

Clinical strategy 2014–2020

*Unlocking our potential to transform health
and care*

July 2014

Foreword

The NHS, like other healthcare systems across the developed world, is facing a massive challenge. While continuing to provide excellent urgent and emergency services, we have to transform the way that we care for the vastly increasing number of people with long-term conditions, such as diabetes or heart disease, and for our growing frail, elderly population.

Too many people with long-term or multiple conditions are simply not getting the right support. A fifth of over-75s end up back in hospital as emergencies within 28 days of discharge from hospital – this is bad for patients and bad for the NHS.

We believe we can respond to these challenges – but we have to have the right services, in the right place, in the right facilities. Our estate needs re-development – a large part of our building stock is now over 100 years old. It's vital that we progress our plans.

This clinical strategy reflects the well-evidenced principles of what good future NHS care will look like. This means more local and integrated services, to improve access and help keep people healthy, and more concentrated specialist services where necessary, to increase quality and safety. We've already seen many more lives saved by centralising major trauma, stroke and heart attack centres across the capital, including at our hospitals.

We have had a huge input to this strategy from doctors, nurses and other clinicians and staff across the Trust. We recognise that to develop our strategy further and to implement it successfully, we need to do much more to explain our thinking and to listen and respond to the views and concerns of patients and local communities. And we have to make sure that we have community capacity in place before we reduce inpatient hospital services. But, as clinicians, we are certain that the biggest threat to the NHS – and to the great care we are here to provide – will come if we don't change to meet new demands.

Dr Tracey Batten, chief executive

Professor Chris Harrison, medical director

Professor Jamil Mayet, divisional director of surgery, cancer and cardiovascular

Mr Steve McManus, chief operating officer

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1 Introduction

Imperial College Healthcare NHS Trust is one of the largest NHS trusts in England, with 10,000 staff in five hospitals providing a range of acute and specialist health services for the residents of north west London and beyond.

The Trust was formed from a merger of St Mary's and Hammersmith Hospitals' NHS Trusts in 2007. In 2009, we became the first organisation to be awarded academic health science centre (AHSC) status in the UK, and our partnership for education and research with Imperial College London remains a fundamental part of who we are. All of our hospitals have an incredible heritage, with a track record of continuous innovation in medicine and healthcare dating back to the days of the voluntary hospitals.

Along with the rest of the NHS and other healthcare systems, we are now facing a very difficult set of challenges – most significantly, the need to transform healthcare to meet the needs of many more people living longer and epidemic levels of chronic conditions such as diabetes and heart disease. At the same time, scientific and clinical innovation is hugely extending our ability to save lives, especially around the potential for personalised medicine linked to rapidly expanding knowledge of the human genome. We have to ensure these breakthroughs remain available to everyone, according to need, not ability to pay.

This clinical strategy sets out how we propose to organise, deliver and develop our services over the next five years to meet these challenges. The strategy has been led by senior clinicians across the Trust and draws on detailed evidence and input from a wide range of sources, including a very large proportion of our clinical staff. We have worked particularly closely with our local clinical commissioning groups and with NHS England.

The clinical strategy is a core product of the Trust's wider strategy. Its development has been guided by our organisational vision and strategic objectives (see Fig. 1) and, in turn, it is influencing the development of other Trust-wide strategies, such as those for estates, people informatics, education, research and patient and public engagement. Our clinical ambition is such that implementing the clinical strategy will require far-reaching organisational transformation over the next five years.

The clinical strategy also sits within the wider strategic context of the *Shaping a healthier future* programme. Led by the eight clinical commissioning groups responsible for commissioning NHS care for the population of north west London, *Shaping a healthier future* sets out a framework for service change across the region to improve the quality of primary, community and specialist care.

North west London is also one of 14 Whole System Integrated Care Pioneer areas in England, selected by a wide range of national organisations, including NHS England. Along with other providers, we are working closely with commissioners across the region to design innovative solutions to enable greater integration of health and social care services.

In addition, our strategy is guided by the priorities of a rich network of research and education partnerships and collaborations focused around our AHSC, our wider Academic Health Science Centre Network (Imperial College Health Partners) and our role in providing undergraduate and postgraduate education. These include the National Institute for Health Research (NIHR) Imperial Biomedical Research Centre, North West London NIHR Clinical Research Network, the Collaboration for Leadership in Applied Health Research and Care (CLAHRC), and Health Education North West London.

Fig. 1: Our organisational vision and strategic objectives

Our vision is to be a world leader in transforming health through innovation in patient care, education and research.

We will achieve this vision by delivering our four strategic objectives:

- to achieve excellent patient experience and outcomes, delivered efficiently and with compassion
- to educate and engage skilled and diverse people committed to continual learning and improvement
- as an academic health science centre, to generate world-leading research that is translated rapidly into exceptional clinical care
- to pioneer integrated models of care with our partners to improve the health of the communities we serve.

2 Our starting point

2.1 Our performance and achievements

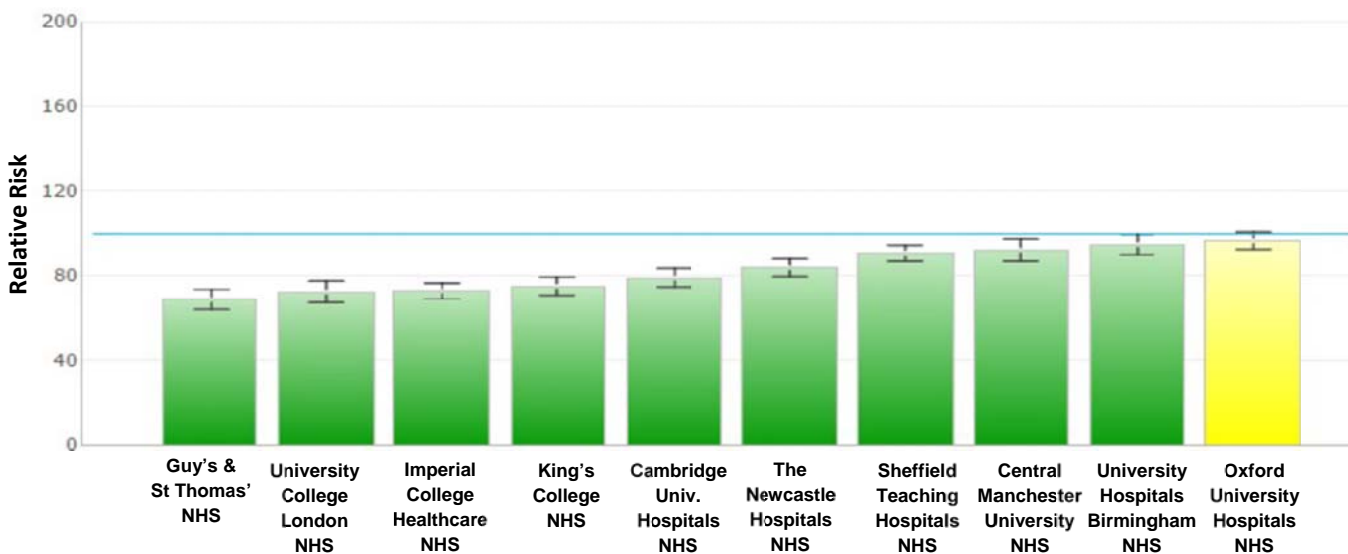
We have strong foundations on which to build our new clinical strategy. Our links with clinical research and education to facilitate the development of specialist care and the implementation of medical breakthroughs are long-standing. More recently, we have also been focusing on building our information technology and clinical leadership capacity.

We provide care for patients at every stage of their lives, with over 55 specialist services for both children and adults. The Trust provides over a quarter of all outpatient and inpatient care for the 2.2 million population of north west London, with over 1 million outpatient contacts and 192,000 inpatients in 2013/14.

The Trust's services have been attracting a greater proportion of referrals from local GPs, while demand for our specialist centres, including renal, stroke, major trauma and cardiology, has also grown over the past five years in comparison with other similar providers.

The Trust delivers excellent clinical outcomes for our patients. Our mortality rates are consistently among the lowest in the UK. Hospital standardised mortality ratios (HSMR) are a mortality indicator where each patient has a 'risk' of death calculated based on specific factors. Risks are aggregated to give an expected number of deaths for each Trust and compared against actual deaths. The Trust's HSMR for 2013 is 73, which means that we are 27 points below the expected number of deaths in our hospitals. The average for all hospitals in the Shelford Group – made up of 10 leading NHS multi-specialty academic healthcare organisations – is 86 (see Fig. 2).

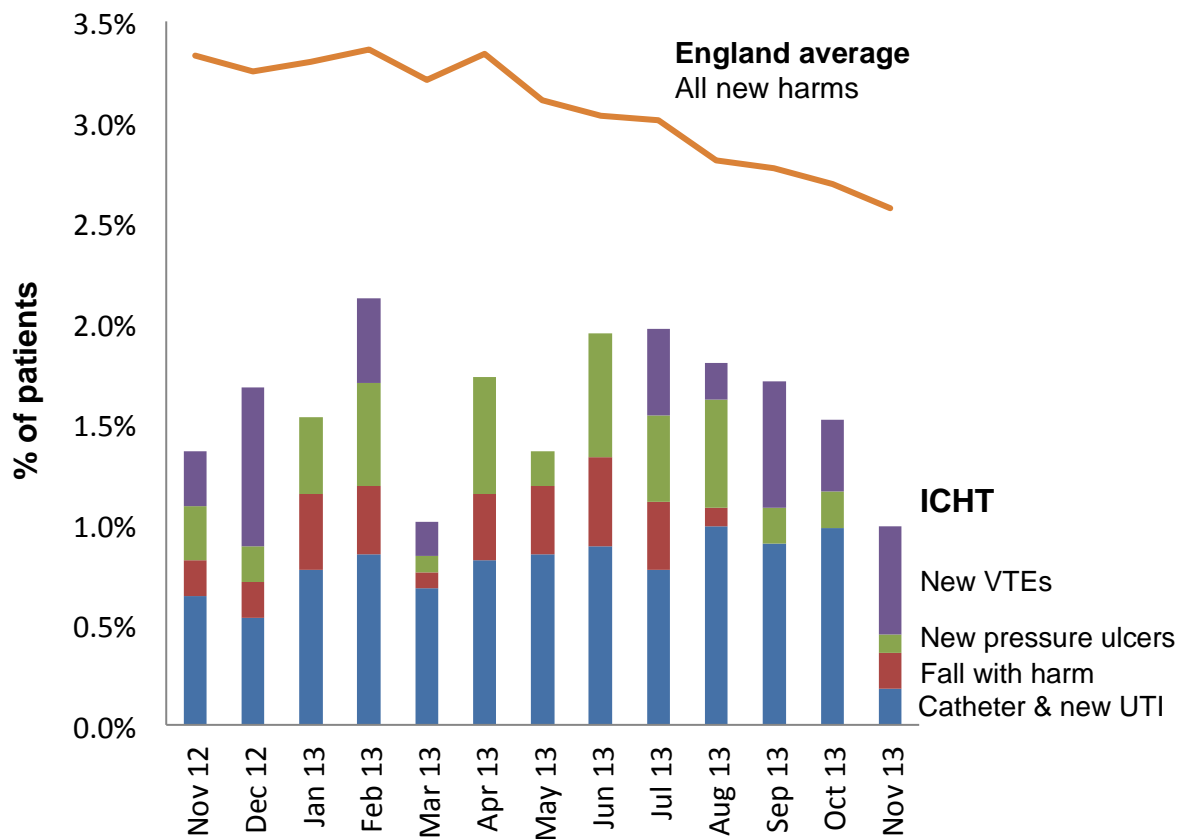
Fig. 2: Hospital standardised mortality ratios (HSMR) in the Shelford Group, January–December 2013



The Trust also performs well in comparison with our peers in the NHS 'safety thermometer' measures. The safety thermometer is an improvement tool for measuring, monitoring and analysing patient harm and harm-free care.

We had between 95–97 per cent harm-free care in 2013/14. This compares with the national average of between 92–94 per cent for the same year. This means that patients in our hospitals are less likely to experience harm when compared with other Trusts. Fig. 3 below shows this, with performance measured against the national average.

Fig. 3: Imperial College Healthcare NHS Trust harm-free performance versus the national average



Source: NHS Safety Thermometer Report, 2012/13

We consistently achieve the 95 per cent four-hour A&E wait standard, including throughout winter. We have a good track record on overall referral to treatment (RTT) standards. In the past six months, we have turned around our cancer referral performance and we are on track to sustain that in 2014/15.

We are making real progress on improving patient experience, and are ranked just above average on staff and patient national 'Friends and Family' tests that ask whether individuals would recommend the Trust to others.

We achieved a major financial turnaround in 2012/13. For the last financial year, we delivered a surplus of £15.1 million on an annual turnover of £979m and achieved cost improvement programmes totalling £45.8m.

This year, we implemented the first stage of a single electronic patient administration system. This opens up the possibility for step changes in real-time data accuracy and access and, further on, data sharing, including with our clinical partners and, importantly, our patients. We successfully reapplied for AHSC status in 2013 and we are one of only six AHSCs in the UK, which brings direct benefits to patients (see Fig. 4). And we are one year on from a major organisational restructure that strengthened clinical leadership through the creation of four operational divisions, each led by a practising consultant, supported by their own multi-disciplinary clinical and managerial leadership teams.

We have made good progress in our application to become an NHS Foundation Trust, having completed a number of key stages of the application process, including our public consultation.

Fig. 4: Examples of research into practice through Imperial AHSC

Saving babies from brain damage

Around three in every 1,000 babies suffers from birth asphyxia, in which the brain suffers from a shortage of oxygen during the birth. In severe cases, 25–50 per cent of babies may die, and those who survive are at risk of disabilities like cerebral palsy, blindness and epilepsy. Following a sustained programme of laboratory and clinical research, Professor David Edwards and Professor Denis Azzopardi showed that a treatment that cools the brain by a few degrees, called hypothermic neural rescue, improves babies' chances of surviving without brain injury by 50 per cent. This simple, low-cost treatment is now used at Imperial College Healthcare NHS Trust and has been adopted nationally at more than 40 UK hospitals as well as being incorporated into NICE guidance. It is also used across the world and is being tested in developing countries where more babies suffer from birth asphyxia. An Imperial College London study led by Professor Denis Azzopardi and published in the *New England Journal of Medicine* in July 2014 showed that hypothermic neural rescue means that babies treated in this way are 60 per cent more likely to avoid brain injury and disabilities in later childhood.

Preventing bowel cancer

A clinical trial led by Professor Wendy Atkin showed that a screening programme for people aged 55–64 was effective at preventing bowel cancer. Eleven years after a single flexible sigmoidoscopy (FS) examination, the incidence of bowel cancer was reduced by a third and deaths from bowel cancer cut by 43 per cent compared with the group who were not screened. After the trial results were published, the UK National Screening Committee approved a bowel cancer screening programme using FS, aiming to achieve 30 per cent coverage by the end of 2014, 60 per cent by 2015 and full coverage by 2016.

Improving survival for chronic myeloid leukaemia

Chronic myeloid leukaemia (CML) is a rare cancer that affects white blood cells. Professor Jane Apperley's group contributed to the development of treatments called tyrosine kinase inhibitors (TKI) that have changed the outlook from a fatal disorder to a chronic disease with normal life expectancy. They went on to show that rigorous monitoring using a test developed at Imperial could identify patients who will need different types of TKI to have a similar life expectancy. The group is now focusing on enabling people with CML to have a better quality of life thanks to a better management of side effects, cutting down on hospital visits through telephone clinics and remote monitoring, and developing studies looking at discontinuing treatment. A particular interest is to manage and monitor treatment so that younger patients are able to have children.

Safer removal of liver tumours

Liver cancer is the sixth most common cancer worldwide, and the main treatment is surgery to remove the tumour and surrounding tissue. The liver is full of blood vessels, so minimising blood loss is a serious concern. Professor Nagy Habib, working with researchers at Imperial's Faculty of Engineering, developed devices that use radio frequency energy to clot blood inside the liver along the line that is to be cut. This allows the surgeon to take out the tumour with as little bleeding as possible. Clinical trials show that this technique improves recovery, reduces the time patients spend in hospital and keeps patients out of intensive care. As well as helping to care for our patients at the Trust, these devices are now being used in many other UK hospitals.

2.2 Our challenges

We identified a number of challenges for the Trust that also need to be considered in relation to the clinical strategy:

- *Staff engagement:* Our reorganisation into four clinical divisions in 2013 has already delivered benefits in terms of greater clinical leadership and accountability. But our own staff surveys show that we have a significant way to go to achieve the levels of active and positive engagement that are required to make a difference to staff experience, which, evidence shows, will make a difference to patient experience.
- *Patient and stakeholder engagement:* We recognise that we need to focus much more on building two-way relationships with our patients, the local community and wider stakeholders, particularly as we embark on significant change. Working closely with local commissioners, we know that we need to find effective ways of using external views, concerns and ideas to help shape our plans from the start, as well as doing more to share and explain our thinking.

- *Physical infrastructure:* We have not carried out any major estate redevelopment since the merger in 2007. Much of our estate is over 100 years old and much is not fit for modern healthcare and a good patient experience. It is becoming increasingly difficult to maintain. This is in contrast to a number of our AHSC peers who have invested significantly in recent years in estate redevelopment to support modernisation of services and improved patient experience, for example at UCLH and Guy's and St Thomas'.
- *Funding:* The NHS remains subject to significant funding pressures. Over the past three years, Imperial College Healthcare Trust has achieved over £127m of recurrent savings whilst delivering increased demand and improving quality and safety.

Over the medium term, the Trust must continue to deliver savings through efficiency measures in the order of 4 to 4.5 per cent, per annum, as required by Monitor's, the TDA's and NHS England's planning guidance. This will mean delivering further recurrent savings, in today's money, in excess of £207m over the next five years.

- *Administration and management processes:* The Trust was created in 2007 through the merger of St Mary's NHS Trust and Hammersmith Hospitals NHS Trust. However, it is apparent that we are still experiencing legacy issues from the merger due to the variability of many of our internal systems and processes as well as different ways of working across our sites. This sometimes results in poor experiences for our patients and people with, for example, over 30 different patient call centres for the booking of elective activity alone.

2.3 Our wider health economy

North west London is served by eight clinical commissioning groups who have come together to form two commissioning entities: CWHHE Collaborative (made up of Central London; West London; Hammersmith & Fulham; Hounslow; and Ealing CCGs); and BHH Federation (made up of Brent; Harrow; and Hillingdon CCGs). They work closely with the eight local authorities in the region through the Health and Wellbeing Boards and with local healthcare providers, pioneering major service reorganisation through the *Shaping a healthier future* programme and co-ordinating the area's successful application to be one of 14 Whole System Integrated Care Pioneer areas across England.

There is a wide range of organisations providing NHS care across north west London, including:

- **General acute NHS trusts** (West Middlesex, Hillingdon, Chelsea and Westminster, North West London Healthcare). As general providers, many are facing challenges in maintaining the critical volumes to retain clinical effectiveness. As part of Imperial College Health Partners, we will explore potential further benefits to be achieved by working as part of a network
- **National and world-recognised specialist centres** (Royal Brompton, Royal Marsden, Royal National Orthopaedic Hospital). They rate highly on outcomes and patient

experience, with world-recognised brands. This represents opportunities for collaboration with our Trust – to import their specific expertise for some of our service lines, such as cancer, while providing them with access to our acute service capabilities and linked specialty services

- **Adjacent AHSCs** (University College London (UCL), King's Health Partners (KHP)). They provide services into north west London and are looking to extend their services further, either around particular defining specialties or through new community-based models of care
- **Community/mental health/integrated care providers.** As well as the established NHS mental health and community providers, the largest being Central and North West London NHS Foundation Trust, there is a range of other providers and collaborations increasingly looking to develop specialist healthcare and integrated care services within the community, drawing on new models of care. This includes GPs, other primary care providers and social care providers, operating out of traditional statutory sector organisations, as well as out of charities or new organisational models, such as mutuals. Many of the new organisations are not yet mature in their capabilities and present additional opportunities for partnership working.

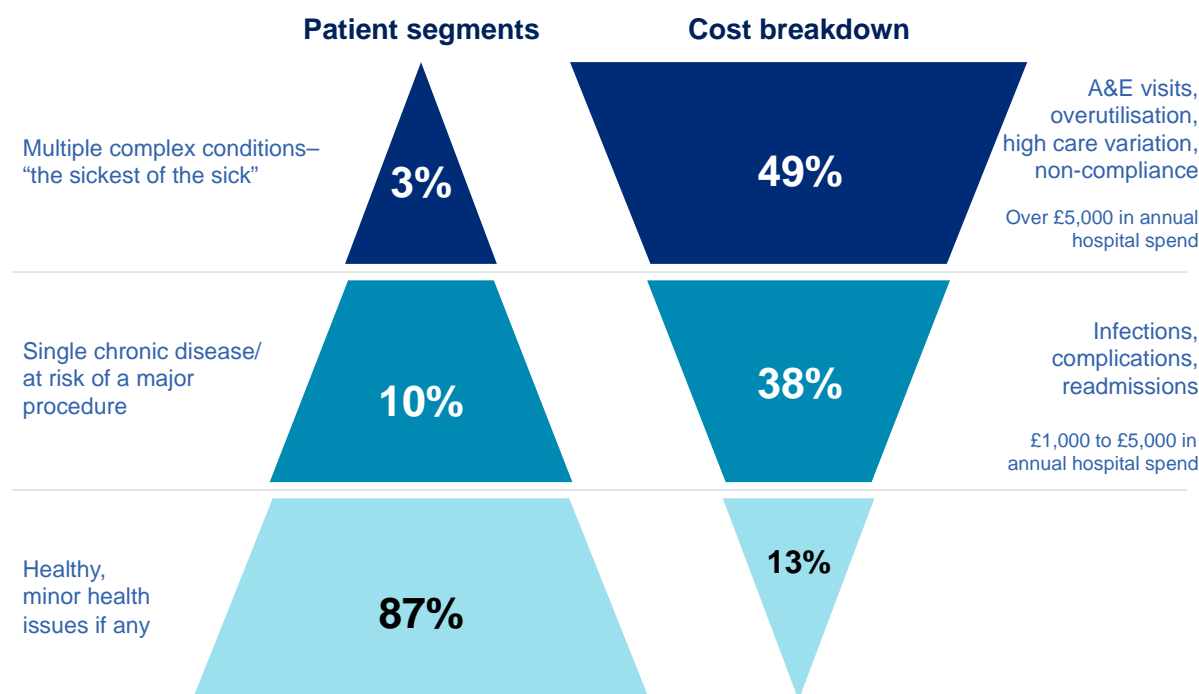
2.4 The future of healthcare

Along with the rest of the NHS and other healthcare systems, we are facing a very difficult set of challenges in terms of meeting future health and healthcare needs.

The main drivers of these challenges are outlined below.

The changing population: Chronic diseases are now the most common cause of death and disability in England, with more than 15 million people living with conditions for which there are no cures. People with chronic conditions account for a significant proportion of NHS resource, including half of all GP appointments and 64 per cent of outpatient appointments. Although the prevalence of long-term conditions rises with age, in absolute terms there are more people living with long-term conditions under the age of 65 than in older age groups. While clearly identifiable and with clearly anticipated needs, many patients with long-term conditions do not receive the care they need, in the right place and at the right time. In north west London, half of secondary care spend is now driven by three per cent of the population (see Fig. 5). Also in north west London, 20 per cent of over-75s are readmitted unplanned to hospital within 28 days of discharge from hospital. Nationally, 60 per cent of people currently die in hospital, although only 8 per cent of people would choose to die in hospital, fuelled by significant gaps in end-of-life planning and community care provision for end-of-life patients.

Fig. 5: Breakdown of NHS spend by patient segment in north west London



Source: HES, 2011. Patients whose GP practices span Brent CCG, Central London (Westminster) CCG, Ealing CCG, Hammersmith and Fulham CCG, Harrow CCG, Hillingdon CCG, Hounslow CCG, West London CCG

Rapidly evolving technologies and clinical understanding: The development of new technologies and treatments is continuous and rapid, and the NHS sometimes struggles to adopt, disseminate and adjust to these advances at the same pace. We also do not always involve patients and the public sufficiently in considering how these advances impact on the system as a whole, for example with advances in surgery enabling many more procedures to be undertaken on a day-case basis, resulting in the need for fewer inpatient admissions.

Continued pressure on public spending: The financial outlook for the NHS and the wider public sector in the UK is extremely challenging. In his Autumn Statement, the Chancellor of the Exchequer indicated a period of austerity lasting for at least 10 years despite a return to economic growth. Against this backdrop, the Trust must plan for continued efficiency savings of at least 4 per cent, per annum. It is unlikely that this level of saving can be made from traditional means and it is, therefore, vital that clinical efficiencies, where cost is reduced at the same time as quality improvement, are at the heart of future Cost Improvement Programmes.

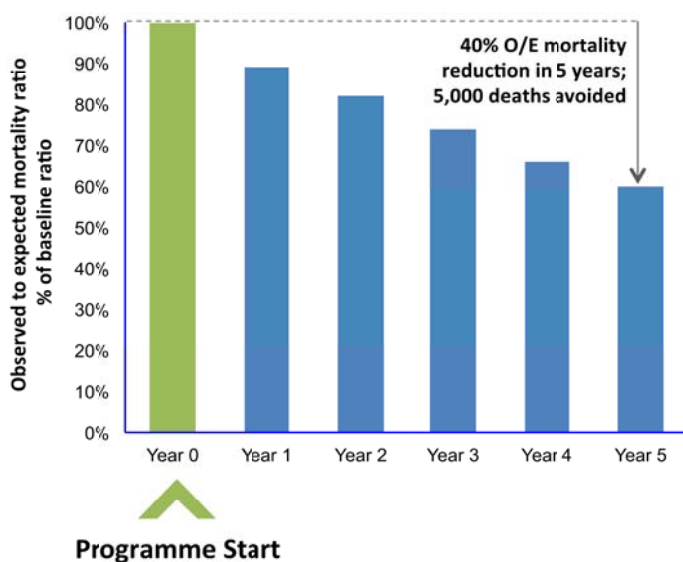
Expectations of improved quality, responsiveness and patient control: Patient and public expectations are rising. Service industries such as banking have transformed over recent years and now provide customers with much more control over their own accounts, and have enabled them to interact in more convenient ways through the use of new technology. Rightly, NHS patients increasingly expect to have control over their own care and to have access to a range

of information about their care and the options open to them, as well as to have convenient and personalised services.

There have been many attempts at regional and local transformation initiatives within the NHS over recent years. Some have achieved significant improvement; others have achieved very little. But we have not yet seen sustainable improvement of the scale achieved in some other health systems. For example, Ascension Health in the United States avoided 5,000 deaths over a five-year period through a new safety improvement programme that introduced ‘huddles’ – real-time safety incident reviews, and a structured approach to audit, measurement and improvement interventions (see Fig. 6). This programme improved quality and experience while reducing cost.

Fig. 6: Case study of healthcare transformation – Ascension Health’s safety improvement programme

Impact on preventable mortality of strong safety programme



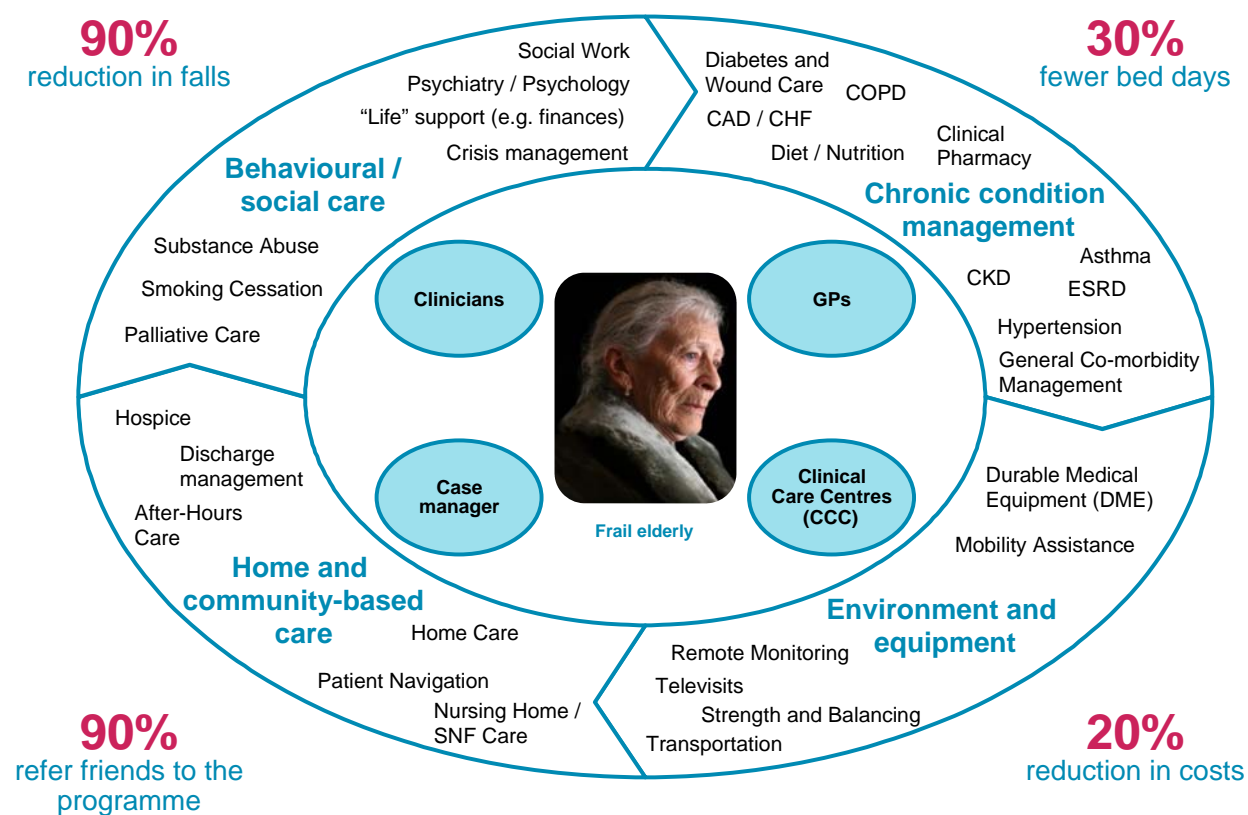
Step change achieved (2004–2006):

- **Pressure ulcers:** no new stage III or IV
- **Falls:** less than 10% of national rate
- **Adverse drug events:** Up to 60% reduction
- **Surgical complications:** >90% reduction in peri-operative AEs
- **Nosocomial infections:** >50% reduction
- **Perinatal safety:** Birth trauma at or near zero

Source: Joint Commission Journal on Quality and Patient Safety articles
 Ascension healthcare is a leading US non-profit provider with >65 acute care hospitals, >100k employees, >650,000 hospitalised patients

In another example, at CareMore in the United States, the introduction of a frail elderly integrated management programme reduced falls by 90 per cent and time spent in hospital by almost a third, while also reducing costs by a fifth (see Fig. 7). CareMore introduced ‘extensivists’ – doctors who lead the care of small groups of patients across hospital and community settings, supported by integrated information technology systems.

Fig. 7: Case study of healthcare transformation – CareMore’s frail elderly integrated management programme



In the UK, a good example of transforming the co-ordination of care for people with multiple chronic illness is the three chronic care management demonstrators in Wales, which led to a reduction in the total number of bed days for emergency admissions for chronic illness of 27 per cent, 26 per cent and 16.5 per cent for the three years 2007–2009. This represented an overall cost-reduction of more than £2m.

It is that order of transformation that is required at Imperial College Healthcare NHS Trust and across the whole of the north west London health economy, essentially to rebuild care around patients.

NHS England and the *Shaping a healthier future* programme have set out very clear and complementary frameworks for how future healthcare needs to evolve to meet the challenges we face, generally and locally (see Fig. 8 and Fig. 9).

As an AHSC with an associated AHSC network, we have a great opportunity to help facilitate change across the whole health system. We need to work with partners to demonstrate to our

patients and communities that we can provide the routine care they need, when and where they need it, at the same time as providing access to world-leading specialties.

Fig. 8: NHS England's six characteristics of future care (*Everyone Counts – planning for patients 2014–19*)

- Citizen participation and empowerment
- Wider primary care, provided at scale
- A modern model of integrated care, especially for patients with complex care needs
- Access to the highest quality urgent and emergency care
- A step-change in the productivity of elective care
- Specialised services concentrated in centres of excellence

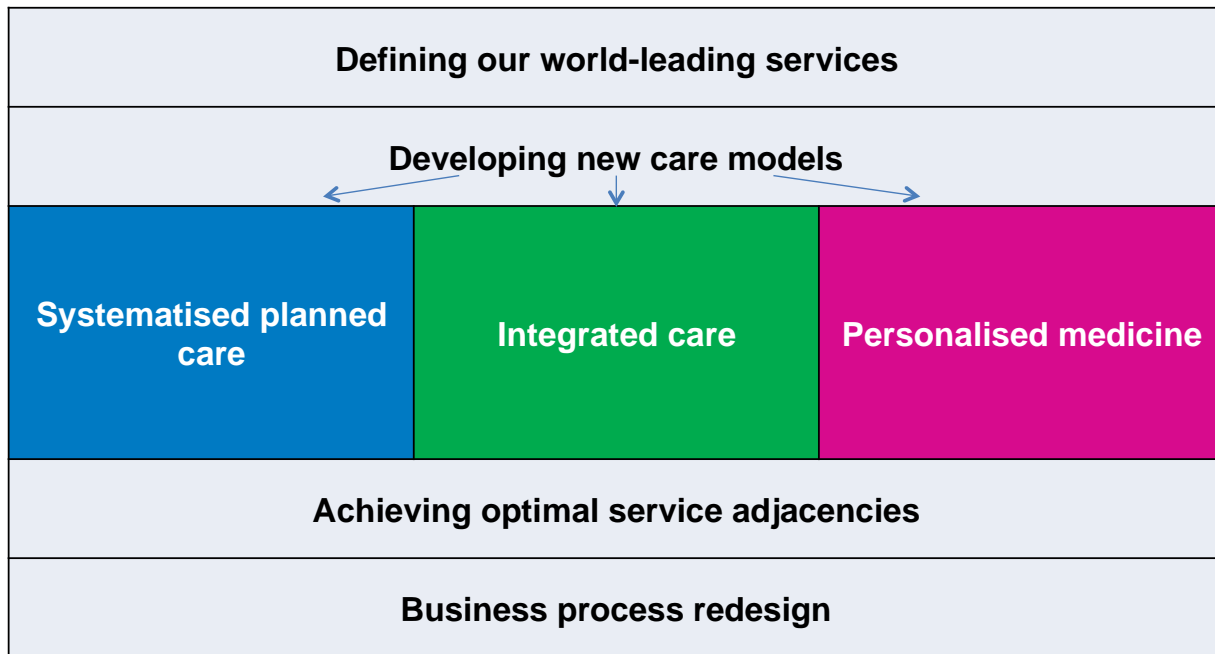
Fig. 9: *Shaping a healthier future* programme – four main principles

- Localisation of routine medical services will mean patients have better access closer to home with improved patient experience.
- Centralisation of most specialist services will mean better clinical outcomes and safer services for patients.
- Where possible, care should be integrated between primary and secondary care, with involvement from social care to give patients a fully co-ordinated service.
- The system will look and feel personalised to patients – empowering and supporting people to live longer and live well.

3 Clinical strategy framework

We have established a framework setting out the core elements of the clinical transformation that we need to achieve in order to meet the very significant challenges facing health systems in general and the particular challenges facing us and north west London in particular (see Fig. 10).

Fig. 10: Clinical strategy framework



3.1 Service adjacencies and site model

Clinical engagement across the Trust reignited a debate about balancing the safety and efficiency advantages of centralising services against the access and responsiveness advantages of localising services. For the majority of our specialties, clinicians were clear that a one-site option would be the safest and most efficient approach. But they also recognised that we have to understand and respond to patients' views and we have to fit within the wider strategic context of north west London.

Section 4 of this document, on service strategies, provides the detail on how specialties should best be organised to deliver the three-site model set out – and consulted upon – in *Shaping a healthier future*. See below for a summary of that model.

Our clinical strategy will need to develop continually to respond to changing needs and clinical advances. As part of this work, through public engagement, research and practical learning, we will also consider how we might evolve to a more consolidated 'hub and spoke' model. This would involve bringing together more core specialty services and inpatient facilities onto one

'hub' site, while expanding access to diagnostics, assessment and routine treatment through specialty outreach services on our other sites and beyond.

3.1.1 The three-site model

St Mary's Hospital: the major acute centre for the region

While we expect our clinical strategy to help deliver a large overall reduction in hospital admissions, our role as a regional specialist centre for a number of acute conditions will necessitate maintaining significant inpatient facilities. We believe the key to improved quality and efficiency in these areas will be scale and the introduction of new clinical roles to ensure patients are cared for holistically.

We will consolidate the Trust's hyper acute stroke unit (HASU) with our main accident and emergency department, major trauma centre and intensive care unit at St Mary's, alongside acute medical and surgical specialties. This will provide the scale to provide affordable and continuous 24/7 senior expert cover on site. This will also provide an excellent training ground and allow us to continue to attract the best emergency clinicians. For specialties with significant acute workload but insufficient scale to be viable over two sites, elective services will also be provided at St Mary's Hospital. This includes vascular and paediatrics, as well as ophthalmology (through the relocation of the Western Eye Hospital). In addition, we will continue to provide maternity and outpatient services at St Mary's.

The success of our reconfigured acute site will also rely on rolling out new clinical ways of working, such as team-based consultant general physicians present daily on emergency and acute wards to ensure enhanced continuity of care, efficient discharge processes and effective leadership of acute medical training. Daily specialist medical input on the acute wards will be instituted. This model of care will avoid the multiple handovers and process breaks that challenge continuity of care and efficient discharge processes.

We will also build further on our designated specialist centres, where consolidating acute expertise has been demonstrated to save lives. An independent audit published in July 2014, commissioned by NHS England and produced by the Trauma Audit and Research Network, shows that patients in England have a 30 per cent improved chance of surviving severe injuries since the introduction in April 2012 of regional trauma networks across England, including the medical trauma unit at St Mary's Hospital. This equates to 600 more lives saved than in 2012.

Hammersmith Hospital: a world-leading specialist centre

Linking closely with our academic partners at Imperial College, Hammersmith Hospital will act as the main hub for a range of specialties, including renal, haematology, cancer and cardiology. Much of our complex surgery will also take place at Hammersmith. To ensure truly sustainable, world-leading care, many of these services will need to grow, primarily by extending their reach

as 'defining' services (see 3.3). In addition, we will continue to provide maternity services at the co-located Queen Charlotte's and Chelsea Hospital.

Again, we will build on the consolidation of specialist expertise such as that in our designated heart attack centre. The Hammersmith heart attack centre was established over 20 years ago and was a pioneer centre for the acute treatment of heart attacks with primary angioplasty. Over this time period, the mortality rate of patients with major heart attacks has reduced from 15 per cent to 5 per cent in these specialised centres. The success of the early programmes has led to the spread of this 24/7 specialist treatment approach across London, representing an innovative city-wide approach to acute cardiac care. Following on from heart attack centralisation, the London Ambulance Service now diverts all patients with a cardiac arrest where the heart has stopped to the heart attack centres. As a result, discharge survival rates for this group of patients has improved from 30 per cent to 66 per cent.

Charing Cross Hospital: a pioneering local hospital

The redevelopment of Charing Cross Hospital is intended to lead the way for a new type of hospital, providing dedicated access to a wide range of specialist planned care on an outpatient or day-case basis. This will include an elective day-case surgery centre alongside specialist assessment and treatment and care co-ordination. It will facilitate the rapid development of outpatient – or ambulatory – and day-case services as part of a much more integrated healthcare approach across secondary, community and primary care. As such, the hospital site will also house primary care services, diagnostics and pharmacy, transitional care and rehabilitation, and education and wellbeing services. Urgent and emergency care services appropriate to a local hospital will also be provided at Charing Cross, as well as existing mental health and cancer support services.

The Trust's three-site model will also support a new approach to out-of-hospital care for the area, as set out in *Shaping a healthier future*. In this new approach, services will be delivered in four key ways: at home, in a GP practice, across a network of GP practices, and in an 'integrated care' hub. The hubs are new settings, offering a range of on-site services provided by various types of clinicians and other health professionals, as well as a base from which those clinicians and health professionals can reach out further into the community. They are also likely to house some relocated general practices over time.

Charing Cross Hospital will provide many of the features of a 'super' integrated care hub, as well as planned specialist care and surgery. Local commissioners are also planning for there to be an integrated care hub co-located on the St Mary's site.

3.2 Models of care

3.2.1 Systematised planned care

Currently, the majority of NHS providers use the same operating model for almost all surgical procedures regardless of acuity, volume and specialty. The multi-specialty environment makes it hard to measure quality and operational performance. This drives a higher potential for poor patient experience and variable clinical outcomes.

New models of systematised surgery are emerging that can transform quality while reducing costs by over 30 per cent (see Fig. 11 and Fig. 12). These are predicated on the redesign of clinical space, processes and roles to facilitate a higher throughput of patients and low cancellation rates. These clinics can be either inpatient or day-case (ambulatory), although day-case tends to predominate as it brings greater benefits. A threshold requirement for operating in this way is sufficient volume; the Trust is unique in north west London in having sufficient scale to operate a true systematised unit in major specialities. We will develop very high quality ambulatory care units and explore opportunities for consolidation.

Fig. 11: Ambulatory systematised surgery clinics provide efficient and convenient care for straightforward procedures at 30–40% lower cost

Example specialties

Ophthalmology



- Cataract extraction / implant
- Vitreous retinal Procedures
- Oculoplastics

Orthopaedics



- Arthroscopy
- Carpal tunnel release
- Wrist joint repair

Gastrointestinal endoscopy



- Colonoscopy
- Flexible sigmoidoscopy
- OGD
- Polyp removal

Example benefits

For patients

- Shorter waiting times and more convenient appointments
- A relaxed non-hospital environment
- Higher levels of patient/ customer care

For physicians

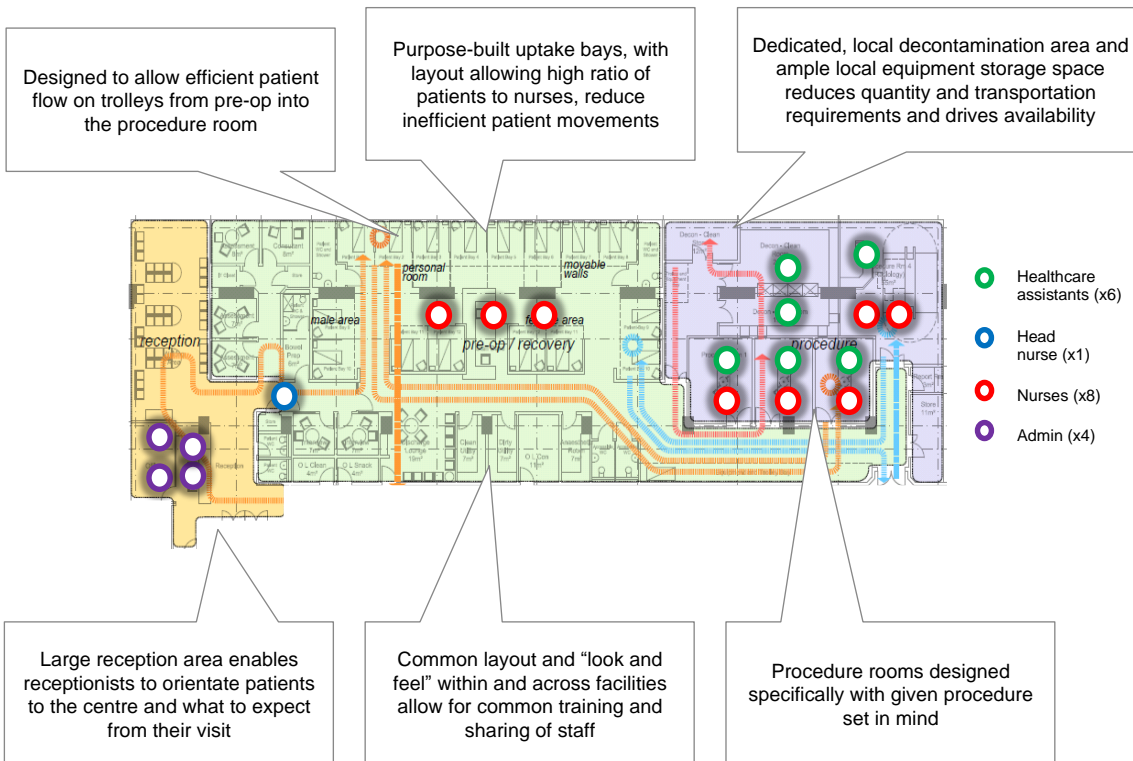
- Working in an efficient unit designed around their workflow
- Specialisation and high volume leads to superior clinical outcomes



For commissioners

- Increased quality and outcomes
- Fewer hospitalisations post procedure
- Lower cost care
 - Small fixed cost base
 - Highly efficient
 - Economies of scale across practices

Fig. 12: Example facility plan and staffing map – four theatres at full capacity



3.2.2 Integrated care

As a major provider within a national pioneer area for integrated care, we have a great opportunity to help transform care for patients with multiple and complex needs spanning the health and social care sectors – both frail, elderly patients and younger patients with chronic conditions.

We will develop a model of elderly care that has been proven internationally to transform the quality of care – for example, with 30–40 per cent reductions in hospital admissions and a similar reduction in bed days (see Fig. 7 and 13). This is at the same time as reducing costs by up to 20 per cent. At the centre of the model is the patient. They have a single point of accountability for their health and social care needs, as well as for their overall health and social care budget. Clinicians will lead multi-disciplinary teams and be accountable for delivering excellent care and outcomes for all of our elderly patients with complex care needs. Where appropriate, care will be delivered in community-based clinics or in patients' homes, using the resource of the acute site only when absolutely necessary.

Fig. 13: Care clinics can focus on frail and elderly patients with the most significant needs

- Frail and elderly overview



- Highest need patients aged over 65 at risk of catastrophic decline
- Uncoordinated care and inadequate access leads to unnecessary admissions and poor disease management
- Drive seven times more spend than the population average

3%
Of the LHE
population

~£5,800
per capita

- Patient segmentation

>2 comorbidities¹

- Myocardial Infarction
- Congestive Heart Failure (CHF)
- Peripheral Vascular Disease
- Cerebrovascular Disease
- Dementia
- Chronic Obstructive Pulmonary Disease (COPD)
- Connective Tissue Disease
- Ulcer Disease
- Diabetes
- Hemiplegia
- Moderate to Severe Renal Disease
- Liver Disease
- Cancer – *all types*
- HIV / AIDS
- Multiple Sclerosis

>1 risk factor

- Hypertension
- Obesity
- Severe Recurrent Major Depressive Disorders
- Schizophrenia
- Bipolar Disorder
- Addiction – *substance or alcohol*

Source: Hospital Episodes Statistics, Office of National Statistics, Oliver Wyman analysis
1. Defined according to Charlson Index multiple sclerosis also included due to high complexity of patient needs

With our health and social care partners, we will also develop pathways and multi-disciplinary care teams to support patients with chronic conditions through proactive, highly co-ordinated care. Care managers will be available for all our chronic patients who will act as the single point of contact and co-ordinate all of their care needs. A single care plan will be developed jointly with our patients, supported by multi-channel education and engagement. We will build on existing programmes and areas of best practice to ensure that all of our patients have access to the best care pathways for their condition. We will work closely with our local community providers to ensure that care is well integrated and, where appropriate, provided close to patients' homes or at home, ensuring they have access to the best acute facilities when needed.

Successful programmes have shown that high-quality interventions that support patients before they become acutely unwell can reduce non-elective admissions and slow progression of a disease. This can contribute to a 20 per cent reduction in overall care costs through the removal of acute beds when a critical mass of out-of-hospital solutions are in place. In addition, examples show that up to a 50 per cent reduction in missed work days can be achieved, having a positive impact on social and welfare costs, plus business workforce productivity.

Through these initiatives, we will drive significant reductions in the number of days that our patients spend in hospital on an unplanned basis, significantly reducing the cost of unplanned care while maintaining or improving safety and quality for our patients.

3.2.3 Personalised medicine

Personalised – or stratified – medicine is an emerging, potentially revolutionary approach to healthcare provision that takes advantage of advances in our understanding of health and disease at a genetic and molecular level. We are increasingly able to target and tailor the treatments that are most effective for particular individuals, or small groups of individuals, based upon analysis of genomes, clinically expressed traits and characteristics (known as ‘phenotypes’), and identification of key biological markers. This is also enabling new approaches to identifying individuals at risk of disease and developing preventative responses.

As an AHSC, we host the NIHR Imperial Biomedical Research Centre (BRC), worth £113m over five years, which works to translate new research discoveries into improvements into patient care and patient outcomes. The BRC strategy is to drive translation of our inventions in highly characterised patient populations, facilitating the development of personalised medicine. This strategy begins with the enhancement of our product pipeline by focusing on pulling through new chemical entities, diagnostics, devices and interventions from Imperial College London, including support for product development partnerships via Imperial Innovations, industrial partnership and through facilitating external funding. The Trust is already working to put new advances in this area into practice.

The BRC directly supports the Imperial Clinical Phenome Centre, which brings together a unique collection of state-of-the-art technologies for rapid molecular analysis in the hospital setting, aiming to put them at the heart of clinical decision-making for individual patients. It links closely to the MRC-NIHR National Phenome Centre, which carries out similar studies at a population level. Projects underway include metabolic phenotyping for surgical patients, critical care and cancer patient journeys.

The BRC also funds the AHSC Clinical Genome Laboratory, which runs a comprehensive service for genetic and genomic research into common and rare hereditary disorders, and the BRC supports novel scanning techniques in PET and MRI. As future innovation will be increasingly personalised, the ability to undertake detailed patient characterisation on a large scale is central to our programme of experimental medicine. Therefore, our strategy for translation of our innovative products is based on establishing sufficient capacity to characterise our patient populations through our platforms of phenotyping, genotyping and imaging.

3.3 Defining services

While it is a clear strategic priority for the Trust to provide excellent patient outcomes and experience across all of our services, we want to make the most of our strengths by identifying a subset of our services that will be truly world-leading in terms of innovation, education and reputation.

Our track record in a number of service areas has already attracted additional investment and support, accelerating performance improvement and developments. For example, our nationally

designated specialist centres include units for major trauma, heart attack, hyper acute stroke and fetal medicine.

Our focus on a subset of defining services will also be driven by relative research potential and so will be linked strongly to the AHSC's Centres for Translational Medicine (CTMs). Recognising a need for structured, close collaborations between NIHR Imperial Biomedical Research Centre theme leads, other researchers, and educational and clinical service leads, the AHSC has established seven CTMs as delivery mechanisms to fulfil a central role in integrating research, education, clinical care and innovation through locally developed work programmes (see Fig. 14).

Our defining services will also need to:

- address the major causes of morbidity and mortality within our local community and the wider health economy
- be financially sustainable
- be supported by commissioners for development
- have established partnerships for delivery where necessary.

Further work is underway to determine our defining services and how they will be developed over the next five years.

Fig. 14: AHSC Centres for Translational Medicine

- Metabolic medicine
- Brain sciences and disease
- Respiratory and cardiovascular diseases
- Infectious diseases
- Inflammatory diseases
- Surgery and technology, cancer and haematology
- Women's health, neonatology and paediatrics

3.4 Business process redesign

There was strong clinical support for renewed efforts to ensure the administrative and operational processes that underpin our clinical care are fully fit for purpose. Developments are being identified at a service-, directorate- and organisation-wide level that will produce a step change in how we organise our work, ensuring patient need is the primary driver. A major project is the development of a new patient service centre to hugely simplify contact points for patients and other audiences.

4 Service strategies

Strategies for each clinical service feed into and out of the overarching clinical strategy framework. Knowledge and views at a service level have been explored in detail to ensure we have the most accurate information and assumptions about future need, optimal clinical adjacencies, new models of care, opportunities for consolidation and collaboration, and potential in terms of education and research.

The vast majority of the service strategies detailed below have arrived at a firm clinical consensus about the best models of care and clinical adjacencies within the clinical strategy framework.

The details for two specialties are awaiting the outcome of external developments. In emergency services, we are awaiting further guidance from NHS England on a national strategy to help guide the development of emergency services appropriate for a local hospital, specifically for our new local hospital at Charing Cross. In orthopaedics, we are awaiting further developments on the proposal for an elective orthopaedic centre for the region at Central Middlesex Hospital.

More detail is provided under the relevant specialty.

4.1 Investigative and clinical support sciences

Investigative and clinical support sciences provide a wide range of services critical to the successful diagnosis and holistic management of our patients. Investigative services need to respond to the detailed plans for our services and sites as they evolve. The main themes for the future include:

- routine provision of seven-day services
- specialist radiological services for the early identification and minimally invasive treatment of conditions
- integration with community services, allowing easy access and seamless management across primary, secondary and community care
- development of theatre estate to reflect modern operating practices
- development of patient administration services to reflect the modern needs of patients and use of digital technology to improve patient engagement and interaction.

4.1.1 Imaging

The department performs and reports approximately 450,000 examinations per annum, with a high proportion of complex imaging and procedural radiology.

Currently, the Imaging department offers a comprehensive range of diagnostic and interventional procedures on all three sites to support all aspects of clinical management. Although community services will continue to be offered at all three sites, the specialist modalities will be tailored to reflect the clinical priorities of the sites. The unified reporting system allows clinicians to view the images obtained from any of the sites. We will continue to offer direct access to GPs for plain radiographs, CT, MRI and ultrasound on all our sites and provide specialist services for a number of external organisations.

We have responded to a particular growth in demand over the past three years for CT, MRI and hybrid imaging (PET/CT and SPECT/CT). We are an early adopter of new techniques and minimally invasive therapies, many of which are not widely available. Many of these have been, or are being developed through, translational research links via the AHSC. For example;

- first UK centre to perform F-18 florbetapir PET/CT imaging for dementia
- renowned expertise in cardiac CT and MRI
- established use of focused ultrasound in treatment for uterine fibroids
- renowned expertise in interventional radiology.

Our training scheme is one of the most sought after in the UK, with a high level of trainee satisfaction, based on internal and external surveys.

4.1.2 Pathology

We will consolidate the pathology service into a major hub with small outreach facilities on each of the hospital sites for delivery of urgent investigations and clinical liaison. This hub is likely to include partners from a number of organisations in north west London. This opportunity has arisen as a result of pathology modernisation across the north west London sector.

We also aim to expand specialist pathology, both in terms of continued introduction of cutting-edge specialist investigations and of expansion of its referral networks and partnerships – to develop into a national/international referral centre. With improvements in the quality of our specialist services, we have seen increased demand from external clients within the UK. This increased demand, along with the internal expertise, creates the opportunity to expand our specialist services. Pathology works closely with many academic units within Imperial College London, with a good proportion of staff holding joint appointments or honorary appointments with the College. This gives us the opportunity to expand molecular pathology and genomic pathology. This will allow the further development of personalised medicine.

We have an excellent opportunity to develop our pathology capability into an 'Institute of Personalised Investigative Medicine'. Investigative medicine has evolved from providing

individual results of investigations into the provision of integrated diagnostics/prognostics that provide personalised information to each patient, dictating personalised management. This needs close collaboration between clinical groups, clinical trials units, various academic groups in medicine, biology and engineering, and industry. We also have a leading role to play in teaching and training in all pathology disciplines, involving both doctors and biomedical/clinical scientists.

4.1.3 Therapies

Therapy services are a key clinical service, supporting the identification of vulnerable patients to benefit from targeted treatment. With the increasing emphasis on preventative medicine, the role of the therapies will need to expand and integrate with community services, allowing patients to remain at home, with early identification of risk factors for deterioration. Specialist therapy services for speech and language, stroke, trauma, neurology and dietetics will be reviewed and strategies developed to support the expanding specialist fields.

4.2 Medicine

The medicine division provides a wide range of services across a wide range of specialties from accident and emergency services to specialist medicine, the regional renal unit and neurosciences units, along with important services for infection, HIV and sexual health. We also provide training for junior doctors and for medical and nursing students. Our clinicians, along with the scientists at Imperial College, have internationally recognised expertise in a broad range of areas, and are constantly working to increase our understanding of disease and develop new treatments. By employing leading figures in the development of these areas to provide care to our patients we aim to give the most modern care to our patients possible. We are constantly looking to see how we can improve our services in the light of modern developments, whether these are in the fields of technology, new medications or new models of care. We are particularly looking to see how we can work with our partners across healthcare to develop new models of care which will allow our experts to provide input to patients closer to their own homes in order to improve their quality of life as well as medical outcomes.

4.2.1 Specialist medicine

The majority of specialist medicine services have a long history of providing community-based care as well as out-of-area access through established networks or nationally commissioned specialist services. There are opportunities to develop the hub and spoke model for more medicine specialties, consolidating specialist services at a centralised hub while extending access through planned assessment and ambulatory care in community-based facilities.

Specialist respiratory, endocrine, thoracic, rheumatology and HPB services will be based on the Hammersmith Hospital site, improving patient pathways and exploiting efficiencies through co-location with thoracic surgery, haematology and renal services. In addition, we will develop a co-

located specialist cardiothoracic medicine and surgery centre alongside the oncology lung cancer centre.

In line with St Mary's as the major acute site, hepatology/liver failure and acute gastroenterology services will be based there. We will also keep the allergy service in its historical location at St Mary's so that it is co-located with the hyper acute and paediatric services.

Sleep studies will remain at Charing Cross, accommodated within the established medicine planned investigation unit (PIU). Dermatology will continue to be provided as a predominantly outpatient-only service with focused specialist services in selected locations.

Growth areas have been identified in hepatology with the increasing burden of disease and through a strengthened clinical pathway, both through internal and external referral. The respiratory service has created a niche in the field of endobronchial ultrasound. As one of the few providers in London, continued growth is forecast. The Trust already runs an established and highly successful bowel cancer screening service that will expand into new areas of activity due to the lowering of the screening age. Growth is planned to take place for appropriate day cases in the successful PIU service.

4.2.2 HIV, sexual health and infection

Our infection services include specialist outpatient clinics at both Charing Cross and Hammersmith Hospitals, offering urgent referral services and an inpatient facility at Hammersmith to care for patients with severe infections and fever who might require isolation or high-level medical treatment and monitoring.

With strong links to the department for infection prevention control and tuberculosis and microbiology services, the infection specialty is well positioned to focus on embedding a Trust-wide integrated approach to the prevention, recognition and management of infection across all hospital sites. Our services ensure and promote excellent antibiotic stewardship and the prevention and management of healthcare acquired infections (HCAIs). We will continue to provide high-quality inpatient care to patients with complex infections, and rapid access to specialists and clear clinical pathways across all sites. Future opportunities for development include building on the success of our current outpatient antibiotic therapy (OPAT) services based at the Charing Cross and St Mary's sites. We aim to develop this service area to ensure comprehensive access to OPAT across all specialties and to offer direct access to these clinics by primary care providers in order to improve patient safety and patient experience, reduce length of stay and prevent hospital admissions. Infection outpatient services will continue to be provided at St Mary's, Charing Cross and Hammersmith Hospitals.

The HIV and sexual health services are based at St Mary's Hospital, with inpatient facilities in the main hospital and multiple specialist clinics in the Jefferiss Wing. Together, they offer comprehensive services for patients with sexually transmitted infections, HIV and related problems, while being fully integrated with Imperial College's departments of genitourinary medicine and communicable diseases. The clinical trials centre was established in 1991 and is

one of the leading HIV and sexual health research units in the UK, located in the Winston Churchill Wing.

Our HIV service was the first of its kind to be set up in the country and it remains one of the largest in the UK. We are able to offer consultant-led care for both outpatients and inpatients, with 24-hour access to fully trained staff across the wider multi-disciplinary team, as well as specialised medical and surgical care. Treatment outcomes are above average in the UK. Multiple specialist clinics exist, often in collaboration with other specialist services within the Trust and across the north west London network – for example, comprehensive liver services in collaboration with hepatology, infectious diseases and HIV; a metabolic service with endocrinology, joint neurology and TB clinics; and services for adolescent transitioning from paediatrics to adult care.

The service will continue to focus on reducing the morbidity and mortality associated with late diagnosis of HIV infection through leadership of a comprehensive integrated programme of HIV prevention, testing and management across community, primary and secondary care settings. In addition, we aspire to be the leading site in the UK of a programme to realise a functional cure for HIV and further development of preventative and therapeutic HIV vaccines. We continue to engage with and play a lead role in pan-London and national developments that are reviewing the configuration and funding arrangements for both inpatient and outpatient HIV services in the UK.

A sexual health service has existed at St Mary's Hospital since the original Venereal Diseases Regulations of 1917 and has developed a comprehensive range of specialist services with allied clinical specialities across the Trust (including dermatology, paediatrics, urology, gynaecology and Haven Sexual Assault Centre). The service is a key provider of open access and specialist sexual health services in London and its impact is far reaching – supporting not only the achievement of wider public health outcomes, but also promoting the safeguarding agendas for vulnerable adults, young people and children. We tailor services through patient engagement and rapid sexually transmitted infections (STI) diagnostic approaches, in line with new clinical developments and local community requirements. For example, the service established the nationally renowned Jane Wadsworth sexual dysfunction service and Praed Street sex worker project. As a result of changes to the commissioning structures for sexual health services, continued engagement of local authority/public health commissioners remains a priority for future successful tendering processes and we are directly involved in shaping these developments. The aim for the future is continued growth and streamlining of current clinical pathways services and developing community models of care and provision of a fully integrated sexual healthcare service for contraception and STI management.

The HIV and sexual health services serve a large proportion of the local community and, in addition, the special expertise and reputation of the centre attracts patients from other areas in London and wider, from across the UK. Our aim is to continue to expand and develop these services, and the location at St Mary's Hospital of the main service hub, as well as advantages of co-location with key services such as hepatology and respiratory medicine, provides this

opportunity. We will continue to work with local communities and our health and social care partners to improve public health.

4.2.3 Renal

Hammersmith Hospital is one of the largest specialist renal and transplant centres in Europe. While lengths of stay for some categories of treatment are longer than those for some other providers, our renal service delivers some of the lowest mortality rates in the world, while remaining cost effective. We are introducing a new model of consultant inpatient care that will enhance quality and deliver a reduced length of stay.

The case mix at St Mary's Hospital results in patients who still have ongoing dialysis needs stepping down from level 2 or 3 care to level 1 care. In addition, patients who are on long-term dialysis will continue to have treatment needs that can only be met through an inpatient stay at St Mary's. To provide these patients with continuing dialysis care, there is a need to develop facilities for inpatient dialysis on the St Mary's site.

Below are some other key growth/developments areas:

- Opportunity to develop, with the Royal Marsden, the regional complex kidney cancer service (an already strong local collaboration with established patient pathways); and develop in parallel north west London's specialist centre for all urological malignancies with kidney dysfunction, building on our inpatient dialysis capacity and specialist renal care.
- Need to respond to increasing demand from commissioners and other providers for us to provide care for patients with vasculitis and systemic lupus erythematosus (SLE). We have longstanding research expertise in SLE and an integrated clinical service for lupus patients in the Lupus Centre for Imperial College London, where we have pioneered the use of steroid-sparing regimes in lupus nephritis.
- Increasing the number of annual live-donor transplants by training up the remaining two (of four) transplant surgeons who are not yet able to undertake this surgery.
- Increasing the level of home dialysis. The service should be aiming for 10 per cent home dialysis. However, there are challenges around current fistula first targets, as there are significant patient concerns that would need to be overcome.
- Developing specialist clinics for other providers to offer through their facilities, anticipated to be in line with the forthcoming Dalton review. Currently, Trust consultants provide some of their time to other providers through a recharge arrangement.
- There is market share growth potential around acute kidney injury. At present, a significant proportion of this work throughout north west London is provided through the level 3 capacity of other providers. This creates pressure on level 3 beds that could be eased by increasing level 2/1 beds at Hammersmith Hospital, providing large savings from the reduction in extra-regional level 3 transfers.

4.2.4 Stroke and neurosciences

There is strong clinical consensus that providing inpatient stroke and neurosciences services across three sites is not sustainable from a safety and quality perspective. There are critical clinical adjacencies with A&E, major trauma and the hyper acute stroke unit and so all stroke services plus a neurosurgical elective spinal service will be based alongside those services on the St Mary's major acute site. Remaining elective neurosciences services will be based at Hammersmith Hospital alongside related specialties, particularly head and neck/base of skull surgery.

4.2.5 Emergency medicine

The emergency medicine service strategy is built around St Mary's as the major acute centre for the region, with an urgent care centre at Hammersmith Hospital and the development of an emergency service appropriate for a local hospital at Charing Cross Hospital. The service is also expanding ambulatory care pathways on all of its sites, closely co-ordinated with specialist teams across the Trust, to help more people to be treated without having to be admitted as inpatients.

Our aspiration is to ensure patients with emergency and urgent conditions are treated by the right practitioner, in the right place, at the right time, with a focus on treatment in the community wherever possible, alongside good access to specialist services whenever required. Our unique integrated urgent care network allows us to have joint governance and training for staff and flexible working patterns, attracting some of the best clinical staff.

Critical to the success of the emergency medicine strategy will be the development of new models of care across the Trust, particularly more streamlined pathways for frail elderly patients. We also need to ensure there is an improved transport strategy (see section 5.3) to ensure efficient transfer of patients to relevant sites once stabilised and that we respond to growing demand for paediatric emergency services, including a dedicated assessment or clinical decision unit.

4.2.6 Acute medicine and medicine for the elderly

In line with the overarching clinical strategy, our service vision is to provide acute care at all three of our sites:

- *St Mary's Hospital*: our hyper acute centre managing complex medical admissions for north west London. The innovative acute medical model for the delivery of acute services will ensure enhanced continuity of care and efficient discharge processes, with team-based consultant general physicians present daily on the emergency and acute wards. The model will allow the institution of daily consultant specialist medical input onto the acute wards.

- *Hammersmith Hospital*: a centre for inpatient specialist medicine with facilities for specialist medical admissions and medicine for the elderly.
- *Charing Cross Hospital*: a local, mostly outpatient-based service, but retaining the medicine for the elderly step up/down enablement beds.

Critical to the delivery of this stratified service will be:

- an enhanced older persons assessment team (OPAT) on each site to ensure that medicine for the elderly patients are managed in the most appropriate environment, avoiding unnecessary hospital admission
- further development of a single referral process for primary care physicians to the Trust, and cross-site bed management systems to allow the care of each patient in the optimal clinical setting
- specialist elderly medicine reablement services at the Hammersmith site.

4.3 Surgery, cardiovascular and cancer

The surgery, cardiovascular and cancer division delivers a wide spectrum of care, from managing the sickest patients presenting as emergencies to our regional 24/7 major trauma and cardiac units, to visiting chronically unwell patients in their homes to fine tune treatments and prevent deteriorations. We deliver complex tertiary and quaternary care, providing not only the best routine treatments, but, via our academic programmes, truly cutting-edge developments. As well as providing care at our main hospital sites, we are increasingly delivering outpatient and diagnostic services at local sites throughout north west and south west London. We are planning to deliver most of our care in these local settings. However, when patients need an operation or procedure, we deliver that care in our regional specialist hubs. There, we focus our expertise and our consultants are able to sub-specialise to provide the most expert care when patients are at highest risk.

We are at the forefront of delivering seven-day consultant-led care to our patients across our major specialties and we are large enough to be able to do this in a sustainable way, while still delivering high-quality elective services. This will be a challenge for the smaller hospitals around us and there will be a consolidation of emergency surgical and cardiac services to a smaller number of sites as the current provision across London is unsustainable. As a result, our specialist emergency market share is likely to increase. In parallel, we will expand our network of local outpatient services across north west and south west London. We will be in a strong position to bid for these services as they are tendered, because we will be able to ensure that patients who come in as emergencies smoothly feed into the local services so patient pathways are co-ordinated without duplication.

We are aiming to collaborate with local specialist hospitals to benefit patients. There are also many synergies that can be realised by close collaboration with our neighbouring general

hospitals and, with them, we would aim to deliver a network of clinical services across the sector.

4.3.1 Circulation sciences

Hammersmith Hospital is the major emergency cardiac centre in west London and is the only hospital in the sector to provide both 24/7 heart attack and arrhythmia services. Our clinical strategy has been to position ourselves as the single place to come if you have an acute cardiology problem. Hammersmith Hospital has an innovative cardiac surgical programme emphasising novel valvular surgical techniques, aortic surgery and minimally invasive approaches. We contribute to delivering the regional aortic dissection service.

Both St Mary's and Hammersmith Hospitals have a proud cardiac heritage. The first human ECG was recorded by Augustus Waller at St Mary's. Our cardiovascular department has major coronary and electrical academic programmes, with a world-renowned translational programme and several 'first in human' developments over the past few years. These programmes are underpinned by collaborations with many science and engineering departments across the Trust. We have a world-leading cardiovascular risk department based at the International Centre for Circulatory Health, which has published many trials over the past few years that have changed clinical practice around the world. We have developed a strong academic training programme and have established ourselves as the place where our brightest young doctors come to receive cardiac academic and clinical training.

Our clinical strategy is to grow the acute coronary and electrical services by providing the best and safest place for emergency patients. Our surgical strategy is to increase the capacity of the thoracic surgery service and develop a more integrated approach with respiratory and cancer services, building on our excellent lung cancer outcomes. Electively, we are aiming to expand our community cardiology service model, working with commissioners to develop innovative integrated care pathways to improve outcomes and reduce costs.

The regional vascular surgical service is situated at St Mary's Hospital, based on its emergency emphasis and the alignments with the major trauma and acute interventional radiology services. It was a pioneer centre in the development of aortic stenting and has developed novel technology for stenting in collaborative work with the Trust engineering department. Our ongoing strategy for vascular surgery is to build on our expertise and reputation to grow the aortic surgical programme.

4.3.2 Plastics, orthopaedics, ENT and major trauma

The major trauma centre at St Mary's Hospital sees over 2,500 major trauma calls per annum (around a third of all London trauma patients) and provides dedicated expert care across multiple specialties, including neurotrauma, extremity reconstruction and pelvic trauma. Our unit was the top rated in the country on peer review in 2014. Our strategy is to consolidate our cadre of consultant trauma surgeons; to consolidate neurotrauma onto the St Mary's site; to site a helipad at St Mary's; to continue to integrate with military medical expertise; and to increase our

academic profile. We will also raise our national/international profile by linking with centres in the US and continuing to contribute to UK-run trauma education programmes. We aim to develop an Institute of Trauma Research, including an appointment of a chair of traumatology.

The orthopaedics service will continue to provide acute trauma care, including supporting the major trauma service, as well as developing a systematised, planned care, orthopaedic pathway. We are working with our commissioners to explore whether a regional elective orthopaedic centre can be set up on the Central Middlesex Hospital site.

We plan to build on our areas of specialist trauma expertise: hand and wrist, pelvis, spine, shoulder and paediatrics. We aim to enhance capacity to deal with the increasing trauma workload, including using existing resources more efficiently – for example, through ensuring there is daily consultant review of all patients on our wards and providing extended operating hours.

Our plastics service has a growing reputation for excellence in complex reconstruction after trauma and cancer. We are about to publish the best outcomes for the management of severe lower limb injuries that have been reported in worldwide literature; we want to build on this to develop an international reputation for limb reconstruction. We are expanding our hand surgery service to include hand trauma and we are setting up a hand transplant programme with the aim of performing London's first hand transplant in the next 18 months to consolidate our reputation in this area.

We aim to become one of two head and neck cancer centres in London and expand our current activity to manage the whole range of facial reconstruction, including craniofacial trauma. We intend to increase our breast reconstruction activity by developing more referral links within our sector. In addition, the service aspires to continue to grow our academic performance and have a chair of plastic and reconstructive surgery within the next five years.

Our ENT department is the oldest in the world and has a worldwide reputation for excellence and innovation. Several members of the team are recognised as international experts in their field. As a result, patients are referred from all over the UK and worldwide. The Trust is the regional centre for head and neck and thyroid cancer. Our supra-regional skull base surgery centre treats the largest number of patients in the UK with malignant anterior skull base disease and our national centre for adult airway reconstruction is the largest in Europe. We also provide on-site paediatric or adult ENT services for the Brompton, Chelsea and Westminster and Ealing Hospitals. Complex head and neck and skull base surgery will be further centralised in London over the next few years and we should be at the forefront of this development with a dedicated cancer centre and support services. Our strength lies in cross-speciality collaborative work with neurosurgery, plastic reconstructive surgery and others. More skull base and invasive sinonasal disease will be treated endoscopically, avoiding the need for craniotomy. We will be continuing to expand the airway service and also envisage the creation of a dedicated salivary gland centre.

Hammersmith Hospital will provide specialist plastics/oncology and ENT, with a centralised head and neck centre to be developed for West London.

Neurotrauma step-down will be enhanced, aligned with the acquired brain injury unit and grown to develop a neuro-rehabilitation centre. Potential acute post-surgical rehabilitation also developed and grown in a partnership/integrated model.

4.3.3 Surgery

The Trust has the foremost academic surgery department in the UK and is world renowned, with high-profile programmes in robotic surgery, surgical training and safety. The Trust has some of the best surgical outcomes – for example, upper gastrointestinal cancer surgery outcomes are matched only by some Japanese centres.

At present, acute surgery is provided at St Mary's and Charing Cross Hospitals. However, with sub-specialisation, an increasing out-of-hours workload (particularly with the trauma service) and the need to increase the amount of acute care provided by consultants across the whole week, the service is not sustainable on two sites. We aim to have a single acute surgical site at St Mary's providing a world-leading consultant-run general and trauma surgical service. Elective short-stay surgery will be consolidated at the Charing Cross site, with a systemised surgical centre providing a high-volume, efficient programme with an excellent patient experience. The Trust has a very large and growing urology service, which is consolidated at Charing Cross. As we develop Hammersmith as a cancer and complex elective surgical centre, urological surgery will collocate here with lower gastrointestinal and gynaecological cancer surgery to deliver the synergies required to provide a high-quality pelvic surgical service. We are aiming to build on the recent growth in complex urological cancers by attracting referrals from outside London.

We anticipate a growth in upper gastrointestinal surgery with consolidation of small services in our region at the Trust, building on our excellent outcomes. We also anticipate a growth in bariatric surgery, as there will likely also be a consolidation of smaller services. Our strength is based on our good outcomes coupled with our ability to provide a comprehensive service. The Trust is the national centre for male-to-female gender reassignment and we anticipate this service growing to meet the increasing national demand.

The Trust has a large breast service seeing over 600 new patient referrals a month in clinics at St Mary's and Charing Cross Hospitals. We also invite 40,000 well women for screening each year. We had an increase of 18 per cent of breast cancer operations in 2012 and plastic surgery's breast work has doubled in the past year. With four breast surgeons trained in oncoplastic techniques, we are aiming to become a training centre in oncoplastic surgery. Breast services must be provided in both a local and specialist setting. For our local patients, our aim is to be a centre of choice, using the most up-to-date diagnostic techniques and providing all women with cancer the option of oncoplastic surgery, or mastectomy and immediate reconstruction. For that increasing number of young women with breast cancer, we already provide a specialist young woman's service using the expertise of other services, such as fertility preservation, which we are fortunate to have at the Trust. We would aim to develop this as a regional service. We aim to maintain a single multi-disciplinary breast unit, including the screening and symptomatic service, active in training, staff development and research co-located with oncology and plastic surgery.

4.3.4 Clinical haematology and cancer

Clinical haematology provides a comprehensive service for all haematological disorders, both malignant and non-malignant, and has benefited substantially by the consolidation of in- and out-patients services on the Hammersmith site. The unit is internationally recognised as a centre of excellence in stem cell transplantation and chronic myeloid leukaemia (CML). The first transplant was performed in 1975 and approximately 100 allogeneic and autologous procedures are performed each year, principally for chronic and acute leukaemias, lymphoma and myeloma. The clinical transplant unit is supported by a state-of-the-art facility for cell collection and manipulation, that provides mesenchymal stem cells throughout the UK. Our programme in CML is one of the largest and most innovative in Europe and is supported by innovative molecular techniques for diagnosis and monitoring.

Our current and future strategy is to develop programmes in the lymphoproliferative diseases through a holistic approach involving basic science, translational and clinical medicine. Excellent progress has already been achieved by the appointment of a CRUK senior lecturer in myeloma, the award of a LLR programme grant also in myeloma, the development of clinical trials in these diseases through collaboration with the pharmaceutical industry, Myeloma UK and the NIHR, and by the award of two BRC Confidence in Concept projects to develop novel pharmaceutical and cellular therapies.

We anticipate an increase in activity in haematological malignancies through an ageing population and in non-malignant diseases such as Sickle Cell Disease (SCD) through changes in demographics, the transition of paediatric patients to the adult service and the closure of the A&E department at Central Middlesex Hospital. To manage this demand we are aiming to expand the opening of our ambulatory haematology unit to provide a 7 day service to help deal with the increasing demand.

Within non-malignant disease we have been expanding our practice in auto-immune diseases, particularly with the support of colleagues in renal medicine, and have recently been awarded a BRC rare diseases grant for idiopathic autoimmune thrombocytopenia. In haemostasis and thrombosis we host a haemophilia centre and will expand our support for the delivery of anticoagulation services in the community. Colleagues in haematology support obstetrics with specialist clinics for high risk pregnancies in SCD and bleeding disorders. Our transfusion consultants support transfusion across the Trust and through joint appointments with NBTS, lead on developments for safe cost-effective transfusion throughout the UK.

Clinical and medical oncology are closely linked together through an academic and clinical research partnership. The clinical and medical oncology departments treat an average of 2,100 patients per annum, delivering a total of approximately 2,700 courses of treatment. The clinical oncology service treats a full range of adult malignancies and supports the haematology services.

Hammersmith Hospital has a rich radiotherapy history, having hosted the MRC radiotherapy Unit. The first linear accelerator designed for medical use was at the Hammersmith Hospital, with the first patient being treated in 1953. We were also one of the first centres to develop and

use stereotactic radiotherapy for the management of brain tumours. Main research areas have been in radiobiological research. Significant growth in the need for radiotherapy services is expected, primarily linked to the aging population.

The medical oncology department supports care for the major cancer types, as well as the national gestational trophoblastic disease service, and links these major cancer types to Cancer Research UK and other national research charities (for example, Ovarian Cancer Action, prostate cancer charity). We have strong academic programmes in breast, ovarian, colorectal and prostate cancer; there is also an active pancreatic/HPB unit, as well as a successful and active Phase I clinical trials unit. The lung and upper GI services have some of the best clinical outcomes in the country. The breast cancer clinical oncology team has nationally developed the use of gating in the management of breast cancer patients. We have a large colorectal cancer practice and provide leadership for the regional anal cancer service. The west London gynaecological cancer centre is the best performing gynaecological oncology unit in the London Cancer Alliance and is internationally renowned for its clinical and academic excellence, being linked to the largest dedicated ovarian cancer research centre in Europe. In gynaecological oncology we are committed to the creation of an integrated surgical/medical/clinical gynae oncology unit that co-locates inpatients of all three branches of gynae oncology in a truly integrated unit, with the possible additional integration of the GTD and women's germ cell tumour units.

Radiotherapy is delivered through linear accelerators, of which we have four with integrated imaging facilities and the ability to deliver state-of-the-art adaptive radiotherapy treatment, stereotactic treatment in addition to non-sealed source treatments and brachytherapy. The vision is for radiotherapy to be consolidated on the Hammersmith site within a specialist cancer service that allows expert clinicians and scientists to work collaboratively to develop new cancer treatments. We plan to develop an integrated cancer research/trials space on the Hammersmith site. The four linear accelerators will be consolidated at Hammersmith Hospital due to the co-location requirement with oncology and haematology oncology inpatients. Hammersmith will also provide a merged and expanded ambulatory care service for oncology and haematology. The co-location with other specialities, such as renal and complex cancer surgery, is clinically significant for the new model to run effectively.

Charing Cross Hospital's outpatient and short-stay services include chemotherapy day-case, outpatient and home care services and oncology ambulatory care, with both rapid access pathways, in support of admission avoidance, and local outpatient services, including diagnostic rapid access pathways. A responsive acute oncology service will be developed at St Mary's Hospital to support the acute medicine unit and emergency department in assessment and discharge or admission.

4.3.5 Critical care, anaesthetics and pain

We provide care for the sickest patients in the hospital, and we are the leading London provider of pain management services. We also offer a consultant-led anaesthetic service providing comprehensive out-of-hours cover (including on-site consultant cover at the acute hub).

The national trend for critical care is upwards. The Trust also expects an increase in demand in line with planned increases in neurosurgery and natural growth in major trauma.

We will consolidate the provision of critical and high-dependency care throughout the Trust to improve safety, flexibility and efficiency. This means co-locating all ITU and HDU patients at both St Mary's and Hammersmith Hospitals and closing satellite HDUs on ward areas.

At Hammersmith Hospital, we will provide a critical care unit to support the following specialities: renal, urology, cardiovascular, haematology, oncology, obstetrics and complex gynaecology.

Critical care beds will support emergency care in all acute specialities at St Mary's. While there is no plan for a critical care unit at Charing Cross, there will be a locally based medical emergency team to provide a cardiac arrest service. Cover will be provided on site for deteriorating patients through a retrieval service from the acute site. A robust pre-operative service will also be provided at Charing Cross to ensure the highest-risk patients are not operated on at this site, where the focus will be on highly efficient, high-volume surgery with an excellent patient experience. The sickest patients will be operated on at the St Mary's and Hammersmith sites, where there will be maximum support. Further design work is required to determine the most effective model for critical care outreach on all sites.

In the outpatient chronic pain service, we will forge links with primary care and we will build an acute pain service for adults and children.

We will continue to strengthen the academic profile of the department, building on our high-quality training, as evidenced in a recent GMC survey and deanery visit. We particularly want to increase research within the anaesthetic department, both by supporting other specialties and driving research inside the specialty with the development of further academic posts.

4.4 Women's and children's

Across two hospitals (Queen Charlotte's and Chelsea Hospital on the Hammersmith site and St Mary's Hospital), we are one of the largest providers of maternity and neonatal services nationally, with the second largest gynaecology service in the UK. Our integrated models of care ensure that care is locally provided where possible and specialist services are centralised at our hospitals.

As a centre of excellence, our tertiary maternal, fetal medicine, preterm labour and gynaecological cancer services provide specialist care that attracts regional and national referrals. The provision of integrated neonatal and paediatric care also attracts many specialist commissioned paediatric services, and regional, national and international referrals.

4.4.1 Paediatrics and neonates

The first mobile paediatric intensive care transport service for very sick children in England was established at St Mary's in 1993 and now has become the standard of care with the CATS (Children's Acute Transport Service) team for north London.

In the 1990s, the paediatric intensive care unit (PICU) team at St Mary's pioneered the management of sepsis and meningococcal disease, leading to the lowest documented mortality rate worldwide and management guidelines for care that have been disseminated internationally.

In 1991, the first family clinic for comprehensive care of HIV in children, pregnant women and parents was established at St Mary's. The family clinic has an international reputation and continues to lead the way in HIV multi-disciplinary care.

Allergy and immunotherapy research has been undertaken at St Mary's for the last century. Over the past two decades, the paediatric allergy team has continued to develop new therapies for severely allergic children.

In 1939, the first human milk bank in the UK was started at Queen Charlotte's and Chelsea Hospital and is one of the 16 human milk banks in the UK.

In 1993, the Weston Neonatal Research Group was founded. The group has pursued a dual track of combining clinical and laboratory research. The laboratory has been successful in making important discoveries, including the role of apoptosis in hypoxic-ischaemic perinatal injury, the reduction in this apoptosis by hypothermia, the nature in intrauterine infection and preterm delivery and, more recently, the potential of fetal stem cells for brain repair.

In 1996, the first 1.0T MRI system especially for preterm babies was built at Queen Charlotte's and Chelsea Hospital's neonatal unit for brain research. For over a decade of research, it was the only high-field MR scanner in the world fully integrated into a neonatal unit. The research done using 1.0T MR redefined the nature and understanding of brain injury in preterm infants and created a new direction for researchers across the world. This scanner was replaced in 2006 with a state-of-the-art 3.0T MR scanner within the neonatal unit at Queen Charlotte's and Chelsea Hospital.

Clinical research on serious childhood illness is at the core of paediatrics at the Trust and the Paediatric Research Unit established in 1998. The first research unit in the UK dedicated only to children, it is an excellent resource for promoting access to clinical trials and new treatments for children.

The haematology team at St Mary's is pioneering the management of children with haemoglobinopathies and bone marrow failure in the UK. In 2012, the team undertook the first unrelated haemoglobinopathy transplant and the first combined maternal haplo/mismatched unrelated cord for aplastic anaemia. They were the first centre in the UK to establish automated

red cell exchange for children, and they have established the first Diamond Blackfan clinic worldwide.

We are looking to consolidate our position as the specialist paediatric and neonatal hub in west London, to involve:

- co-locating the paediatric intensive care unit (PICU) with our high-dependency unit in a modern purpose-built facility, for the sickest children, including those with surgical conditions and major trauma
- as the largest neonatal intensive care unit (NICU) service in the regional network, linked to tertiary fetal medicine, continuing to provide expert care for extreme premature infants and specialist neurological care, and supporting the needs of the maternity services
- continuing to develop our research-led, NHS England-commissioned services for critical care, allergy, bone marrow transplant, clinical haematology, infectious diseases, nephrology, neurology, sleep, ENT, surgery and ophthalmology
- continuing our work innovating new pathways for general paediatrics across primary and secondary care, including Connecting Care 4 Children (CC4C) and supporting A&E services for children
- extending our co-design work with young people with chronic diseases (such as allergy, diabetes, sickle, HIV and epilepsy) to improve transitional care for adolescents, as well as to maximise care out of hospital
- building on our recognised expertise in education and simulation for all healthcare staff
- continuing to expand clinical research in allergy, infection, neonates and intensive care, recruiting children to clinical trials, and improving access to new treatments, within the unique academic resource of the clinical paediatric research unit.

A specialist paediatric service with a level three PICU and a level three NICU will be provided at St Mary's. Queen Charlotte's and Chelsea on the Hammersmith site will provide a level two NICU service with a paediatric outpatient and ambulatory care unit being provided at Hammersmith Hospital.

Ealing's maternity service is scheduled to close, with 2017/18 the current anticipated date. Modelling to date assumes that all activity will move to West Middlesex and Northwick Park Hospitals, but we anticipate some emergency and specialist activity will come to St Mary's.

4.4.2 Gynaecology

The gynaecology service has a strong heritage – St Mary's was the first hospital to appoint a reproductive endocrinologist to a permanent academic consultant post, and the first in the world to develop low-dose ovulation induction therapy for infertility. Furthermore, our expertise in

clinical management and research into polycystic ovarian syndrome is acknowledged internationally.

The combined service is the second busiest in the country with specialist services in acute gynaecology, recurrent miscarriage, colposcopy, urogynaecology, fibroids infertility for endometriosis, family planning and gynaecology oncology. It serves the local, regional and international population.

Our community-based gynaecology clinic, mutually developed with Brent CCG, is an innovative and efficient pathway that we wish to explore with our other stakeholders.

In line with the Trust strategy and co-located services, St Mary's will provide emergency gynaecology services and will be the site for most complex, benign gynaecology, while Queen Charlotte's and Chelsea will continue with its tertiary gynaecology cancer services and in-hours emergency gynaecology.

4.4.3 Obstetrics

The maternity service aspires to build on its international reputation as a leader in the provision of high-risk, tertiary-level maternity care to women with complex medical diseases and to managing babies with complex fetal problems. We also provide maternity care to low-risk women, giving them the choice of where they deliver.

St Mary's was the first hospital to introduce fetal blood sampling and monitoring systems in labour and also led the development of specialist clinical services in the management of gestational diabetes. The computerised maternity database first developed at St Mary's was adopted by many maternity units in London and revolutionised our ability to analyse maternity statistics.

At Queen Charlotte's and Chelsea, the service also has a very strong heritage of innovation, developing obstetric anaesthesia as a distinct subspeciality, pioneering the use of mobile epidurals for pain relief in labour, and being the first hospital in the UK to use combined spinal epidural (CSE) for labour.

The service has strong academic roots, too. We have one of only two clinically active UK professors of obstetric medicine, and we were one of the first obstetric medicine units in the UK with obstetric physicians working alongside maternal medicine specialists and specialist midwives. We have an established international reputation in the field of laboratory and translational research in prematurity and established one of the first prematurity clinics in the UK. The Centre for Fetal Care is one of a handful of units in the UK performing laser treatment in cases of twin-twin transfusion syndrome. In addition, the service provides the only community deinfibulation service for women with female genital mutilation in the UK.

A two-site model has been designed for the future provision of this service, to include a large (6,000 births per year) tertiary-level unit at St Mary's, linking in with the PICU and level three NICU, and a smaller (4,000 births per year) unit at Queen Charlotte's and Chelsea Hospital on

the Hammersmith site. Both sites would offer consultant-led and midwife-led services. A high-volume antenatal clinic is required on both sites. Our midwives provide care to the community by advocating deliveries for low-risk women, antenatal care in children's centres and postnatal services to the community.

4.5 Private patient services

The Trust provides private healthcare services at all three of its main sites, at the Lindo Wing at St Mary's Hospital, the Sainsbury Wing at Hammersmith Hospital and on the 15th floor at Charing Cross Hospital. Around £39m of our total income comes from private care and we would seek to increase this up to twofold in five years. This is in response to demand and to help us fund investment to meet our strategic objectives. The Trust's private patient strategy will align with and support the clinical strategy for the Trust. As clinical services are consolidated and sites redeveloped, opportunities for co-location of our private services with our NHS services will be explored to improve patient choice. Further expansion of the Trust's private services will, however, require some upfront investment to increase bed space and supporting infrastructure.

5 Implementation

Pulling together the service strategies with the overarching clinical strategy enables us to create an estate redevelopment strategy for St Mary's, Hammersmith and Charing Cross Hospitals. As well as a new estates strategy, there are a number of other supporting or enabling strategies that are essential to the development and implementation of the clinical strategy. Most notably, these include people, patient transport, informatics, education and research, and public and patient engagement.

We have also begun to create a clinical transformation office to act as the engine room for ensuring and facilitating a whole organisation response to delivering the clinical strategy and achieving the step change in patient outcomes and experience that we seek over the next five years.

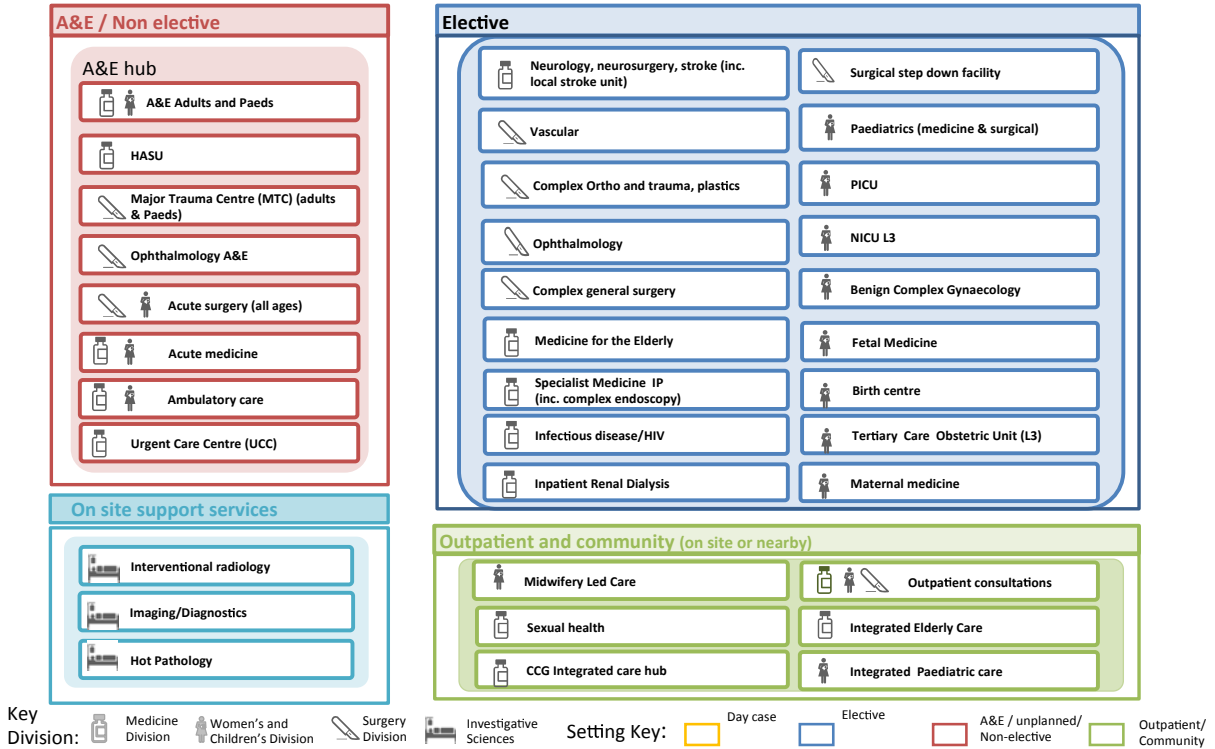
5.1 Estates strategy

Implementation of the clinical strategy will require a fundamental overhaul of our physical estate. Detailed work has been underway to develop an outline business case to begin the process to secure the capital funds for redevelopment of our estate in the best way to deliver our clinical strategy through the three-site model. Our preferred option would see significant redevelopment and new build on the St Mary's and Charing Cross sites, with Western Eye Hospital relocating to the St Mary's site, and a smaller redevelopment on the Hammersmith site (where the Queen Charlotte's and Chelsea Hospital would remain co-located). The Western Eye Hospital site, around 55 per cent of the Charing Cross site and around 45 per cent of the St Mary's site would be sold to fund just over 40 per cent of the redevelopment costs. The net capital costs – approximately £408m – would be sought through a Treasury-approved loan following business case approval by the NHS Trust Development Authority.

The following sections show how clinical services are intended to move between our sites and what the final service configuration would be.

5.1.1 St Mary's site plan

St Mary's and Western Eye Hospitals final service configuration



Service movements at St Mary's and Western Eye Hospitals

Services to stay / build new

Services to move to SMH

From Charing Cross Hospital

- Neurology, Neurosurgery, Stroke (inc. HASU)
- A&E, acute surgery
- Medicine for Elderly
- Specialist Medicine IP (inc. complex endoscopy)
- Ortho & Plastics (complex)

From Hammersmith & QCCH Hospitals

- A&E, acute surgery
- Acute Gynaecology (out of hrs)
- Fetal Medicine
- NICU L3

From Western Eye Hospital

- Ophthalmology
- Ophthalmology A&E

- A&E & Acute Surgery (all ages)
- Major Trauma Centre (MTC adult and paed)
- Acute medicine
- Ambulatory care
- Urgent Care Centre (UCC)
- Specialist Medicine IP (inc. complex endoscopy)
- Medicine for the Elderly
- Infectious Diseases/HIV
- Local stroke
- Complex general surgery
- NICU Level 3
- PICU
- Paeds Medicine
- Paeds Surgery
- Birth Centre
- Mat Medicine
- Tertiary care obstetrics
- Benign Complex Gynae

On site support services

- Hot Pathology
- Interventional radiology
- Imaging/Diagnostics

Services to move out of SMH

To Charing Cross Hospital

- Day case Specialist Medicine
- Day Case Surgical specialities (except Gynae & Ortho)

To Hammersmith & QCCH Hospitals

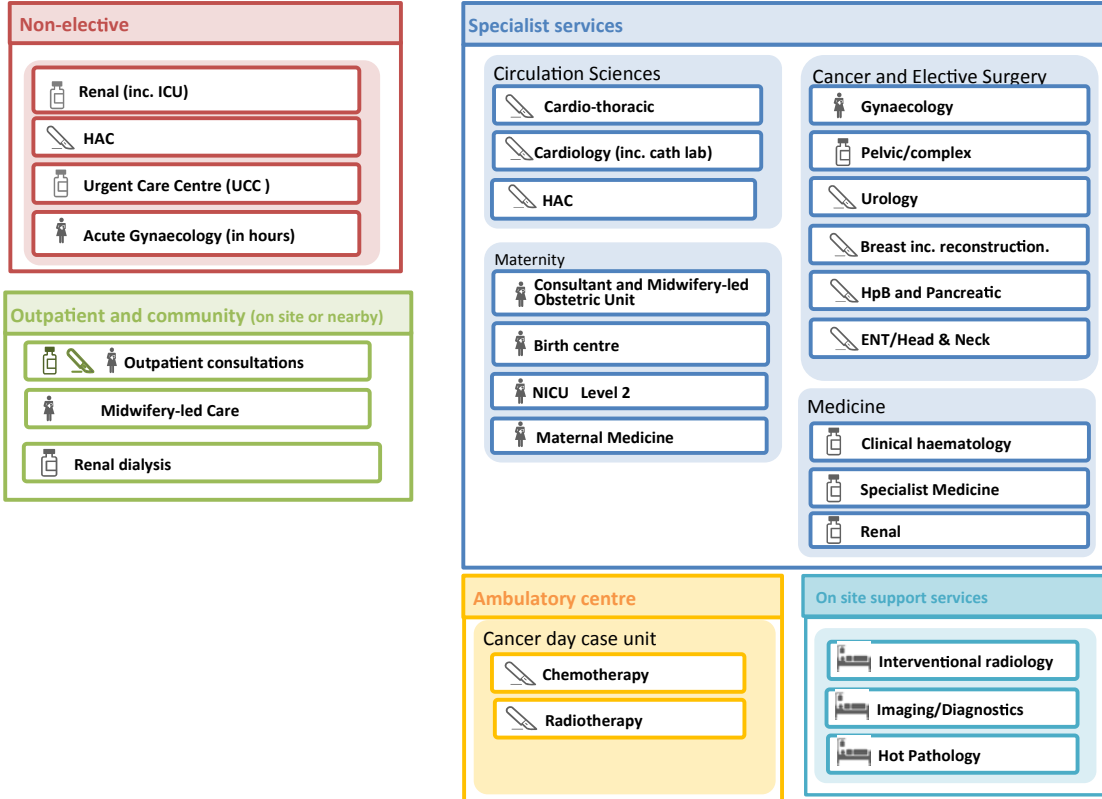
- NICU Level 2

Outpatient services to stay / build new (on site or nearby)

- Outpatient consultations
- Integrated Elderly Care
- Integrated Paediatric care
- Midwifery Led Care
- Sexual health
- CCG Integrated care hub
- Surgical step-down facility

5.1.2 Hammersmith site plan

Hammersmith and Queen Charlotte's and Chelsea Hospitals final service configuration



Service movements at Hammersmith and Queen Charlotte's and Chelsea Hospitals

Services to move to HH & QCCH

From St Mary's Hospital

- NICU Level 2

From Charing Cross Hospital

- Gastrointestinal – non DC
- Urology – non DC
- Breast – non DC inc. reconstruction.
- ENT/Head & Neck – non DC
- Radiotherapy *

* Radiotherapy current plans assume the service is consolidated on HH site, further work ongoing with regard to satellite services

Services to stay / build new

- Renal (elective and non-elective inc. ICU)
- Circulation sciences (elective and non-elective)
- HAC
- Acute gynaecology (in hours)
- Clinical haematology
- Specialist Medicine
- HpB and Pancreatic
- Gynaecology (cancer & elective surgery)
- NICU Level 2
- Maternity unit (inc. birth centre)
- Maternal medicine
- Radiotherapy
- Chemotherapy

On site support services

- Interventional radiology
- Imaging/Diagnostics
- Hot Pathology

Services to move out of HH & QCCH

To St Mary's Hospital

- A&E, acute surgery
- Acute gynaecology (out of hrs)
- Fetal Medicine
- NICU Level 3

To Charing Cross Hospital

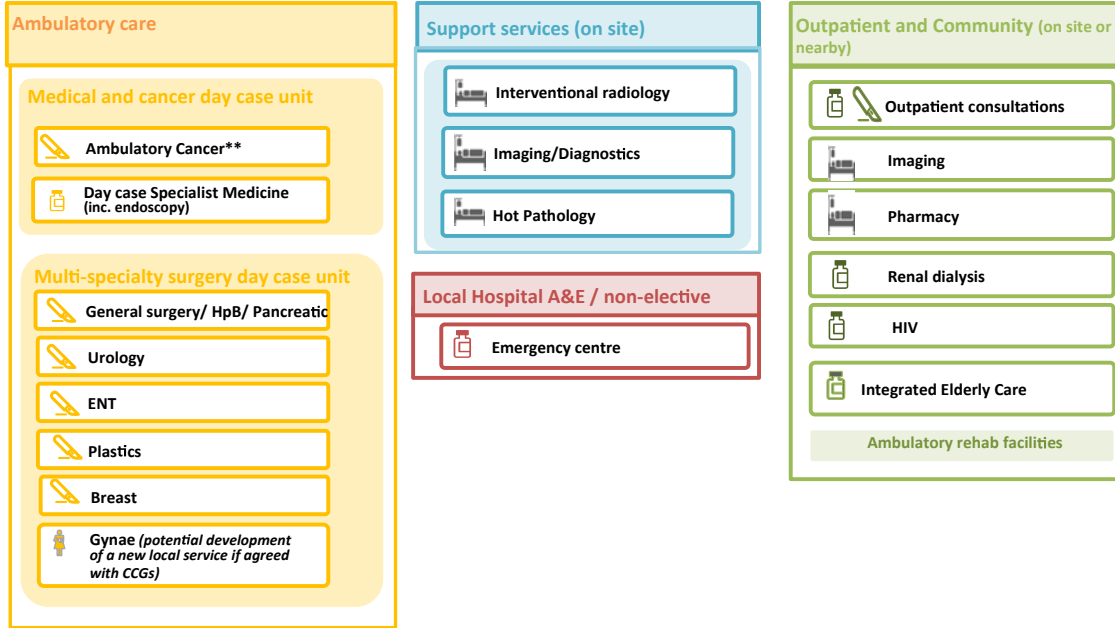
- Day case surgery (except Gynae)

Outpatient and Community (on site or nearby)

- Outpatient consultations
- Midwifery-led Care
- UCC
- Renal dialysis
- Ambulatory chemo

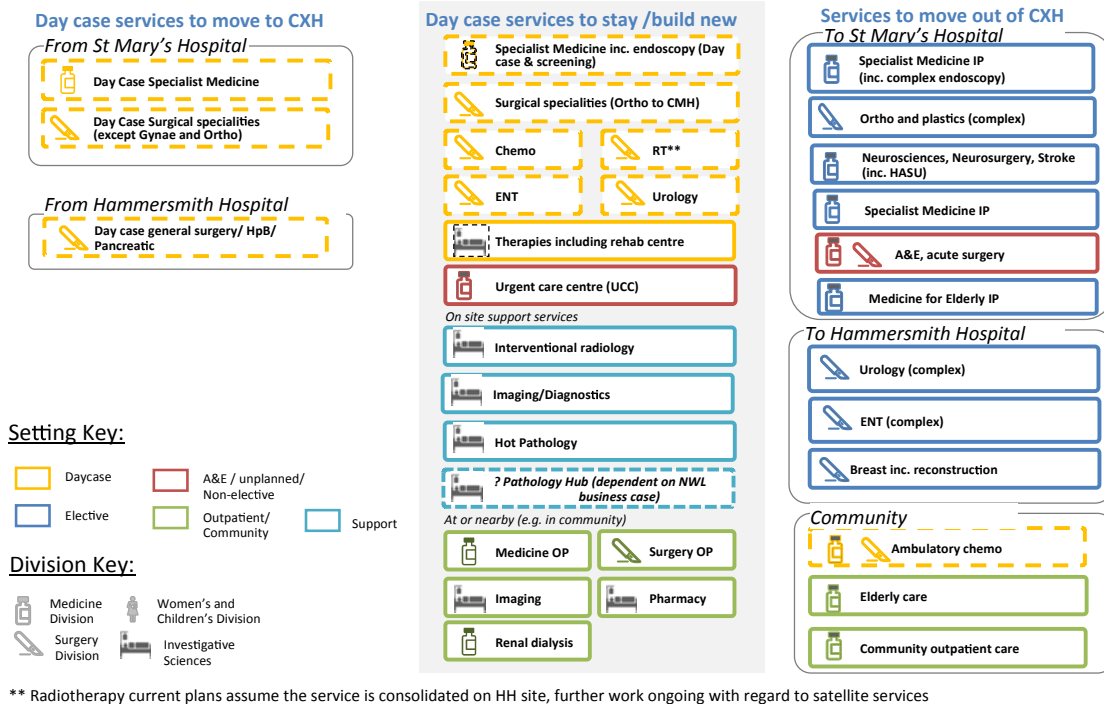
5.1.3 Charing Cross site plan

Charing Cross Hospital final service configuration



** Radiotherapy current plans assume the service is consolidated on HH site, further work on-going with regard to satellite services

Service movements at Charing Cross Hospital



The site plans include updated estimates of inpatient and day-case bed numbers as a key requirement for the scale of future facilities. To fully specify the shape and size of our facilities, these figures have been combined with outline requirements for theatres, clinics and therapy spaces, and for research and education activities, to enable us to deliver our clinical strategy. (See Fig. 15).

Fig. 15: Proposed scale and shape of Trust estate by 2020 (current scale and shape in brackets)

	Inpatient beds	Day-case beds	Theatres	Total space m²
Charing Cross	24* (360)	86 (41)	6 (11)	25,000 (109,000)
Hammersmith	427 (406)	39 (39)	11 (11)	99,500 (98,000)
St Mary's	507 (401)	33 (40)	17 (14)	108,500 (92,000)
Total	958 (1,167)	158 (120)	34 (36)	233,000 (299,000)

*In the space requirements and costings for Charing Cross, we have also allowed for a further approximately 40 beds to support a new integrated care offering.

We have also considered the needs of our partners on the site, include Maggie's Centre, the mental health service, Imperial College London, and the residential landlord A2 – and have assumed that their services will continue on the site - but we have not yet had detailed engagement with them.

We anticipate that it will take until 2020 to obtain necessary funding approvals, planning approvals, and to complete all building works. Planning will continue through the business case process to refine the design of our facilities and to determine the intricate sequence of moves that will enable us to maintain safe and high-quality patient care during the construction works.

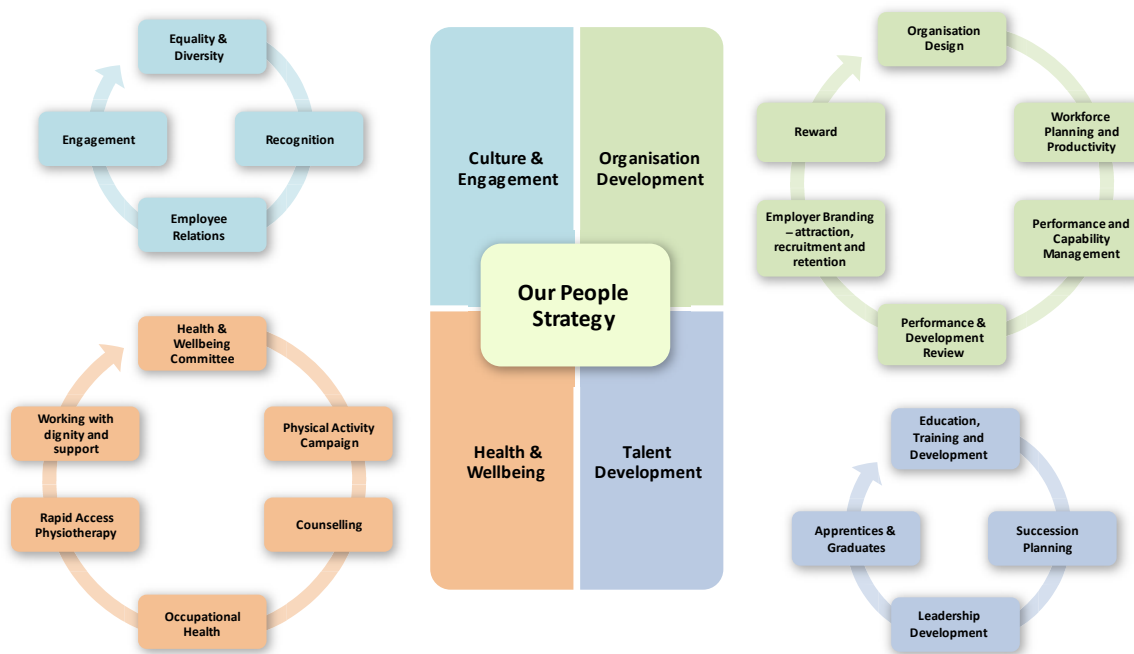
Key milestones in implementation of the estates strategy include approval of the outline business case at the end of 2014/15, approval of the final business case at the end of 2015/16, the start of main construction at the beginning of 2016/17, and the end of all construction at the end of 2019/20.

5.2 People strategy

The Trust's vision to be a world leader in transforming health through innovation in patient care, education and research requires leadership and a workforce that is also world class. The Trust's people strategy is focused on recruiting, retaining, developing and organising the staff and leaders with the right skills and experience, in the right place. It seeks to develop the talent and culture of the organisation to provide a sustainable business and advancement and development opportunities for all.

The people strategy consists of four broad areas, each with a number of elements (see Fig. 16). It details the actions the Trust will undertake against each element with expected outcomes. Delivery of the clinical strategy will be through a workforce plan, which is supported by the people strategy.

Fig. 16: Imperial College Healthcare NHS Trust people strategy



5.3 Patient transport strategy

Improving patient transport to and between our sites has been highlighted as a priority throughout the development of the clinical strategy.

While smoother pathways and new models of care will reduce the need for transfers between sites, it is essential that we provide a fast, safe and high-quality service for those patients who need to be transferred to a more appropriate facility – for example, to move to a rehabilitation bed nearer home after a period of emergency care. To access more centralised specialist services, patients – and their friends and families – may have to travel further and we will work with partner agencies to help ensure this is made as easy as possible.

We will work through requirements in detail, taking account of the specific needs of particular groups – for example, women in labour who need quick and easy access to our birthing services and so would benefit from on-site parking near the birth centre.

5.4 Informatics strategy

The informatics strategy will enable the transformation of the provision of healthcare and the promotion of health envisaged by the clinical strategy. As such, patients will be fully informed and equal participants in their own care. They will be able to interact with clinicians in ways that suit their lifestyles, coming into hospitals only when they and their clinician think it is necessary.

GPs, hospital clinicians and community healthcare professionals will work together, often remotely, on planning and delivering care for patients. AHSC and Biomedical Research Centre (BRC) research professionals will have access to a wealth of information for translational research. Trust managers will plan efficient and effective service delivery, making use of comprehensive information about our services.

The informatics vision is to enable patients and healthcare professionals across north west London to fully embrace digital technology for access to information and engagement. Ultimately, patients will be able to view their digital healthcare records with the facility and share and add comments. This will allow them to make informed judgements about their own care. They will be able to communicate with administration staff and healthcare professionals electronically, through the use of telehealth and telecare technologies where appropriate. Clinical staff will have remote access to patient records from the point of care, whether that is the hospital bedside, community settings or patient homes.

Informatics strategy: the five themes	
Theme 1	Improve patient safety and quality of care by providing clinical staff with a holistic view of a patient's medical condition from anywhere and at any time
Theme 2	Support integrated models of care through the ability to share information and interact electronically, across organisational boundaries, with health and social care partners and patients
Theme 3	Improve quality and efficiency of service by providing complete, accurate, real-time business intelligence via a single access point to support operations and research
Theme 4	Enable the Trust to achieve its translational research and education objectives
Theme 5	Provide the capability for smarter, safer, more effective and more efficient ways of working

New models of care will require the appropriate sharing of information with all those involved in a patient's care pathway. This cannot be achieved with paper health records. Where information is held digitally, it is currently in a variety of systems in primary, secondary and social care. The Trust is committed to moving from the current predominantly paper-based approach to health records to a paper-light way of working over the coming two years. The foundations for the electronic patient record is already in place, and development work is underway to provide comprehensive health records that contain all the information the Trust holds about a patient. This will allow the safe and secure transfer of information within and outside the Trust so that it is accessible whenever and wherever there is clinical need and that patient confidentiality is protected. This has the power to transform the delivery of healthcare.

5.5 Education and research strategy

A major focus on education and research is a central and consistent characteristic of the Trust and its constituent hospitals. It is what led to the Trust becoming the first academic health science centre (AHSC) in the UK and to its recent successful application to maintain that status. The Trust and Imperial College London have a deeply connected relationship as partners in the delivery of medical undergraduate education, translational research, and a large clinical academic programme, as well as College clinical academic staff delivering patient care.

The Trust's vision and strategic objectives are fully aligned with the AHSC's vision and strategic objectives (see Fig. 17).

Fig. 17: Imperial AHSC vision and strategic objectives

Vision

- To improve measurably the quality of life of patients and populations by taking the discoveries that we make and translating them into advances and new therapies and techniques in as fast a timeframe as possible

Strategic objectives

- To utilise the research strengths of Imperial College combined with the critical mass of the Trust to enhance healthcare for patients and populations
- To create powerful new interdisciplinary synergies spanning Imperial College, AHSC and the AHSN to transform healthcare through translational science, bioengineering and informatics
- To educate and train the future generation of multi-disciplinary clinical scientists capable of utilising new technologies for enhanced healthcare
- To translate research into new policies for the benefit of patients nationally and internationally
- To create new wealth through innovation in healthcare in discovery science and in population-based translation

Across the AHSC, we have first-class facilities in which to undertake clinical research, recognised by our NIHR Biomedical Research Centre award and for which we will apply for further funding in 2017.

We are committed to improving the quality and quantity of clinical research. Our research strategy is fourfold:

- To engage effectively with all of the faculties of Imperial College London in order to maintain a pipeline of new medical interventions, diagnostics and devices to improve the health outcomes of our patients
- To enhance the quality and increase the quantity of our clinical research

- To increase engagement with commercial partners, ensuring that patients have access to newly developing therapies
- To carry out studies faster, to 'time and target'.

The Trust's education strategy, currently being reviewed, will provide the framework to transform multi-professional education across the organisation in line with the clinical strategy.

Our aim is to provide excellent education to all members of the multi-disciplinary team and undergraduate students. The key areas that will be prioritised are:

- building excellent opportunities for students in clinical practice
- improving the environment for doctors in training
- building supportive 'coach and mentor' relationships
- creating productive and exciting learning environments that meet student/trainee needs
- improving patient safety by optimising the opportunities for education to support Trust-wide learning, across all staff groups
- ensuring clarity of education time allocation through robust job planning
- increasing innovation in education and embedding within training programmes.

The Trust's new education strategy will be fed by the education transformation programme that is currently underway and has already seen progress, including:

- the restructure of the education team to support improvement plans in education
- the appointment of cohort of Darzi fellows to help drive clinical transformation
- the creation of the hospital at night project board
- the review of SPA and educational tariff to give clarity on the resource needed to deliver excellent performance in education.

5.6 Public and patient engagement

Working closely with our commissioners, and building on previous engagement and consultation, we will develop an engagement programme specifically around the implementation of our clinical strategy. We will look to build awareness and understanding of the key elements of the strategy and, most importantly, bring in the views and ideas of stakeholders to help shape our future plans. This will cover new models of care, improving patient pathways and systems, and our estates design and implementation.

We are also developing a wider communications strategy that seeks to improve opportunities and channels for two-way communications for our audiences, especially through the development of digital communications.

5.7 Clinical transformation programme

The success of this clinical strategy will be measured by our ability to transform clinical care and patient experience, specifically:

- to implement new models of care
- to fully realise our AHSC strengths to deliver world-class patient outcomes and experience, especially within our defining services
- to successfully reconfigure our services to deliver the three-site model and support the wider aims of the *Shaping a healthier future* programme
- to modernise our business processes.

We are establishing a clinical transformation programme (CTP) to act as the engine room for ensuring and facilitating a whole organisation response to delivering the clinical strategy and achieving the step change in patient outcomes and experience that we seek over the next five years.

The CTP will comprise of six workstreams:

- *Excellence in urgent care*: reducing unnecessary unplanned admissions through increasing emergency department consultant cover and developing ambulatory emergency pathways, and reducing inpatient length of stay by providing seven-days-a-week access to diagnostics and therapy.
- *Excellence in planned care*: reducing outpatient attendances through alternative service models and enhanced integration with community services, and eliminating on-the-day cancellations for elective patients.
- *Excellence in clinical support services*: modernising internal logistical systems and processes to ensure high quality patient communication and efficient management of patient flow.
- *Defining services*: harnessing the work of the AHSC to develop and grow services of clinical, academic and research distinction that are recognised by patients and commissioners as leaders nationally and internationally.
- *Quality and safety*: designing and implementing systems and processes to improve further the management of risk across all clinical services to ensure that the care all patients receive is of the very highest quality and safety.
- *Embedding learning and improvement*: fostering a culture where all staff are encouraged and rewarded for promoting learning and embracing improvement, leading to a highly motivated and skilled workforce as well as the early adoption and diffusion of clinical best practice.

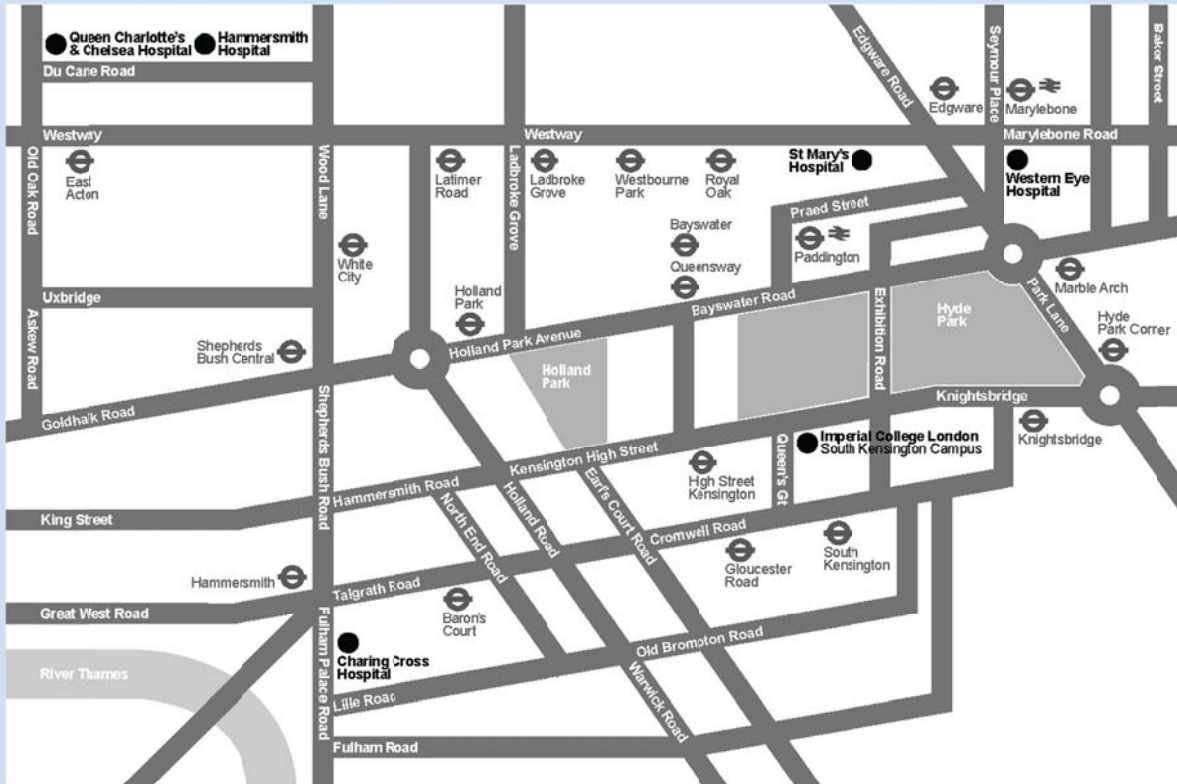
6 Conclusion

Implementation of this clinical strategy will enable us to transform the way we provide our care in order to meet the changing needs of our patients in north west London and beyond. It will mean more local and integrated services, to improve access and help keep people healthy, and more concentrated specialist services where necessary, to increase quality and safety. Crucially, it will reduce hospital admissions – so that patients are only admitted to hospital when they should be. Not because we haven't done enough to help them manage their long term condition at home or because we are waiting for test results to come through. And it will mean better organised care, helping us improve patient experience as well as clinical outcomes.

By 2020, we plan to have invested just over an additional £400 million – on top of reinvesting the proceeds from surplus land sales - in purpose-built or improved facilities within a three-site model – Charing Cross, Hammersmith (including Queen Charlotte's and Chelsea) and St Mary's hospitals. We will also be providing our specialist services through integrated care hubs, in community clinics and through other innovative ways of bringing our services to our patients rather than to always expect our patients to come to us.

We recognise that to develop our strategy further and to implement it successfully, we need to do much more to explain our thinking and to listen and respond to the views and concerns of patients and local communities. And we have to make sure that we have community capacity in place before we change inpatient hospital services.

Contact us and map of Trust sites



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