neither Trust is meeting the expected hip replacement ratios for their fractured neck of femur patients compared with internal fixation (i.e. the ratio of a non-replacement approach which repairs rather than replaces a hip fracture are too high). Primary total hip replacement provides a better outcome for mentally competent elderly patients with a displaced femoral neck fracture as the complication and re-operation rates are significantly lower and hip function and health related quality of life are found to be at least as good at four years after the surgery.

Through the consolidation of the Orthopaedic surgery lists from both Trusts and the greater availability of Orthogeriatrician support it will be possible for specialist arthroplasty surgeons (who repair rather than replace hips) to identify and work on those patients suitable for repair procedures and those requiring replacement which will improve the outcomes for fractured neck of femur patients. This has previously been successfully implemented for other services by close working with North West Ambulance Service to ensure that patients would arrive at the right hospital site for their injury to receive the correct specialist care.

Detailed implementation planning is significantly progressed, alongside the broader merger planning and details on consultant rotas will be available when the new patient pathway for fractured neck of femur patients has been finalised with its hospital site. However, the aspects of planning related to achieving better coordination of specialist staff and deployment across more of the week is significantly progressed. The Trusts have identified a number of workforce areas that will be resolved within the first year following merger (as part of the post integration transaction plan) in order to deliver this benefit. Specifically:

- Specialist consultant job planning is being undertaken to optimise efficiencies of staff deployment, for example, better matching on-call arrangements against the day-rota to ensure more consistent staff coverage.
- It is intended to introduce specialist consultant 'Hot Weeks' whereby arthroplasty surgeons would be timetabled to undertake the theatre lists. This will have the result of more timely surgery, and more patients receiving surgery from specialist surgeons. This will improve outcomes and reduce length of stay for fractured neck of femur patients. The increase in Orthogeriatric consultant cover will provide greater medical input for this vulnerable group. A recent review of deaths from fractured neck of femur at MRI showed a significant number of patients acquiring a post-surgery chest infection. There is an expected mortality rate of 70% in this group of patients.
- Junior and middle grade medics intending to work in the dedicated unit are being carefully reorganised with the intention that these grades will provide cross-cover support between the Orthopaedic speciality and Orthogeriatrician sub-speciality. A dedicated fractured neck of femur unit permits existing resources to be deployed and optimised in a way that the same resource across two sites cannot.
- Increasing the number of common standards and close working amongst Allied Health Professionals and Advanced Practice Nurses to achieve, as for junior and middle grade medics, improved cross-cover support for fractured neck of femur patients. The early mobilisation of this group is extremely important and is being facilitated already through the Allied Health Professionals team.

- Exploration of the improved possibility of recruiting Orthogeriatricians to vacant posts that have existed within CMFT for some time and so reduce the existing locum support arrangements.
- Planning staff resources for a dedicated rehabilitation centre, intended to be based at Trafford hospital, to improve patient outcomes following fractured neck of femur surgery.

As the dedicated fractured neck of femur unit is an aspect of the Orthopaedic benefit planning, project documents for the planning have already been provided to NHS Improvement and the CMA. The discussion regarding standards and the proposed working of the dedicated unit has commenced. This is continuing to be taken forward by the multidisciplinary team to ensure timely implementation following merger. The plan is to commence the development of this model during this summer in preparation for implementation shortly following the merger. The medical teams have commenced preliminary discussions to enable this to occur.

Outpatient Clinics

NHS England and Monitor guidance encourage and reward expert and timely specialist care in the rehabilitation of patients, because it produces improved patient care. The Outpatient services that have been described in the Patient Benefits Submission are a key component of the rehabilitation package of fractured neck of femur patients, and so represent improved patient care.

The merger will enable staff to be better coordinated to expand existing 'virtual fracture clinics' (i.e. clinics where there is a timely review of images by a consultant-led multidisciplinary team). This enables patients to be 'streamed' to ensure timely intervention. Destinations following 'streaming' may be: direct listing to surgery; discharge; Allied Health Professional clinic; or review by consultant. This results in patients only receiving face to face appointments with consultants when necessary and results in less disruption for the patient, and also results in Outpatient appointment capacity with consultants being freed for other work (which will reduce waiting time for patients and is consistent with improving the timeliness of this care, and so improve patient outcomes). At UHSM, the physical capacity for outpatient appointments is limited and it is anticipated that following the merger additional capacity can be utilised from Altrincham and Trafford hospital sites to improve access and timeliness of physical outpatient appointments for fractured neck of femur patients.

An important outcome of the Outpatient clinics is advice for patients on falls prevention. A recent review for the Greater Manchester Combined Authority indicated that for the period 2012-2015 there were 11,538 attendances at CMFT's A&E by persons over 65. Of these 5,105 (44%) were attendances due to falls. Improved access to these specialist Outpatient clinics is expected to have an important effect in reducing these attendances.

2. Patient Demand for Fractured Neck of Femur Surgery

NHS Improvement also suggested it would be helpful to understand whether patient demand would be sufficient and consistent enough to support dedicated theatre lists. And if there is sufficient patient demand, how many patients might be expected to experience the dedicated surgery lists.

At Table 9.2 of the Patient Benefits Submission the Trusts have identified that there are around 550 fractured neck of femur patients per year. This equates to approximately 10 patients per week which is one dedicated list per day (one or two patients per day delivered over seven

days). Overall this patient demand, and progressing patients through theatre within 36 hours (see NICE guidance), is sufficient to support a dedicated fractured neck of femur unit. It is important to note that this benefit is not about creating additional dedicated theatre lists, as is the case in the urgent gynaecology patient benefit (and which has been referenced by NHS Improvement in its note as being more detailed on the issue of how to create additional capacity). It is expected that the patient demand from the patient population of the new combined Trust will be sufficient and consistent to support the planned dedicated surgical theatre lists. The benefits to patients from the dedicated unit are obtained from realigning medical staff around a single cohort of patients. All patients needing fractured neck of femur surgery are expected to benefit from the dedicated unit.

Further, it can be noted that Trauma and Orthopaedics consists of many different patient pathways. For example, there are patients who require surgery quickly (fractured neck of femur patients) and those who have Orthopaedic related injuries (not involving trauma) who can, after their initial assessment, go home and then return to hospital at a later time on what is described as a 'cold list'. In this way demand can be somewhat 'smoothed' to match demand with available resource.

3. Existing Causes of Variation in Outcomes between the two Trusts

NHS Improvement also suggested that it would be helpful to further specify the causes of variation in outcomes between the two Trusts and how these variations would be addressed through the merger.

Table 9.2 in the Patient Benefits Submission identifies variation in outcomes on several different measures of the fractured neck of femur service at each Trust. Specifically: performance against Best Practice Tariff criteria; patients receiving surgery within 36 hours; Total Length of Stay; and Adjusted 30-day mortality. UHSM performs better than CMFT on all of these measures except adjusted 30-day mortality.

As described in the Patient Benefits Submission, paragraphs 445-451, variations in the patient pathway are likely to lead to variations in outcomes. By merging the fractured neck of femur service, it is possible to identify those aspects of the patient pathway that contribute to better patient outcomes and then replicate this within the new dedicated unit. The key difference, as previously discussed with the NHS Improvement and the CMA and the focus of this patient benefit, is the presence of Orthogeriatricians as part of the multi-disciplinary teams undertaking daily ward rounds. CMFT has fewer staff within this sub-speciality and is more reliant on locum support.

It is also possible, but not yet determined, that CMFT's superior access to step-down / intermediate care facilities to transition patients from post-operative acute care into rehabilitation services leads to improvements in patient quality outcomes (not an area robustly measured) and potentially the improved 30-day mortality score. As described at paragraph 446 of the Patient Benefits Submission, CMFT accesses these facilities through its arrangements with Gorton Parks Care Home and the inpatient rehabilitation services available at Trafford hospital.

The merger will allow patients to benefit from a combined superior patient pathway that utilises the staff in a more coordinated manner and provides access to the combined physical resources of both Trusts.

Following the receipt of NHS Improvement's note, CMFT has identified a report that it produced for the Care Quality Commission (CQC) in response to "*the Imperial College Dr Foster Mortality*

alert for 'Fracture Neck of Femur (hip)' at Central Manchester University Hospitals NHS Trust." This report was produced by CMFT following a local clinical audit of the 27 deaths identified by the Dr Foster analysis that occurred between October 2015 and September 2016. A number of issues were identified with the current service and are outlined below:

- The length of time from attendance at Emergency Department and admission to ward identified that 22 of 27 of patients waited longer than 3 hours;
- Early Orthopaedic senior review was not always available;
- The length of time to theatre for surgery was not optimum and delays were apparent in 55% of cases;
- 45% patients within the cohort of 27 had hospital acquired pneumonia which had a negative impact on their outcome;
- It was identified that all 27 patients had a delay discharge and this impacted their care and outcome
- The average length of stay for this cohort was 34 days.[1]

Given the results of this earlier study, and work that has been done more recently to compare the UHSM and CMFT patient pathways, it is expected that important areas for the new merged Trust to focus on will be:

- **A reduction in length of time from attendance at Emergency Departments to ward admission:** a pathway is being discussed with the North-West Ambulance Service for emergency patients with an obvious fractured neck of femur (i.e. patients presenting with a flexed internally rotated and adducted leg) to be taken directly to the admitting unit at Trafford General Hospital. This change will considerably improve patient experience as it will reduce the time to admission (and access to prescribed pain medicine). The majority of patients with a fractured neck of femur are frail elderly patients in considerable pain. This is expected to improve for all 550 patients attending the dedicated unit.
- **Reliable early orthopaedic senior review for all patients:** this is a core element of the patient pathway that can be improved for at least the 200 CMFT patients and also for many of the 350 UHSM patients following the improved coordination of staff that will be available within a dedicated unit.
- **A reduction in length of time to theatre:** 45% of CMFT patients and 25% of UHSM patients are expected to receive surgery within 36 hours.[2] It is anticipated that all patients fit for surgery will receive it within 36 hours and also importantly the number of patients who are not fit for surgery will reduce (which will improve theatre scheduling) given the more consistent input from the orthogeriatric team.
- **Improving access to theatre with timely and early mobilisation / rehabilitation:** evidence suggests that where these parts of the patient pathway can be improved together a significant proportion of patients attending the dedicated unit will not develop hospital acquired pneumonia. Of the 27 patients reviewed as part of the mortality review 13 patients (48%) developed a chest infection whilst an inpatient. For those patients who acquire a chest infection following a fracture neck of femur surgery, 70% will not survive. Although this is not expected to be all patients, evidence indicates that if theatre access is timely and early mobilisation / rehabilitation is available for a patient then rates of pneumonia can be significantly reduced. Given that this is such a large proportion of all

[1] This can be compared to Table 9.2 in the Patient Benefits Submission which for 208 patients at CMFT for 2015-16 was 36.2 days and for UHSM over this period was 24.3 days. The national average is 21.1 days.
[2] See Table 9.2 which identifies the number of patients that do not receive surgery within 36 hours (i.e. 45% of CMFT patients and 25% of UHSM patients).

patients, this is expected to have a large impact on patient mortality following surgery. In addition, it is expected that other harms associated with the length of time in bed such as pressure damage, deep vein thrombosis and pulmonary embolism will also reduce in significant proportions.

In order to help illustrate to the CMA the expected impact *on individual patients* of developing a dedicated fractured neck of femur unit, the Trusts have provided a patient case study to provide an example of how reducing the length of stay in hospital from existing levels can save lives.

Patient Case Study

A 79-year-old lady was admitted to the emergency department at MRI following a fall and sustained a left femur inter trochanteric fracture. She was admitted on 23.6.16 at 20.46pm and was seen by a Consultant Orthopaedic Surgeon on 24.6.16 at 9am. The patient had a history of COPD, myocardial infarction, hypertension and CA lung. The patient underwent a dynamic hip screw procedure on 25.6.16. She was reviewed by the Consultant Orthogeriatrician on 27.6.16 at 2.00pm. On 21st July, 30 days following surgery, she developed a chest infection on the background of left upper lobe lung carcinoma. She was treated with IV antibiotics but did not improve and died on 29.7.16.

A mortality review was undertaken by a consultant physician. The mortality classification score was Grade 0 (no suboptimal clinical care). The cause of death was hospital acquired pneumonia, CA lung, chronic obstructive pulmonary disease.

It is expected that following the introduction of the Fractured Neck of Femur dedicated unit that patient length of stay will, on average, reduce, and so the chance of a fractured neck of femur patient contracting pneumonia in hospital will accordingly reduce. Given that around 70% of patients who contract pneumonia in hospital following fractured neck of femur surgery will die, this is a very high priority objective and reason for delivering the dedicated fractured neck of femur unit.

Conclusion

The Trusts expect that this supplementary note to the Patient Benefits Case provides evidence that combining specialist staff and managing patients in a dedicated Fractured Neck of Femur will provide the best opportunity to deliver real improvement in patient outcomes, including patient mortality for this speciality. The dedicated unit will support optimal scheduling and concentration of the specialist staff across both UHSM and CMFT at critical points in care pathways which will ensure that patients access surgery within 36 hours and also receive early mobilisation rehabilitation. The dedicated unit, only possible through the merger, will permit the best of both Trusts to offer the best care conditions to patients and so improve post-operative morbidity and mortality.