Summary of Patient benefits

Central Manchester University Hospitals NHS Foundation Trust and University Hospital of South Manchester NHS Foundation Trust

1. Following a request by Inquiry Panel at the hearing on Tuesday 4 July, the table appended to this note summarises the patient benefits arising from the planned merger between Central Manchester University Hospitals NHS Foundation Trust (CMFT) and University Hospital of South Manchester (UHSM).

2. This table shows that the benefits arising from the 15 cases submitted to the CMA are wide-ranging, multi-faceted, and will have a major impact on the treatment of patients within these specialties. The additional context set out in this covering note shows that these 15 benefits form only a small part of the total benefits that the Trusts plan to achieve through merger. The CMA should have a high degree of confidence that the 15 specific benefits will be achieved, and every reason to expect that the learning from these benefits will, in turn, lead to the achievement of considerable benefits in other areas.

3. This note sets out:
   - first, the process by which the patient benefits cases were identified for the purposes of the patient benefits submission; and
   - second, the wider benefits that the Trusts anticipate realising from their merger, which do not form part of the 15 proposed patient benefits that were submitted to the Competition and Markets Authority (CMA).

4. The Trusts also refer the Panel to Section 3.3 of the patient benefits submission, which discuss the wider benefits arising from their planned merger.

Process for identifying patient benefits for submission to the CMA

5. As the Panel is aware, the decision that CMFT and UHSM should merge followed a review led by Sir Jonathan Michael for the Manchester Health and Wellbeing Board. This report identified opportunities for improved acute services in the City of Manchester, through a process of reviewing a number of exemplar services, and then recommended a merger as the best way of delivering these benefits.

6. CMFT and UHSM understood, early on in the transaction process, that a patient benefits case would need to be submitted to the CMA, which built on Sir Jonathan Michael's work, but which also provided the additional detail necessary to meet the relevant customer benefits (or patient benefits) test.

7. Developing the patient benefits case could not simply be a matter of re-purposing existing documentation and plans that the Trusts would prepare as part of the wider transaction process. This is because the patient benefits test requires a higher standard of evidence than is needed for internal and other regulatory decision-making concerning the merger.

8. Even though the merged Trust would ultimately need to have detailed plans for individual services for the purposes of post-merger integration planning, that might broadly be consistent with the level of detail required for a patient benefits case, the timing of the CMA review process meant that this detail was needed earlier for those services forming part of the patient benefits case than would otherwise be the case.

9. As a result, to bring forward a robust patient benefits case within the timelines required by the CMA merger review process, the Trusts engaged in the following process. First, an understanding of the requirements for a patient benefits case was built up by the clinical leads and other staff working with the Single Hospital Service Programme Management Office (PMO). Next, meetings with clinicians across the full range of specialties at both CMFT and UHSM were held to discuss service changes that could be implemented following the merger, and from these, potential patient benefits cases were identified.

10. Potential patient benefit cases were identified based on the requirements of the relevant customer benefits test as well as several other criteria. This included:
    - the overall impact of the case (e.g. on the number of patients and/or the impact per patient);
    - the level of clinician enthusiasm and support for the case (given the need for their on-going support in its development);
    - the financial requirements for implementation (with particular reference to capital requirements); and
    - the ability to deliver the proposed benefit within a reasonable timeframe post-merger.

11. This selection process sought to maximise the total impact of the patient benefit case submitted to the CMA. It also had to be developed within the practical constraint of time and resources, which meant that the total number of patient benefit cases that CMFT and UHSM could develop was not unlimited. The Trusts also, in developing the patient benefits case, deliberately held themselves to a high standard in terms of assessing potential benefits so that the Trusts, NHS Improvement and the CMA could all be confident that that these benefits would meet the necessary standards and be realised post-merger.

12. Service change initiatives that were identified during this process, but not selected for inclusion in the patient benefits case to be submitted to the CMA, were not discarded, but have been included in a wider package of initiatives to be developed and implemented following the merger.

13. Further, as the transaction developed, new service improvement initiatives emerged that were not identified during the initial identification process. In some cases, the emergence of these new initiatives has been the result of clinicians becoming increasingly enthusiastic about the merger, and seeing opportunities that had not previously been considered. In other cases, the patient benefits cases that have been developed for the CMA in particular specialties have been seen as having a wider application in other specialties.

14. One example is the development of the additional urgent list for gynaecological surgery. This has highlighted a potential way forward for other surgical specialties with urgent work that is displaced by emergency caseload, and where the combined volume of work at both Trusts would justify the creation of extra theatre lists. Similarly, the rota development work across several of the proposed patient benefits has exposed staff to possible solutions to current challenges in service provision elsewhere at the two Trusts that would not be possible absent the merger.

15. At the hearing, reference was made, by way of example, to Respiratory Medicine clinicians at CMFT and UHSM who have developed service improvement initiatives that they wish to implement as a result of the opportunity that the merger makes available. This includes:

- streamlined pathways for transfer of patients through child, adolescent and adult services in cystic fibrosis and long term ventilation services;
- roll-out of the UHSM RAPID programme, a streamlined lung cancer pathway which reduces the time to diagnosis and thoracic surgery, thereby increasing patient survival through earlier intervention;
- improved development and recruitment to clinical trials through establishing a single governance and leadership structure for research and innovation; and
- integrated access across Manchester to primary and acute secondary care electronic patient records to create a database to facilitate research (as per the Salford Lung Study, which a randomised control trial of a COPD treatment in a real-life, everyday clinical practice setting).

16. The emergence of these additional service improvement initiatives is a direct response to the strong and growing clinical engagement that the Trusts have engaged in as part of the transaction. However, it has not been possible to add further patient benefit cases to the overall case submitted to the CMA given the resources and time required to put these cases together. It is worth noting that in addition to the lengthy patient benefits submission provided by CMFT and UHSM, the Trusts have answered more than 100 detailed questions from NHS Improvement on the 15 patient benefits cases that were submitted.

Wider benefits arising from the merger

17. The clinical engagement process for identifying patient benefits for submission to the CMA has, as set out above, resulted in the identification of many additional benefits that could not be included in the case submitted to the CMA. It is important to note, however, that these initiatives are only part of the wider benefits anticipated from the merger by the two Trusts.

18. Standardisation of patient pathways and protocols, for example, will be a critical part of the integration process following the merger. This standardisation process, which will be led by the clinicians in each specialty, supported by managers and transformation experts, will ensure that best practice from each is adopted by the merged Trust. This process can be expected to result in significant benefits in area like length of stay, reduced waiting times for diagnostics and access to specialist opinion, reduced infection prevention and control risks, and improved patient experience overall. The Trusts are sufficiently confident of this benefit that it has formed a key part of the financial savings anticipated from the merger.

19. This confidence is not misplaced. Western Sussex NHS Foundation Trust is one example of an NHS acute trust merger that was able to realise significant post-merger quality and financial benefits as a result of this process.[1] At the hearing, the Trusts set out their own experience of standardising practice and generating savings following CMFT's acquisition of Trafford Healthcare NHS Trust.

20. As set out in the patient benefits submission, the wider benefits that the Trusts anticipate from the merger span: quality of care; patient experience; workforce; finance and operational efficiency; research and innovation; and education and training. These are reflected in the Full Business Case for the merger.

[1] See Aldwych Partners, *Benefits from mergers: lessons from recent NHS transactions*, May 2016 at https://improvement.nhs.uk/uploads/documents/Mergers_Aldwych_Partners_Overarching_report.pdf.

21. One example of these broader benefits is in the area of research and innovation. Both CMFT and UHSM are major teaching hospitals, but other cities with single Trusts (e.g. Leeds, Newcastle, Nottingham) are able to appear as more substantial research institutions. This has impacted on both Trusts ability to attract research funding, which has consequences for the Trusts' ability to recruit and national profile. A further example relates to the Trusts' ability to grow innovation campuses. Healthcare research and technology are critical components of Manchester's economic growth, but as individual institutions it is more difficult to enter into commercial arrangements and attract commercial investment.

22. Wider benefits that are expected from the merger also arise from the merged Trust's role in the broader healthcare landscape for Manchester. Together, these new arrangements are aimed at upgrading prevention, improving community-based care, standardising acute care pathways, and pooling commissioning budgets across health and social care in Manchester. Moreover, these arrangements are part of a broader strategy for Greater Manchester that is aimed at achieving improved health outcomes for the region.

6 July 2017

Summary of Benefits Submission

Patient benefit case	Summary of changes to service delivery	No. of patients to benefit	Benefits to patients	How many patients benefit in what way / significance
Cardiology, Vascular and Stroke				
Acute Coronary Syndrome	7-day rota for ACS sub-specialism Centralisation of clinicians and patients in a dedicated ACS unit	c.4,000 per year	Shorter length of stay for all NSTEMI patients treated at the new merged Trust	Average time from referral to procedure to reduce from 3.3 days to 1.0 days, and average time post-procedure to discharge to reduce from 1.6 days to 1.0 days. A reduced length of stay allows a patient to return to their usual place of residence and/or commence rehabilitation more quickly. It has significant value for patients in and of itself. Further, a shorter length of stay allows patients to avoid the risks associated with staying in hospital, including the risk of (i) acquiring an infection; and/or (ii) suffering an accidental fall. The risk of either of these outcomes, although low generally, is highly significant at an individual-level, and ranges from death (e.g. significant numbers of patients acquiring pneumonia in hospital die) to entering an additional patient pathway (e.g. fractured neck of femur pathway due to a fall in hospital) to losing independence and requiring residential or nursing care instead of returning to their home. Infections have a significant impact on patient recovery (delayed return to normal) and following discharge from hospital will generally have more contact with their general practitioners, district nurses, and other health care professionals. Infections might come in a variety of forms including: bloodstream infections, lower respiratory tract infections, skin, surgical wound, or urinary tract infections. Infections also generally lead to longer lengths of stay for patients in hospital. A regularly referenced paper on the socioeconomic burden of hospital acquired infection is attached.
			Shorter time between admission and referral for NSTEMI patients admitted to local hospitals and transferred to the merged Trust for treatment.	The period between admission to referral from local hospitals expected to reduce from 2.5 days to a target of 1.0 days for 3,300 patients. This (i) will reduce anxiety which is shown to have a significant effect on patient experience (i.e. an individual's panic over potential mortality) and (ii) is proven to reduce length of stay following surgery. Shorter length of stay benefits from the patients' perspective are set out in more detail in the cell above.

			Improved mortality, subsequent risk of heart attack or risk of refractory ischaemia outcomes for NSTEMI patients treated at the new merged Trust	Evidence from NHS Improvement indicates that mortality outcomes can be halved as a result of improved access to coronary artery surgery. This mortality improvement is expected to apply to around 750 patients who receive this specific surgery, out of the 4,000 patients admitted for care. As the mean mortality rate for this type of surgery is approximately 10% (i.e. 75 patients) a reduction of 50% suggests around 37 lives would be saved from this improvement. An additional number of patients would benefit from reduced risk of subsequent heart attack or stroke. A paper from NHS Improvement that explains the benefits and supports this type of cardiology improvement has been attached.
			Reduced waiting times for new patients as a result of patient flow moving faster through the new merged Trust	4,000 patients saving on average 2.9 days at the merged Trust is the equivalent of 11,600 bed days. Using an average length of stay of 4.5 days per patient suggests that there would be hospital capacity (if not otherwise closed or re-purposed) for 3,900 new patient admissions each year. There would be an additional capacity benefit for other hospitals that refer NSTEMI patients to the merged Trust for treatment that arises from the shorter admission to referral times for these Trusts. This would allow additional patients to be treated at these hospitals (above and beyond the estimate of 3,900 patients at the merged Trust).
			Financial savings to the new merged Trust and the NHS	The effect of reducing length of stay is estimated to be the equivalent of 23 beds or 1 ward within the hospital. A ward is estimated to be worth a net saving of around £1.6 million annually. The average cost per patient, if average length of stay reduces by 40%, is expected to reduce also by 40%. If the 11,600 bed days are costed at the NHS excess bed-day-tariff of £306 this is a saving worth around £3.5 million (assuming that the beds are not repurposed to another speciality).
Heart Rhythm Abnormalities	7-day rota for Cardiac Rhythm Management sub-specialism Centralisation of clinicians and patient flows	c.430 per year	Reduced time to treatment	Reduction of 1.3 days (to the average of in-hours care) for 130 patients needing a pacemaker implant on a non-elective basis out of hours and 300 patients requiring immediate analysis of their ICD device. This delay leads to discomfort, anxiety, and longer recovery (length of stay). See above for expected effect of these patient outcomes.
			Reduced length of stay	Reduction in anticipated length of stay is expected to be modest for 430 patients. A reduction in length of stay has the same expected effect on patient outcomes as described above.

			Reduced risks from interim stabilisation measures or other complications	Reduces the risks associated with receiving a temporary pacing wire to stabilise the patient (or not receiving one where it would have helped because sub-specialist advice is not readily available out of hours) for 430 patients. Pacing wires introduce significant risk of mortality, morbidity, and infection (complication rates as high as 25% where insertion occurs and a 300% increase in subsequent pacemaker infection occurring, which is life-threatening).
Acute Aortic Surgery	7-day rota for Acute Aortic Surgeons Centralisation of clinicians and patient flows	c.50-100 per year	Improved patient mortality	There is some difficulty identifying Type-A aortic dissection patients, as the condition can be undiagnosed. Failure to diagnose results in fatality. It is clinically estimated that diagnosis will improve the outcome for around 65 patients in the merged Trust's catchment, of which 75% are expected to survive. This results in a saving of around 50 lives annually.
			Reduced time to treatment	10-15 patients transported to Liverpool because sub-specialist care is unavailable at Manchester are expected to experience reduced risk of mortality (each hour of delay significantly increases risk of death).
Vascular Surgery	Centralisation of clinicians and patient flows at Manchester Royal Infirmary	c.3,300 per year	Improved complication and morbidity rates	With the centralisation of the vascular service the Trusts have estimated that 2/7 of patients (weekends) will receive improved consultant care and this is expected to result in a 50% improvement in existing morbidity and complication rates. When applied to 3,300 patients this is expected to result in around 60 patients who avoid complications, which can include: cardiac arrest, insufficiency or failure; stroke; pneumonia; shock lung; respiratory distress; bleeding; postoperative infection; and or shock. An academic paper supporting the relative incidence of complications in this form of surgery, and the improvements that can be achieved from higher volume has been attached.
			Reduced length of stay	Academic literature proves that a reduced length of stay should be expected from greater volume Vascular centres, although detailed patient modelling of the anticipated reduced length of stay is not available. A reduced length of stay allows a patient to return to their usual place of residence and/or commence rehabilitation more quickly. It has significant value for patients in and of itself, as described in greater detail above.
			Reduced tissue loss and amputation for diabetic foot patients	Single care pathways for the management of distal peripheral vascular disease (reduced blood flow), and the management of foot ulceration (with or without diabetes) will reduce the incidence of major amputations. Extrapolation of the Trusts' data on 3,300 patients indicates that 30-50 limbs would be saved per year, with 50% of current

				above knee amputations receiving less destructive below knee amputations. Patients with a below knee amputation are considerably more likely to walk with a prosthetic limb (60%) than those with a prosthetic limb following an above knee amputation (30%).
Stroke	Introduction of weekend services for patients that suffer suspected mini-strokes so that all patients are assessed within 24 hours	c.900 per year	Reduced risk of subsequent larger stroke, and associated mortality and morbidity outcomes	Risk improvement depends on when patient is assessed i.e. 2 days following TIA event is up to 4.1% risk of stroke and at 7 days following TIA event is up to 6.5% risk of stroke. This means that 40 to 60 patients are expected to avoid a full stroke as a result of sub-specialist attention within 24 hours of the TIA event. The effects of a stroke differ depending on what part of the brain is affected but include: weakness or paralysis; problems understanding speech or communicating; Cognitive issues with memory, concentration or learning; pain or numbness; bowel or bladder control issues; tiredness; emotional outbursts; and depression.
Women's Health				
Urgent Gynaecology Surgery	More regular urgent gynaecology surgery lists that women across the merged Trust can access	c.400 per year	Reduced waits for urgent gynaecology surgery	Reduction of time to treatment by 1.3 days, on average, for around 400 urgent patients. For these 400 patients, this is also associated with a reduction in associated significant complications namely: (i) reduction in duration of time experiencing severe pain (around 50 patients waiting for Laparoscopic salpingectomy and Marsupialisation of Bartholin's abscess); (ii) severe emotional distress experienced by around 350 patients awaiting surgical removal of a baby that has died. It is recognised that miscarriage can trigger a post-traumatic stress disorder, anxiety or depression, in up to 70% of patients (Farren J; BMJ open 2016), this is compounded if there are delays to treatment; and (iii) increased risk of infection (see above for patient risks of infection).
			Reduced length of stay	Reduced length of stay for around 15 patients needing urgent Laparoscopic salpingectomy (ectopic pregnancy). Receiving surgery earlier will on average save one day of waiting per patient. This reduces the associated pain and distress for these women.
			Reduced risk of escalation to emergency status	For patients requiring either urgent Laparoscopic salpingectomy (ectopic pregnancy) or surgical removal of a dead baby, (c 360+ a year) there are clinical risks associated with delay which will be reduced by the planned changes. These risks are haemorrhage (bleeding), reduced long term fertility and escalation to a clinical emergency which is potentially life threatening (MBRRACE UK – saving mothers lives between 2009 -2014, nine women in the UK died from an ectopic pregnancy that had escalated to an emergency).

Community Midwifery	Improved information sharing, standardised governance arrangements	c.1,500 per year	Reduced risk of adverse outcomes	For the around 1,500 women who transfer from their community midwife zone to the out-of-area hospital (i.e. into St Mary's or Wythenshawe) the risk of safeguarding or other sensitive information (e.g. mental health situations) not transferring between providers is reduced. This is a clinical safety improvement for these expecting mothers who would (in the absence of information sharing) not receive care cognisant of their mental health or other safety needs.
			Reduced duplication of information gathering	For the around 1,500 women a reduction in the frustration experienced from repeating blood tests and imaging and the associated additional appointments required to gather this information for separate provider systems.
			Reduction in travel for care in some instances	For the around 1,500 women, antenatal appointments or check-ups can generally be offered at either of Wythenshawe or St Mary's hospital and so all of these women will have an increased choice of location for these appointments, while maintaining their preferred location for delivery. This improved access means a reduction in travel time to expert care, where taken up.
Urology				
Patient Access	Pooled patient lists that allows patients to access outpatient, diagnostic and surgery services at the site most convenient to them	c.6,000 per year	Choice of site for day case urology surgery	For around 6,000 patients, an increased option for location of day-case surgery without needing to experience a delay resulting from transferring between separate providers. Proximity is generally accepted to be an important issue for patients.
			Reduced time to treatment for male bladder surgery	For around 6,000 patients the alignment of CMFT and UHSM patient pathways (based on analysis from the recent "Getting it Right First Time" programme of change led by NHS Improvement, the merger is expected to reduce average length of stay by 1 day for around 1,200 admitted UHSM patients and almost half the emergency readmission rate within 30 days of surgery for around 1,000 CMFT admitted patients. That is, reduce readmission rates from 11.25% at CMFT to the UHSM rate of 5.66% which means 56 CMFT patients are expected to avoid an emergency readmission. A reduced length of stay has the benefits described above, and an emergency readmission is a significant and severe event for a patient who needs to return to hospital in an emergency context.
Urology Cancer Surgery	Centralisation of Urology Cancer Surgery services on to a single site	c.400-500 per year	Improved patient health outcomes	Commissioners have stated that centralisation of cancer services for the 400-500 patients treated at UHSM and CMFT will improve patient outcomes which are stated at the moment to be sub-optimal (see Appendix 7.2c and 7.2d of the benefits submission. In particular, referral to treatment measures (RTT) are expected by commissioners to

				significantly improve. In a cancer context, RTT can be determinative in mortality outcomes. As noted in respect of the Head and Neck Cancer benefit below, patients generally desire and benefit from coordinated multi-discipline care and the intended changes to this service are consistent with achieving these outcomes.
Kidney Stone Removal	Redirection of patients requiring lithotripsy services from Manchester Royal Infirmary to Wythenshawe Hospital	c.200 per year	Reduced time to treatment	Around 60 patients at CMFT that on average wait around 4-6 weeks are expected to have a reduced average waiting time to at least that experienced by UHSM patients of 3-4 weeks. Kidney stones cause intense pain and discomfort in the abdomen or groin. Having kidney stones is likely to result in absence from work and difficulty in carrying out everyday tasks. In general, it is a clinical presumption that a patient will have a higher chance of re-presenting to emergency services with further pain or sepsis the longer that a stone is present in a patient's ureter and the bigger the stone is. A faster time to treatment will both improve quality of life (less pain, less risk of sepsis or renal impairment) but also reduced rates of emergency readmission.
			Increased choice of day of treatment	For the around 200 patients treated at both of UHSM and CMFT they will receive a greater choice of day on which they can receive treatment (at present limited to 3.5 days at UHSM for 140 patients and alternate Friday's at CMFT for 60 patients).
			Lower costs	CMFT will no longer need to contract the mobile unit it presently uses resulting in an annual saving of £36,000 annually.
Seven Day Services	Combined urology consultant rota to deliver a seven day service	c.3,900 per year	Reduced time to treatment	Of the around 3,900 patients admitted for elective and non-elective inpatient care, around 2/7th are expected to benefit from a reduced time to treatment as a result of a seven-day service (i.e. around 1,100 patients).
			Reduced Mortality	Evidence indicates that for around 1,100 patients admitted on the weekend mortality rates may be 16% higher than admissions during the week.
			Reduced Readmission rates	Evidence suggests that for around 1,100 patients admitted on the weekend that important collaboration and multi-disciplinary planning between hospital, community health services and social care becomes difficult and may impact negatively on emergency re-admission rates.
			Improved Patient Experience	Evidence suggests that for around 1,100 patients admitted on the weekend that the quality of care and communication for patients, their families and carers can be woefully inadequate without the right levels of expertise, staffing and attention to individual patients' needs. When too few senior decision makers are present, communication with

				patients, their families and carers is hindered. This is a particular problem at weekends.
			Reduced length of stay	Evidence suggests that for around 1,100 patients admitted on the weekend that several of the factors which contribute to unnecessarily prolonged lengths of stay are more pronounced at weekends. These include the non-availability of community-based resources such as primary care and social care, hospital factors such as lack of senior clinical review and timely access to therapies, and reduced co-ordination between services. Minimising a patient's length of stay can improve their experience of care, and reduces their risk of acquiring a hospital based infection and the degree of lost mobility from time spent in bed.
General Surgery	Centralisation of emergency general surgery at Manchester Royal Infirmary	c.4,700 per year	Improved patient care	For around 4,700 emergency general surgery patients that will be treated by the merged Trust, patient outcomes are expected to improve because consultants with greater volumes of patients in this speciality achieve better clinical outcomes. Access to specialist advice across seven days reduces the likelihood of mis-diagnosis, inappropriate investigations and delays in treatment.
			Reduced readmission rates	For around 4,700 emergency general surgery patients that will be treated by the merged Trust, it is expected that average readmission rates with 30 days following an emergency admittance will improve and many patients will not need to return to hospital following their procedure.
			Reduced length of stay	For around 4,700 emergency general surgery patients that will be treated by the merged Trust, it is expected that average length of stay for an emergency admittance will improve. This means that this group of patients will have a reduced risk of acquiring an infection, tissue damage or deep venous thrombosis from the reduced stay in hospital.
			Improved consultant cover	For around 1,300 emergency general surgery patients admitted for emergency care over the weekend (i.e. 2/7 x 4,700) approved consultant cover standards will be met which will achieve improved patient outcomes for this cohort of patients– including better support for the priority and timeliness of surgery for patients and support when a patient's condition escalates into needing critical care, and improved access for cancer patients requiring stenting procedures.
			Reduced Mortality	If Greater Manchester trusts, on average, achieve the lowest mortality standard of the best hospital in Greater Manchester, or the lowest within England then around 38-72 lives could be saved at the merged Trust (all else being equal). As CMFT and UHSM have some of the lowest

				mortality rates within Greater Manchester it is estimated that the likely mortality improvement is going to be more modest at 20-40 lives saved.
			Reduced morbidity and mortality for colorectal emergency patients	For the around 150 colorectal emergency patients who need a colorectal resection could benefit from avoiding a colostomy because of the planned colorectal sub-speciality on-call rota that is possible following the merger. Not having a colostomy bag is a significant improvement for patients and an improvement in mortality rate (22% at 2 years following procedure) will result.
			£10 million of avoided capital investment.	CMFT will avoid £10m in planed investment to create new capacity because patient activity in other specialities can be spread over UHSM hospital sites.
Orthopaedics				
Elective Orthopaedics	Redirection of UHSM elective orthopaedic activity to dedicated unit at Trafford General Hospital	c.2,500 per year	Reduced cancellations	Ring-fencing elective orthopaedic beds is expected to reduce cancellations of elective orthopaedic operations (in favour of emergency care) by 5-6%. This means that 125-150 patients per year will not have their operation cancelled by UHSM. This will improve the efficiency of the elective orthopaedic pathway but more importantly will mean that these patients will not experience the intrusive preparation process for a major operation that is cancelled for an emergency.
			Improved Patient Experience	By having dedicated elective orthopaedic beds around 2,500 patients will no longer have the risk of being placed on a non-specialist ward as an 'Outlier', need to stay in a theatre recovery bed overnight or be shifted between wards on multiple occasions. This will lead to improved, on average, patient experience of the service and clinical outcomes including faster rehabilitation and less chance of a need for enhanced care arrangements. Larger sub-speciality teams that can be created as a result of the merger will lead to lower infection rates (with the risks described above), readmission rates and revision rates (risk of needing a follow-up repair operation) for the around 2,500 patients that will transfer from surgery at Wythenshawe to the Trafford hospital site. The Trafford hospital elective orthopaedic service offers dedicated rehabilitation services (for example, physiotherapy, nursing and occupational therapist teams) which leads to improved clinical outcomes / recovery from the surgery. This means patients recover faster to improved levels of mobility and reduced pain.
			Reduced length of stay	For the around 2,500 patients it is expected that the streamlined care, and sub-specialist consultant and rehabilitation teams that are available

				to elective orthopaedic patients that will in future receive surgery at Trafford hospital instead of Wythenshawe will save, on average two bed days. A reduced length of stay leads to improvement in patient outcomes including a reduced risk of infection and risk of accidental fall (see above description of these improvements on patients).
			Improved referral to treatment performance / reduced waiting times	Trafford hospital has greater capacity than Wythenshawe hospital and all 2,500 patients that are expected to transfer to Trafford hospital are expected to have a shorter waiting time / referral to treatment. Current Referral to Treatment (RTT) times indicate that CMFT meets the 90% national target and UHSM only meets the target 80% of the time. This suggests that 250 UHSM patients annually should expect to receive treatment within the 18-week target when they do not presently. This leads to reduced pain and discomfort for patients waiting for their surgery and improved rehabilitation outcomes (including reduced risk of needing enhanced care arrangements following surgery).
			Improved access to sub-specialist and complex surgery	The larger sub-specialist teams and greater patient throughput will permit consultants to offer complex sub-specialist operations, for example ankle surgery. This means that a small number of patients will have an additional option for this sort of procedure instead of the Wrightington specialist orthopaedic centre (the next closest alternative).
			Financial Savings to the merged Trust	It is expected that the streamlined care that is available to elective orthopaedic patients that will in future receive surgery at Trafford hospital instead of Wythenshawe will save, on average two bed days. At the NHS England reference cost of £306 per excess bed day this can be expected to save the merged Trust around £1.5 million (assuming that these beds are not reallocated to another service). It is expected that some very low patient-throughput surgical procedures will increase in regularity to justify moving from a model of loaning specialist equipment (at rates of around £1,500 per day) to investing in acquiring specialist equipment. These savings opportunities are still to be identified. NHS Improvement best practice and savings studies have identified that higher-throughput centres gain purchasing power and reduce per-procedure costs on average. Orthopaedic surgery is a speciality that uses high-cost inputs (e.g. replacement hips). These savings are at present un-costed because clinical agreement, following merger, is required to agree standardisation of procedures and inputs.
			Increased opportunities for education and research	The Trusts have initiated discussions with the University of Manchester to create an academic Orthopaedics department. Where these departments have been created the standard of training for medical and

				other clinical staff improves and staff recruitment and retention is facilitated. Larger patient throughput gives greater credibility to patient studies and have a greater chance of being adopted as new standard procedures for patient care within a faster period of time.
Fractured Neck of Femur	Dedicated hip fracture unit offering seven day services	c.550 per year	Improved mortality outcomes	Following the merger and introduction of the dedicated fractured neck of femur unit it is expected, based on Standardised Hospital Mortality Indicators (SHMI), available for 2016, and other published literature that introduction of the dedicated unit would save around 15-20 lives annually.
			Reduced time to treatment	Following the merger, it is expected that the percentage of patients from CMFT that receive surgery within 36 hours will improve from 53.4% to the 76.1% experienced by UHSM patients. This suggests that at least 47 additional patients will receive surgery within the 36-hour treatment guideline.
			Reduced Length of Stay	Following merger, it is expected that the 208 patients from CMFT will experience the reduced length of stay experienced by UHSM patients (i.e. reduce from 36.2 to 24.3 days). The effect of a reduction of almost 12 days in hospital (a 33% improvement) will have a significant impact on patient outcomes, including infection rates (as described above) and accidental falls (as described above).
			Reduced complication rates	Following the introduction of a dedicated fractured neck of femur unit, studies indicate that complication rates can be expected to reduce significantly. An American study (Appendix 9.8) indicated that complications might be expected to reduce by around 15% and applied to the merged Trust this would suggest around 83 fewer patients will experience infections such as pneumonia, urinary tract infections or surgical site infection. Other complications that could be avoided include: deep venous thrombosis, pulmonary embolism, haemorrhagic stroke; intracranial bleeding; gastrointestinal tract bleeding, another fracture, implant dislocation, periprosthetic fracture and hardware fixation failure; and heart arrhythmias.
			Improved discharge outcomes	As a result of the introduction of the dedicated fractured neck of femur unit it is expected that the improved mobilisation and rehabilitation of patients will lead to a 10% improvement in patients discharged to their own home rather than to a Nursing Home. This suggests that 50-60 patients annually will avoid being discharged to a Nursing Home following their fractured neck of femur surgery.

			Reduced cancellations	Following the introduction of a dedicated hip fracture unit in Sheffield cancellations reduced from around 20% to 10%. It is expected that a similar impact will following the introduction of a dedicated fractured neck of femur unit at the merged Trust and this will reduce cancellations across the 550 procedures of the dedicated unit.
			Financial saving to Merged Trust	On the basis that patients presently attending CMFT experience at least the same level of care received by patients attending UHSM it is expected that around 208 patients would experience a shorter length of stay, on average, of 11.9 days. At an NHS England excess bed day rate of £306 this suggests a potential saving to the merged Trust of around £750,000 annually (assuming these beds are not reused in another speciality).
Head & Neck Cancer Surgery	Centralisation of Head & Neck Cancer and Maxillo-Facial Surgery activity, and adoption of a 7 day rota.	c.400 per year	Improved mortality outcomes	Studies show that the greater throughput occurring from the centralisation of these services should improve mortality rates by 7-12% which equates to 30-50 lives saved per year.
			Improved patient experience	Separate and different referral systems for each of UHSM and CMFT for related elements of care mean that patients at present complain of being “lost in the system” and a “lack of coordination” (see Appendix 10.1). Patient Users report that this is common complaint and expect that it will be remedied by moving to the single centralised hub model that is to be delivered following the merger. The introduction of a local prosthetics centre means that specialist prosthetics staff can contribute to multi-disciplinary meetings when planning surgery for patients. This means that some surgeries can proceed differently and reduce significantly the impact on a patient’s functional and cosmetic outcome.
			Reduced length of stay	Average length of stay is expected to reduce from 11.7 days to 8.4 days, on average, for the 150 UHSM head and neck patients. This is expected to reduce hospital acquired infections and accidental fall incidence, as well as improve rehabilitation and patient experience generally.
			Improved patient safety	The larger staff cohort will permit more comprehensive specialist tracheostomy training to be deployed (amongst UHSM staff particularly) and the around 150 UHSM patients are expected to benefit from this improvement in staff skills.
			Improved in-hours and out-of-hours coverage	As a larger staff group, it is intended that in-hours care will have specialist consultant presence 0800-2000 each day at the single / central hub. At present, consultants are required on other hospital sites as part of the hub and spoke arrangements (both CMFT and UHSM are

				hubs at present) which means that consultant cover is less than 5 days per week. Greater specialist consultant presence on the single hub will relieve informal out-of-hours care arrangements and is expected to result in improved patient care for at least 3/7 of patients presenting out of in-hours care (i.e. around 170 patients).
			Introduction of a local prosthetics service	10-15 new head and neck patients per year are expected to benefit from the introduction of a local prosthetics service. The development of a prosthetic involves multiple development sessions for each patient and then on-going maintenance for the life of the prosthetic. At present the nearest alternative prosthetics centre is located in Liverpool.
			Financial savings for the merged Trust	Length of stay is expected to improve for the 150 UHSM patients to at least that experienced by CMFT patients as a result of combining the best of the patient pathways at both UHSM and CMFT. An average improvement of 3.3 days for 150 patients would result in a saving to the merged Trust of around £150,000 (at £306 per excess bed day and assuming this space is not utilised by a different speciality).