# Models of Care impacted by Reconfiguration

(Reviewed and up to date as of 1 November 2019)

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</table>
CMG: CSI

Models of Care Impacted by Reconfiguration:

Clinical Support & Imaging
## Design of System-Wide Clinical Models of Care  
### CLINICAL SUPPORT & IMAGING (CSI)

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
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<tr>
<td>Clinical Support &amp; Imaging services (Pathology, Imaging, Pharmacy, Therapies-Occupational Therapy and Physiotherapy, Medical Physics, Booking Centre, Outpatients, Medical Records &amp; Phlebotomy, Breast Imaging, Nutrition &amp; Dietetics) provide diagnostic and enabling care across the UHL portfolio of clinical services to both admitted patient care and outpatient services.</td>
<td>National Benchmarking shows relative underinvestment in Therapies, Dietetics, and Pharmacy, to our peers alongside outpatient growth in Imaging, Medical Physics and Breast Imaging and inpatient/ED growth in Imaging, Therapies, Pharmacy and Nutrition &amp; Dietetics.</td>
</tr>
<tr>
<td>These services act as a catalyst for time to treatment (diagnostics), improving function and effective discharge (interventions &amp; therapy).</td>
<td>There is increasing expectations from users for greater access to Pathology and the imaging family of specialties in order to make quicker diagnosis across elective care, cancer services and emergency care. Pathology will look to work within an East Midlands Southern Cluster with partners in Kettering and Northampton, where benefits are evident.</td>
</tr>
<tr>
<td>Although outpatient referred support services attract unbundled funding, inpatient support services do not. Reinforcing inpatient scanning is essential if a reduction in length of stay is used to bridge any bed gap.</td>
<td>Ward pharmacists, specialist dieticians and therapists can all contribute to a reduced length of stay, whilst providing alternative delivery models to the traditional medicine led model of care in easier to recruit professions.</td>
</tr>
</tbody>
</table>
| Imaging  
The Imaging team comprises of plain film, ultrasound, CT/MRI, Fluroscopy, Interventional and Breast Imaging modalities and has been working towards delivering improved ED and inpatient diagnostics against a backdrop of increasing demand. Turnaround times and responsiveness have improved, but not to the levels expected. | Radiographers, Pharmacists and Therapists can all provide discharge led care within an Emergency Department setting, yet Leicester has historically been behind the curve in maximising this potential. The development of pathway led investment in UHL’s ED floor II will start a welcome reversal of this. |
| Initiatives within imaging have helped partially mitigate the increased demand and | Imaging  
Inpatient Hub - The medical team initiative to provide a robust multi-specialty reporting hub for cross sectional (CT/MR) imaging which has been delivered in 2017; this has allowed the increased reporting and checking of registrars work to take place over 7 days. |
| | Consistent timely vetting and reporting of inpatient scans from all specialties has been achieved. There is increased Imaging happening after 17:00 which increases the amount of checking and verification of registrars work (conrev). |
| | Pressure on scanner time for supervised scanning (such as cardiac CT/MRI at GH), immediate work (stroke/TIA), one stop type access (assessment unit triage/sarcoma etc.) is making it increasingly difficult to increase inpatient imaging during the 08:30-17:30 day, it is essential that flow is maximised during the time |
have allowed the service to continue with a stable performance but with significant impact on the people delivering the service and financial delivery.

when the specialised radiologists are available. The impact of a pressurised portering service and busy wards is impacting on flow within imaging.

3 senior radiographer posts, dedicated to the ED floor came into post Summer ’19 and are improving the quality of the service provided.

The clinicians working in the hub are under considerable pressure. The additional support for the registrars has proved invaluable. Without this initiative the additional demand would have been unsustainable.

A full review of the demand, capacity and skill mix requirements of the hub is underway.

Overnight and weekend SPR cover - The out of hours registrar led service is at capacity reporting up to 40 CT/MR reports overnight and delivering emergency ultrasound. An additional registrar shift from 1pm to 1am was introduced in Nov ‘18 to support the increase workload overnight (following the addition of 3 extra trainees). This is also under review with concerns raised by the registrars around the 1am to 7am shift with one registrar becoming stressful. We do not have sufficient trainees to rotate into a further overnight shift without impacting on their training.

Waiting time for inpatient acute imaging can become lengthy with demands from differing parts of the hospital conflicting with ED demands.

The personal pressure for these members of staff is now a concern and the on-call consultants are being called more frequently to support.

Checking of the registrars overnight reporting by consultants is now taking several hours.

SPR led ultrasound list - Increased inpatient ultrasound is being delivered by additional service from the Imaging SPR group with one additional ultrasound list at LRI Mon-Fri; this has been in place since May ’17 and is working well in terms of skill mix, however the introduction of GPAU and capacity gaps in DVT clinic overflowing into inpatient ultrasound is putting the service under pressure. The lead body sonographer has improved guidance for DVT referral and an additional DVT clinic for Sat/Sun is being trialled in Nov’19 with the support of ESM.

Hot reporting - A seven day plain film hot reporting by registrars and reporting radiographers is in place (predominantly MSK), wherever possible ED films are reported whilst the patient is in ED reducing call backs and improving quality.

This group is also providing a responsive service for inpatients where an urgent report is required.

Radiographic discharge in minors will commence in March ’18, this is underutilised and is under review.

CT1 at LRI - This scanner was replaced when the service moved into the ED floor and was due for removal
Pharmacy
Dispensary-based service provided from all three sites 7 days a week. Clinical trial dispensing provided from all three sites.

Centralised out of hours on call service (clinical and supply) provided from LRI/home 24 hours a day. Centralised services for Procurement and Homecare (LGH), Medicines Information and Aseptics (LRI), Research (GH). Centralised management structure.

CMG Clinical pharmacy teams are not site-based.

Outpatient dispensing provided predominantly by TrustMed, the wholly owned Trust pharmacy subsidiary, is based on all three sites.

Pharmacy
The income is not activity-related therefore we are unable to develop the service to meet the increase in demand, leading to compromised clinical service due to operational pressures. The clinical metrics show ward pharmacy services are inadequately staffed across majority of CMGs. There are workforce risk assessments in place (score 16). The NHS Benchmarking data (2017) showed pharmacy costs of £382k/100 beds compared to national average of £522k. The weekend dispensary opening hours are significantly worse than other trusts with 40% of weekday availability compared to the average of 70%. The growth of on call activity by 30% is in part due to out of hours supply growth.

The Carter recommendations are that 80% of pharmacist time should be spent on clinical activity; we are at 67%. HoPMOp/Carter programmes state that we need to invest in hospital pharmacy in order to deliver efficiency (medicine spends and wider efficiencies e.g. LOS/readmission).

There are risk assessments in place relating to the storage conditions in the Windsor pharmacy, health & safety, infection control and capacity. There are no capital resources available for improvements to be made.

The growth in activity is not sustainable within the current resources. We are unable to reduce operational activity as all medicine/TTO requests must be fulfilled. This is exacerbated by the high variability and late afternoon peaks in demand.

Investment in core services is required to meet the forecast in growth. The service requirements of the core services submitted to star chamber are £379k for 18/19 and £852k for 19/20 onwards to address an underlying deficit and historic growth. This includes:

- Investment in clinical pharmacy service to meet national standards for ITU and achieve one pharmacist/ward. Includes TTO Project. (TTO Project/1 pharmacist per ward in ESM submitted to Star Chamber April 18-total cost £328k)
- Expansion of clinical services in surgery to meet minimum safe level (Star Chamber bid, £110k)

(April ‘17). The development of the post mortem CT service funded the lease on the scanner to be extended beyond its usual life (13 years). This has absorbed much of the additional inpatient activity.

Whilst PMCT is now using the scanner every afternoon, inpatient scanning still takes place on CT1 week day mornings. From December ‘17 outpatient activity has been displaced from an outpatient scanner at LRI (CT3) every afternoon to continue to deliver the raised inpatient activity. Without this additional capacity inpatient delivery at LRI would have required displacement of the outpatient scanner in its entirety with consequences to outpatient delivery and paediatric services.

The replacement of CT1 is now underway a priority to allow continued delivery of inpatient CT at LRI. The machine and an improved privacy and dignity complicate waiting area will be in situ before the end of the financial year. The building work is supported financially by the imaging research team.

Displaced outpatient activity is being delivered out of hours using overtime.
Highly specialised pharmacist-led service are provided by Consultant Pharmacists in Respiratory and Renal transplant.

Medicines Administration Technician (MAT) posts are in place on two wards.

With the exception of aseptics, pharmacy income is not activity based; significant activity increases were seen in 17/18 compared to 16/17 (20% dispensing, 30% on call). Aseptic growth is approximately 7-9% annually.

**Breast Imaging**
The team provide imaging for all breast symptomatic and screening patients. Services are offered 5 days a week with some sessions undertaken out of hours. Screening KPIs are currently challenged with recovery plans in place.

The service aspires to provide patients with the very best high quality care and treatment in a safe environment, ensuring that every person receives the right clinical treatment, information and support at the right time.

**Nutrition & Dietetics**
The Dietetic and Nutrition Service is a provider of expert and highly specialist services on a local, specialist and tertiary referral basis. The D&NS service consists of five distinct teams:

- Adult Critical Care, Surgery

**Breast Imaging**
Pressure within the screening performance delivery, in particular the breast screening round length, is requiring additional capacity to meet the recovery trajectory.

The service have seen a 12% increase in the number of symptomatic 2WW referrals and the continued age extension trial for breast screening invites an additional 5000 women each year.

Over 800 new cancers diagnoses in 2017.

The service echoes the national shortage of mammographers. There is a workforce risk assessment in place (score 15). Agency staffing is above the capped rate due to the national competition and limited expertise across radiography. Overseas recruitment has been successful along with additional trainee posts. 4 of the 8 Consultant Radiologists participate in the in-patient hub requirements with sessions covering acute radiology.

5 mammography grantry machines have been replaced (2018-2019); this has assisted with a reduction in unplanned downtime. In addition the service has introduced some of the latest mammography technology including tomosynthesis, MRI biopsy and CESM.

**Nutrition & Dietetics**
NHS Benchmarking 2019 shows relative underinvestment in Dietetics to our peers.

Within the Trust we have areas of no or low investment and clinical risk specifically in adult haematology, adult critical care, adult gastroenterology, adult diabetes (in and outpatients), paediatric cardiology and neonatology all of which impact on patient safety and lack of compliance peer review standards.

With increasing awareness and training on malnutrition screening we are seeing increasing numbers of
(Specialist and General) & Cancer Services
- Adult Complex Chronic Disease Services (Gastroenterology, Renal, Diabetes, Respiratory, Stroke, Neurology and Cardiovascular)
- Women’s & Children’s Services (Neonatology, Paediatrics including ED and EMCHC)
- Adult Nutritional Support Team including ED
- Adult Medicine and MSK including spinal trauma emergency and planned

The scope of services provided is vast across nutrition & dietetic care of patients including:
- Nutrition Support modalities include nutritional screening, nutritional assessment and interventions such as oral nutritional support, enteral tube feeding and parenteral nutrition
- Specialist diet interventions used to treat diseases include metabolic, allergy and ketogenic therapeutic diets
- Specialist diet interventions used to control diseases include renal, liver, gastro & diabetes therapeutic diets
- Complex nutritional support where appropriate route of artificial nutritional support needs to be assessed
- Complex enteral nutrition, including those patients being considered for or with an established enteral feeding tube
- PN and/or the management of intestinal failure. Standards for LIFT management of PN is detailed in the

<table>
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<tr>
<th>patients referred for dietetic assessment. Our response to adult inpatient referral is steadily declining due to numbers referred with more proactive nutritional screening using the MUST tool we are currently only seeing 80% of patients referred within 2 days of receipt of referral.</th>
</tr>
</thead>
<tbody>
<tr>
<td>We have outpatient growth in joint Consultant MDT and single attendance HISS lists linked to increased incidence eg diabetes, renal, cancer, metabolic, allergy conditions/diseases.</td>
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<tr>
<td>We also have seen growth in off site satellite joint Consultant MDT HISS lists.</td>
</tr>
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</table>
Direct patient facing services are provided for all inpatients, assessment units, outpatients (the majority of which are joint consultant/MCT clinic one stop models & a few are stand-alone booked dietetic clinics), daycare units e.g. Renal and Chemotherapy.

With increasing numbers and complex patients with long term conditions being diagnosed by the Trust requiring diet treatment structured education groups set against an accredited curriculum are delivered e.g. DAFNE for Diabetes and Coeliac disease.

There are also well-defined service training and education healthcare professionals to deliver evidence based nutritional and diet care to patients e.g. nutritional screening 1st line nutritional care, renal & diabetes diets.

Indirect services include:
Advice and Guidance schemes for GPs eg adult coeliac disease and paediatric general.

Training and education of health care professionals on nutrition and dietary care of patients ranges from paediatric and adult nutritional screening, nutritional first line care and diabetes. The ANST also provides training and education to nursing on competency based nurse training for enteral and parenteral nutrition.

Staff in the service increasingly use IT to deliver direct patient care at the bedside eg NerveCentre, eMEDs, specific data sets such as Infoflex, Badger, Proton, Eclipse. We proactively work with IT teams to develop Trust wide systems eg adult nutritional
screening on NerveCentre and paediatric and adult dietetic formularies on eMEDs.

We have a proactive comms and marketing programme based on IT with a dedicated twitter site DIETITIANS_UHL with over 3000 followers and website [www.lnds.nhs.uk](http://www.lnds.nhs.uk)
Pre-hospital

Primary Care
- Alliance
  - Plain film X-Ray and US in community Hospitals
  - MRI Hinckley
- NCSEM (Diagnostic Imaging Centre)
  - MRI, Dexa Scans Plain Film

Inpatient

Imaging – Specialised Services
- Complex CT
- Complex MRI
- Forensic
- Fluoroscopy

At each site (LRI, LGH & GH)
- Plain Film
- Ultrasound
- MRI
- Interventional Radiology
- Fluoroscopy
- CT

Onward Care & Management by referring speciality
2 site model of care for Nuclear Medicine services is already established; having moved off the LGH site a couple of years ago. The proposed consolidation of services on the LRI & GH sites will have little additional impact.

Referrals are mainly within UHL, with a small number from community hospitals and GP’s.

Most referrals are for outpatient diagnostics. Small numbers of inpatient referrals also received.

Introduction of new technology (higher specification gamma cameras) will impact on patient numbers; with growth in referral numbers expected as a result of improved and enhanced imaging being available. 10% growth is a conservative estimate.

Nuclear Medicine also offers a therapeutic service (LRI only), which is growing. Referrals are mainly from within UHL. Expansion in external referrals from across the East Midlands is anticipated; as a result of supporting the NET Centre of Excellence for Neuroendocrine.

Small numbers of patients requiring sentinel node diagnostics are referred to the LRI for the Nuclear Medicine scan. Patients are currently transported between hospital sites to enable same day surgery to be undertaken at the LGH.

This type of scan could be undertaken at either LRI or GH; this will ultimately be determined by co-location with referring speciality.
OVERAL SUMMARY – DO NOTHING MODEL:

Outpatient & Direct Access Activity only

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<thead>
<tr>
<th>Activity Grouping</th>
<th>Service</th>
<th>17/18</th>
<th>18/19</th>
<th>19/20</th>
<th>20/21</th>
<th>21/22</th>
<th>22/23</th>
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<td>Breast Screening Total</td>
<td>Breast Imaging</td>
<td>45,452</td>
<td>47,844</td>
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<td>50,758</td>
<td>52,280</td>
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<td>Plain Film Total</td>
<td>Imaging</td>
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<td>59,313</td>
<td>60,330</td>
<td>61,365</td>
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<td>US Total</td>
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<td>73,806</td>
<td>77,036</td>
<td>80,407</td>
<td>83,926</td>
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<td>CT Total</td>
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<td>38,732</td>
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<td>43,085</td>
<td>45,441</td>
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<td>Fluoroscopy Total</td>
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<td>MRI Total</td>
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<td>40,630</td>
<td>43,148</td>
<td>45,822</td>
<td>48,662</td>
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<td>Nuclear Medicine Total</td>
<td>Medical Physics</td>
<td>6,377</td>
<td>5,866</td>
<td>5,984</td>
<td>6,103</td>
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<td>OT F/Up Total</td>
<td>Therapies</td>
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<td>OT New Total</td>
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<td>Physio F/Up Total</td>
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<td>57,217</td>
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<td>Physio New Total</td>
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<td>Haematology Total</td>
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<td>BACTERIOLOGY Total</td>
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<td>193,243</td>
<td>209,751</td>
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<td>Histopathology Total</td>
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<td>Immunology Total</td>
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<td>Routine Chemistry Total</td>
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<td>7,517,236</td>
<td>7,955,417</td>
<td>8,419,140</td>
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<td>Specialist Chemistry Total</td>
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<td>193,734</td>
<td>205,978</td>
<td>218,996</td>
<td>232,838</td>
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<td>Virology Total</td>
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<td>54,477</td>
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<td>48,239</td>
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<td>Grand Total</td>
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<td>9,582,646</td>
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ED & Inpatient Activity (Imaging only)

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<th>A &amp; E Referred</th>
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<td>Nuclear Medicine</td>
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<td>667</td>
<td>674</td>
<td>680</td>
<td>687</td>
<td>694</td>
</tr>
<tr>
<td>Plain Film</td>
<td></td>
<td>80263</td>
<td>81066</td>
<td>81876</td>
<td>82695</td>
<td>83522</td>
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<tr>
<td>Ultrasound</td>
<td></td>
<td>15842</td>
<td>17426</td>
<td>19169</td>
<td>21086</td>
<td>23194</td>
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<tr>
<td>Total</td>
<td></td>
<td>141721</td>
<td>145496</td>
<td>149513</td>
<td>153794</td>
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</table>
### OVERALL SUMMARY – DO SOMETHING MODEL:

Outpatient & Direct Access Activity only

<table>
<thead>
<tr>
<th>Activity Grouping</th>
<th>Service</th>
<th>17/18</th>
<th>18/19</th>
<th>19/20</th>
<th>20/21</th>
<th>21/22</th>
<th>22/23</th>
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<tbody>
<tr>
<td>Breast Screening Total</td>
<td>Breast Imaging</td>
<td>45,452</td>
<td>47,844</td>
<td>49,279</td>
<td>50,758</td>
<td>52,280</td>
<td>53,849</td>
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<td>Plain Film Total</td>
<td>Imaging</td>
<td>58,313</td>
<td>59,313</td>
<td>60,330</td>
<td>61,365</td>
<td>61,892</td>
<td>62,423</td>
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<td>US Total</td>
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<td>73,806</td>
<td>77,036</td>
<td>80,407</td>
<td>83,926</td>
<td>85,763</td>
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<td>CT Total</td>
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<td>38,732</td>
<td>40,850</td>
<td>43,085</td>
<td>45,441</td>
<td>46,684</td>
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<td>Fluoroscopy Total</td>
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<td>4,076</td>
<td>4,364</td>
<td>4,672</td>
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<td>MRI Total</td>
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<td>38,259</td>
<td>40,630</td>
<td>43,148</td>
<td>45,822</td>
<td>47,242</td>
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<td>Nuclear Medicine Total</td>
<td>Medical Physics</td>
<td>6,377</td>
<td>5,866</td>
<td>5,984</td>
<td>6,103</td>
<td>6,164</td>
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<td>OT F/Up Total</td>
<td>Therapies</td>
<td>6,208</td>
<td>6,535</td>
<td>6,879</td>
<td>7,241</td>
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<td>OT New Total</td>
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<td>1,763</td>
<td>1,856</td>
<td>1,954</td>
<td>2,057</td>
<td>2,165</td>
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<td>Physio F/Up Total</td>
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<td>54,357</td>
<td>57,217</td>
<td>60,229</td>
<td>63,399</td>
<td>66,736</td>
<td>70,248</td>
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<td>Physio New Total</td>
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<td>20,591</td>
<td>21,675</td>
<td>22,816</td>
<td>24,017</td>
<td>25,281</td>
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<td>Haematology Total</td>
<td>Pathology</td>
<td>48,942</td>
<td>52,421</td>
<td>56,147</td>
<td>60,138</td>
<td>64,413</td>
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<td>BACTERIOLOGY Total</td>
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<td>178,034</td>
<td>193,243</td>
<td>209,751</td>
<td>227,670</td>
<td>247,119</td>
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<td>Histopathology Total</td>
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<td>3,936</td>
<td>4,395</td>
<td>4,908</td>
<td>5,480</td>
<td>6,119</td>
<td>6,832</td>
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<td>Immunology Total</td>
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<td>164,784</td>
<td>164,933</td>
<td>165,082</td>
<td>165,231</td>
<td>165,381</td>
<td>165,530</td>
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<td>Routine Chemistry Total</td>
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<td>6,711,948</td>
<td>7,103,189</td>
<td>7,517,236</td>
<td>7,955,417</td>
<td>8,419,140</td>
<td>8,909,894</td>
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<td>Specialist Chemistry Total</td>
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<td>171,385</td>
<td>182,217</td>
<td>193,734</td>
<td>205,978</td>
<td>218,996</td>
<td>232,838</td>
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<tr>
<td>Virology Total</td>
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<td>54,477</td>
<td>47,761</td>
<td>48,239</td>
<td>48,721</td>
<td>49,208</td>
<td>49,700</td>
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<tr>
<td>Grand Total</td>
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<td>7,681,440</td>
<td>8,111,345</td>
<td>8,573,880</td>
<td>9,063,766</td>
<td>9,577,383</td>
<td>10,121,342</td>
</tr>
<tr>
<td>New Configuration/models of care</td>
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<tr>
<td>The new model of care will deliver more patient work up in advance of admission, with registered healthcare professionals (AHPs, therapists etc.) looking after the right patient, at the right time, on the right pathway.</td>
<td>CSI services will be geographically located across the health economy to ensure that each asset is efficiently used to maximum benefit.</td>
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<td>In order to focus medical time on essential duties, alternative professions will be empowered to guide patients on formal pathways of care, whether as an emergency inpatient or an elective outpatient.</td>
<td>Three session days, seven days a week will become the norm across the patient facing services as red to green methodology is further embedded. This will actively contribute to reducing length of stay and this will provide a more constant provision, better placed to match capacity with demand and manage down variation in turnaround times.</td>
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<tr>
<td><strong>Therapies</strong></td>
<td><strong>Therapies</strong></td>
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<tr>
<td>Integrated working of the acute and Community Therapy service</td>
<td>Reduces duplication, improves efficiencies, provides a seamless therapy service and facilitates flow.</td>
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<tr>
<td>Joint with LPT partners to operationalise the Home first principle for the onward care and support of patients requiring further rehabilitation post discharge</td>
<td>The working group to take this forward has a target date of 1/12/19 by which time the new method of working will be understood and starting to roll out.</td>
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<tr>
<td>Develop Occupational Therapy advanced practitioners</td>
<td>Meetings taking place with HEIs to scope out the feasibility. Role exists in Physiotherapy.</td>
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<tr>
<td>To expand the number of Therapy staff with prescribing rights</td>
<td>Appropriate for some of the first contact musculoskeletal roles. 1 post currently in Paediatric respiratory.</td>
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<tr>
<td>To develop a new pathway of person centred care for Brain injury and neurology patients which specifically targets their needs.</td>
<td>A proof of concept is planned. This will involve different ways of working to support patients with cognitive difficulties to return to their usual residence and develop creative ways of meeting their needs facilitating earlier discharge.</td>
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<tr>
<td>To develop a specialist Adult Neuromuscular respiratory service for planned proactive care in the outpatient and domiciliary setting, case management of those with complex respiratory needs; triage and coordination of</td>
<td>Supports flow, admission avoidance and quality of care. A proof of concept showed a reduction in the length of stay and, admissions avoidance by enabling patients to self-manage Through tailored care plans and escalation plans patients are able to access the right service at the right time, improving patient outcomes as well as flow through the healthcare system.</td>
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<tr>
<td>Admission to hospital in an emergency; admission avoidance; specialist advice and training to non-specialist clinician; provision of specialist equipment and an in reach specialist review to wards and early supported discharge service</td>
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<tr>
<td>Development of a First Contact Practitioner (FCP) physiotherapy service across LLR with staff working across community and acute services</td>
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<tr>
<td>Development of Combined Physical and Psychological Programme (CPPP) for high risk back patients</td>
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<td>Development of an advice and guidance Website for musculoskeletal conditions</td>
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<td>The provision of some Therapy outpatient services to community settings e.g. leisure centre</td>
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<tr>
<td>Implementation of central booking for Physiotherapy outpatient services</td>
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<tr>
<td>The development of an Allied led Health professional (AHP) council across the STP</td>
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<tr>
<td>The development of a system wide Therapy and Allied Health professions (AHP) workforce strategy</td>
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<td>Expansion of student placements and links with the Leicester Physiotherapy school including clinical placements in research, service evaluation and audit</td>
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<tr>
<td>Develop apprentice Band 5 roles for Physiotherapy and Occupational therapy</td>
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<tr>
<td>FCP pilot at Forest House Medical Practice has resulted in a continuation of a funded service for 2 session/week. Pilot results mirrored national results in a reduction in: referrals to imaging, secondary care and prescriptions. Working with LPT on an integrated FCP model – hub and spoke to present to the Primary care networks.</td>
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<td>Proof of concept has shown improved patient outcomes, savings in relation to secondary care referrals, pharmalogical and investigative costs.</td>
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<tr>
<td>Supports self-management.</td>
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<td>Supports the shift of activity, demedicalises patients and supports self-management.</td>
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<td>Facilitates efficiencies and equitable waiting list. In place within Occupational Therapy outpatient services.</td>
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<td>Supports AHP advice, guidance and development across the STP.</td>
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<tr>
<td>Supports recruitment and retention and integrated working.</td>
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<tr>
<td>Supports recruitment, retention and supply.</td>
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<tr>
<td>Supports recruitment, retention and supply.</td>
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<tr>
<td>Partnership working with Alliance using advanced practitioner in MSK clinics and fracture clinic</td>
<td>Supports efficiencies and provides a professional governance framework.</td>
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<tr>
<td>Exploration of new ways of working by utilising Plan, do, study, act (PDSA,) audit and research methodologies.</td>
<td>Supports efficiencies, admission avoidance, reduced length of stay and quality of care.</td>
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<tr>
<td>Increase in the rehabilitation and a dedicated weaning service for patients on Adult ICU and ECMO patients</td>
<td>Proof of concept showed a reduction in ICU length of stay and a reduction in the ward length of stay and improved functional outcomes, in line with the most recent evidence, improve compliance with national standards, guidance, and national practice across other large, comparable NHS Trusts.</td>
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<tr>
<td>Increase in the weekend provision of Therapy inpatient services</td>
<td>Proof of concept of a rehabilitation service for ECMO patients demonstrated an average reduction in length of stay of 1.6 bed days. This equates to a total of 54.4 bed days saved at standard ICU bed tariff rate. An additional 2 patients were able to be repatriated within their ECMO bed day tariff compared to the previous year. Funding has been approved for the winter period 2019-2020 of 2 band 6 physiotherapy staff and 4 band 4 support workers with agreement to build into budget setting in 2020/2021.</td>
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<tr>
<td>Implementation of the therapy research strategy including clinical academic posts and increasing research capacity</td>
<td>Proof of concept of an Elective Orthopaedic Occupational Therapy Sunday OT service, demonstrated a 1 day saving in length of stay. This service has now been funded from MSS to provide a 7 day OT service in elective Orthopaedics. Further PDSA’s required in other specialities e.g. Trauma Orthopaedics, Respiratory.</td>
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<tr>
<td>Explore the potential benefits of extended hours in the cardiorespiratory team</td>
<td>Supports quality of care, efficiencies, income recruitment and retention.</td>
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<tr>
<td>Establish a Primary ciliary Dyskinesia post with Birmingham</td>
<td>Proof of concept in CDU initially.</td>
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<tr>
<td>Expand the Occupational Therapy service in cardiorespiratory e.g. Cardiac surgery, Thoracics and cardiac</td>
<td>Initial proof of concept shows a reduction in length of stay.</td>
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<tr>
<td>Development of an Occupational Therapy service for breast cancer and head and neck patients</td>
<td>Business case being developed.</td>
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<td>Expansion of the East Midlands congenital heart service</td>
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<td>Development of a Therapy neonatal service</td>
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<td>Development of an Oncology Outreach Therapy service and expansion of the current therapy inpatient service</td>
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**Pharmacy**

- Move to two-site dispensary model and two-site TrustMed model (both of these require a solution to how diabetes outpatients and renal dialysis at LGH can be serviced) via Trust reconfiguration programme
  - Windsor pharmacy extension completed to allow capacity
  - GH pharmacy extension and out of pharmacy renal fluid storage as per current reconfiguration plan
  - Expansion of TrustMed on GH site (Treatment Centre)
- Implementation of OptiMed project, leading to use of unit dose and an offsite supply model.

Pharmacy-managed biologics service across ESM and gastro (CCG funded).

Enhanced pharmacy support to frailty (3 posts) and EF (3 posts), linked to STP medicines optimisation frailty workstream. Evaluated through AHSN.

Joint UHL and GP pharmacist/care home posts to address STP priorities around Transfer of Care Around Medicines.

Opportunity to use clinical pharmacy posts to support medical workforce gaps/unmet need.

| Staffing approved. |
| Early discussions. |
| The current therapy provision is below equivalent peers |
| A proof of concept showed a reduction in length of stay. |

**Pharmacy**

Greater ability to respond to peaks and troughs in demand. Reduction in stockholding and deliveries as per Carter recommendation.

- Right-sized departments reducing H&S risks and allowing Purchasing for Safety (i.e. ready-made injectables, greater range of TPN etc.); reducing patient harm and delivering CIP.

(On the LRI site a solution for aseptics capacity, clinical trials space, and TrustMed LRI physical growth will need to be found).

The future MOC will feature Pharmacists on the board round to work collaboratively producing timely TTOs and dedicated project management resource to work collaboratively with the ‘Red2Green’ (R2G) team. This approach would result in a focussed group of skilled individuals acting to implement and promote the revised TTO process across ESM wards whilst improving other patient processes more associated with R2G (e.g. patient transportation and destination processes that allow discharge), to further improve patient discharge. The team design is such that parallel working and implementation of the revised TTO process will be possible to allow sufficient time to allow each ward to be monitored and ensure that the process is sustained and become part of daily practice. This future model will ensure continued focus on freeing up beds, allowing medically fit patients to leave hospital at an earlier opportunity and creating capacity for patients waiting upstream. This will deliver benefits in:

- **Clinical Effectiveness:** TTOs will be prepared ‘right first time’ with both medical staff and pharmacist working together to achieve this. More accurate and timely TTOs will be produced by team that know the patient.

- **Reducing Patient Harm:** Fewer errors on TTO document / general reduction in medicines errors. Improvement in flow reduction in congestion in ED. Increase in daytime discharges. The discharge process is likely to be safer for patients. Improved counselling by Pharmacist.

- **Improved Patient Experience:** TTO delivered to ward quicker reducing patient waiting time. Reduced stress and anxiety for the patient and less chance of failed discharge due to transport delays, missed cut-offs, becoming ill whilst waiting for TTO etc. Re-admissions due to poor compliance with medicines are likely to be fewer.
<table>
<thead>
<tr>
<th>Advanced Pharmacy Practitioner Respiroty (interface post)</th>
<th>Compliance with the Carter Review (2016) and the subsequent Hospital Pharmacy Transformation Programme (HPTP) both require Pharmacists to spend the majority of their time carrying out clinical functions in support of medicines optimisation and the clinical care of patients and to reduce the amount of time devoted to infrastructure services. Currently the clinical pharmacy time on wards is 68%, compared to target of 80%. This case would assist UHL Pharmacy services in moving toward a national strategy requirement. This will be measured by scheduling analysis once project implementation is completed.</th>
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<tbody>
<tr>
<td>-Haematology</td>
<td>Delivery of CIP, more efficient use of space within pharmacy (reduction in stockholding), increase in patient safety (reduction in harm due to medicine administration errors).</td>
</tr>
<tr>
<td>-Paediatric chemotherapy</td>
<td>Delivery of LLR savings (£3.2 million) and reduction in harm. Improvement in Model Hospital performance (top 10 medicines savings). Reduction in admission and readmission, de-prescribing, enhanced medicines-related communication on discharge, including referral to community pharmacy for post-discharge review. Earlier medicines reconciliation, prescribing and administration on admission and enhanced access to medicines. Improvement in medicines governance, CQC compliance and reduction in medicines related harm. Identification of CIP.</td>
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<tr>
<td>All the above agreed and/or with income backed business cases in development in conjunction with clinical areas.</td>
<td>Clinical service delivery and/or increase in income in relevant clinical services. Reduction in medicines related harm.</td>
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<tr>
<td>Pharmacist Independent prescriber working in pre-admissions clinic in MSS (under discussion with CMG, funded through vacancies).</td>
<td>Reduction in medical staff time, earlier discharge (Inpatient drug charts and TTOs prescribed by pharmacist in pre-admission).</td>
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<tr>
<td>Clinical pharmacy service that meets national standards for ITU, achieves one pharmacist per ward, delivery of the TTO Project and expansion of clinical service in surgery to meet minimum safe levels.</td>
<td>Maintain responsive core services e.g. dispensing, replenishment, weekend service to meet operational priorities of trust. Expand weekend dispensary opening hours. Deliver Carter requirement of 80% of pharmacist time utilised clinically and support CQC compliance. Reduce patient harm due to medicines and reduce LOS and readmission. Achieve targets for discharge earlier in the day. Support for Board rounds and Red to Green. Improvement in clinical metrics.</td>
</tr>
<tr>
<td>Extended opening times at weekends.</td>
<td>7 day services. Reduction in weekend discharge delays.</td>
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<tr>
<td>Development and implementation of a technician strategy, including capacity to significantly increase apprentice numbers. Proposed this is developed and implemented with support from STP partners (as UHL net provider of technicians across LLR) and UHL nursing (if MAT model is to be expanded) to provide capacity.</td>
<td>Ability to recruit band 4/5 technicians allowing skill mixing (including development of enhanced clinical technician roles), reduction in locum spend, enhanced recruitment and retention, expansion of meds administration roles releasing nursing time. Improvement in metrics e.g. med rec. Ability to extend opening hours. Succession planning in technical roles, reducing risks across services.</td>
</tr>
<tr>
<td>Expansion of pharmacist prescribers-from 19% to 80%.</td>
<td>Better value from staff working at ‘top of license’. Workforce flexibility and options to support multidisciplinary team. Reduction in harm. Earlier access to medicines.</td>
</tr>
<tr>
<td>Implementation of EPMA.</td>
<td></td>
</tr>
<tr>
<td>Potential to develop offsite hub for administration of chemo in collaboration with</td>
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</tr>
</tbody>
</table>
private provider.

Review options for closer working between pharmacy and dietetics.

Potential to review options for relocation of Procurement Homecare when LGH closes—could operate from a non-acute location.

Potential to consider additional location for TrustMed in line with service need e.g. Loughborough.

Expansion of TrustMed opening times in line with proposed shift to three session clinic days in many services

**Imaging**

Imaging at UHL will ensure excellent diagnostic services are available to support clinical need in the two acute sites, whilst providing a community direct access hub at the former LGH site

Diagnostic Imaging continues to expand, it is expected that the 5% year on year overall increase will continue (with CT/MRI expanding at 10%).

The absorption of the community imaging service into the UHL team from April ’17 has helped consolidate economies of scale and opportunities for pathway development outside the acute sites. Plans will be developed and refined over the coming year in collaboration with the ‘better care together’ work stream.

The service will continue to challenge and consider what diagnostic imaging is specialist, what should be delivered in acute

**Imaging**

A consolidation of 7 day access, three session days across the imaging portfolio. The Imaging service needs to move towards a seven day Acute Imaging service at Glenfield Hospital and Leicester General Hospital, supporting the Internal waits and emergency patient flow process standards. The responsiveness of the service to CDU at Glenfield and SAU at LGH is a particular concern.

The service aspires to:
- Deliver a seven day CT, US and Plain Film service at GH and LGH until inpatients moves off of LGH site
- Ensure flexibility to deliver a responsive Imaging service to meet the needs of patients and clinicians as described in section 5 of the Keogh report.
- To provide an Emergency Radiology service to CDU and SAU.
- Ensure adequate availability of specialist radiology staff to deliver safe services across 7 days.
- To provide relevant support to clinical areas in place for the transition to 7 day working.

The implementation of a resilient acute Imaging service is an enabler for site reconfiguration allowing any of the services moving under the proposed options to be assured of an appropriate service for their patients.

The success of the LOGI/abdominal mass and H&N imaging cancer pathways will be replicated across other specialties, leading to a wider discussion around the place of imaging in current pathways.

A new pathway and model of care for the service rests in the opportunity to develop an ambulatory pathway for use by 2/3 of patients admitted with biliary disease requiring a MRCP. This would save up to 300 bed days per annum.
centres, the need to look at care closer to home and the left shift, what could and should be delivered in community hospitals, and the cost implications of all of the above.

Seamless IT systems between primary and secondary care will be needed to ensure robust processes and patient safety.

Imaging will continue to combine accessible, volume diagnostics with cutting edge technology and processes, in order to maximise regional, national and international recruitment in conjunction with developing best practice for our patients.

Nutrition and Dietetics
A need to develop Dietetic input on the emergency floor will support increased discharges home at the front door.

Expansion of extended scope dietetic roles to release medical capacity and contribute to shorter length of stay and readmissions avoidance.

A move to more Imaging led diagnosis and discharge will be debated, the service proposes more streamlined symptom based pathways. This work has started with the diagnostic work streams and now needs to gain momentum. UHL Imaging proposes that cross-sectional Imaging (CT/MR) should be managed in four diagnostic centres for Leicestershire, this is for reasons of equality of access to the best Imaging equipment with highly qualified staff in a safe environment and it needs to be affordable for the healthcare community whilst being efficiently utilised

Development of the Leicester Institute of Imaging Research, The East Midlands Radiology Academy and the consolidation and further roll out of Post Mortem CTs.

Nutrition and Dietetics
One of three factors predisposing people to frailty is malnutrition. We need to develop dietetic input at the Front Door in ED through input via the Rapid Assessment and Discharge (RAD) with an emphasis on preventing clinical malnutrition in order to prevent unnecessary hospital admission which will improve Trust bed capacity. We also need to expand nutrition nursing input into Adult Gastro Daycase for enteral fed patients with tube problems to avoid ED attendance.

Focus remains on proactive, timely and safe discharge planning. Dietitians will develop extended scope roles to be able to train adult inpatients on their enteral tube feeding system including medication administration via the feeding tube. This will provide the Trust with a rapid response model not reliant on a community referral with response being 5 days. This will bring us in line with other acute Trust performance of 24 hour response to training need and subsequent discharge. This will apply to adult areas such as: UGI Surgery (cancer and non-cancer), Head and Neck Cancer, Bone Marrow Transplant Cancer, Haematology Cancer, Gastroenterology Medicine and Cystic Fibrosis. ESP Dietitians will also ring post-surgical cancer patients within 1 to 2 days post discharge to advice on nutrition and hydration issues. The MRET UGI Surgery intervention saved 2 bed days/patient and nullified readmissions. Early pilot suggests that a Surgical Specialist Dietician should feature in the future model of care for CSI services. Such specialist intervention would deliver reductions in length of stay without an increase in rates of readmission; therefore, achievement of more timely discharge without compromising the safety patients though delivering support immediately post discharge. This service will support the move from three sites to two by increasing surgical ward capacity/efficiency and increasing elective and emergency flow, as a result of reduced length of stay. This service further supports "Red to Green", ensuring patients on surgical wards receive dietetic interventions that help to progress readiness for discharge.

This service will link with the Trusts intention to be a recognised NHS England Centre for UGI Surgery. This service will be delivered at the largest site in the Trust, the Leicester Royal Infirmary. This is a highly
<table>
<thead>
<tr>
<th>Develop an adult dietetic specialist haematology cancer service.</th>
<th>Specialised post with extended scope practice and will function across all of the surgical wards at this site.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expansion of non-medical prescribing dietetic roles in adult critical care, renal, diabetes, paediatrics, cystic fibrosis, gastroenterology medicine and chronic pancreatitis.</td>
<td>For Bone Marrow Transplant and haematology the future model of care incorporates a dedicated dietetic service to be established by a dedicated senior specialist dietician as a core member of the haematology and transplant MDT in which the Dietician will see all patients at diagnosis, during their inpatient stay and in outpatient clinics post-transplant. The establishment of a Nutrition and Dietetic Service resource for this cancer patient group will bring about a number of key benefits including improving clinical outcomes and compliance with standards: JACIE, NICE and Cancer Peer Review.</td>
</tr>
<tr>
<td>Develop Advanced Clinical Practitioner dietetic roles in adult gastroenterology outpatients in UHL and UHL Alliance outpatients.</td>
<td>Roles will release medical capacity and enable a holistic approach to prescribing integral to nutrition and diet.</td>
</tr>
<tr>
<td>We will look to develop input into outreach services in the new model of care.</td>
<td>Roles will release medical capacity in endoscopy, outpatients and for advice and guidance. We will develop dedicated dietetic input into the neonatal outreach team for LLR in order to bring about optimal growth and development of the premature infant.</td>
</tr>
<tr>
<td>Establish new services as part of a managed clinical renal network.</td>
<td>We will develop dedicated dietetic input into the critical care outreach team for LLR in order to bring about enhanced recovery and rehabilitation.</td>
</tr>
<tr>
<td>Develop LLR Clinical Care Pathways for a range of conditions such as Adult Gastroenterology: Adult Coeliac Disease.</td>
<td>We will establish a UHL Trust adult dietetic renal service for the Leicester Hamilton Unit in order to provide continuity and high quality care. A non-medical prescriber will provide some of the dietetic resource to this Unit allowing more timely management of a patient’s bone medication. This will enable the specialist dietetic services to take direct access referrals from Primary Health Care as part of the RRF.</td>
</tr>
<tr>
<td>Establish a corporate estates and facilities patient catering dietetic role for the Trust. A large number of incidents and complaints are received by Patient Catering Services, Estates and Facilities regarding no or incorrect provision of diets for the treatment of conditions/diseases as part of the inpatient clinical care plan.</td>
<td>A dedicated post will enable timely patient menu planning and design to ensure patient safety and improve patient experience. Enable the Trust to become complaint with the nutrition and diet aspects of PLACE.</td>
</tr>
<tr>
<td>Development and evaluation of newly funded</td>
<td>Establish a new regional service for these groups of patients with specialist expert teams.</td>
</tr>
</tbody>
</table>
NHS England services:
- Paediatric Primary Ciliary Dyskinesia (funded 2019/20)
- Very Low calorie Diets for people with Diabetes (bid submitted Q2 2019/20)
- Intestinal Failure (bid to be submitted Q3 2019/20)

Expand the use of information technology to provide timely expert advice to health care professionals eg expand advice and guidance to paediatrics and long term conditions such as diabetes and renal.

Use information technology to deliver patient care eg develop APPs for patients receiving oncology chemotherapy and radiotherapy treatments and training for patients and carers pre discharge on enteral feeding systems.

The Dietetic and Nutrition Service Workforce Strategy will be to recruit Dietetic Assistant Practitioners in 2020 as part of a new apprenticeship programme with access to the Coventry University part time post graduate dietetic masters degree.

Develop clinical care pathways eg elderly frailty with clinical malnutrition.

Develop a business case for a dedicated specialist dietetic diabetes inpatient service in view of poor National Inpatient Diabetes Audit results.

Develop a robust R and D Strategy for the service.

Support GPs in assessment, diagnosis and management releasing medical capacity in PHC and ensuring appropriate referrals to secondary care.

Provide early oral nutritional support interventions at the start of oncology treatments to be able to increase access to dietetic services, prevent clinical deterioration such as weight and muscle loss, improve toleration of treatments and improve clinical outcomes including survivorship.

Stabilises the band 5 dietetic workforce and allows us to adopt a “grow your own” model for new band 5 graduate dietitians.

A frailty nutrition care pathway for inpatients so time can be directed to more complex patients.

Improve inpatient diabetes control and management leading to shorter length of stay and reduced patient safety incidents eg hypoglycaemic episodes during hospital admission.

Have more applications for NIHR to allow backfill for clinicians and develop a bridge between research and clinical practice.
<table>
<thead>
<tr>
<th>Medical Physics</th>
<th>Medical Physics</th>
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<tbody>
<tr>
<td>Nuclear Medicine from LRI and GH (see flow chart on earlier page).</td>
<td>Nuclear Medicine – see flow chart on earlier page.</td>
</tr>
<tr>
<td>Medical equipment management (part of Clinical Engineering) have workshops on all 3 UHL sites.</td>
<td>MEMs – more space will be needed at GH to enable bigger equipment base to be managed on that site. LGH workshop will shrink. Workshops provide services to Alliance and Community Hospitals.</td>
</tr>
<tr>
<td>Radiation Safety.</td>
<td>Radiation safety already covers all 3 sites, Alliance and Community for Radiation Safety Services. Due to the expansion of Imaging services at GH there is a need for a small 2 person office at GH for this service to ensure appropriate support to the safe use of ionising and non-ionising radiation on this site.</td>
</tr>
<tr>
<td>Electrodiagnostics.</td>
<td>No change – small specialised service based at LRI working with Hearing Services, ENT and ophthalmology.</td>
</tr>
<tr>
<td>New Born Hearing Screening.</td>
<td>LGH staff and service will move from LGH to join existing group at LRI providing screening in the hospital and community. Already one of the most efficient teams in the UK. No changes anticipated.</td>
</tr>
<tr>
<td>Urodynamics.</td>
<td>Will move with urology/ urogynae – supporting clinics as they move.</td>
</tr>
</tbody>
</table>
CMG: CHUGGS

Models of Care Impacted by Reconfiguration:

- Colorectal, Upper Gastro-intestinal & General Surgery
- Gastroenterology & Hepatology
- Hepato-Pancreato-Biliary (HPB)
- Urology
## Gastrointestinal Surgery: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview</strong></td>
<td><strong>Benchmark (Right care/GiRFT/Model hospital/other benchmark)</strong></td>
</tr>
<tr>
<td>Currently Gastrointestinal (GI) Surgical or sometimes better known as ‘General Surgery’ Services are provided over 3 sites. The ‘general surgical’ component of the service includes hernias (both lap and open) incorporating incisional, parastomal and ventral hernia repair.</td>
<td>As per GIRFT recommendations, consultant-delivered emergency general surgery should be provided. Following reconfiguration this will happen (see flow diagram). Consultant-led Triage and General surgery will be delivered by the AEGIS surgeons. Consultant-delivered colorectal, HPB and Upper GI emergency surgery will be delivered by the new sub speciality rotas. These sub speciality Rotas are (for HPB and Upper GI) Peer review standards. They are also standards by AUGIS for upper GI cancer and Bariatric emergencies. The Sub specialty rotas will allow safe support to the Northamptonshire network as well.</td>
</tr>
<tr>
<td>Both units provide a general surgical on-call service which covers a range of emergencies including perforation, obstruction, non-specific abdominal pain, cutaneous abscesses and investigation and management of abdominal pain.</td>
<td><strong>Quality &amp; safety</strong></td>
</tr>
<tr>
<td><strong>Colorectal</strong></td>
<td>Those who require surgical intervention are at a high risk of adverse events due to co-morbid disease and hence often will require a higher level of care in the post-operative period (HDU or ICU).</td>
</tr>
<tr>
<td>The colorectal service is split across two sites, LRI and LGH. There are 6 colorectal surgeons based at the LRI and 5 at the LGH. There are dedicated colorectal cancer specialist nurses who support lower GI patients across both sites, managed by Securicare.</td>
<td>Post reconfiguration we will be able to create more specialised ward areas. The proposed model for LRI is two surgical wards which will have 8 level 1 beds and specialist Upper GI patients and Colorectal patients. The remaining 2 wards will be for emergency general surgery plus Triage. It is envisaged that the development of more specialised care will lead to higher FFT and greater nurse retention.</td>
</tr>
<tr>
<td>The colorectal service is one of the largest cancer services in the country providing laparoscopic (and robotic) cancer resections and local resections such as TEMS and TART procedures. The unit provides a</td>
<td><strong>Workforce sustainability</strong></td>
</tr>
<tr>
<td></td>
<td>• A major challenge to the move will be middle grade cover and it is likely that the UHL overall will require further staff grade appointments due to the loss of vascular SpRs from the rota and further reductions in trainees anticipated from the East Midlands Deanery.</td>
</tr>
<tr>
<td></td>
<td>• Currently there is no speciality on-call for Upper GI or colorectal</td>
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<tr>
<td></td>
<td>• There is insufficient consultant capacity for elective RTT work</td>
</tr>
<tr>
<td></td>
<td>• Concerns over sustainability of nurse staffing levels on wards and current vacancy rates</td>
</tr>
<tr>
<td></td>
<td><strong>Efficiency and effectiveness</strong></td>
</tr>
<tr>
<td></td>
<td>• Maintaining two separate sites for major in-patient activity results in some duplication of resources. In addition, the surgical take is presently split across LRI and LGH on an approximate 60% and 40% split</td>
</tr>
</tbody>
</table>
supraregional service for patients with locally advanced and recurrent colorectal cancers.

The unit has expertise in managing inflammatory bowel disease and provides ileal pouch surgery. In close collaboration with the Leicester Intestinal Failure Team (LIFT), the unit provides an intestinal failure surgery service. The unit undertakes lower GI endoscopy including colonoscopy and flexible sigmoidoscopy as diagnostic, screening and therapeutic procedures.

Joint collaborative working exists with gynaecology: 1. gynae-oncology for complex cancer resections (3x sessions per month) and 2. for complex benign work such as endometriosis.

The colorectal team at the LRI run a tertiary functional bowel/pelvic floor Service in close collaboration with Urogynaecology colleagues and provide Sacral Nerve Stimulation. The three consultants, who lead this, work in conjunction with Nurse Physiologists who specialise in Pelvic Floor physiotherapy.

The unit provides a high volume benign proctology service, to treat patients with haemorrhoids, fissure in ano and fistula in ano.

**Upper GI**

Upper GI emergencies requiring intervention from the Upper GI team will be cared for at the LRI and be transferred to the care of an UPGI surgeon, whilst Lower GI emergencies requiring intervention will be cared for under a LOGI/colorectal surgeon at either the LRI which results in inefficiency and delay in patient treatment times across the two sites, particularly those patients who are required to be transferred to the LGH site for review and treatment, from LRI.

- Lack of ambulatory facilities adds to current bed pressures as patients are often admitted rather than being treated in an ambulatory care setting.
- Day case procedures make up 52% of our SLA plan with 48% becoming inpatients (defined as a stay overnight). Currently there are differences in the day case rates and conversion to inpatients across the three sites offering day case surgery. There is rationale to suggest cohorting patients into one main site for day case will allow the right resource to support same day discharge, particularly for Hernia & Lap Chole procedures, facilitating flow.

**Demand and capacity/flow**

- Insufficient access to theatre, HDU beds and cancellations of elective procedures.
- Elective and emergency activity impacted by medical admissions outlying to the emergency wards at the LRI adds to demand and capacity pressures on both LRI and LGH as surgical takes get regularly moved which also impacts on HDU at the LGH.
- Challenges in being able to progress the development of one stop services.

**Cost**

Currently there are key challenges in providing colorectal services across two sites and offering day case across 3 sites and inpatient facilities for colorectal services across two sites. Also supporting two triages with specialised colorectal equipment across two sites.

By being able to reduce to 1 site, efficiencies will be gained from being able to work collectively as a team of 11 colorectal surgeons with the specialist nurses being available on one site, rather than splitting their time across two sites to deliver key inpatient and outpatient care.
or the LGH.

**Location**
GI Emergency admissions come to both the LRI and LGH on a 1:1 basis. Direct admissions from ED unless know to the LGH team are admitted to the LRI Surgical Assessment Unit. Bed Bureau admissions, which is a direct access for GP admissions are allocated on a 1:1 basis to either the LRI or LGH surgical admissions unit.

Inpatients are cared for at either the LRI or LGH.

Day case electives are cared for at any of the three sites.

Out-patient services are delivered at the LRI and LGH.

The GI Surgeons work in the LLR Alliance Community Hospitals, to deliver outpatient, endoscopy and same day case elective surgery for patients across LLR.

**Staffing**
The Upper GI team consists of 6 consultants all of whom offer cancer care to patients in the Leicestershire, Rutland and Northampton areas they perform outreach services for Northamptonshire. All surgeons partake in the management of anti-reflux surgery and Leicester is an NHS implanting centre for LINX therapy. Four of the six surgeons offer Bariatric surgery including endoscopic suturing techniques with Leicester being the UK training centre for this
Currently the GI Surgical team is made up of 4 sub-specialist teams; Colorectal (x2), Upper GI, HPB. All four teams currently provide a GI surgical emergency service.

There is currently an emergency GI Service supported by a 1in12 at the LRI and 1in11 rota at the LGH.

All six surgeons perform a full range of surgery for patients with upper GI cancers. They work within a comprehensive MDT in collaboration with radiology, clinical and medical oncology and palliative care colleagues, in addition to the clinical nurse specialists and dieticians. Supraregional patients with rarer tumours such as GIST and small bowel cancer.

The team provide a supraregional bariatric service, in collaboration with a specialist dietician and endocrinology colleagues, performing surgery such as laparoscopic sleeve gastrectomy and gastric bypass.

The team provide a high volume service for patients with benign upper GI conditions such as antireflux procedures (such as laparoscopic Nissen’s fundoplication), treatment for oesophageal dysmotility (laparoscopic Heller's procedure), complex refractory peptic ulcer disease and laparoscopic cholecystectomy (removal of gall bladder).

**Training and Education**
The unit provides excellent education to foundation doctors, core and higher surgical trainees. There is a weekly educational
programme. The unit’s consultants include the regional Core and Higher General Surgical Training Programme Directors. All consultants examine for the University of Leicester undergraduate examinations, four of the consultants are involved in the National recruitment programmes for Core or Higher General Surgical training, and two examine for the part 3 exit examination in General Surgery. Two of the consultants are regional conveners for the Royal College of Surgeons Educational Supervisor (TrACE) training course. One consultant regularly instructs on the Royal College of Surgeons Care of the critically ill surgical patient course. Furthermore, 3 consultants teach RCS basic surgical skills course.

**Research and Development**
The department has an active research programme, with a number of recently completed funded investigator led clinical trials. These trials have led to a number of National and International presentations, and peer-reviewed publications. Follow on work from these studies is underway, with an application for a Programme Grant being worked up in collaboration with the Clinical Trials unit and the Research Design Service. There are excellent collaborations in place with the Leicester Biomedical Research Unit, the Leicester Clinical Trials Unit, the University of Leicester and De Montfort University. Half of the firm hold honorary academic positions with the University of Leicester in recognition of on-going academic and educational excellence.
<table>
<thead>
<tr>
<th>HPB</th>
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</table>
| Hepatobiliary emergencies (such as acute pancreatitis) and other Hepatobiliary emergencies requiring intervention from the HPB team are transferred to the care of an HPB consultant and cared for at the LGH site. The Hepato-Pancreato-Biliary unit in Leicester comprises of 6 surgeons, 3 clinical nurse specialists and a research nurse.  

NB: For further information on the HPB service – please see the HPB Model of Care. |
# Gastrointestinal Surgery: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits: What will this mean against rationale for change?</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How will the new model of care look?</td>
<td>Benchmark (Right care/GIRFT/Model hospital/other benchmark) As per GIRFT, RCS and AUGIS, reconfiguration will allow consultant-delivered care in all categories of General Surgery; Emergency (AEGIS surgeons), Colorectal, HPB and Upper GI. We will be Truly Peer review compliant for both cancer and bariatric pathways. Opportunity to achieve and adhere to cancer targets for colorectal and upper GI cancers and compliance with national standards for RTT benign elective work. Quality &amp; safety Those patients with requiring theatre will be operated on within CEPOD requirements. The reconfiguration of colorectal and general surgery to the LRI site will enable better pathways for emergency patients with prompt intervention for patients who require emergency surgical treatment. The move will result in a single colorectal MDT which will be commensurate with peer review recommendations. Offer prompt and consultant-led investigation and treatment for patients</td>
<td></td>
<td></td>
<td></td>
<td>Workforce impact as a consequence of OP clinic consolidation</td>
</tr>
<tr>
<td>When will it be in place?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aim to reduce to &gt;1% cancellations in-week (target of less than 23.5 sessions)</td>
</tr>
<tr>
<td>Who will provide what activity at which site?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aim for an additional 151.5 sessions per annum to be delivered.</td>
</tr>
</tbody>
</table>

General surgical emergencies will be seen and assessed by the surgical team at the LRI. GP admissions and BB patients will be assessed in a revised and expanded triage unit at the LRI. Patients not requiring admission will be seen by the AEGIS surgeons, and will be discharged or seen in the Emergency Ambulatory Care (ESAC) clinic. Elective colorectal and upper GI patients will be admitted and managed as per the usual pathway at the LRI. Following the development of the Treatment Centre all out-patient clinics, including pre-operative assessment, will be delivered from the Treatment Centre at the Glenfield Hospital. This will mean a transfer of all OP services from the LGH and LRI to the GH site.

When will it be in place?
General surgical services will relocate to the LRI and HpB to the GH as part of the interim ICU moves. Outpatient, day case and 23 hour stay services will move to the GH as part of the delivery of the Treatment Centre.

Who will provide what activity at which site?

Benchmark (Right care/GIRFT/Model hospital/other benchmark)
As per GIRFT, RCS and AUGIS, reconfiguration will allow consultant-delivered care in all categories of General Surgery; Emergency (AEGIS surgeons), Colorectal, HPB and Upper GI. We will be Truly Peer review compliant for both cancer and bariatric pathways.

Opportunity to achieve and adhere to cancer targets for colorectal and upper GI cancers and compliance with national standards for RTT benign elective work.

Quality & safety
Those patients with requiring theatre will be operated on within CEPOD requirements. The reconfiguration of colorectal and general surgery to the LRI site will enable better pathways for emergency patients with prompt intervention for patients who require emergency surgical treatment.

The move will result in a single colorectal MDT which will be commensurate with peer review recommendations.

Offer prompt and consultant-led investigation and treatment for patients.

Workforce impact as a consequence of OP clinic consolidation
Aim to reduce to >1% cancellations in-week (target of less than 23.5 sessions)
Aim for an additional 151.5 sessions per annum to be delivered.
Reduction of 400 WLI per annum
Opportunity through combination of HpB and Urology triage
Move to GH Treatment centre, there will be a central TAA area for day
All emergency colorectal and upper GI patients will be managed at the LRI. All emergency HPB patients will be managed at the GGH. New pathways will ensure that all emergency patients will be directed to the correct site for assessment +/- admission. Further discussions will take place as to ensuring patients are able to go to the correct site at times of severe capacity constraint.

**Shift to community provision**

Services such as ‘general’ surgery i.e. hernias can predominately be provided for in the community.

Please see further below information for proposed future models of care for Hernia patients.

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**Workforce sustainability**

- Following reconfiguration, there will be an expansion in the numbers of Ambulatory and Emergency GI Surgeons (AEGIS) consultants to a 5 (3 are already in budget). Their role will to provide cover for general surgery admissions at the LRI from 08:00 to 20:00 hours and deliver “front door” consultant input for surgical admissions.
- The pooling of consultants at the LRI will also have beneficial impact on elective activity by reducing the frequency of on-calls.
- The AEGIS surgeons will convert a significant proportion (up to 65%) of surgical attendees to an ambulatory and “hot clinic” clinical pathway. When not providing emergency cover, they will support the day case elective pathway and “left shit” of surgical activity to the alliance.
- The move will allow for economies of scale with better use of middle-grade and junior doctor cover and provide new training opportunities, with a broader case mix of patients.
- By moving all OP clinics to the treatment centre and by improved scheduling of OP clinics, this would reduce the need for as many administrative staff.

**Efficiency and effectiveness**

- The new triage area at LRI will enable ambulatory surgical care to be delivered to a much broader range of patients than at present. This will also support patients presenting with acute abdominal pain.
<table>
<thead>
<tr>
<th>Demand and capacity/flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>• By ensuring prompt and efficient processing of emergency patients, more bed spaces will become available for elective cases leading to fewer cancellations for cancer resections.</td>
</tr>
<tr>
<td>• Move to GH Treatment centre, there will be a central TAA area for day case.</td>
</tr>
<tr>
<td>• Opportunity to offer laparoscopic bowel resections with a concomitant reduction in length of stay to as many as patients as possible.</td>
</tr>
<tr>
<td>• Provision of the outpatient, day case and 23 hour stay service in the future treatment centre will facilitate the use of one stop diagnostic and outpatient services with dedicated Radiology input</td>
</tr>
<tr>
<td>• The potential to develop ambulatory services will release much needed bed capacity at the LRI for emergency care</td>
</tr>
<tr>
<td>• Developed hernia pathways to support ambulatory pathways utilising community services will create capacity in the acute for specialised work.</td>
</tr>
<tr>
<td>Cost</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>• With improved ambulatory pathways/triage, it is likely LOS on inpatient wards will increase, however this will present the opportunity to backfill with % growth in demand with less costs to manage demand with an associated future income opportunity.</td>
</tr>
<tr>
<td>• Reduced triage costs</td>
</tr>
</tbody>
</table>
Clinical Model of Care

General surgery—Emergency Patient Flow

Pre-hospital ➔ Attendance ➔ Inpatient ➔ Discharge

Local Hospital Care

At each site—Enhanced Emergency Hubs

11 Colorectal Surgeons & 6 Upper GI Surgeons

Treat & Discharge

Treat & Transfer

General Surgery - Specialised Services

Lower GI
Upper GI
Bowel
Cancer
Oncology

Local Health and care initiatives

Pre-hospital Attendance Inpatient Discharge

Emergency Theatre

Surgical assessment unit (SAU)

Base Ward

Intensive Care Unit (ICU)

Follow up care at local hospital

Acute/non-acute step-down/home
Patients triaged by senior surgical triage supported by the Ambulatory & Emergency GI Surgeon (AEGIS). Patients with general surgical problems and/or those who can be treated on an ambulatory pathway or managed by the AEGIS surgeon working 08:00 to 20:00 on the surgical admissions area.

Short stay patients (<72 hours) requiring ambulatory surgical intervention e.g. lap appendix or period of observation stay under the AEGIS surgeons.

Patients with significant Upper GI or colorectal pathology admitted under the speciality team for definitive surgery or treatment.

Managed on ambulatory setting, placed straight to waiting list for definitive surgery or endoscopic procedure.

Discharged.

Requiring admission

Local

Managed on ambulatory setting, placed straight to waiting list for definitive surgery or endoscopic procedure.

Discharged.
General surgery – Elective Patient Flow

Pre-hospital Attendance Inpatient Discharge

Local Hospital Care
- GP Referral
- Post emergency stay

Treatment & Transfer to Specialised Hubs

Referral
- Straight to test CT/MRI/Endoscopy
- Virtual review

Diagnostics
- Pre assessment

Glenfield Treatment Centre
- Out Patient clinics
- Virtual review

Treat & Discharge/Decision not to treat and discharge

Glenfield treatment centre

LRI Elective Inpatient Care

Glenfield Treatment Centre
- Daycase
- 23 Hour stay

Acute/non-acute follow up
- Home
- Follow up care at local hospital

Specialised Services
- General surgery -
No change in elective pathway- additional hot clinical slots, choose and book advice and guidance. The provision of an additional 5 AEGIS surgeons will help support left shift of work into the community and meet RTT demands.

Added to in-patient elective waiting list either day case or main theatre or elective endoscopic intervention.
New Models of Care – Hernia Pathway

As part of the STP to support the delivery of patient care closer to home and utilise NHS resources more effectively, there is an impetus to move activity from Acute Trusts to Community settings. Hernias have been identified as a low risk category of patients who can receive surgical treatment in predominately a day case setting. By shifting some of the activity currently undertaken at UHL to the Alliance, this would free up theatre time and support the delivery of specialist complex work. It also provides the option to provide care closer to home.

Figure 1 demonstrates the current hernia model:

This model is unwieldy in that patients are assessed either within the UHL or the Alliance after triaging the referral and if a DTT is made then they may have to be moved from one to the other depending on the complexity of the repair and co-morbidities. This can result in delays in the patient pathway.

The hernia hub will centralise all hernia assessments within the community. In combination with the revised PRISM forms (ensuring that only patients with symptomatic hernias are referred), the hernia hub will streamline the pathway and patients will be triaged to either community or UHL waiting lists.

Figure 2 demonstrates the proposed alternative hernia model:
New PRISM referral guidance to ensure that only symptomatic and clinically evident hernias
### Overview
The Digestive Diseases Centre in Leicester is one of the largest clinical gastroenterology centres in the UK. The Centre is staffed by a team with wide expertise in the fields of genetics, biochemistry, mutagenesis and pharmacology. They provide a range of services for patients requiring intestinal and gastroenterological treatment for stomach problems.
Gastroenterology clinics are held for a range of conditions including colitis, liver, rectal bleed and follow up cancer clinics. One of the most common procedures is an endoscopy used for internal exploration of the stomach using a camera. Other procedures also carried out include:
- Colonoscopies and flexible sigmoidoscopies
- Transoesophageal echo scans (TOES)
- Hydrogen breath tests
- Liver biopsies

### Location
Leicester Royal Infirmary has a purpose-built endoscopy unit, with up-to-date video equipment, carrying out all forms of diagnostic and therapeutic endoscopy. Leicester General Hospital has a modern multi-room endoscopy suite with X ray equipment.

### Benchmark (Right care/GiRFT/Model hospital/other benchmark)
- Responsibility for delivery of Bowel Cancer Screening Service – accountability via NHSE and PHE. 2017 Visit outcome demonstrated compliance with standards. UHL is only one of 2 centres rolling out a full bowel screening service and are an exemplar site for this. Please see attached outcome from March 2017 Screening Quality Assurance Visit Report. (page 6/7)

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- Gastroenterology contributes to the Inflammatory Bowel Disease (IBD) registry which will provide future information on quality standards.
- NHS England, the commissioners of IF surgery and care for patients with IF requiring more than 21 days nutritional support, have indicated their intention to procure services against a new, as yet unpublished, service specification. A previous attempt at procurement and consolidation of IF services by NHS England was halted. This new specification is again likely to concentrate services on fewer sites. At this stage it is not clear whether the East Midlands will be served by one or two providers. A national consultation has been initiated and providers have been asked to bid for services by November 2019.
- The service is JAG accredited for Endoscopy at both the Glenfield and LRI site but not at the LGH site.
- The recent Model Hospital review identified:
  - Cost per WAU for Gastroenterology is £4,168 and we are in quartile 4 for this speciality.
  - We are currently working with the PLICS team to validate the data and understand how we record information to identify why spend is significantly higher than our peers.

### Quality & safety
- Both Inpatient and Outpatient FFT scores attract a positive rating
- Previous CQC inspection reports highlighted that the diagnostic imaging service could demonstrate
screening facilities in the nearby X-ray department. We carry out more than 6000 endoscopic procedures a year.

**In Patient Services**
In patient services are provided from 2, 28 bed wards at the Leicester Royal Infirmary, the offer specialist input from either luminal, nutrition or the hepatology team.

**Outpatients**
Outpatient clinics are provided at LRI and LGH. Each clinic has eight new appointments and 12 follow-ups. There are no outpatient procedures. The current outpatient suite can also be used for pre-assessment prior to endoscopy.

Where possible OP activity is delivered in the community under the Alliance in community hospitals.

**Daycase**
All daycase procedures are done in Endoscopy rooms. Currently Gastroenterology use seven endoscopy rooms – three at GH as part of ward 25E, two each at LGH and LRI. The service is available Monday to Friday, two session days at LRI and LGH and three session days at GH. To meet demand, weekend working is being investigated – two session days Saturday and Sunday. Services are also provided within the Alliance. Gastroenterology is the main user of endoscopy; however, Bronchoscopy (Renal Respiratory and Cardiac) have seven sessions per week at Glenfield. Endoscopic retrograde cholangiopancreatography (ERCP) learning from audits. Actions and learning have been collated and presented to the team;

To respond to this there is a monthly consultant meeting where audits are presented and a quarterly Endoscopy user group.

- CQC visited Gastroenterology wards 19 July 2017 and noted several areas of concern including:
  - Diabetes Management
  - Fire safety policy & procedures
  - Medicines Management
- The CQC re-visited the Gastroenterology wards in Feb 2018 and although they found progress in Diabetes management further improvement is still required

**Workforce sustainability**
- Concerns over sustainability of nurse staffing levels on in patient wards
- An emergency take (any patient experiencing a GI bleed across all three sites requiring an endoscopy for diagnosis / treatment) is run over 3 acute sites which results in on call rotas being unsustainable. Services are provided 7 days per week, managed on a 5 day workforce comprising nurse endoscopists, GI surgeons, endoscopy fellows and a Physicians Associate. This has not affected retention rates and in fact Gastroenterology in terms of clinical staff has increased significantly over the last three years from 12 consultants to 19, a new Physician Associate and an Endoscopy Fellow role.

**Efficiency and effectiveness**
- Work continues on efficiencies in Triage with patients who can be sent direct for Diagnostic test identified early. The service has also introduced direct to test pathway for Coeliac and rectal bleed.
- Advice & Guidance successfully introduced for Hepatology and has been started as of May 18 for the general Gastroenterology service.
- All patient referrals are triaged by consultant gastroenterologists to ensure that the correct pathway is identified at the earliest point.
- Lack of ambulatory facilities adds to current bed pressures as patients are often admitted rather than being treated in an ambulatory care setting.

**Demand and capacity/flow**
- Endoscopy demand is growing significantly. Projected growth 50% in the next 3 years (colonoscopy). 5% - 20% increase predicted for 2WW referrals for lower GI because of FOB testing – NICE guidance; Quantitative faecal immunochemical tests to guide referral for colorectal cancer in primary care. [DG30]
- Although the service is an exemplar site for bowel cancer screening the increase in activity is increasing pressure on the service.
ERCP is undertaken in the imaging department at LGH.

**Staffing**
There are 13 consultants and registrars. Each consultant and registrar has two clinics per week – a total of 26 clinics.

**Teaching and training**
The service seeks to promote national training programme for nurse endoscopists and training for Physicians associates.

**Research and development**
- Outpatients are becoming more complex as patients are more acutely unwell as we are medically managing patients who previously may have had surgery or may well have died. Improvements in medication have resulted in more patients requiring close monitoring which also has an impact on capacity.
- More complex endoscopy (EDM, EMR) which take up more units on a list. These couldn’t move to the community (5% will be under heavy sedation – requiring anaesthesia). This will happen naturally. Resulting from more screening etc. Casemix appropriate for secondary care/acute management.
- Fibro scans are likely to increase – more requests coming from rheum, diabetes etc. These could be in the community (the research clinics are looking at this).
- Prescription of biologics likely to increase – NICE guidelines. (KTT15: Biosimilar medicines)
- National liver plan – deaths from liver disease going up. Means more outpatients and inpatient work. Working with IDU as more patients are eligible for treatment as pervious non-responders can be treated with new drugs. We are also completing in-reach into local prisons to ensure this cohort of patients receives adequate care.
- Intestinal failure home parental nutrition is increasing. About 30% of patients with a stoma will be admitted. Ambulatory models of care would improve care for these patients and would help with admission avoidance.
- Due to a greater awareness of inherited cancers, both upper and lower GI there is an increase in referrals from medical genetics.
- Insufficient access to theatre, HDU beds and a lack of diagnostic and dedicated theatre lists adds to demand and capacity pressures.
- Endoscopy service are delivered across seven sites; x3 UHL and 4 within the community and consultant job plans are fixed, this current arrangement with the Alliance limits flexibility to deliver the service in a way that optimises available capacity and use of the workforce.

**Cost**
- In order to deliver the current level of demand the service is operating a 7 day service, with an additional shift (x3 day shifts) at the GGH with a workforce that has been set up to deliver five day working. This means there is a considerable overspend for WLI for both clinical, nursing and administration costs.
- Management of change process underway to implement 7 day working for administrative staff. Although a small number of additional posts will be required, this will be offset by the large amount of premium spend savings.
- Current loss of income associated with failures in endoscopy decontamination facilities resulting in procedure cancellations and loss of income £72K per month.
- Because the LGH is not JAG accredited we do not received BPT at this sites this contribute a further loss of income of circa £400K per annum.
Gastroenterology & Hepatology: Summary of proposed changes

|-------------------|----------|--------------------------|--------------------------|------------------------------------------|-------------------|
| Who will provide what activity at which site? | Benchmark (Right care/GIRFT/Model hospital/other benchmark)  
- Reconfiguration of gastroenterology and hepatology services will achieve JAG accreditation standards.  
- The service will remain compliant and a leader for Bowel cancer screening services and will have the capacity to meet future demand.  
- UHL has previously indicated its intention to continue to provide IF services which support our cancer and other surgical portfolios. A decision as to whether UHL will bid in a future procurement will be made by the executive team when the financial and other arrangements are published. In anticipation, he service has been developing service to meet the standards previously published, but not adopted by NHS England. Reconfiguration of services onto 2 sites will promote this.  
- Reconfiguration will provide the opportunity for the service to look at overall cost and readdress issues raised through model hospital. | Will allow the service to provide ambulatory care in daycase beds | Efficiencies will allow us to support demographic growth without the need for an increase in bed base | Will support a decrease in 1st OP waiting times due to the efficiencies gained from being at one site. | Will allow the endoscopy service to meet the ever increasing demand and to ensure the service is fully JAG accredited. |
| In patient emergency care: | | | | | |
| In patient emergency care including emergency endoscopy will continue to be provided at the LRI. The emergency pathways will remain as they are currently provided. Emergency patients will be referred from ED and AMU. The inpatient wards at LRI will provide emergency care for patients with : Hepatobiliary or Pancreatic disorders, Non Malignant Liver disorder Non Malignant Pancreatic or | | | | | |

Quality & safety  
- The service will benefit from consolidation onto 2 sites rather than the current requirement to cover 3 hospital sites 24
**Biliary Disorder**

Inflammatory Bowel Disease – Simple. More complex specialised services will be provided for the management of Inflammatory Bowel Disease – Complex, Intestinal Failure and Liver Failure. The GI Bleed service will continue to use daily emergency theatre lists at the LRI and will continue to offer a 24 hour a day service to cover emergencies at the GH should they arise. The service will benefit from consolidation onto 2 sites.

**Elective Endoscopy**

The future model for endoscopy is an integrated LLR service that makes best use of facilities across LLR managed through a single centralised booking system, promoting care closer to home and improving patient experience. This will provide greater flexibility across the service and will afford more acute capacity for more complex patients. In addition at GH as there will be a greater medical presence and consolidation of services on the GH site.

**Outpatient and Daycase**

hours per day 7 days per week, this will mean that patients identified for the emergency service will be seen and treated in a more timely manner.

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**Workforce sustainability**

Efficiencies and best use of the staff
Minimises the impact of seasonal availability and increases staffing over the winter period to support increased demand

**Efficiency and effectiveness**

Earlier access to advice, information and treatment reducing the burden on the Health economy.
Reconfiguration and co located facilities in the treatment centre will offer the opportunity for ambulatory services for stoma patients and acetic drains promoting admission avoidance. Improved nurse staffing and workforce may opportunities for developing R2G discharge planning and other similar initiatives to mitigate delayed discharges.
Consolidation of all elective endoscopy services in the treatment centre will enable increased efficiency and flexibility to work across 5 – 7 days per week.
services
In UHL Elective endoscopy, daycase/24 hour care and outpatient services will be provided from the treatment centre at the GH site. Services currently provided from Ward 25 at GH will move into the treatment centre to allow a dedicated centralised 10 suite facility for all elective endoscopy procedures. Whilst gastroenterology is the main user of endoscopy Bronchoscopy (Renal Respiratory and Cardiac) will continue to use have seven sessions per week at Glenfield. Endoscopic retrograde cholangiopancreatography (ERCP) (fluoroscopy?) that is currently undertaken in the imaging department at LGH will transfer to imaging facilities at the GH site.

Theatre Provision
Sufficient theatre access to deal with the demand ensuring that all patients are treated within their treatment targets will also be as a result of reconfiguration. Theatre capacity will be provided for emergencies at the LRI and any elective procedures at the GH

Demand and capacity/flow
In order to counter increased accessibility, referrals (both internal and external) will be optimised through the enforcement of electronic requesting and adoption of clinical pathways to ensure all requests are appropriate.

- Reconfiguration and centralisation of elective endoscopy services at the GH provides future opportunity for endoscopy to be undertaken under GA rather than using a main theatre (1 list per week).
- As part of the current work to look at the future provision of endoscopy decontamination and the space required within the treatment centre demand and capacity modelling has been undertaken for gastroenterology services. This also takes into consideration the impact of the increasing demand as a consequence of the bowel screening programme. 10 Endoscopy suited provided in a centralised area will promote efficient ways of working as well as future proofing the service.
- Provision of the outpatient, daycase and 23 hour stay service in the future treatment centre will facilitate the use of one stop diagnostic and outpatient services with dedicated Radiology input.
- The potential to develop ambulatory services will release much needed bed capacity at the LRI for emergency care and offer the opportunity for a dedicated bed base should we become a future centre for IF services.

Cost
Outpatient services are currently located across both LRI and LGH, by co-locating the outpatient clinics this will ensure all patients are seen in the timeliest manner as all clinicians will have access to rooms on one site and can provide cross cover. Pre-assessment for patients requiring heavy sedation will be provided from the pre-assessment hub in the treatment centre.

**Shift to community provision**

*Services will be developed in the community to enable:*

- access pain management support
- Provide social behavioural support for Non-Medical conditions
- Promote self-management for example patients with stable IBD
- Dyspepsia pathways
- Access to first contact plus
- Fatty liver groups

**When will it be in place?**

For those services that are moving these services will transfer to the Glenfield site once the Glenfield new build project including the

**Maximises recovery of lost income due to separation of elective and emergency flows**

- Will ensure that all endoscopy procedures carried out will attract BPT, increasing income by £400k at least per annum. To note that this is based on current LGH activity but the 10 room unit will allow for greater activity numbers.
- UHL currently complete approximately procedures 25,000 per year, a 10 room unit would allow the service to increase activity by approximately 35,000.
Treatment Centre has been delivered.
Gastroenterology & Hepatology – Emergency Patient Flow

Pre-hospital ➔ Attendance ➔ Inpatient ➔ Discharge

Local Hospital Care

Local Health and care initiatives

At each site – Enhanced Emergency Hubs

Triage

AMU
GPAU
A&E
AFU

Treat & Discharge

Local

Short Stay(<72hr)
Hepatobiliary or Pancreatic procedures
Non Malignant Liver disorder
Non Malignant Pancreatic or Biliary Disorder
Inflammatory Bowel Disease - Simple

Gastroenterology & Hepatology - Specialised Services

Inflammatory Bowel Disease – Complex
Intestinal Failure
Liver Failure

Treat & Transfer

Acute/non-acute step-down/home

Direct Referral to Dietetics

Follow up care at local hospital
Gastroenterology & Hepatology – Elective Patient Flow

Pre-hospital Attendance Inpatient Discharge

Local Hospital Care

Local Health and care initiatives

At each site

Patient Booked

Out Patient clinics

Day Case

Diagnostics

Referral

Treat & Discharge

Local

Short Stay (<72hr)

Adult Stable Ulcerative Colitis (IBD)

Newly Diagnostic & management of Coeliac Disease

Adult irritable Bowel Syndrome

Specialist Nurse for IBD Monitoring & On-going review

Acute/non-acute step-down/home/
Self-Management

Follow up care at Hot Clinic/Specialist Nurse/Virtual Clinics
**Design of system-wide clinical models of care**

**Hepato-Pancreato-Biliary (HPB) Unit: Cancer, Haematology, Urology, Gastroenterology and Surgery (CHUGGS) Clinical Management Group (CMG)**

**Hepato-Pancreato-Biliary (HPB) Unit – current position**

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
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<tbody>
<tr>
<td><strong>Overview</strong></td>
<td><strong>Benchmark (Right care/GIRFT/Model hospital/other benchmark)</strong></td>
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</table>
| The Hepato-Pancreato-Biliary unit in Leicester comprises of 6 surgeons, 3 clinical nurse specialists and a research nurse. We cover a catchment area with an overall population is around 2.5 million including Leicestershire, Peterborough, Kettering and Northampton. The work of the unit can be broadly divided into 5 main streams comprising of Endoscopic Work (ERCP & EUS); Cancer & Major Resections; Major Complex Biliary Work; Laparoscopic Cholecystectomy & Day case Procedures. | - The HPB unit’s 30-day mortality and long-term survival figures are within or exceed reported national averages. Other markers of excellence such as exploration rates for malignancies and tissue diagnosis percentages exceed national average.  
- Royal College of Surgeons guidelines have recommended that up to 75% of patients undergoing DCLC could be discharged home the same day.  
- The Association of Surgeons of Great Britain and Ireland -“Emergency General Surgery; The Way Forward” suggests multiple (non-evidence-based) proposals to meet the demands of emergency surgical admissions. Nine measures have been proposed including senior triage at the “front door” may help reduce the number of emergency admissions, reduce the time to appropriate intervention and possible reduce LOS.  
- NICE Guidelines stipulate that all suitable patients with uncomplicated gallstone disease who are fit enough are treated within 1 weeks of presenting with acute choledystitis. These patients can be operated on their index admission or discharged with analgesia and placed on a “hot gallbladder list. UHL currently achieve this for 30 -40% patients due to the lack of 24/7 HPB cover for gallstone disease and other pressures on the emergency list. Reconfiguring HPB services will improve this compliance rate. |

**Endoscopic work:**
The majority of the endoscopic work involves endoscopic retrograde cholangiopancreatography (ERCP). There are presently 7 ERCP practitioners within the trust. Leicester is unique in providing such an integrated service where surgeons undertake the majority of the ERCP procedures and also provide the majority of cholecystectomies. This affords an unprecedented opportunity to promptly treat jaundice and allows for a simultaneous assessment by a surgeon to determine suitability for cholecystectomy (if benign |

**Quality & safety**
- Recent patient surveys show 90% of patients stated that they would recommend the UHL HPB unit to a friend  
- Issues concerning EOL Pathways- this is due to the lack of comprehensive palliative care support at the LGH site. This is a combination of a lack of palliative care provision and the “three site” configuration. Moving services to the Glenfield should ensure better palliative care support and in turn will enable EOL discussions to take place more comprehensively for patients with malignant obstructive jaundice before embarking on endoscopic treatment to treat their jaundice.  
- Prolonged length of stay for jaundiced patients on account of current delays with radiological input and management planning
disease) or major resection if malignant.

HPB Cancer Work
In 2013 over 1,500 suspected cases of cancers of the liver, gallbladder, pancreas, duodenum, spleen and adrenals were discussed at our MDT. We undertake 100 curative resections for liver malignancies and 50 pancreatic explorations annually. In addition, we offer a wide range of palliative treatments (including ablation, biliary stenting, TACE and chemotherapy) for HPB malignancies. We have made major changes in our processing of our 2WW referrals (including a new HPB-specific proforma) to improve the patient pathway and expedite access to treatment. Since these improvements, we have achieved a 90% compliance with 62 treatment targets and 100% 31 day targets. Our mortality figures over the last 2 years were <1% for both pancreatic and liver resections. Leicester HPB also has the largest series of total pancreatectomy and autologous islet cell transplantation in Europe.

Benign Biliary Work
In addition, to our cancer services we provide the majority of the benign biliary work in Leicester including gallstone disease, acute pancreatitis, chronic pancreatitis and obstructive jaundice. The HPB unit undertook over 1,000 ERCPs in the last year and over 500 of the 600 cholecystectomies undertaken in Leicester.

“Hot” Gallbladder Service
The unit currently attempts to undertake

Workforce sustainability
- Nurse staffing vacancies and difficulties with recruitment and retention
- 1:11 consultant on-call
- Lack of consistent HPB cover
- Significant problems with medical staff recruitment medical staff recruitment and retention issues across all grades
- The changes within the case mix, together with a reduction in trainee numbers, has led to the removal of the middle tier critical care training rota at the LGH unit.

Efficiency and effectiveness
- Opportunities to reduce readmission rates further noting that the service has one of the lowest readmission rates when benchmarked against other
- Ability to run hot jaundice clinics to avoid GPs admitting patients unnecessarily – many patients can be diagnosed in clinic and a management plan and treatment commended in an ambulatory setting

Demand and capacity/flow
- Streamed take to the LGH for HPB pathology
- Lack of consistent and sustainable HDU support services
- Insufficient IR lists resulting in increased length of stay
- Emergency demands impact elective patients resulting in cancellation of elective procedures and loss of income
- Day case activity currently undertaken through the in-patient bed base

Capital Cost
A pilot study comparing emergency laparoscopic cholecystectomy for admissions versus standard treatment demonstrated that this is a cost-effective approach to managing patients with acute cholecystitis on their index admission. Indeed, the projected increase in income could be as high £608,000 due to the higher emergency tariff. This benefit is independent of reductions in LoS which has been estimated at a bed day saving of over 400. These targets could be met if the number of emergency lap choles was increased from 100 (presently) to 374 annually. Other data has demonstrated a saving of 800 bed days annually if patients with emergency biliary conditions are admitted directly under an HPB consultant rather than consultant from an alternate speciality.
cholecystectomies for patients admitted with biliary colic or acute cholecystitis on their index admission. Suitable patients with uncomplicated gallstone disease are discharged with analgesia with definitive surgery scheduled the following week.

**Laparoscopic Cholecystectomy & Day Case Procedures**

Laparoscopic cholecystectomy is undertaken for gallstone related pain and/or complications which have arisen from gallstones such as acute pancreatitis or jaundice. To a lesser extent this procedure is also undertaken for premalignant gallbladder conditions such as polyps. Cholecystectomy is the most commonly performed operation in general surgery in the UHL and the vast majority of these procedures are undertaken by the HPB unit. In addition to undertaking the majority of the gallbladder resections, the HPB unit also performs a significant proportion of the hernia repairs as part of its general surgical commitment.

**Staffing**

The Hepato-Pancreato-Biliary unit in Leicester comprises of 6 surgeons, 3 clinical nurse specialists and a research nurse.

**Teaching and training**

The unit is committed to an active education programme from fellowship teaching, teaching of foundation year doctors, undergraduates and primary care practitioners (in addition to allied health care personnel). This teaching forms an integral part to offering HPB patients (with both
benign and malignant disease) the best care possible. Accurate data collection on procedures undertaken is essential to provide accurate figures for hospital standardised mortality.

Research and development
The unit supports an active research programme dedicated to early diagnosis, novel treatments and mechanistic pathways is essential to improve patient care. Academic work undertaken by the unit spans both randomized clinical trials and molecular in vitro work. The unit understands that internal standards must be maintained by the regular use of audit which should be published (when applicable) in peer-reviewed journals. The unit has a number of on-going clinical trials and translational research in addition to collaborative projects with the Universities of Cambridge and Adelaide.
### Hepato-Pancreato-Biliary (HPB) Unit – Summary of proposed changes

|-------------------|----------|--------------------------|--------------------------|------------------------------------------|-------------------|
| **How will the new model of care look?**  
Moving HPB to the Glenfield site will enable the unit to run as a “stand alone” service providing consultant-led care for patients presenting with emergency biliary pathology with emergency laparoscopic cholecystectomy undertaken on their index admission. This will result in significant efficiencies and have a positive impact on length of stay for emergency admissions and help reduce the RTT backlog for laparoscopic cholecystectomies 40% of whom present as emergencies on their pathway. | **Benchmark (Right care/GIRFT/Model hospital/other benchmark)**  
- Reconfiguration (in conjunction with the planned ambulatory care hub) should increase the same-day discharge rate for laparoscopic cholecystectomy.  
- 24/7 HPB cover will reduce LoS for patients with emergency biliary pathology and lead to better quality of care  
- HPB is one of the largest providers of non-elective emergency care in the UK. A stand-alone service is essential to ensure appropriate management of these patients (ASGBI recommendation) | None | No overall reduction in beds but more efficient use of I/P beds and reduction in cancellations | No overall impact, but more rapid time to be seen and a greater proportion of “hot” slots | Meeting NICE guidance for treatment of biliary disease, enhanced quality |
| **Quality & safety initiatives to improve access with our primary care and patient stakeholders as:** | | | | | |
|  
- An electronic “app” for patients with pancreatic cancer;  
- An electronic app for patients with liver cancer;  
- Leicester HPB website;  
- Improve mortality and morbidity rates for people with HPB disease and improve survival rates following hospitalisation  
- Reduce complication rates following HPB surgery | | | | | |

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<tr>
<td><strong>What will this mean against rationale for change?</strong></td>
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<td><strong>Impact on DC beds</strong></td>
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<td><strong>Impact on IP Beds</strong></td>
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<td><strong>Impact on 1st OP/FU Clinic numbers</strong></td>
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<td><strong>Other Impact</strong></td>
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obstructive jaundice, acute cholecystitis and pancreatitis.

- At present, it is not possible to undertake laparoscopic cholecystectomies in the Alliance and this is not likely to be realised in the future to the intraoperative possibility of open conversion
- UHL HPB is presently formulating a bid to become one of a handful of super-specialised centres undertaking total pancreatectomy and islet cell transplantation (TPIAT) in the UK. Agreement to fund this procedure has recently been granted by NHS England. Leicester has the largest European series of TPIAT and Professor Dennison has been pivotal in securing funding from NHS England. Hence, Leicester will be a strong bidder for the selection process. The tariff for TPIAT more than covers the cost of the procedure and this new service will both enhance the reputation of Leicester world-wide but also generate significant income. Reliable access to Level III beds and

**When will it be in place?**

**Who will provide what activity at which site?**

(see diagram 2)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
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<tbody>
<tr>
<td>Better patient experience</td>
<td>Through improved and optimised pathways including reductions in readmissions</td>
</tr>
<tr>
<td>Workforce sustainability</td>
<td>Improve the resilience of the HPB service in terms of facilities and workforce</td>
</tr>
<tr>
<td>Bespoke new facilities</td>
<td>Will be attractive for nursing staff leading to improved recruitment and retention and a reduction in sickness absence rates. Three resection surgeons will be required following reconfiguration. This will be off-set by an expected two retirements over the next two years.</td>
</tr>
<tr>
<td>Efficiency and effectiveness</td>
<td>DNA Rates 6.5% for new and F/U outpatient activity</td>
</tr>
<tr>
<td>Improve day case laparoscopic cholecystectomy rates</td>
<td>Improve partnership working and improve emergency pathways for patients with emergency admission of biliary disease or obstructive jaundice.</td>
</tr>
<tr>
<td>Reducing the LOS for ERCP referrals</td>
<td>Reducing length of stay following major resections PB and intervention radiology</td>
</tr>
<tr>
<td>A standalone HPB service</td>
<td>Could provide urgent one-stop clinics to see and assess patients presenting with obstructive jaundice and hot gall bladder services. The efficiencies possible through improved care of patients with obstructive jaundice come through;</td>
</tr>
<tr>
<td>Admission avoidance</td>
<td>Using protocols above to manage well patients on outpatient basis;</td>
</tr>
</tbody>
</table>
Radiology buy in to time limits to performing and reporting requisite investigations decreasing LOS.

- Reduced average length of stay (including pre and post-op LOS)
- Increased ability to complete multiple procedures & diagnostics in 1 hospital visit

Improved day case rates
Increased same day discharge rates to 65 – 70% in line with BADS guidelines e
Ability to offer combined HpB oncology and palliative care clinics

Demand and capacity/flow

- 13.5 contiguous theatre sessions, incorporating three session days. This excludes day case operating lists. These must take place within an operating theatre able to accommodate CUSA, argon, harmonic, intraoperative ultrasound and laparoscopic stacks.
- Improved access to CEPOD 24 hour theatre (non-resident staffing from 20:00hours onwards). Approximately 2.1 cases daily
- Access to scheduled ERCP lists 5 days a week with out of hours to ERCP (if required and more effective use of interventional radiology 24/7) with dedicated facilities for ERCP in IR with room for side-viewing scope and radiology image intensifier. Requirements for 6 lists a week-morning lists 4 days a week and one all-day list. Decontamination facilities for 6 side-viewing scopes. Four bedded
recovery area needed for post-procedure patients. Activity would be 1000 ERCPs undertaken annually, minimum of 4.6 per day.

- Improved access to IR resulting in a potential reduction in LOS of up to 4 days
- Reduction in cancelled operations through dedicated bed base & reduced competition for critical care beds and separation of elective from emergency flows
- Improved access to bed base through the separation of daycase activity and inpatient work resulting in a greater emphasis of getting the patient home sooner for daycase procedures

**Cost**

Improved income through potential to increase same day discharge through the treatment centre in the 23 hour stay area

Increased opportunity to attract BPT through compliance with BADS same day discharge rates

Whilst the initiatives below are all possible and indeed since reconfiguration plans began in 2015; many of these are now being delivered - reconfiguration will enable these initiatives to continue to grow and develop and future-proof them.

- *Day case laparoscopic cholecystectomy*;
- *Enhanced Recovery for post-operative patients*;
- *Expedited or “hot” gallbladder service*;
- Enhanced ERCP service of out of area referrals;
- Multi-disciplinary chronic pancreatitis clinics;
- Emergency pancreatic cancer resection pathway;
- Prehabilitation preoperative clinics;
- Patient recovery couches
- Reconfiguration will enable the development of Total Pancreatectomy and Auto-Islet Transplantation Programme (TPIAT)

NHS England is planning to reduce the number of HPB units within the UK by 5. This will result in an amalgamation of HPB units and hence a potential increase in the catchment areas. This could increase the number of cancer resections of the Leicester unit. Reconfiguration is essential to provide the increase in capacity required to enable this additional activity to be undertaken. Reconfiguration of services will coincide with the formation of a standalone HPB unit which will manage all HPB emergencies. The pathways below reflect this change in working.
### Managing the bed gap

<table>
<thead>
<tr>
<th></th>
<th>Beds released minimum - max</th>
<th>Resource required</th>
<th>Estimated £</th>
<th>Methodology for numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018/19</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019/20</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020/21</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021/22</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2022/23</td>
<td>4</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>HPB pathway redesign</td>
<td>4</td>
<td></td>
<td>4</td>
<td>Won't release any beds - work will improve efficiencies to manage within bed base any growth in service</td>
</tr>
<tr>
<td>Activity modelling</td>
<td>Activity modelling</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Work in progress to be inserted when in-patient, day case an outpatient modelling is complete)
Referrals suitable for transfer and retention by HPB

- Acute Cholecystitis/empyema/mucocele
- Acute pancreatitis
- Obstructive jaundice
- Liver abscess
- Biliary colic requiring admission
- Chronic pancreatitis (confirmed on imaging or a diagnosis previously made by an HPB clinician) with uncontrolled pain or evidence of SIRS
- Readmission with confirmed or suspected post-operative complication undertaken by HPB

Referrals suitable for intervention by HPB, but not retention

- Patients requiring biliary tree compression as definitive treatment
- Patients for biliary radiological, endoscopic intervention or diagnostics as part of an alternate cancer pathway
- Patients whose co-morbidities will not be appropriately met by in-patient admission under HPB

Referrals unsuitable for intervention OR retention by HPB

- Patients with end-stage malignancy, not requiring specific input from HPB other than MDT discussion
- Patients with non-specific chronic abdominal pain and no radiological or clinical features of chronic pancreatitis
- Patients with short-lived abdominal pain after inebriation
- Non-specific raised amylase with no other features of pancreatitis
- Patients with unexplained RUQ pain and no gallstones with a putative diagnosis of sphincter of Oddi dysfunction or biliary dyskinesia
HPB – Emergency Patient Flow

Pre-hospital Attendance Inpatient Discharge

Local Hospital Care

Local Health and care initiatives

Glenfield

A&E

Bed Bureau

Triage

Out of Area

Treat & Discharge

Requiring admission

Managed on ambulatory setting, placed straight to waiting list for definitive surgery or endoscopic procedure

Local

Assessed in triage by consultant and either admitted or managed in an ambulatory/hot clinic setting

Acute Pancreatitis

Acute cholecystitis

Jaundice with sepsis

Treated on index admission with definitive surgery, reduction in LoS
No change in elective pathway- additional hot clinical slots, choose and book advice and guidance

Added to in-patient elective waiting list either day case or main theatre or elective endoscopic intervention
**Patient Flow from ESAC and Emergency Surgery**

**HPB Acute presentation Red Flags**

<table>
<thead>
<tr>
<th>Any two of:</th>
<th>Or Any one of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR&gt;90</td>
<td>Bilirubin&gt;150</td>
</tr>
<tr>
<td>RR&gt;20</td>
<td>INR&gt;1.7 with any level of jaundice</td>
</tr>
<tr>
<td>WCC&gt;12 or &lt;4</td>
<td>Amylase x 3 above normal</td>
</tr>
<tr>
<td>Temp &lt;36 or &gt;38°C</td>
<td></td>
</tr>
</tbody>
</table>
Figure 1 - Jaundiced Patient pathway

Jaundiced Patient Pathway

1. Patient Arriving in Triage
   - USS on arrival/mane in triage NPT slot
   - LFTs & Amylase & UE & FBC
   - Normal Ducts on USS
     - INR<1.7
     - No/Mild ascites
     - Normal mentation
     - Bilirubin <50
     - ALT <500
     - Urgent Hepatology OP
   - Admit under Hepatology

2. Patient Seen by GP
   - Dilated Ducts on USS
     - INR>1.7
     - Gross ascites
     - Abnormal mentation
     - Bilirubin >50
     - ALT >500
     - no red flags
     - Gallstones & Dilated Ducts
       - MRCP within 48 hours and HPB clinic within 96 hours

3. Patient From Out of Area
   - With red flags
     - No Gallstones & Dilated Ducts
       - CT within 48 hours, MDT, tumour markers, referral and HPB Clinic
     - Direct Referral to HPB Clinic, using shared drive template
     - ADMIT UNDER HPB
Jaundiced Patient Pathway

1. Patient Arriving in Triage
2. Patient Seen by GP
3. Patient From Out of Area

*Not yet available*

- GP/HPB "hot phone" to discuss patients
- Acute HPB red flags?
  - YES: Assess in Triage
  - NO: HPB 2WW Referral Form

- Urgent Clinic

Proforma Completed and Faxed by Referring Centre (see separate file)

- Clinical grade (see separate file)
  - Immediate transfer
  - "Next available"
  - One in one out
  - Out-patient

When fit for discharge from tertiary unit to be transferred back to secondary care within 24 hours (if not possible then premium tariff to offset reduced throughput)
PANCREATITIS

ACUTE PANCREATITIS
Defined by serum amylase ≥3 the upper limit of normal
Or
Cross-sectional imaging confirming pancreatic inflammation

CHRONIC PANCREATITIS
Defined by epigastric pain WITH evidence of pancreatic parenchymal loss on cross-sectional imaging AND/OR exocrine/endocrine pancreatic insufficiency

TRANSFER TO LGH, ONLY IF SPECIALIST TREATMENT REQUIRED

Bilirubin > 50
INR > 1.7
Pseudocyst
Gastric Outlet Obstruction
Pancreatic Ascites

USS screening if pseudocyst suspected

Any HPB red flags, or...

USS in triage before transfer if possible

ADMIT UNDER HPB

Organise pathway with pain team, for frequent flyers to have data-sheet with specific plan for pain management. DO NOT REQUIRE ADMISSION

ADMIT UNDER HPB
MDT REFERRALS

Speciality MDT not available prior to treatment planning

Local MDT (PBH, KGH or NGH)

Cross-cover between MSM, GG, DJM and ARD

Treatment or diagnostics need urgent planning

Case discussed between 2 HPB surgeons, CNS & consultant radiology input

Treatment or diagnostics decided

Case discussed retrospectively at the next available speciality MDT

Urgent Cases (after the 12:00hrs cut-off on Thursday)

Screened by the MDT Chair (GG) and added on if clinically urgent

Discussed at the “formal” speciality MDT as an additional case

GG version 1.2. Discussed at Annual Meeting 2/12/13
GP Referral or Emergency Admission with Suspected HPB Cancer

Investigations and Initial Discussion at Local Area Teams

Patients Referred to Nottingham and Leicester sMDT

Or if sufficient local expertise exists

Radical Treatment
Specialist Palliation
Chemotherapy Palliative Care
Endoscopic Rx Radiotherapy

Leicester or Nottingham

Leicester or Nottingham
Urology: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview</strong></td>
<td><strong>Benchmarking</strong></td>
</tr>
<tr>
<td>The Urology Multi-Disciplinary Team is a multi-professional group at the University Hospitals Leicester NHS Trust. The service currently provides all urological activity for Leicestershire. It provides Tertiary cancer care for patients from Northampton, Kettering and Lincolnshire. It is a tertiary referral centre for cancer, andrology, stones and female urology. The urology department is embarking upon a 5-year development plan which includes the building of a consultant-led Urology Planned Treatment Centre offering one stop outpatient urology clinics for all new GP referrals.</td>
<td><strong>BADS</strong>: For Urology services there are potentially 1204 bed days savings opportunity when benchmarked against the BADS guidelines (see information below). Many of the GIRFT recommendations have already been implemented or are not relevant to a large teaching hospital department. However, the following recommendations either need to be implemented or actions completed.</td>
</tr>
<tr>
<td></td>
<td>• Develop a structured training curriculum for specialist urological nurses (difficult to see nurses as a solution to medical manpower at a time of nursing shortage)</td>
</tr>
<tr>
<td></td>
<td>• Improve the secondary care pathway for patients with urinary tract stones.</td>
</tr>
<tr>
<td></td>
<td>• Reduce average length of stay across the specialty through enhanced recovery and increased use of day case pathways, while monitoring causes and rates of emergency readmissions. (Already partly implemented, further scope for day case transfer and enhanced recovery)</td>
</tr>
<tr>
<td></td>
<td>• Provide consultant-delivered emergency urology care in every trust by reducing elective commitments for consultants on call. (current difficulties in recruitment will delay this)</td>
</tr>
<tr>
<td>The unit is expanding its robotic surgery programme for cancer resections and has developed partnerships with other Trusts to provide cancer services for Northamptonshire, Lincolnshire as well as Leicestershire and more widely in some sub-specialist areas.</td>
<td>Whilst urology are working towards the recommendations laid out in the GIRFT report, some elements of transformational change are limited by the current configuration at the LGH site, the following can be implemented once a space large enough to run a diagnostic clinic is identified.</td>
</tr>
<tr>
<td>Autumn 2016 will see the launch of East Mercia Urology as a single virtual department, bringing together urology expertise from Leicestershire and Lincolnshire. It will provide a population of over two million patients with access to specialist care including, but not limited to,</td>
<td>• Increase the provision of Urological Investigations Units (UIUs), providing a dedicated resource for urological outpatient care.</td>
</tr>
<tr>
<td></td>
<td>• Review follow-up rates against a median of 1:2 first outpatient to follow-up</td>
</tr>
<tr>
<td>Quality &amp; safety</td>
<td><strong>CQC</strong>: Findings highlighted that some surgical specialties at the LGH hospital site did not meet the 90% standard of the proportion of patients waiting less than 18 weeks from referral to treatment time including urology.</td>
</tr>
<tr>
<td>Risk register: There are challenges to delivering the cancer waiting times targets in Urology leading to risks with patient diagnosis and treatment. These challenges relate to a mismatch in theatre capacity and demand</td>
<td><strong>Risk register</strong>: There are challenges to delivering the cancer waiting times targets in Urology leading to risks with patient diagnosis and treatment. These challenges relate to a mismatch in theatre capacity and demand</td>
</tr>
</tbody>
</table>
robotic assisted surgery, lithotripsy and brachytherapy. It is anticipated that recruitment, teaching and education and access to clinical trials will also be further strengthened by this Partnership.

Location
The assessment centre, in-patient bed base and out-patient services are based at Leicester General Hospital. The assessment unit manages patients with catheter and stricture problems, teaches intermittent self-catheterisation techniques and offers lithotripsy treatment - the shattering of kidney stones.

Staffing
Urology currently has 11 Consultant Urological Surgeons and an Associate Specialist. They are supported by 2 Specialty Doctors, 4 SpRs, 12 Junior Doctors and a team of Specialist Nurses. The department has a significant focus on research through clinical trials and has strong links to Leicester and Nottingham Trent Universities.

The Consultant team has a national and international profile and contributes significantly to the major Urological meetings (BAUS, American Urology Association (AUA) and European Association of Urology (EAU)).

Our consultant urologists and specialist nursing staff offer a district-wide service to patients with urological conditions such as diseases of the kidneys, bladder, urinary tract and male reproductive organs.

Services include one-stop haematuria and prostate assessment clinics, where a patient which impacts on both cancer and RTT targets.

Workforce sustainability

There are nurse staffing shortages which may impact the quality of care provided. Strategies are in place to book agency staff in advance, explore opportunities for recruiting to non-nursing roles and to hold targeted recruitment Open days. Staffing levels on wards will be reviewed as part of work looking at “tomorrows ward”.

While consultant recruitment is difficult nationally (130 consultant vacancies) we have now filled a vacancy and recruited to a joint appointment with ULH. Major surgery for bladder and prostate cancer has now been transferred to UHL and has stopped at ULH. The joint video-conferenced MDT has been working successfully since Spring 2018.

One stop outpatient service

As services are re-located from the LGH there is a risk to the sustainability of the nursing and theatre workforce. In addition the support staff for LGH as a whole presents a sustainability risk.

We plan and are signed up to a one stop service for all new GP referrals. However, this requires a large space and immediate availability of diagnostics including cystoscopy, ultrasound, transrectal ultrasound and simple urodynamic testing. Specialist nursing presents a major challenge as 50% of this workforce is approaching retirement and there is no current training program to fill those posts.

Efficiency and effectiveness

<table>
<thead>
<tr>
<th>Service</th>
<th>Efficiency score</th>
<th>Quality &amp; safety score</th>
<th>Performance score</th>
<th>Finance score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urology</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Demand and capacity/flow

Key challenges identified in the annual business planning session for 2018/19 were:

- Theatre capacity, including the need to optimise the use of facilities within the Alliance & EMU Grantham, Melton, Syston, and Ward 28a at the LGH
is assessed, investigated and diagnosed within one visit to the hospital.

Consultants offer a service for patients requiring complex abdominal surgery for both cancer and benign urological related diseases, with specialist nurses available to support patients through this process.

Teaching and training
Undergraduate medical students are regularly placed in the department as part of their Oncology module. The Core trainees are also allocated to Urology on a 4 month rotation and taught the basics of Urology. SpRs have formal “away-day” teaching throughout the year.

The College’s mission is to pursue the highest standards of research, education and training in biomedical and related subjects, and to apply this knowledge and expertise to enhance the quality of life and economic prosperity of populations, both locally and internationally. Its considerable academic resources mean that it is already widely recognised for the international impact of its research and the quality of its undergraduate and postgraduate teaching. This is reflected in the high proportion of academic staff regarded as international in the 2008 Research Assessment Exercise, and the consistently high ratings achieved in the National Student Survey.

Research and development
The department also has an active research programme looking at risk factors, screening and improved treatments for men with prostate cancer.

- The need to increase 3 session theatre days and increase robotic days
- The need to establish a true Day Case (23 hour stay) ward
- Pre-operative demand and capacity

Emergency admissions:
There were 875 admissions direct from ED in 2016-17 which accounts for only 22% of the total emergency admissions. This is approximately 2 patients a day admitted from ED. The highest admissions are from GP’s at 41%. Urology admit approximately 10 patients a day.

Elective demand: The service is particularly challenged on delivering in patient, day case OP elective cancer and diagnostic pathways within the current constraints of the facilities provided and geography of the LGH. Demand into the service continues to increase, despite use of facilities within the alliance and across the wider network. Diagnostic lists and outpatients take place at several of the peripheral hospitals. Peno-scrotal surgery is offered at Melton Hospital currently and we have imminent plans to move circa 140 TURP (or similar) cases to Grantham Hospital where the ULH team will provide their care. Current activity levels suggest Urology require access to 52 inpatient beds (patients with a length of stay of <23hrs).

Urology requires access to 116 level 3 and 371 Level 2 critical care bed days. Once the provision of ICU Level 3 access transfers from the Leicester General Hospital site it will be essential that Urology services are relocated to Glenfield Hospital.

1615 Theatre sessions per annum will be required in 18/19 to deliver the SLA plan and meet demand. Urology run theatres for 49 weeks of the year with an average case per list (ACPL) target of 2.7. Currently 1274 sessions can be delivered in week (26 sessions per week), meaning 341 sessions are currently required to be delivered out of hours at weekends (an average 7 per week). Delivering activity at a weekend is currently delivered with additional ad hoc staffing and is not a sustainable solution. To meet the required theatre demand, there will be the requirement for additional resources to support the delivery of the required capacity.

Increasingly specialised elements of surgery (e.g. robotics and exenteration surgery) will drive growth.

Cost
The service currently faces potential challenges around loss of income as procedures are cancelled due to failures with endoscopy decontamination. This will be rectified through the development of a centralised endoscopy decontamination unit in 2019.
Urology – Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds</th>
<th>Impact on IP Beds</th>
<th>Impact on 1st OP/FU Clinic numbers</th>
<th>Other Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>How will the new model of care look?</td>
<td>What will this mean against rationale for change?</td>
<td>(Awaiting completion)</td>
<td>(Awaiting completion)</td>
<td>(Awaiting completion)</td>
<td>(Awaiting completion)</td>
</tr>
</tbody>
</table>

Located at the Glenfield Hospital, the future Urology Department would aim to continue to provide an effective and efficient service to all patients. Urology needs to maintain close links with the renal and interventional radiology services provide the best possible care for patients. Some procedures requiring Hepatobiliary, vascular or Cardiac surgery input, co-location at Glenfield Hospital creates significant clinical benefit for these patients.

The introduction of a one stop diagnostic and outpatient clinic with dedicated Radiology input would provide support to discharging/treating patients at an earlier opportunity.

Key components to ensuring effective delivery of urological services include:

- Sufficient theatre access to deal with the demand ensuring that all patients are treated within their treatment

**Bencharking**
The consolidation of Urology services at the Glenfield site with outpatient, diagnostic, day case and 23 hour stay facilities provided within a dedicated treatment centre environment will deliver the following benefits:

- Earlier diagnosis and treatment
- Admission avoidance
- Improved ability and confidence to deliver cancer waiting times targets, RTT and diagnostic targets
- Reduce patient cancellations
- Right care, right place by the right personnel including increased use of specialist nursing expertise freeing up consultant time
- Improved management of patients with complex conditions and co-morbidities through improved clinical adjacencies

**Workforce sustainability**
Consolidation and co-location of services onto one site will allow the opportunity for additional consultant on-call support and an improved ability to provide consultant-led emergency urology care.

**Efficiency and effectiveness**
Co-located clinics in the Treatment Centre will allow for better efficiency and the use of more one stop clinics. Diagnostic and outpatient clinics with dedicated Radiology input would provide support to discharging/treating patients at an earlier opportunity.

In the new models of care, pre-assessment will be
targets
Sufficient procedure rooms to cope with the increasing demand. Procedure rooms to be able to accommodate diagnostic procedures in addition to appropriate local anaesthetic procedures, to be located both on site and in the proposed planned care hub
Specific lithotripsy room with the appropriate lead lining
Urodynamics to be housed within the Urology Department with support from the radiology team
Co-located clinics to allow for better efficiency either on site or collocated in the Planned Care Hub Model. Ideally if some clinic provisions remain on site, there is the opportunity for additional consultant on-call support should the need arise.
Access to a 23-hour ward on site will support both elective and emergency flow for Urology patients.
Pre-assessment either on site or co-located in the Planned Care Hub is required to facilitate the current walk round service provided for patients, which is essential for patients on a cancer pathway to enable rapid listing for urgent urological diagnostic or therapeutic delivered from a pre assessment "hub" at the Glenfield site. Pre-assessment pathways will be redesigned so that complex patients will still attend for pre-assessment (ASA3&4) with lower risk patients (ASA1&2) being managed by virtual appointment.

Opportunities exist to deliver efficiencies through:
- Reduction in waiting list initiatives and cessation of use of the private sector
- Removal of weekend work as bed base constraints will be alleviated through the separation of elective and emergency streams
- One stop stone clinics and the ability to deliver on the day Ultrasound, TRUS and flexi cystoscopy
  - Improved scheduling of clinics
  - Improve clinic utilisation to mitigate growth
  - Further extension to existing and the ability to combine triage of surgical patients all in one area ambulatory care pathways

Demand and capacity/flow
The move to Glenfield Hospital, with improved clinical adjacencies will provide benefits in allowing sufficient theatre access to deal with the demand ensuring that all patients are treated within their treatment targets
Sufficient procedure rooms will facilitate the timely delivery of diagnostic access targets and rooms that will enable re provision of both diagnostic procedures in addition to appropriate local anaesthetic procedures, to be located both on site and in the proposed Treatment Centre. Specific lithotripsy and Urodynamics facilities modelled to meet future demand will also deliver the required level of services to mitigate current risks to the diagnostic pathways. Such facilities will be reflective of a dedicated urological investigation unit, allowing more care to be delivered in out-patient settings and providing more effective pathways and definitive treatments
procedures and enhances patient experience for any out of area patients. Nurse led catheter services to work across site to provide catheter support – this will allow the consultants and junior doctors to deal with emergencies as they arise. Potential for in-reach into ED to be provided by experienced specialist nurses and consultant input to be gained following an initial nursing assessment. This would require additional investment of 5.27 WTE specialist nurses to provide a 24/7 service.

Multi-purpose meeting room to be used for student teaching, audit meetings, appraisals etc. This room would need teleconferencing facilities and high definition TV screens for MDT work. Access to a central decontamination area to facilitate turnaround of equipment to maximise efficiency of lists.

Sufficient IT support to ensure that all systems link in with each other and those systems are as robust as possible.

When will it be in place? Services will transfer to the Glenfield site once the

Assumed within the activity plans and schedules of accommodation for the treatment centre is the capacity to deliver compliance against the BADS standards, benchmarked against other Trusts. Similarly a dedicated 23 hour stay facility supported by improved flows through stage 1 and stage 2 recovery will improve flow and capacity

As a provider within LLR health and Care system, and beyond, the service will be looking to ensure only those patients requiring access to secondary care services are delivered in UHL. Relationships will be built up with the Alliance and explore all available options to ensure patients are treated in the most appropriate location and in line with the supporting principles of the Better Care Together model

Capital Cost Performance and models of care have been reviewed using the Model Hospital, Patient Level Information and Costing Systems (PLICS) & Healthcare Analytic Systems (CHKS) to compare and benchmark against peers. Opportunities will be sought going forward to deliver efficiency and productivity opportunities against these measures and as enabled by reconfiguration.

(Impact on income with the increased activity to be quantified)
Glenfield new build project including the Treatment Centre has been delivered

Who will provide what activity at which site?
All Urology elective and emergency services will be provided from the Glenfield site in the future. Dedicated inpatient outpatient and day case/23 hour facilities will be provided for the future delivery of Urology Services. Initial triage and assessment will be provided via a bespoke surgical assessment unit facility on the Glenfield site.
**Urology – Emergency Patient Flow**

**Pre-hospital**
- **Attendance**
- **Inpatient**
- **Discharge**

**Local Hospital Care**
- Local Health and care initiatives

**Treat & Discharge**
- Patients seen and assessed in triage and discharged with either no FU or urgent OP FU
- Patients moved to ambulatory pathway e.g. stone disease with expedited out-patient imaging thereby avoiding admission
- Patients requiring urgent admission e.g. testicular torsion or inpatient admission

**Obstructed kidneys requiring nephrostomy or subspecialist urology**

**Out of area referrals**

**Discharged**
- home, no further action/next day appointment in ambulatory clinic/

- Acute step down/discharge home or discharge to local hospital
Pre-hospital Attendance Inpatient Discharge

Local Hospital Care
- Local Health and care initiatives

Treatment & Transfer to specialised Hubs

Future model: OPD investigation and treatment on the day for most patients

Patient Booked

Diagnostics

Out Patient clinics

Treat & Discharge

Day case activity undertaken at:
- Melton
- Grantham
- Day wards UHL/ Treatment centre

Discharged or referred for further treatment

One Stop Clinic for haematuria and other GP referrals, Pre investigation for suspected prostate cancer

Combined clinics for prostate cancer with oncology

Increased use of robot and converting a greater proportion of surgery to 23 hour stay or <72 hours

Urology Specialised Services- combined MDTs with telephone dial in. Greater collaboration with other centres e.g. Lincoln and Derby
CMG: ESM

Models of Care Impacted by Reconfiguration:

Chemical Pathology & Metabolic Disease
Dermatology
Endocrinology
Geriatrics
Rheumatology
Stroke
Neurology, Neurosurgery and Neuro-rehabilitation
### Design of system-wide clinical models of care

**Chemical Pathology and Metabolic Disease: Acute Medicine/ED and Specialist Medicine (ESM) Clinical Management Group (CMG)**

### Chemical Pathology and Metabolic Disease: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview and Location</strong>&lt;br&gt;Outpatient clinics are held the LRI metabolic diseases and GGH for Lipids new and follow up GP referrals which are the bulk of referrers with some internal consultant to consultant referrals. Clinics are consultant led, with a vision to move to nurse led clinics for monitoring of patients on the thyroid register. There is also a postal monitoring system for Lipid patients. This is an outpatient speciality with no inpatient activity.</td>
<td>Moving clinics to a single site will benefit patients having all services on one site.</td>
</tr>
<tr>
<td><strong>Staffing</strong>&lt;br&gt;Current workforce is 3 wte Consultant&lt;br&gt;Patient admin is provided from within 3 other specialty groups both at the GGH and LRI.</td>
<td></td>
</tr>
</tbody>
</table>
Chemical Pathology and Metabolic Disease: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How will the new model look?</td>
<td>Benefits of nurse clinics will reduce waiting time for follow up and as a result reduce DNA rates currently at 10%</td>
<td>NA</td>
<td>NA</td>
<td>NONE</td>
<td>2% improvement on DNA rates equates to 535 apps with opportunity income of £3,821 per year</td>
</tr>
<tr>
<td>When will it be in place?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Who will provide what activity and at what site?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Future workforce will add 1 wte Lipid Nurse</td>
<td></td>
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</tr>
<tr>
<td>It is expected that patient administration will not change in configuration due to all specialties moving into the single centre</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

There will be no change to the delivery of this service other than all clinics moving to a single site.

There is an intention to introduce nurse led monitoring clinics expected in Qtr 4 2018/19.
Chemical Pathology and Metabolic Disease – Elective (Out Patient) Flow

Pre-hospital

GP Referral (PRISM Pathways)P
Advice and Guidance

Discharge

Pre-consultation blood tests and referral into Lipid clinics via tertiary Hospital Consultant

At GH Site (Treatment Centre)

Out Patient clinics (Lipid and Metabolic Bone)

Patient Booked

Day Case

Diagnostics

Referral

Treat & Discharge

Chemical Pathology and Metabolic Disease - Specialised Services

Clinic:  
- Drug therapy, management and monitoring  
- MDT and teaching

Daycase:  
- Administration of specialist medications  
- Investigations

Diagnostics:  
- Dexa scan  
- ECG  
- One stop clinic

Treat & Discharge

Clinic ➔ Stabilise

Discharge back to GP

Or

Manage via lipid postal follow up process or virtual clinics being established

Discharge to referring tertiary consultant
Managing the bed gap

No impact as an out-patient and laboratory delivered service

Activity model

(Work in progress. To be inserted when in patient, day case and OP modelling is complete)
## Design of system-wide clinical models of care
Dermatology: Acute Medicine/ED and Specialist Medicine (ESM) Clinical Management Group (CMG)

### Dermatology: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview</strong></td>
<td><strong>Benchmark (Right care/GiRFT/Model hospital/other benchmark)</strong></td>
</tr>
<tr>
<td>UHL Dermatology Department</td>
<td>Dermatology has been selected within wave one of the 18/19 full speciality pathway reviews. The purpose of these full system pathway reviews is to develop a proposal and plan for the transformation of existing pathways of elective/non-elective care. These plans will look to make our services sustainable for the future, from the following perspectives:-</td>
</tr>
<tr>
<td>The Dermatology service covers a population of 950,000 across the Leicester, Leicestershire and Rutland region. The service provides secondary and tertiary level care. It also acts as one of two specialist centres in the East Midlands providing tertiary level care.</td>
<td>- Quality,</td>
</tr>
<tr>
<td>Within UHL there are 144 Dermatology clinics per week seeing approximately 1000 patients. Dermatology is a large mainly outpatient based speciality within UHL that in 2017/18 seen 47573 outpatients last year of which 23200 were outpatient consultations, 4791 were skin operations the majority of these being for suspected skin cancer and the remaining were a mixture of virtual clinics, light therapy, patch testing and dermatoscopies.</td>
<td>- Waiting times (&amp; Managing Demand),</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>- Staffing/Resources,</td>
</tr>
<tr>
<td>Services are delivered from the Leicester Royal Infirmary and in a number of community hospital settings within the Alliance.</td>
<td>- System Financial,</td>
</tr>
<tr>
<td></td>
<td>- Volume of Follow Up Activity</td>
</tr>
<tr>
<td></td>
<td>This creates an ideal opportunity to consider what the model of care across the whole pathway should be to enable the best outcomes for our patients at the best value for the LLR pound. The Dermatology service DNA rate and new to follow up ratio is comparable to similar sized services nationally. Our cancer waiting times are equal if not better than our regional neighbours.</td>
</tr>
<tr>
<td></td>
<td><strong>Quality &amp; safety</strong></td>
</tr>
<tr>
<td></td>
<td>The Dermatology Service is chronically understaffed at consultant level and this has been challenging to recruit to these positions. The advert has been live for 3 years with no suitable applicants.</td>
</tr>
<tr>
<td></td>
<td>Work has been done using process mapping with agreed processes for various administrative functions in booking patients and streamlining the process for phototherapy, This has been focussed on following a previous SI where a patient received UVB phototherapy instead of PUVA photo-chemo therapy. As part of this a new UVB light machine and PUVA hand and foot machine have been ordered and are now in place.</td>
</tr>
<tr>
<td></td>
<td>The bid to make three separate clean rooms for surgical procedures with appropriate air conditioning/exchange has been approved by CMIC for this year’s capital round. The need for air exchange was noted in the CQC report as best practice.</td>
</tr>
<tr>
<td></td>
<td>LOCSIPPs for both safer surgery and patch testing have been signed off at the April Q+S board. The team</td>
</tr>
</tbody>
</table>
Treatments and services offered at the Dermatology department

- Acne
- Basal Cell Carcinoma
- Eczema and Dermatitis
- Hair
- Nails
- General dermatology
- Patch Testing for Contact Dermatitis
- Psoriasis

Staffing

As part of this service, the department runs Consultant, Specialist registrars and Nurse led clinics. Included in these clinics are General Practitioners with special interests (Speciality Doctors), Dermatology Nurse Specialist and Skin Cancer Nurse Specialists’ clinics. It is acknowledged that the pressures and intensity of the workload is significant and demands are ever increasing for the service. The current dermatology patient demand exceeds substantive capacity within the service and as a result additional waiting list initiatives are required to manage the activity levels within the service.

Current Nursing and Medical establishment

- 5 Whole Time Equivalent (WTE) Substantive Consultants + 1.5 Consultant Vacancies
- 1.5 WTE Locum Consultants
- 6.5 WTE Specialist Registrars
- 0.6 WTE Associate Specialist
- 6 sessions with GP with Specialist Interests
- 3.9 WTE Dermatology Nurse

are using and embedding safer surgery STOP the LINE this has led to STOP the LINE being used when it was identified that the wrong notes had been picked up for a patient with the same name also having a procedure that day.

SOPs for the use of Biologic therapies and DMADS have also been updated and approved following an SI in Rheumatology.

Due to the high pressered work environment, there have been concerns raised regarding the culture within the work place and the Organisational Development team has been recruited to perform some work within the service to address this and this has been positively received. Despite the workload pressures and workforce shortages the patient experience as measured by the friends and family test is very good and improving with 98% of patients and relatives recommending the service.

Workforce sustainability

Capacity

The administrative staff has all been recruited and are now in post. Further nursing and consultant recruitment will be required after completion of job plans and service pathway reviews. The most recent Demand and Capacity paper shows we are currently x3.5 WTE consultants down of which x1.5 WTE consultants are being filled by locums. Nursing job plan shows areas for efficiency and need for more administrative support

Due to the high pressured work environment, there have been concerns raised regarding the culture within the workplace and the Organisational Development team has been recruited to perform some work within the service to address this and this has been positively received. Despite the workload pressures and workforce shortages the patient experience as measured by the friends and family test is very good and improving with 98% of patients and relatives recommending the service.

Efficiency and effectiveness

Dermatology already had some processes for DMADS but these are being reviewed and streamlined and a new SOP is in place. They are also going to liaise with rheumatology around having biologics and DMARDS on the DAWN system. SOP for DMADS will go to Q+S in August 2018 and the Biologics SOP was approved at the July 2018 Q&S meeting.
### Specialists
- 2 WTE Skin Cancer Nurse Specialists.

### Teaching and training
Training Admin staff are fully competent for their job and training package has been developed for new starters. All staff using specialist equipment have been trained. Staff have done their ANTT training and work is on-going training staff in clean room technique 2 have undertaken this.

### Research and development

#### Demand and capacity/flow
It is acknowledged that the pressures and intensity of the workload is significant and demands are ever increasing for the service. The current dermatology patient demand exceeds substantive capacity within the service and as a result additional waiting list initiatives are required to manage the activity levels within the service.

A demand and capacity review has been completed this has shown a gap of 49 New appointment slots and 59 Follow up appointment slots. Work is on-going looking at PRISIM referral pathways and potential triage of referrals to ensure the correct cases are signposted to secondary care and others to intermediary / primary care services.

Clinic templates are being adjusted to reduce clinic intensity but this will have a marginal positive benefit on capacity. Specialist nursing and doctors job plans are being reviewed. There will still be a resource gap and recruitment will be required. However the modified clinic templates are already showing improvement in patient satisfaction with very positive feedback to matron comments and an improving friends and family test achieving 97% and 98% in February and March respectively up from 90% in April 2017.

#### Cost
The main cost pressure for this service is the need to provide weekly extra capacity clinics and weekend outpatient procedure clinics to support delivery of the 2 week wait subsequent cancer pathways. The cost of waiting list initiative clinics is £157,480K per annum.

### Example

<table>
<thead>
<tr>
<th>Efficiency score</th>
<th>Quality &amp; safety score</th>
<th>Performance score</th>
<th>Finance score</th>
<th>Intel score</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

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### Dermatology: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
</table>
| **How will the new model of care look?**  
The introduction of a Dermatology triage hub, ideally run by senior consultants/GPwSI will ensure that only suitable cases where added value to patients care are accepted into the service. The patients will then be appropriately signposted into a suitable service, either nurse led services, GPwSI services or secondary care services in either the Alliance or UHL, aiming to provide care closer to home wherever possible but also being mindful of waiting times. All tertiary referral patients will be seen in the UHL dermatology hub (within the proposed Treatment Centre). | **What will this mean against rationale for change?**  
The rationale for change will allow patients with the greatest to be managed within UHL Dermatology hub in the proposed treatment centre. This will include tertiary referrals, patients with severe skin disease multidisciplinary input. Patient requiring complex surgery and outpatient treatments. It will also allow better integrated working with allied specialties to streamline patient care. E.g. plastic surgery for the management of patients with skin cancer. | N/A | N/A | 2019/20 it is expected that 2,141 new routine referrals will be deflected from UHL |
| **When will it be in place?**  
Work is on-going to develop the Dermatology referral hub and it is expected that this will start to be operational in the last quarter of 2017/18. Work on pathway redesign is also on-going. | | | | |
| **Who will provide what activity at which site?**  
To be effective the referral triage service needs to be consultant run/led. This service can be delivered virtually. | | | | |
Dermatology – Emergency Patient Flow

Pre-hospital → Attendance → Inpatient → Discharge

Local Hospital Care

Local Health and care initiatives

At each site – Enhanced Emergency Hubs

- Bed Bureau
- AMU
- GPAU
- Direct from Clinic
- A&E

Treat & Transfer

Dermatology Specialised Services

Treat & Discharge

No change to current pathways

Home and follow up in OP or other setting by right professional: GPwSI, Nurse Led and Consultant

Follow up care at local hospital
Dermatology – Elective Patient Flow

**Pre-hospital**

- **Triage Hub:** All dermatology referrals

**Attendance**

- **Glenfield Treatment Centre**
  - Patient Booked
  - Day Case
  - Diagnostics

- **Multi-speciality skin cancer hub (dermatology, Plastics and Oncology)**
- **Direct referral onto plastics lists for cancer patients**
- **Out-patient procedures and Phototherapy**

**Discharge**

- **Follow up care by GP**

**Local Hospital Care: PRISM Referral Pathways. Advice and guidance**

- **Procedures of Low Clinical Value** managed locally: Localised Vitiligo
- **Nurse led acne care** in intermediary care setting
- **Management of Childhood Eczema** in Intermediary care setting or City Hub
- **Alliance:** General Inflammatory low grade skin conditions

**Specialised tertiary Care**

- **Referral**
  - **Dermatology - Specialised Services e.g.**
    - CTCL
    - Hidradenitis
    - Immunobullous diseases
    - Complex inflammatory dermatoses
Managing the bed gap
No impact as an out-patient delivered service

Activity model
(Work in progress. To be inserted when in patient, day case and OP modelling is complete)
Design of system-wide clinical models of care
Endocrinology: Acute Medicine/ED, Specialist Medicine (ESM) Clinical Management Group (CMG)

Endocrinology: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview</strong></td>
<td><strong>Benchmarking</strong></td>
</tr>
<tr>
<td>The catchment for this department is very large and widely dispersed with a higher concentration of patients coming from the south of the region. Excellent collaboration with genetics department, which is co-located in the clinic. Leicester was the first Trust to set up remote clinics and are successfully running over 2,500 thyroid appointments yearly. NET and adrenal: We have set up a very successful joint adrenal clinic which attracts referrals extra-regionally. We have a very experienced adrenal surgeon and anaesthetic expertise for the management of phaeochromocytomas. Streamlining referrals: (a.)We have set Advice &amp; Guidance as a consultant-led service for GPs in order to streamline referrals and ensure that the right patients are being seen at the right time. This has enabled us to improve our waiting times for outpatients. (b) ‘Straight to neck lump clinic’. GPs can refer all patients with new neck lump to have radiological assessment and clinic triage. This has reduced 69% OPD</td>
<td>Benchmark (Right care/GIRFT/Model hospital/other benchmark) GIRFT review meeting that Professor John Wass (the GIRFT programme lead for Endocrinology) undertaken at University Hospitals of Leicester NHS Trust on 22nd March 2018. The ambition of the programme is to identify examples of innovative, high quality and efficient service delivery. Conversely, it will look at areas of unwanted variation in clinical practice and/or divergence from the best evidence-based Endocrinology care. A set of national recommendations are aimed at improving the quality of care and reducing expenditure on complications, litigation, procurement and inappropriate treatments.</td>
</tr>
<tr>
<td><strong>Quality &amp; safety</strong></td>
<td><strong>Workforce sustainability</strong></td>
</tr>
<tr>
<td>High volume of positive feedback from patients which is regularly shared with clinicians. Pituitary patient safety initiatives: Electronic alerts are in place for patients with Diabetes Insipidus on desmopressin and rolling out protocols, guidance and education forums (both doctor and nurse led). The service leads nationally on the DI guidelines with the SFE Clinical Committee. For patients on hydrocortisone, practice has been audited and the service is in the process of setting up alerts for the East Midlands Ambulance Service.</td>
<td>There are challenges around nurse recruitment and focused recruitment campaigns are held regularly to mitigate this, there is a high dependency on agency nursing staff, which in turn places cost pressures on the service.</td>
</tr>
<tr>
<td><strong>Efficiency and effectiveness</strong></td>
<td></td>
</tr>
<tr>
<td>DNA rate currently stands at 8.2%. Department to set up a Tier 3 Obesity service to look at mean time (days) from referral to initial pituitary imaging.</td>
<td>Department is to review their booking systems in light of high level hospital cancellations shown in the GIRFT data pack. They are to look at introducing a new (partial) booking system rather than the ‘booking a year approach’.</td>
</tr>
</tbody>
</table>
We have an expanding thyrotoxicosis shared care virtual clinic and adrenal incidentalomas service.

Pituitary patient safety initiatives: We have set up electronic alerts for patients with Diabetes Insipidus on desmopressin and rolling out protocols, guidance and education forums (both doctor and nurse led). We are also leading nationally on the DI Guidelines with the SFE Clinical Committee. For patients on hydrocortisone, we have audited our practice and are in the process of setting up alerts for the East Midlands ambulance service.

There is an expanding thyrotoxicosis shared care virtual clinic and adrenal incidentaloma service.

**Staffing**
3.25 WTE endocrinologists employed
21 PAs per week provided in endocrinology
2.0 WTE Specialist Endocrine Nurses
2.0 WTE Specialist Endocrine Nurse PAs

**Networks**
Thyroid cancer - UHL Oncology + Radiotherapy
ENT
Radiology + Nuclear medicine - UHL
Histopathology Pituitary - NUH / UHL
Neurosurgery - NUH / UHL
Ophthalmology - UHL
Radiology - UHL
Oncology + Radiotherapy Neuroendocrine - UHL
HPB surgery - UHL
Oncology + Radiotherapy - UHL

Trust to audit frequency of hypocalcemia following thyroidectomy for hyperthyroidism and look into contributory factors (Ethnicity, Vitamin D deficiency and timing of operation)

Parathyroidectomy length of stay is currently above the national average. The recommendation is that patients only need to stay for a day. Department to look into whether this could be delivered from the 23 hour stay area within the Treatment Centre.

**Demand and Capacity**
Activity will remain unchanged with clinics remaining on the LRI site.
Streamlining referrals: Advice & Guidance as a consultant-led service is provided for GPs in order to streamline referrals and ensure that the right patients are being seen at the right time (PRISM pathways). This has enabled us to improve our waiting times for outpatients. Patients are seen according to clinical priority e.g: 'Straight to neck lump clinic'. GPs can refer all patients with new neck lump to have radiological assessment and clinic triage. This has reduced 69% OPD attendance.
Winter pressure clinic cancellations present potential constraints to delivery.

**Cost**
The depth of secondary diagnosis coding within the department is generally very good. The department are much better than the national average (GIRFT 2018 report)
The department believe that some patients being admitted under General Medicine are being coded under the endocrinology specialty and the appropriateness of this needs to be reviewed by the coding department.
<table>
<thead>
<tr>
<th>Radiology + Nuclear medicine - UHL</th>
<th>Histopathology Adrenal - UHL</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPB surgery - UHL</td>
<td></td>
</tr>
</tbody>
</table>

**Location**

Outpatient clinics are held at the LRI and are Consultant, Registrar and Nurse led. 3WTE Consultants run 3 clinics per week over 42 weeks seeing circa 2,200 outpatients annually. Of these, 25% represent new patients and 75% follow ups.

**Teaching and training**

**Research and development**

We were on of the highest contributors to a national CET phaeochromocytoma audit. We collaborate with Cambridge and contribute regularly to the MATCH trial which is a head to head study looking at metomidate PET in primary hyperaldosteronsim.

We are in the process of application to be Centre of Excellence for Neuro-endocrine Tumours.
### Endocrinology: Summary of proposed changes

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</table>
| **How will the new model look?** Department to set up a Tier 3 Obesity service to look at mean time (days) from referral to initial pituitary imaging. | Efficiency and effectiveness  
Improved RTT  
Department is to review their booking systems in light of high level hospital cancellations shown in the GIRFT data pack. They are to look at introducing a new (partial) booking system rather than the 'booking a year approach'.  
Minimal clinic cancellation.  
Informed capacity requirements based on audited demand.  
Reduced Length of Stay for patient and improved performance of the Trust. | To be completed | To be completed | To be completed | To be completed |

Trust to audit frequency of hypocalcemia following thyroidectomy for hyperthyroidism and look into contributory factors (Ethnicity, Vitamin D deficiency and timing of operation)  
Parathyroidectomy length of stay is currently above the national average. The recommendation is that patients only need to stay for a day. Department to look into whether this could be delivered from the 23 hour stay area within the Treatment Centre.
Endocrinology – Emergency Patient Flow

Pre-hospital Attendance Inpatient Discharge

Local Hospital Care

Treat & Transfer

Endocrinology-Specialised Services

Treat & Discharge

Home

Follow up in OP Clinic

Local Health and care initiatives

LRI

Triage

GPAU

A&E

Clinic

AMU

Ward

In reach

AMU

Endocrinology - Specialised Services
Managing the bed gap
Impact to be included in overall numbers for ESM

Activity modelling
(Work in progress. Activity tables to be inserted when IP, daycase and out-patient activity modelling is complete).
Geriatric Medicine: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
</table>
| **Geriatric Emergency Medicine (GEM)**  
"Leicester’s Emergency Department prides itself on leading within the field of Geriatric Emergency Medicine (GEM) by having a frail-friendly front door."  
This provides a unique service allowing frail older patients presenting to the ED to receive integrated and multidisciplinary care in an appropriate environment from the moment they arrive. Patients are screened for frailty in the Emergency Department by means of a Clinical Frailty Scale (CFS) and the presence of moderate to severe frailty (CFS 7-9) is intended to direct care towards geriatric multidisciplinary care as provided by the Frailty Emergency Squad (FES). The FES team is led by a geriatrician supported by a multi-disciplinary team (MDT) of an occupational therapist, physiotherapist, Primary Care Co-ordinators, advanced clinical practitioners and pharmacists. It operates from the Emergency Frailty Unit (EFU), operating across the Emergency Floor. When fully staffed, it will operate from 08:00 – 18:00, 7 days a week, 365 days/year providing in reach into the areas as appropriate. The purpose of the FES is to support ED colleagues in the management of frail patients by reviewing and signposting to **Benchmark (Right care/GiRFT/Model hospital/other benchmark)**  
The period from December 2017 to March 2018 saw unprecedented pressure on the local LLR system. This pressure was noted in every part of the economy, from primary care to social care to secondary and community care, with services stretched and staff fatigued across the system. Analysis of UHL data suggests that the issue was not the volume of patients (attendances and admissions have increased in months 11 and 12 but not by a significant amount) but the acuity along with the multimorbidity and frailty of the patients being seen.  
Moderate to severely frail patients over 75 comprise approximately 20% of all Emergency Department attendees yet contribute to approximately 80% of acute hospital bed days. Moreover there is a relationship between increasing degrees of frailty and longer lengths of stay, higher rates of in-patient complications including mortality and a greater chance of subsequent readmission.  
It is important to note that even amongst the older patient cohort, reaction to illness and outcomes will vary. Frailty can be identified more proactively and graded using various tools, allowing the frailer patients to undergo Comprehensive Geriatric Assessment (CGA), an evidence-based process that informs a structured and tailored management plan and is associated with better clinical and functional outcomes for this group of patients. Local data has already demonstrated the benefits of cohorting the frailer group of patients after ED attendance with improved outcomes in terms of reduced admissions and readmissions when they are subsequently assessed and managed by a multidisciplinary Geriatric team. Given the prevalence of frail older patients over a wide area of the Trust, CGA or at least its key principles, need progressive adoption in a whole hospital approach.  

**Quality & safety/Clinical adjacencies**  
Up until recently, across the system and at the UHL front door, we have tended to operate a one size fits all, undifferentiated approach towards patients attending the ED. We also experienced a geographical separation of the acute assessment areas from the ED itself, resulting in little ability to support and develop changes in clinical practice and service.  

**Workforce sustainability**
appropriate areas. This might include in-patient or community care (community hospital or home based).

**Acute Frailty Unit (AFU) and Emergency Frailty Unit (EFU)**

Patients with moderate to severe frailty and whom from assessment in the ED are deemed potentially able to be discharged to a community location of ongoing care within 24 hours are directed to the EFU which acts as an assessment unit for the more ‘ambulatory’ frail older patients.

Moderate to severely frail patients who are likely to need a longer in-patient stay than 24 hours are directed to the AFU.

Both AFU and EFU are staffed by a multidisciplinary team that includes a Consultant Geriatrician. The EFU Geriatrician has the added role of supporting the Frailty Emergency Squad, which operates to assess and make decisions on frail older patients in ED.

**In-patient Geriatric Care**

Geriatricians and their teams currently provide in-patient care to 6 of the 11 medical wards in LRI as well as providing an orthogeriatric service.

**Community Geriatric Care**

Community Geriatric Care is provided over 7 community hospitals (10 wards in total) located in the city, county and Rutland, the vast majority of whom have a degree of frailty. Such patients either are ‘stepped up’ from a home setting direct to community

Consultant staffing is a dynamic issue with loss from ‘natural wastage’ and relative capacity deficits arising due to service expansion, balanced against new appointments. There is a significant reliance on premium locum spend to maintain service delivery. Furthermore, cover for our orthogeriatric service is currently suboptimal due to capacity limitations as well as a lack of suitably skilled consultants.

**Efficiency and effectiveness**

Despite being the largest source of outpatient referrals to Geriatrics, the Falls Clinics (UHL and Alliance) are beset by long waiting times for new appointments yet also have a relatively high DNA rate when booked in probably in part due to the nature of their clinical problems (frail and multi-morbid) and lower functional baseline. There may be opportunities to review and reform the Falls Service in the light of this.

**Demand and capacity/flow**

In terms of identifying specialty demand, there is still suboptimal frailty identification in ED (achieving approximately 70% of target currently). There is also a challenge in measuring adequacy of process such as time to first MDT or consultant review and undertaking of the various elements of CGA. A lack of individual consultant performance data for key metrics (time to first assessment, discharge rate, readmission rate, lengths of stay >10 days, in-patient mortality rates, utilisation of resources) also limits an understanding of system functioning and flow.

**External Contracts**

Community hospitals now have a consistent level of consultant cover that is in line with the SLA agreed with LPT (income ~£400k pa).
hospitals (after discussion between a GP or Advanced Nurse Practitioner with the on-call geriatrician) or are ‘stepped down’ following a period of care or assessment in UHL, either for on-going medical care, rehabilitation or both.
Support is also available for city residents to receive domiciliary care from a Consultant Geriatrician where appropriate and where care needs are more complex as assessed by the GP or the Intensive Community Support service which might be delivering existing care.

**Outpatient Geriatric Care**
Geriatric outpatient services are provided at the LRI and LGH for general geriatric problems, whilst specialist multidisciplinary Falls clinics are provided at the LGH and 6 community hospital sites. Specialist clinics also run for Parkinson’s Disease and Continence problems whilst a specialist outpatient Tilt Service (GGH) is also provided for appropriate patients with suspected transient loss of consciousness.
Geriatric Medicine: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>We recognise that isolated medical interventions alone do not optimise outcomes for older people with frailty – a more holistic, multidimensional care model is required.</td>
<td><strong>What will this mean against rationale for change above?</strong>&lt;br&gt;The Trust is responding positively to frailty and the challenges it poses through frailty identification for patients and targeting a small number of key interventions at those most at risk of adverse events.</td>
</tr>
<tr>
<td>Across the wider health and care system, a targeted programme of work is underway focussed on improving the care planning and care offer in primary care, improving the acute offer in a crisis and enabling a joined up and effecting post-discharge offer for frail multi morbid patients.</td>
<td>We will need to engage with all parts of the LLR system in order to effect change. We see potential synergies with LPT community services and possibilities to create a consistent response from an acute provider point of view. Education and training of the wider LLR team will be essential to underpin these changes.</td>
</tr>
<tr>
<td>Our new system of care will include higher quality care planning, with visible and enactable care plans available to providers, an integrated response from community teams to prevent hospital admission and a common frailty scoring systema cross LLR.</td>
<td>The key change in this proposed model is the early differentiation of frail unwell patients. Currently, if this happens it is all too frequently when the patient has already penetrated the hospital and is in bed on AMU etc.</td>
</tr>
<tr>
<td>In UHL, our new model of care will encourage this through implementation of a revised model of care starting at our front door:</td>
<td>We are proposing a new approach incorporating recognised tools for assessment and training of teams which is underpinned by QI methodology. This approach begins to treat frailty identification in a manner akin to the sepsis pathway.</td>
</tr>
<tr>
<td><strong>Same day acute frailty services:</strong></td>
<td>The opportunity presented here is not limited to UHL, rather it creates the ability to begin bridging the gap between primary and secondary care. This proposal will provide part of the support which integrated locality teams will need and creates a LLR system wide approach to frailty which will ultimately benefit our patients and their families.</td>
</tr>
<tr>
<td>1. Identify frailty:</td>
<td>• Identification of frailty in the ED and admissions units –this should improve delivery of care and services to our frailest patients who are at most risk of decompensation and prolonged hospitalisation. It will also provide a focus for education of the whole hospital workforce around care for frailer patients.</td>
</tr>
<tr>
<td></td>
<td>• Development of perioperative joint geriatric/surgical assessments (colorectal, vascular, urology) to effect optimum delivery of surgical care to our frailer patients and reduce post-operative complications and length of stay.</td>
</tr>
<tr>
<td>Potential Solutions</td>
<td>• Focus on developing SpRs coming through in 2017 to provide the consultant clinical input required for our service, reducing dependency on premium spend locums.</td>
</tr>
</tbody>
</table>
### Identification
Older people (65+) presenting to acute services (ED, AMU, AEC/SDEC) by ambulance will be identified using the Clinical Frailty Scale within 30 minutes of arrival (to align with the start time for the four-hour A&E standard).

#### 2. Response to Identification:
- Frail older people (65+) presenting to acute services will be screened for geriatric syndromes within an hour of being identified as having a CFS of 7 or above; documented consideration of end-of-life care should also be routine.

#### 3. Action response during core hours:
- An MDT capable of assessing and managing geriatric syndromes will be available 10 hours a day, 7 days a week. This will promote same day emergency care and reduce time spent in hospital.
- Action response outside core hours. Frail older people presenting and admitted outside acute frailty service hours will be reviewed by the frailty team by noon the following day.

### Improved Benchmark (Right care/GIRFT/Model hospital/other benchmark)

The Frailty programme across LLR should enable a much more holistic management of our frail and multi-morbid patients across our system – the revised system of care has been assessed by a group of UHL consultants and GP’s as well as business analysts across primary and secondary care. Once the full system of care is in place, it is anticipated that our LoS for the 65+ cohort will decrease and MDT input will increase.

The NHS RightCare case study of ‘Janet’s story’ has been used as a basis for system design.

### Increased Workforce sustainability/quality of services

Our workforce across the system will adapt to the new system of care through implementation of the programme – all health and social care partners within the STP footprint have signed up to the new system of care.

In terms of UHL, our models show that frail multi-morbid patients will be the heaviest users of our services over the coming years - this system of care is therefore designed to ensure MDT working becomes the norm to support patients to get to the right place at the right time. In essence, frailty becomes everyone’s issue across the whole workforce as opposed to just geriatrics. Mandatory training modules on the recognition of frailty will have been rolled out by this time (planned for Q4 18/19) as will additional modules focussed on the system-wide offer for frail patients.

### Increased efficiency and effectiveness/balanced demand and capacity

We have modelled the expected impact of the frailty programme using NHS RightCare case studies from Frimley and Slough. Both these systems used a similar approach to improving their system for frail multi-morbid patients, with direct decreases in demand at the acute site in both cases. However, their systems did see increased demand on MDT and primary care.

Implementing the frailty programme should see an 8% cumulative decrease in bed days over the 5 year period at 100% efficiency.

- Look at revising the LLR Falls Strategy, with much of current clinical pathways being designed to be undertaken by trained nurses/therapists and potentially establishing a real-time Front Door Falls Assessment Service (multidisciplinary) which could assess and initiate treatment the same or next day for those attending ED/GPAU with falls or high falls risk.
4. Decision-making:
   a. The MDT input will be recorded in the clinical management plan, incorporating all five domains of the Comprehensive Geriatric Assessment (medical, cognitive/psychological, functional, social and environmental problems).

Our discharge and post discharge model of care will involve a single coordination centre for complex discharges, with coordinated MDT-led discharges back into the community, targeted plans for those at risk of readmission and integrated reablement services across LLR.
## Managing the bed gap

<table>
<thead>
<tr>
<th></th>
<th>Beds released minimum - max</th>
<th>Resource required</th>
<th>Estimated £</th>
<th>Methodology for numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPAU - admission avoidance</td>
<td>0  2  2  5  5  6  6  6  6  6</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EF2 pathway redesign</td>
<td>5  5  5  7  7  8  8  8  8  8</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red to green ward methodology</td>
<td>5  7  7  8  8  9  10  11  11  12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional ward</td>
<td>28  28  28  28  28  28  28  28  28  28</td>
<td>Staff &amp; Capital &amp; 4,500,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>End of life pathway improvements</td>
<td>0  0  0  1  1  2  2  2  4  3</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frailty pathway redesign</td>
<td>0  0  0  2  2  3  3  4  4  5</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hampton Suite</td>
<td>0  1  0  2  0  2  2  3  3  4</td>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Clinical Model of Care – Geriatric Medicine Emergency Patient Flow

Pre-hospital

Identification of frail patient using EFI/CFS or ACG marker for frailty and multimorbidity
MDT care planning for optimisation of care and prevention of crisis via CGA
Crisis management plan, with visible and enactable information, available at every provider access point

Primary care

GP Assessment Unit (GPAU)

Emergency Department

Emergency: LRI

Treat & Discharge

EDU < 24hrs (shared care with ED Cons)
EFU < 24hrs
AFU < 72hrs
ACB

Crisis management plan, with visible and enactable information, available at every provider access point

Inpatient

Integrated discharge team
Base ward/Admission units LGH/GH/LRI
Hampton Suite
Home/Usual place of residence +/- ICS
Transfer to community Hospital/Rehabilitation
Mental Health

Discharge

Frailty Emergency Squad (FES) focused on CFS 7-9
IDENTIFY CFS within 30 mins
RESPOND TO CFS SCORE initial geriatric screening in ED
ACTION CARE PLAN via MDT
REFER FOR ONWARD COMMUNITY MDT IF NEEDED
Clinical Frailty Score 7-9
NerveCentre ID
Adjust Clerking paperwork
Training for HCAs
Training for CDU team

CGA (Comprehensive Geriatric Assessment)
Clerking paperwork
Template development
Competencies required
Training to upskill

Senior assessment
ED consultant;
Geriatrician; GPwSI in ED
MDT development team – need therapy resource and Geriatrician

Home First Model
Training team to think differently
Link into Home First programme (integrated working)

"Planned emergency admission"
Flag via paperwork CFS
Clear management plan
Earlier Discharge Date
Primary care coord/therapist input sooner
Acute Frailty Unit Model of Care
## Rheumatology: Summary of proposed changes

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview</strong></td>
<td>Benchmark (Right care/GiRFT/Model hospital/other benchmark)</td>
</tr>
</tbody>
</table>
| Rheumatology service provides all aspects of rheumatology care for patients from assessment to treatment. Our staff diagnose and treat diseases and disorders of the joints, muscles, bones and tendons such as arthritis and degenerative joint disease. Rheumatology serves a population of 1.2M. The rheumatology service has a range of specialist clinics including:  
- Early onset arthritis clinic  
- Connective tissue disease clinic  
- Ankylosing spondylitis  
- Osteoporosis and metabolic bone disease clinic  
- Physiotherapist lead clinic  
| Quality & safety | As a result of a CQC visit to the Trust in June 2016 Concerns were raised around the safe management of long term follow up patients. During 2017 a recent serious incident (SI) highlighted lack of robust processes for monitoring and prescribing Biologics which resulted in unsafe practices. Further patient safety incidents were also highlighted around administrative processes to support screening. Rheumatology is currently participating in a 3-year audit commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). This will assess the care provided by rheumatology services in England and Wales and the health outcomes this achieves for people living with inflammatory arthritis conditions, including rheumatoid arthritis, psoriatic arthritis and axial spondyloarthritis. The performance of the service will be assessed against NICE quality standards, measuring key items such as referral times from primary care, waiting time for specialised rheumatology care, time to treatment, access to education and self-management, and the outcome of care including disease remission. |
| Location | Efficiency and effectiveness  
Rheumatology is predominantly an outpatient service and does not have a dedicated bed base, however inpatients with Rheumatology conditions are supported through an in reach service at the Leicester Royal Infirmary. Outpatient services are run from the Glenfield Hospital, Leicester General Hospital and Leicester Royal Infirmary. 2017/18 Rheumatology delivered 4,165 new |  
NICE guidelines state that patients with Rheumatoid Arthritis (RA), the specialty main patient group, should have regular access to a multidisciplinary team, to provide periodic assessments of the effect of the disease on their lives and to help to manage the condition, for example, the specialist nurse [2009]. Pharmacological management, in people with newly diagnosed active RA, should be offered a combination of DMARDs as first-line treatment as soon as possible, ideally within 3 months (12 weeks) of the onset of persistent symptoms.  
Due to insufficient capacity across the pathway the service is unable to deliver all 4 key components of the best practice for patients being referred with Early onset Arthritis. The first part of the pathway is the biggest challenge to see all patients within 3 weeks of referral. The annual income plan for BPT is £60k and in first two months of 2018/19 the service has underachieved against plan by £4k. |
patient appointments and 20,647 follow up patient appointments. Clinics also run in the alliance community hospitals in Leicestershire and Rutland.

Day case procedures area carried out on the Leicester General Hospital site on Ward One the medical day case unit; these procedures include joint injections and epidurals. Day case activity delivered 3280 Day case procedures during 2018/19. Co dependencies for Rheumatology are orthopaedics and the radiology department. requiring access to the following diagnostics; MRI, CT, musculoskeletal ultrasonography, DEXA and radioisotope scans to aid diagnosis and treatment.

**Staffing**

<table>
<thead>
<tr>
<th>Staff description</th>
<th>wte</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultant</td>
<td>9.25</td>
</tr>
<tr>
<td>FY medics</td>
<td>2.00</td>
</tr>
<tr>
<td>Registrar</td>
<td>5.10</td>
</tr>
<tr>
<td>Specialist Trainee</td>
<td>1.0</td>
</tr>
<tr>
<td>Other medic</td>
<td>0.83</td>
</tr>
<tr>
<td>Admin and Clerical</td>
<td>16.98</td>
</tr>
<tr>
<td>Nursing specialist</td>
<td>4.6</td>
</tr>
</tbody>
</table>

**Training**

Teaching sessions run every Friday with clinical MDT and PA’s allocated for clinical supervisor.

**Research**

Currently there are 7 CRM studies underway – 5 corporate and 2 commercial, with 2 portfolio studies in the future.

As part of the service review process mapping has been completed across all pathways. Performance in the specialty is good with RTT at 97% DNA rates at 4%, below the current target and New to Follow ratios sit within the top benchmark of 2.84

**Demand and capacity**

The current demand exceeds capacity with additional clinics provided to maintain performance and safety. The service delivered 3,600 new outpatients during 2017/19 and received 5,200 referrals which is a gap of 1,600. Several factors place pressure on demand. In adequate staffing levels is a big factor. The current nursing team consists of 2.6 WTE band 6 and 2.0 WTE band 7 Specialist Nurses, who serve a population of 1.2 million within UHL and the Alliance. British Society of Rheumatology recommends 1 Specialist Nurse per 100,000 patients; Leicester therefore has a short fall of 7.4 WTE. To improve safety around prescribing late 2017 introduced 0.3 WTE Band 8 Pharmacist to support sub-cutaneous methotrexate (SCMTX) prescribing. Over the last 4 years the number of patients on SCMTX has increased by 100% from 450 to 900, equating to approximately 150 prescriptions being written per week. This requires a full time post to ensure safe and effective prescribing; an uplift of 0.7 WTE band 8a to efficiently run the service.

There has been slow uptake from GPs to provide Shared care agreement to monitor patients on DMARDS, which means patients are returning to the acute setting for this monitoring increasing follow up demand. Together with inadequate staffing levels across all disciplines.

There are high attendance rates to our Emergency Department from patients with Rheumatoid conditions. Average attendance for 6 months is 2800 at a cost of £362,400. These would be reduced by increased nurse led help line capacity.
## Rheumatology: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How will the new model of care look?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Delivery of EIA BPT</td>
<td>What will this mean against rationale for change? Benchmark</td>
<td>NA</td>
<td>NA</td>
<td>200 N ref reduction through MSK</td>
<td>1% reduction of DNA rates £36,287.49</td>
</tr>
<tr>
<td>• More Nurse led services</td>
<td>Quality &amp; safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Fully Implemented MSK Triage</td>
<td>Improved communication between patient and clinicians through timely follow up appointments and virtual clinics in order to ensure patients are informed of their treatment pathway and blood monitoring.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Increased work within Alliance</td>
<td>Enhanced use of DAWN will reduce duplication and improve monitoring patients on Biologics and DEMARD medications, across both UHL and the Alliance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Developing the use of DAWN system to real time data capture by clinicians.</td>
<td>Pharmacy presence within the department will strengthen prescribing processes and improve safety. Reducing the number of patient queries, complaints and DATIX’s relating to medication delays.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>• Establish best practice for safe management of follow up demand by increasing take up from GPs to provide shared care agreements.</td>
<td>Increased staffing will provide capacity to support Care plans for patients in line with NICE guidelines.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Adopt best practice around provisions of Nurse led telephone help line to reduce emergency attendances.</td>
<td>Additional administrative staff will facilitate patient admin process to ensure compliance with national audit guidelines for EIA.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Realise full income associated with robust tracking of compliance and drug monitoring, and improved efficiency reducing duplication of testing through increased Pharmacist input in the team.</td>
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<td></td>
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</tbody>
</table>

### Daycase services
Daycase services will be relocated to the Treatment Centre at the Glenfield Hospital, providing better support from diagnostics and one stop appointments, which are not currently available at the LGH. Delivery of Outpatient clinics will be done...
from the Treatment centre at Glenfield Hospital, which will provide the co dependencies currently provided at the LRI. Imaging including Dexta scanning.

There will continue to be Consultant led activity for complex care needs and increased Nurse led clinics for 6 week DMARD follow ups, Biologic swaps, initiation of therapy, 3 month reviews. MDT clinics with other specialities such as dermatology and renal running Monday to Friday.

When consultant recruitment is complete there will be a 20% increase in the shift of patients being seen in the Alliance clinics. Providing care closer to home.

Acute care will remain at LRI where there will be an emergency clinic and in reach provided by clinicians.

Nurse Telephone help line will provide advice to patients to reduce attendances in ED.

For safety the standard for returning patient calls should be within 24 hours, currently there is a delay of 72 hours which puts patients who flare at risk of emergency admission and GP consultations. Over the last 12 months 202 patients have been seen in emergency nurse clinics following a phone call regarding a flare.

**MSK TRIAGE**

The service is designed to be used for patients where physiotherapy has not been successful or is not appropriate. On referral, the patient's symptoms will be reviewed

<table>
<thead>
<tr>
<th>Workforce sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved moral with correct workload. Able to develop and train nursing staff through nurse prescriber training. Reduced pressure on Junior Drs to cover a higher frequency if on calls and to attend training clinics. Improve quality of research within service, more time allocated to increasing associated income. Recruitment of substantive clinical staff ensures longevity and continuity of care to patients and allows development of service for consultants with specialist interests.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Efficiency and effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients would have access to appointments in a timelier manner improving clinical outcomes with regards to earlier treatment and improved access to advice and guidance via telephone advice line and face to face follow up with Specialist Nursing staff.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demand and capacity/flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expectations are that MSK triage service will reduce the number of new referrals by 4% which will equate to a reduction of approximately 200 per year. This will not have a major benefit to the demand in Rheumatology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction in number of WLI clinics required to meet demand, cost saving of approximately £12K per month</td>
</tr>
</tbody>
</table>
virtually by an (MSK) GPSI within 2 working
days, who will determine the most
appropriate pathway of care for the patient.

The service ensures that patients are treated
in the best place for their particular needs. It
will also ensure that where possible, patients
are treated more conveniently in the
community and are not unnecessarily using
services at UHL’s acute sites. All patients are
offered choice by the MSK triage team. As a
result, they will receive more effective care,
consistently across Leicester, Leicestershire
and Rutland, and will be seen much more
quickly than previously would have been the
case.

Osteoporosis Pathway
The Osteoporosis pathway is a nurse led
service which screens patients who are at
risk of developing osteoporosis. These
patients will meet a certain criteria and may
present with fragility fractures. Improving the
efficacy of the Osteoporosis clinics by
screening the appropriate patients and
organising of bloods, questionnaires, DEXA
scanning of patient, face to face interview of
patient with outcome and plan of care.

There will be a follow-up, adherence and
support to patients with osteoporosis and
shared care for Denosumab working along
with the primary care. The Nurse will also
provide education for patients to support
ongoing management in the longer term.

It is anticipated this service will be
established by Qtr4 2018/19 dependent

<table>
<thead>
<tr>
<th>Benefits of Osteoporosis pathway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase cost-effectiveness by reducing variation and delivering best practice through locally agreed standardised pathways for bone health interventions for secondary fracture prevention</td>
</tr>
<tr>
<td>Reduce costs to the local health economy through effective secondary fracture prevention</td>
</tr>
<tr>
<td>Reduce the incidence of fragility fractures</td>
</tr>
<tr>
<td>Increase equity of service, with equal access to services for the whole population.</td>
</tr>
<tr>
<td>Improve the quality of the experience for the individual and their family by developing high-quality education around the opportunities for intervention</td>
</tr>
<tr>
<td>Release capacity in consultants' bone clinic to see more new patients to reduce wait times, Reduce the numbers of unnecessary</td>
</tr>
</tbody>
</table>
approval of business case and successful nurse recruitment and training.

Who will provide what activity at which site?

When will the service be in place?

Shared Care Agreements
A shared care agreement (SCA) outlines suggested ways in which the responsibilities for managing the prescribing of a drug can be shared between the specialist and general practitioner.

Sharing of care assumes communication between the specialist, GP and patient (and/or carer). The intention to share care should be explained to the patient by the doctor initiating treatment. It is important that patients are consulted about treatment and are in agreement with it. Patients receiving the given drug must be under regular follow-up, which provides opportunities to discuss drug therapy.

follow-ups in the consultant lists, i.e. Patients who are already on specific bone active therapies can be seen by the nurse rather than by the doctor
The osteoporosis nurse will serve as a link between relevant related specialties, especially orthopaedics and orthogeriatrics, thereby enabling the identification of 'at risk' patients for Dexta scanning/Treatment initiation and follow-up
Screening of at-risk patients in a timely fashion will reduce the risk of future fractures (e.g. Wrist and hip fractures) and avoid the need for subsequent hospitalisation/surgery.
DEXA reporting, thereby potentially freeing up consultant time
The Osteoporosis Specialist Nurse (OSN) will be able to link in with the wider Fracture Liaison Service (FLS) aimed at delivering high quality osteoporosis services for the local community

The clinical significance of osteoporosis lies in the fractures that arise. In the UK, approximately 536,000 new fragility fractures occur each year, comprising 79,000 hip fractures, 66,000 clinically diagnosed vertebral fractures, 69,000 forearm fractures and 322,000 other fractures (i.e. fractures of the pelvis, rib, humerus, fibula, clavicle, scapula, sternum and other femoral fractures) (NOS 2016). Fractures cause severe pain and disability to individual sufferers, at an annual cost to the National Health Service (NHS) of over £4.4 billion, estimated for 2010. First year costs, subsequent year costs and pharmacological fracture prevention costs
amounted to £3.2 billion, £1.1 billion and £84 million, respectively.

Extrapolating these to the UHL patient cohort of 1.2 million, 9,895 new fragility fractures every year, 1458 hip fractures annually, 1218 vertebral fractures annually with substantial cost on the trust. Other than the financial implication, it is clear from the evidences that approximately 772 (53%) of patients suffering a hip fracture can no longer live independently and 408 (28.7%) die within 12 months of the fracture (NOS, 2016). Furthermore, most major osteoporotic fractures are associated with reduced relative survival, with an impact persisting more than five years after the index event.
Rheumatology – Emergency Patient Flow

**Pre-hospital**
- Local Hospital Care

**Attendance**
- Treatment Centre: Urgent clinic slots
  - LRI
  - Bed bureau or direct from clinic
  - AMU
  - GPAU
  - A&E

**Inpatient**
- CTD or serious infection due to biologics
  - Process remains unchanged *(note in the future with improved day case access some unwell patients can be managed through a medical daycase unit avoiding admission)*

**Discharge**
- Home
  - Follow up care *(Often patients stay under the management of UHL clinicians – workforce issues)*
  - Transfer back to referring centre/specialist

**Treatment & Transfer to specialised Hubs**
- Rheumatology-Specialised Services
  - Tertiary CTD
  - Vasculitis
  - Lupus
  - Myositis
  - Ankylosing Spondylitis
Managing the bed gap

No impact as Rheumatology is predominantly an out-patient delivered service and any assumptions re mitigating growth will be included in the wider ESM bed base

Activity model

(Work in progress. To be inserted when in patient, day case and OP modelling is complete. Note: The service has flagged an outstanding issue for the CMG to sign off: Reduction of 200 patients FU if shared care agreements increase by a further 1% releasing follow up capacity to support EIA management. This will benefit the patient from fewer trips to hospital and more frequent communication around their treatment. If the speciality were to run the SCA in relation to protocol we would actually require additional capacity in line with the 2 FU prior to handover from secondary care. We are still required to follow patients up 6-12 monthly which is what we are currently doing anyway. Further work is required to agree how to reduce the capacity in line with the above statement.)
### Stroke: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview</strong></td>
<td>There will be no change to the location of the Hyper acute, inpatient service and the TIA clinics which will remain at the Leicester Royal Infirmary site where it is well placed to take patients directly from the Emergency Department.</td>
</tr>
<tr>
<td>Our Department of Acute Stroke Medicine is based at <strong>Leicester Royal Infirmary</strong>. The Stroke Team won a Caring at its Best award in 2017/18. SSNAP rating overall B at during Qtr1 2018/19 demonstrating high quality stroke service to our patients.</td>
<td></td>
</tr>
<tr>
<td><strong>In-patient care</strong></td>
<td>The Stroke Rehabilitation ward 3 based at the Leicester General Hospital will relocate to the Evington Centre which is on the same site. The reason for the move is linked with the plan to enable diabetes clinic expansion into the area currently used by ward 3.</td>
</tr>
<tr>
<td>The in-patient stroke services at Leicester Royal Infirmary are housed in Wards 25 (Male and HyperAcute Stroke Unit - HASU) and 26 (Female), located on the third floor of the Windsor Building. Day-to-day medical care is conducted by a team of consultants, middle-grade. Junior doctors and a physician’s assistant. Most new patients are admitted to HASU (level 2 beds). Following initial medical treatment, we have a philosophy of early rehabilitation provided by our dedicated team of therapists, including physiotherapists, occupational therapists, and speech and language therapists. The full range of non-invasive investigative techniques is available: transcranial Doppler and cervical duplex ultrasound; CT with angiography, venography and perfusion; MR imaging and angiography.</td>
<td></td>
</tr>
<tr>
<td>There are challenges around nurse recruitment across the Stroke wards, and focussed recruitment campaigns are held regularly to mitigate this, there is a high dependency on agency nursing staff, which in turn places cost pressures on the service.</td>
<td></td>
</tr>
<tr>
<td>The SSNAP rating indicates that the pathway is being followed correctly for the majority of patients, but during extreme winter pressures it is necessary for acute medical patients to fill stroke beds, which can compromise the capacity of the unit to take hyper acute stroke patients.</td>
<td></td>
</tr>
<tr>
<td>The SSNAP rating indicates that the pathway is being followed correctly for the majority of patients, but during extreme winter pressures it is necessary for acute medical patients to fill stroke beds, which can compromise the capacity of the unit to take hyper acute stroke patients.</td>
<td></td>
</tr>
</tbody>
</table>
**Daily one-stop transient ischaemic attack (TIA) and minor stroke clinic**

At our one-stop TIA clinic, people who have been suspected to have recently suffered a TIA or minor non-disabling stroke are reviewed by a senior doctor. The required investigations are conducted on the day (MRI, vascular ultrasound). The clinic is open 7 days a week, and located in the Ambulatory Care Area (adjacent to the RVS Shop, Balmoral Building). There are close links with Vascular Surgery for patients with symptomatic carotid disease.

**Rapid response to acute stroke (the RAP team)**

In addition to the daily running of HASU, the team based there are responsible for providing a rapid response to people presenting with acute stroke. Mostly these patients present to the Emergency Department (with a positive FAST test or otherwise), but patients with stroke occurring in hospital are also covered. Early intervention for these patients can make a significant impact upon outcome. Locally provided treatments include high grade antiplatelet therapy, intravenous thrombolysis, clotting reversal and intensive hypotensive treatment, intensive care and cooling. Mechanical thrombectomy and neurosurgery are available for patients transferred to Queens Medical Centre, Nottingham. There is an extensive programme of clinical research.

<table>
<thead>
<tr>
<th>Demand and Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity will remain unchanged with acute stroke on the LRI site and Step down Rehabilitation on the Leicester General site.</td>
</tr>
</tbody>
</table>

At the **Leicester General Hospital** we provide a 15-18 bedded in-patient stroke...
rehabilitation unit for residents of Leicester City (Ward 3). The Early Supported Discharge team is also based there, providing specialised stroke rehabilitation that can be delivered at home. ESDS (early supported discharge service) has strict criteria for patients to qualify. This service has been established from some time and significantly reduced length of stay.

Several elective outpatient clinics are held each week including specialist services for patients with spasticity.

All patients managed by these services are registered into a national stroke audit: Sentinel Stroke National Audit Programme (SSNAP) which benchmarks UHL’s performance on a thrice-yearly basis against other NHS England Trusts.

**Research and Development**
The department is very proactive in Research opportunities and won an award for this work.
Stroke: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute and Hyper Acute Stroke</strong></td>
<td>The relocation of Ward 3 to Evington Centre enables the same model and sharing across all three stroke rehab units with the use of Acute Nurse Practitioners (ANP) rather than a full medical service. This will help patient flow and in the long term reduce POC increase help to get back to work, and reduce complications of contracture etc. This work is primarily led by LPT. The move to the Evington centre is looking at a like for like move with 15 city rehab beds and is not expected to change the long term plan with CCG and LPT is to have all 3 sites at 15 beds. So would affect other units than city. The previous trend is that admission to stroke has been steady over the last decade with the development of TIA etc. CINS will help discharges from UHL and community hospitals which should help flow and lead to maintaining capacity despite increased frailty.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Reduction in the number of HASUs in NHS England</strong></td>
<td>It is envisaged that fewer units would enable the current available staffing capacity to be fully utilised and maintain uniform high standards of care.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The model of care for Acute Stroke patients will not change. The only change will be the physical location of the Ward 3 providing step down and Stroke Rehabilitation. This will move on the same site to the current Evington Centre, which is managed by Leicester Primary Care Trust.

Elective outpatients will re locate to the Patient Centre at the Glenfield Hospital.

Clinical in reach Neuro and Stroke Rehabilitation Service (CINSS): This is a recently established multidisciplinary team providing community support for all stroke and neuro rehabilitation patients CINSS continue to develop it will be doing more 72 hour check-ups on discharge, and continue to work with ESDS for more timely neuro specific rehab on discharge from wards or ESDS as required. This will help patient flow and in the long term reduce the need for package of care schemes (POC) increasing help to patients to get back to work, and reduce complications of contracture etc. This work is primarily led by LPT. The move to the Evington centre is looking at a like for like move with 15 city rehab beds and is not expected to change the long term plan with CCG and LPT is to have all 3 sites at 15 beds. So would affect other units than city. The previous trend is that admission to stroke has been steady over the last decade with the development of TIA etc. CINS will help discharges from UHL and community hospitals which should help flow and lead to maintaining capacity despite increased frailty.

Reduction in the number of HASUs in NHS England

The National Clinical Director for Stroke has stated intent to reduce the number of HASUs in NHS England. The relocation of Ward 3 to Evington Centre enables the same model and sharing across all three stroke rehab units with the use of Acute Nurse Practitioners (ANP) rather than a full medical service. This will help patient flow and in the long term reduce POC increase help to get back to work, and reduce complications of contracture etc. This work is primarily led by LPT.

The move to the Evington centre is looking at a like for like move with 15 city rehab beds and is not expected to change the long term plan with CCG and LPT is to have all 3 sites at 15 beds. So would affect other units than city. The previous trend is that admission to stroke has been steady over the last decade with the development of TIA etc. CINS will help discharges from UHL and community hospitals which should help flow and lead to maintaining capacity despite increased frailty.
by half (from 120 to around 60). GIRFT directors have been appointed to oversee this change. There is no published timeline for this change.
Managing the bed gap

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Resource required</th>
<th>Estimated £</th>
<th>Methodology for numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red to green ward methodology</td>
<td>5 7 7 8 8 9 10 11 11 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>End of life pathway improvements</td>
<td>0 0 0 1 1 2 2 4 3 None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frailty pathway redesign</td>
<td>0 0 0 2 2 3 4 4 5 None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activity modelling (Work in progress. To be inserted when IP, Daycase and OP modelling is complete).
**On-going care**

- Improved detection and management of AF

**Primary Care**

- Patient calls 999 or attends A&E
- Suspected TIA

**Pre-hospital**

- A&E
- CT & Diagnostics
- TIA Clinic, Scan & F/U
- Treat/Intervention

**Attendance**

**Inpatient**

**Discharge**

- Early supported discharge (home).
- Step-down to Community rehabilitation
- 6 week nurse led OP review

**HASU**

- Acute Stroke Unit immediately (within 4 hours) – Swallow screen
- – Specialist intervention (OT, Physio, SALT, MDT within 72 hours)
- – Initiate rehabilitation goals – Nutritional screening (dietetics)

- Intravenous thrombolysis, Mechanical Thrombectomy, Neurosurgery

**Other investigations**

- Other investigations

**Discharge Home/Primary Care**

- Discharge Home/Primary Care

**Patient Booked**

- Out patients
- Day case
- ?Botox therapy
## Design of system-wide clinical models of care


### Neurology, Neurosurgery and Neuro-rehabilitation: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview</strong></td>
<td><strong>Benchmark (Right care/GiRFT/Model hospital/other benchmark)</strong></td>
</tr>
<tr>
<td>The department provides neurological and neurorehabilitation services for a population of around 900,000 in LLR (Leicester city, Leicestershire and Rutland). The Department has a broad range of inpatient, day case and outpatient service provision, congruent with a neurology centre of this size with secondary and tertiary input for the wider region as well.</td>
<td>The Association of British Neurologists/Royal College recommendations (2010) was for one neurologist per 80,000 of the population. The number of neurologists required given the population coverage of LLR is therefore a minimum of eleven whole time equivalent Consultants in Neurology.</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td><strong>Quality &amp; safety</strong></td>
</tr>
<tr>
<td>In-patient care is delivered at Leicester Royal Infirmary (LRI) by the attending neurology consultant with neurology registrars and junior staff seven days a week on the 27-bedded Ward 24. Comprehensive diagnostic services for neurophysiology and neuroradiology are based at the LRI. Close links are maintained with Queen’s Medical Centre, (QMC) Nottingham which accepts transfers from LRI for emergency neurosurgical assessment and intervention, reciprocated by repatriation back to Ward 24 LRI post procedure. Two visiting neurosurgeons from QMC run clinics at Leicester General Hospital (LGH). There is sub-specialty day case activity performed on Ward 1 at the LGH, comprising</td>
<td>The MS Disease Modifying Therapy service is on the risk register until more robust system in place for monitoring DMT results and acting on them. - DMT coordinator recruitment to administer Microsoft excel based system and implements DAWN to monitor results. The administrative service of the neurology department is on the risk register. – Recruitment of more administration staff has been completed and the successful applicants are going through pre-employment checks. Existing staff are currently going through a retraining programme.</td>
</tr>
<tr>
<td></td>
<td><strong>Workforce sustainability</strong></td>
</tr>
<tr>
<td></td>
<td>Capacity analysis demonstrates a significant gap between the available manpower for clinics and the demand for neurology outpatient input, which is increasing year on year, exceeding current capacity within the service. As a result, additional waiting list initiatives have been used as a temporary measure, but this is not a long term sustainable solution. The following areas are being developed to address this issue:</td>
</tr>
<tr>
<td></td>
<td>- Specialty pathway reviews for Headache, Epilepsy, MS and Parkinson disease that have led to development of PRISM pathways</td>
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<td></td>
<td>- More integrated care by community clinics in primary and secondary care settings closer to home with expansion of specialist nurse led clinics</td>
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<tr>
<td></td>
<td>- Developing more expertise in primary care by training GPs and GP trainees to develop specialist interest and skills in neurology including Headache, Epilepsy, Parkinson disease and MS: teaching clinics, courses and in-reach to primary care by specialty consultants.</td>
</tr>
</tbody>
</table>
elective lumbar puncture lists, full neuropathy screening blood tests, and planned intravenous infusions for methylprednisolone, intravenous immunoglobulin, cyclophosphamide and the full range of biologics and higher tier disease modifying drugs for multiple sclerosis (Fingolimod, Cladribine, Natalizumab, Alemtuzumab). Neurology out-patients and administration are based at the Leicester General Hospital. A seven-bedded specialist Brain Injury Unit and a sixteen-bedded Neurological Rehabilitation Unit are also located at Leicester General Hospital.

Specialised Clinics delivered in Outpatients

General Neurology clinics
MS Clinics
Epilepsy Clinics
Parkinson’s Clinics
Muscle Clinics
Migraine BOTOX Clinics
Dystonia BOTOX Clinics
*Clinics are both consultant and nurse led.*

Brain injury unit

BIU is 9 bed specialist Level 1 Neuro-Rehabilitation units and it is the only Level 1 facility in East Midlands. It provides specialist input for highly complex patients including tracheostomy weaning after polytrauma and Prolong Disorder of Consciousness (PDOC) patients. It takes patients with Highly Complex Rehabilitation Needs that are beyond the scope of their Local Specialist Rehabilitation Services. The unit has highly

- Acute or rapid access neurology clinics in LRI co-located with TIA clinic in GPAU overseen by on call Neurology Consultant for rapid access by GPs and medical and emergency department colleagues as this is accepted to reduce admission rates and length of stay and can improve waiting times for urgent referrals including ‘First fit’ pathway patients.
- BIU is a Tertiary Specialised Rehabilitation Unit but is not being led by a Consultant trained and Accredited in Rehabilitation Medicine as per NHS Standard Contract Service Specification for Specialised Rehabilitation for Patients with Highly Complex Needs hence need for Business Case for a 3rd Consultant in Rehabilitation Medicine.
- BIU and SNRU Staffing not as per BSRM Recommendations. BIU and SNRU not compliant with NHS England Contract for Specialised Rehabilitation for Patients with Highly Complex Needs (NHSE Self Declaration Exercise attached).

C075-201718m12-1  C076-201718m12-2
1-proposed-summary 1-proposed-summary

Efficiency and effectiveness

- Manpower review and uplift to recommended establishment on BIU and SNRU as per BSRM Recommendations for Minimum Staffing for Specialist Rehabilitation Units including Therapy, Nursing, Neuropsychology, SALT Ward Clerk for Mandatory Monthly Data Submission to UKROC and provision of Dedicated Social Worker/Discharge Coordinator Input is required.
- Efficiency Index =4

<table>
<thead>
<tr>
<th></th>
<th>Neurology</th>
<th>Neurosurgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cost (£)</td>
<td>£7,727,225</td>
<td>£144,796</td>
</tr>
<tr>
<td>Total Cost (£)</td>
<td>£9,212,794</td>
<td>£113,223</td>
</tr>
<tr>
<td>Savings (£)</td>
<td>£954,333</td>
<td>£31,573</td>
</tr>
<tr>
<td>Efficiency Index (%)</td>
<td>12.35%</td>
<td>21.81%</td>
</tr>
</tbody>
</table>

Neurology

Efficiency score

Intel score

Quality & safety...

Performance score

Finance score
Specialist staff including specialist physio, OT, SLT, Neuro-psychology and specialist nurses. Unit is supported by pharmacist and dieticians.

**Specialist Neurological Rehabilitation Unit (SNRU)**
The Specialist Neurological Rehabilitation Unit, formerly known as the Younger Disabled Unit, has been open since the 1970’s. The unit is a 16 bedded unit providing Specialist Rehabilitation services to the population of Leicester, Leicestershire and Rutland. It is one of the two Level 2 A Local/ District Specialist Rehabilitation Unit in East Midlands taking patients with a range of Complexity Including those with Highly Complex Rehabilitation Needs.

We are a specialist service offering rehabilitation to adults with complex disabilities, predominantly of working age who have a neurological disability.

We give priority to patients with an acute neurological disability; hence most of our patients are transferred from Neurology ward at the Leicester Royal Infirmary (LRI) ward 24 and Major trauma unit or neurosurgical ward at Queen’s Medical Centre. Patients are transferred from other wards of UHL with neurological diagnoses as well as from other nearby hospitals. LLR patients are offered specialist community Neuro-Rehabilitation via CINSS (Community Integrated Neurology & Stroke Service) with a lead consultant for neuro-rehabilitation working with this team one day

**Demand and capacity/flow**
- It is acknowledged that the pressures and intensity of the workload is significant and demands are ever increasing for the service. The current Neurology patient demand exceeds substantive capacity within the service and as a result additional waiting list initiatives are required to manage the activity levels within the service.
- Neurology’s new to follow up ratio is 2.94 which is above the national rate.
- BIU has had 3067 total OBDs in 2017-2018 that is 93% Occupancy for 2017-18 (In- patient activity Reported to UKROC for submission to NHS England)
- And SNRU has had 5558 total OBDs in 2017-2018 that is 95% Occupancy (In- patient activity Reported to UKROC for submission to NHS England). Financial Value to be set with NHS England (see below)
- Both BIU and SNRU are already operating at High Occupancy which has been realised after Expansion of beds in 2016 and has been increasing Year on Year since 2016(see Attached Annual UKROC Summary.
- Currently able to meet Demand due to significantly shorter length of stay than comparable Specialist Rehabilitation Units Nationally. Should BIU and SNRU have the same Length of Stay as other similar level Units Nationally they will need significantly more number of beds to meet current Demand.

**Cost**
- Current contract for BIU/SNRU (previously called YDU) is inconsistent with the UKROC methodology as it is based on HRG V4 even though Rehabilitation HRGs are ‘Unbundled’ HRGs and HRGs V4 specifically excludes ‘Complex Specialist Rehabilitation’ which has been subject to Specialised Commissioning by NHS England Nationally for many years. BIU and SNRU are the only Specialist Rehabilitation Units which are using HRGs V4 and related patient coding for Reference Cost Reporting.

  - After shadow monitoring of activity on BIU and SNRU in the financial Year 2017-18, we are working to move to UKROC mandated National Tariff / Currencies via Specialised Commissioning from this financial year with help of Trust Head of Finance- Commissioning.

  - We will have an accurate data capture of all patients admitted to and discharged from BIU and SNRU from April 2018 to overcome the previous situation where some BIU and SNRU patients were not coded as receiving Rehab leading to lost income under the old system of accounting.

  - This money will be the investment and CIP Opportunity for BIU and SNRU as this switch to UKROC methodology of Commissioning via National Currencies will result in us supposedly over-performing as per Contract Value compared to last Financial Year.
per week. Patients are referred to this service directly from both QMC and Coventry MTC when patients do not require long LOS and can be supported for their rehab in the community. The team has Rehabilitation consultant input, neuro-psychologist, specialist neuro-physiotherapists, occupational therapists, SLT, Dietician and therapy assistant input. Multi-agency input is supported involving social services as required including multi-agency case meetings. CINSS team was established as a part of ‘Better Care Together’ programme.

Neuro-psychology is currently provided by LPT. It has long waiting list and patients have to wait minimum 18 months before making first contact with this service. This provision is currently being reviewed by UHL & LPT.

**Staffing**
The service of Neurology and neuro-rehabilitation comprising 8 Consultants, 4 Specialist registrars and 3 MS, 2 Epilepsy and 2 Parkinson Specialist Nurse clinics. These posts are all funded by UHL.

**Teaching and Training**

**Research and development**
### Neurology, Neurosurgery and Neuro-rehabilitation: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What will the new model look like?</strong>&lt;br&gt;The new configuration of services will continue to be delivered across 2 sites. In patient services currently provided at the LGH will relocate to the LRI and out-patient and day case activity will move to the GH.</td>
<td>Benchmark (Right care/GIRFT/Model hospital/other benchmark)&lt;br&gt;Specialist Rehabilitation Services are Benchmarked by United Kingdom Rehabilitation Collaborative (UKROC) which is national benchmarking tool for specialist rehabilitation.&lt;br&gt;BIU and SNRU consistently outperform on Benchmarking with Other Similar Level Specialist Rehabilitation Units by UKROC. Please see attached yearly UKROC report of 2017-18.</td>
<td>BIU and SNRU beds being effectively used due to Significantly Shorter Length of Stay (LOS). If LOS goes up will need more beds to manage Current demand</td>
<td>BIU and SNRU beds being effectively used due to Significantly Shorter Length of Stay (LOS). If LOS goes up will need more beds to manage Current demand</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>When will the new service be in place?</strong>&lt;br&gt;In line with reconfiguration plans and STP proposals the BIU and NRU will relocate to the LRI</td>
<td>Quality &amp; safety&lt;br&gt;Suboptimal Staffing of BIU and SNRU (as per as per NHS Standard Contract Service Specification for Specialised Rehabilitation for Patients with Highly Complex Needs) not only affects Safety of and Quality of Specialised Rehabilitation provided to patients who are vulnerable due to Cognitive, Communication, Behaviour disorder and Physical Impairment by putting them at risk of falls and or injuries due to lack of sufficient Staff needed to provide the close supervision needed. It also leads to delaying patients achieving their rehabilitation goals and delaying discharge. The two units currently do not have Mandated minimum Staffing Level.</td>
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</tr>
<tr>
<td><strong>Who will provide what activity at which site?</strong>&lt;br&gt;The BIU and NRU would move over to the LRI site to be closer to Ward 24 and the Stroke unit to enable consolidating</td>
<td>Workforce sustainability&lt;br&gt;Consolidating services onto one site will allow us much more flexibility in our medical and nursing workforce; helping to fill vacancies and reducing premium spend&lt;br&gt;• Overtime and all premium pay reduction due to consolidation of services&lt;br&gt;• Decreased vacancy rates with consolidation onto one site&lt;br&gt;• Improve sickness rates to Trust average rates&lt;br&gt;• Co-location is not likely to allow reduction of staffing but it will enable the service to utilise the current workforce better in a better configured model and remove many of the inefficiencies noted.</td>
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</table>
services onto one site will allow us much more flexibility in our medical and nursing workforce; helping to fill vacancies and reducing premium spend.

The Neurology outpatient department will move over to the Treatment Centre at Glenfield Hospital.

- Achieving Minimum Recommended Staffing on BIU and SNRU will improve morale of staff and thereby workforce sustainability. It would also help achieving cost efficiency with potential reduce length of stay.

**Efficiency and effectiveness**

**Inpatients:**
- Both BIU &NRU will be able to accept patients earlier to rehab setting freeing up acute beds in Neurology & other wards for example orthopaedic & surgical wards when patients are repatriated from MTC (QMC & Coventry).
- Patients will be offered specialist rehab at earlier stage with potential to reduce LOS in hospital setting and achieving rehab outcomes early (faster recovery as there will not be ‘wasted bed days’ in other hospital wards)
- Patients can access other specialties input sooner such as surgical & orthopaedic (this is mostly used for polytrauma patients both at BIU &NRU), benefit for multi-specialty work for benefit of patients

**Outpatients:**
- Neuro-Rehabilitation outpatient appointments are offered to complete rehabilitation of patients including return to work and referring to vocational rehabilitation and directing for further rehabilitation. This would allow patients to be productive members of the society instead of being dependent on the state to look after them.
- Reduction in DNAs to improve outpatient efficiencies.
- Expansion of Spasticity Day Case Service at LGH ( after recruitment of Additional Staff as per Spasticity Business Case) will significantly reduce the Waiting Time experienced by patients to access this service currently
- As part of ‘Better Care Together’, Neuro-Rehabilitation consultants provide input to ‘CINSS team- Community Integrated Neurology & Stroke Services’. This allows identifying potential problems early while patients are in the community and treating them so reducing hospital admissions. CINSS team work is in the process of multi-disciplinary review in the community which will reduce follow-up at Neurology OPC

Pre-hospital Attendance Inpatient Discharge

Primary care

Treat & Discharge

Emergency:
- GPAU
- AMU
- Out-Patient Clinic

Ambulatory Care/Ward attenders
- First Fit

Short stay

Specialised Services
- Patients needing Specialised in -Patient Rehabilitation are referred to BIU and SNRU with a view to transfer of their care to BIU and SNRU

Treat & Discharge

Home/
Rehabilitation/
NRU/
Transfer to back to referring Trust
Follow up care

Treatment & Transfer to specialised Hubs
Neurology, Neurosurgery and Neuro-rehabilitation - Elective Patient Flow

Pre-hospital Attendance Inpatient Discharge

Primary care PRISM Referrals, Advice & Guidance?

Other e.g.: Shared Care, GP Scan prior to 2WW Pathway

Neuroradiology Treatment & Transfer to specialised Hubs

Alliance: Treatment Centre & Inpatients LRI

- Out Patient clinics
- 2WW Pathway
- Patient Booked
- Out Patient clinics
- Day Case
- Diagnostics

Treat & Discharge

Out patients
- Long term follow up management – shift to nurse led or other alternatives
- Botox for dystonia and headache

Neurosurgery
- Day case:

Neuro rehabilitation

Brain injury unit

Which conditions are admitted as electives? Any proposed change to pathway or alternative management

Specialised Services

Out patients

Neurosurgery

Out patients

2WW Pathway

Home/
Rehabilitation/
NRU/
Transfer to back to referring Trust
Follow up care? Botox in community
With reciprocal communication

Follow up care?

Botox in community

With reciprocal communication
Managing the bed gap
Nothing noted on plan - check

Activity model
(Work in progress. To be inserted when in patient, day case and OP modelling is complete)
CMG: ITAPS

Models of Care Impacted by Reconfiguration:

Pain

Sleep

Adult Intensive Care
Design of system-wide clinical models of care  
Pain Management: Critical Care, Theatres, Anaesthesia, Pain and Sleep (ITAPS) Clinical Management Group (CMG)

### Pain Management: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pain Management</strong></td>
<td><strong>Benchmarking or national standards</strong></td>
</tr>
<tr>
<td>Our pain management service team of consultants, specialised nurses, psychologists and physiotherapists provide assessment and treatment for both acute and chronic pain sufferers. Chronic pain generally means pain that does not respond to the usual forms of medical management, that is, it does not go away. We treat patients suffering pain after surgery, following an injury, through cancer, those with chronic back pain and neuropathic pain. Other problems can include post herpetic neuralgia caused by shingles or chicken pox virus. Day case - patients attend for injections to control their pain. Treatments include trigger point injections, lignocaine infusions and radiofrequency denervation. We also run a procedure room within the Daycase setting for patients that do not require a Daycase bed following trigger point injections and other minor procedures. Outpatient treatments include Pain physiotherapy - concentrates on therapy assessments, using specific exercises which can help to improve posture and reduce chronic pain. Complementary therapies – such as</td>
<td></td>
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<tr>
<td></td>
<td><strong>Quality &amp; safety</strong></td>
</tr>
<tr>
<td></td>
<td>- Inadequate time for patients [compared to Faculty of Pain Medicine (RCOA) requirements]</td>
</tr>
<tr>
<td></td>
<td>- Patient safety: following daycase treatments, medical staff are often required to commute between sites, leaving recovering patients on another site. On occasions, this required their return across site.</td>
</tr>
<tr>
<td></td>
<td><strong>Workforce sustainability</strong></td>
</tr>
<tr>
<td></td>
<td>- Need for more multidisciplinary working</td>
</tr>
<tr>
<td></td>
<td>- Administrative deficiencies with changing staff</td>
</tr>
<tr>
<td></td>
<td>- Service remains very dependent on a small team and is thus vulnerable to sickness/leavers/retirement etc.</td>
</tr>
<tr>
<td></td>
<td><strong>Efficiency and effectiveness</strong></td>
</tr>
<tr>
<td></td>
<td>- Inadequate time in clinic as the patients are more complex and demanding</td>
</tr>
<tr>
<td></td>
<td>- Inefficient referral pathway clinical pathways</td>
</tr>
<tr>
<td></td>
<td>- Administrative support such as clinic coordination is split with staff required to be in 2 places at once.</td>
</tr>
<tr>
<td></td>
<td>- Use of a procedure room model with recovery room (supported by RN) would reduce Daycase demand.</td>
</tr>
<tr>
<td></td>
<td><strong>Demand and capacity/flow</strong></td>
</tr>
<tr>
<td></td>
<td>- Need to reduce waiting time for therapies</td>
</tr>
<tr>
<td></td>
<td>- Increase in referrals and demand to the service (11% when comparing April – September of 2019 compared to 2018).</td>
</tr>
<tr>
<td></td>
<td>- To provide adequate outpatient space for therapies to be completed. Activity is constrained by space availability.</td>
</tr>
<tr>
<td></td>
<td>- Regularly lose allocated theatre sessions due to on the day prioritisation of more clinically urgent specialities</td>
</tr>
<tr>
<td></td>
<td>- Use of a procedure room model with recovery room (supported by RN) would reduce Daycase demand.</td>
</tr>
</tbody>
</table>
acupuncture, Qutenza and use of a transcutaneous electrical nerve stimulation (TENS) machine that blocks pain messages.

Pain Management Programme – We run structured programmes with a variety of sessions from an experienced team of physiotherapists, clinical psychologists, occupational therapists, nurse and medical consultants.

The Adult Inpatient Pain Management Team consists of Pain Consultants, Specialist Nurses and Pharmacy Support.

The service is currently delivered predominantly from the Leicester General Hospital site. There is a paediatric pain MDT clinic delivered from the Leicester Royal Infirmary and plans are in place to deliver therapeutic injections in the Alliance. These discussions however are in their infancy.

The pain management service is currently delivered exclusively within UHL. Work is underway to scope out what could be delivered in the community to improve patient experience.

We are a tertiary referral centre covering the majority of the midlands with specialist clinics such as:
- Addiction clinic
- Pelvic pain clinic
- Paediatric Pain management MDT

The WTE of the service is as follows:
- 1.46 Specialist nurses
- 2.2 HCA’s

Current waiting times are:

<table>
<thead>
<tr>
<th>Clinic</th>
<th>Waiting times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day case</td>
<td>18 week wait patients can be seen within their breach month, planned patients have a backlog of 4-5 months</td>
</tr>
<tr>
<td>Addiction clinic</td>
<td>12 months</td>
</tr>
<tr>
<td>Paediatric MDT</td>
<td>38 weeks</td>
</tr>
<tr>
<td>New OP</td>
<td>11 weeks</td>
</tr>
<tr>
<td>Consultant FUP</td>
<td>Varies per consultant, range – 3-8 months</td>
</tr>
<tr>
<td>Acupuncture</td>
<td>3 months</td>
</tr>
<tr>
<td>TENS</td>
<td>3 months</td>
</tr>
</tbody>
</table>

Cost:
- Inherent costs with administration activities across multiple geographic sites.
- PLICS – we currently lose money on every point of delivery of Pain Management with a small surplus made on Paediatric Pain Management.
## Pain Management: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In the interim period, whilst waiting for the Treatment Centre to be completed, we are looking to the Alliance to deliver suitable interventions within the community. ‘Low risk’ injections can be delivered in community based clean rooms, freeing up consultant sessions to deliver follow up clinics and addressing the long waiting times. Procedures requiring advanced imaging or high risk due to co-morbidities will still require their procedure to be done in a Theatre setting. However, the increased flexibility and capacity within the community will enable us to ensure that only the patients that absolutely require Theatre are performed there. We want to move together as a single multidisciplinary unit with adequate resources to deliver the service. Centralised Pain Management Service on a single site will allow greater efficiencies in terms of delivering correspondence, patient referrals and dealing with enquiries by directly reducing the cross sites transfer of patient medical records, all correspondence and other documentation. Moving our services together which are currently based in different areas and buildings would increase support from the medical team for nursing and other clinical support staff. Enable the service to review patient pathways with the aim to improve patient flow and support better communication and teaching opportunities. Quality &amp; safety Workforce sustainability • Centralisation will allow review of administration processes releasing potential savings Efficiency and effectiveness • Patients will receive clinical parity of services: previously there were variations in waiting times between sites.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Procedure rooms will be provided so what impact will this have—qualify</td>
<td>N/a</td>
<td>No impact</td>
<td>N/a</td>
<td>No impact</td>
</tr>
</tbody>
</table>
• Centralised services on a single site: this will allow greater efficiencies in terms of delivering correspondence, patient referrals and dealing with enquiries.
• Ability to streamline clinical pathways
• Huge efficiency benefit associated with bringing all clinical activity into same clinic areas in terms of staffing clinics and running clinics, waiting areas and providing basic clinic checks such as weight, blood pressure etc.
• Pain management service consolidation would free up day ward space as we are currently utilising rooms for acupuncture treatments within a day ward due to no capacity within outpatients

Demand and capacity/flow
• Increased capacity to meet future growth
• Adequate capacity within outpatients would free up Day ward capacity.

Cost
• Expenditure on additional workforce
• Reduced premium spend
• Reduced overheads
Pain Management – Elective Patient Flow

Pre-hospital Attendance Inpatient Discharge

Local Hospital Care

- Referral
  - GP/Cons to Cons via ICE

Treatment & Transfer to specialised Hubs

At each site

- Patient Booked
- Out Patient clinics
- Day Case
- Diagnostics

Day Case Only
- Chronic Complex pain
- Acute Pain

Pain Management-Specialised Services

Pain Management Clinic Out-Patient

Treat & Discharge

AHP/home/GP

Follow up at Out Patient Clinic

Referral to IAPT

Referral
## Activity Modelling – Do nothing model (modelled by service – to be updated following completion of in-patient, day-case and out-patient activity modelling)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatients</td>
<td>(IP)</td>
<td>(IP)</td>
<td>(IP)</td>
<td>(IP)</td>
<td>(IP)</td>
<td>(IP)</td>
<td>(IP)</td>
</tr>
<tr>
<td>Pain Management</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Day case</td>
<td>(DC)</td>
<td>(DC)</td>
<td>(DC)</td>
<td>(DC)</td>
<td>(DC)</td>
<td>(DC)</td>
<td>(DC)</td>
</tr>
<tr>
<td>Pain Management</td>
<td>1,631</td>
<td>1,688</td>
<td>1,712</td>
<td>1,736</td>
<td>1,760</td>
<td>1,785</td>
<td></td>
</tr>
<tr>
<td>Pain Management &amp; Paediatric Pain Management</td>
<td>11,954</td>
<td>11,006</td>
<td>11,160</td>
<td>11,316</td>
<td>11,475</td>
<td>11,635</td>
<td></td>
</tr>
</tbody>
</table>
### Design of system-wide clinical models of care

**Sleep: Critical Care, Theatres, Anaesthesia, Pain and Sleep (ITAPS) Clinical Management Group (CMG)**

**Sleep: Summary of proposed changes**

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
</table>
| The UHL Adult Sleep Disorders Service (SDS) is the 4th largest in the country. It was among the first sleep services developed in the UK and began seeing patients in the early 1990s. The SDS offers a full range of adult sleep diagnostic & therapeutic services to the population of LLR & Northamptonshire. It is also a tertiary referral centre drawing patients with complex sleep disorders from across the East Midlands. The majority of the activity delivered takes place in the sleep laboratory area itself, though six weekly physician/consultant technologist outpatient clinics occur in the LGH main outpatients department (OPD4). The Leicester General Hospital. The Laboratory area consists of four overnight study bedrooms, a study monitoring/scoring/reporting room and patient lounge and staff and patient toilet facilities. In the last 10 years the Sleep Service has progressively expanded into 2 adjoining rooms from which outpatient diagnostic activity and CPAP clinic services are now conducted. The associated corridor space has been adopted as a reception and Three further rooms have been incorporated to provide vital equipment storage and office space to the rapidly expanding service. The department is not currently able to | **Benchmark (Right care/GiRFT/Model hospital/other benchmark)**

The UHL Adult Sleep Disorders Service was one of the first established in the UK and has a national reputation. It has been based at the Leicester General Hospital (LGH) since its inception in the early 1990s. Over the last 16 years, the service has grown inexorably with consistent year-on-year activity increases in the region of 12%. The Sleep Disorders Service has always been very profitable for the trust. Income has exceeded expenditure consistently year on year and currently an excess of £2million per year is generated. This level of growth has caused problems for the service in keeping up with demand. Staff numbers and the size of the ‘footprint’ space allocated to the service have continually lagged behind that which is required. The outpatient service delivered is currently inefficiently split between the main sleep laboratory clinic area and Outpatients Department 4 at LGH. |

**Quality & safety**
- A review of methods of working and models of care is necessary to allow increased opportunity for audit and the implementation of a robust quality management system.

**Workforce sustainability**
- Service remains very dependent on a small team and is thus vulnerable to sickness/leavers/retirement etc.
- Loss due to resignation or illness of key staff members. The service is vulnerable due to its small numbers; one member of staff going on extended leave represents 33% of the technical capacity. Given the specialised nature of the Sleep service, recruitment is a challenge, particularly in more senior roles where the knowledge and expertise required is not readily available.

**Efficiency and effectiveness**
The SDS operates inefficiently due to the need to conduct all physician and Consultant Technologist outpatient activity in another area. The Sleep Laboratory area is not suitably configured to allow co-location of these clinics. This leads to the following difficulties and inefficiencies:
- Medical staff are not readily available to support MTO staff in the management of patients attending the Sleep Laboratory.
- Many patients attending the medical clinics would benefit from technical staff input and/or replacement of CPAP equipment ‘consumables’. Their attendance at a distant clinic makes this both difficult for
| accommodate physician clinics that are conducted remotely in OPD4. The service is consultant lead with consultants from a variety of specialities being present within the team although predominantly anaesthesia and respiratory. The service is also delivered by a team of Sleep Technicians, led by a Consultant Technologist. | staff and inconvenient for patients.  
- Administrative support such as clinic coordination is split with staff required to be in 2 places at once.  
- Case notes, results, patient information resources etc. need to be transported to the distant clinic.  

**Demand and capacity/flow**  
- Currently at the limit of activity constrained by space availability and staffing numbers |
As a service that operates predominantly in isolation, the Sleep service can be based virtually anywhere that is a) appropriate for the service and b) appropriate for patients. The service can be ‘lifted and shifted’ with minimal changes to methods of working necessary.

Opportunities for efficiencies and improved utilisation of capacity exist if, when within the chosen location, outpatient clinics, consultant clinics, treatments and diagnostics are all performed from within the same department (as opposed to the current split between the Sleep lab and the Outpatient Department at LGH), the clinics themselves however will continue to run as they do now.

A review of the Sleep workforce is currently underway to ensure capacity is aligned with demand and the workforce is set at a sufficient and appropriate level.

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is evident that co-location of all sleep services would lead to a more efficient and effective service and a better experience for our patients. <strong>Benchmark (Right care/GIRFT/Model hospital/other benchmark)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quality &amp; safety</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Reduction in waiting times for IP/Diagnostic &amp; DC procedures.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>• Better access to a range of professionals all in one clinical area.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Better teaching and training opportunities for staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Workforce sustainability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Centralisation will allow review of administration processes releasing potential savings</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>• Rationalisation onto one footprint would bring efficiency savings and improved team working. It will facilitate better service coverage, staff training and reduce complaints, many of which relate to unanswered phones and clerical/administrative issues.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Better teaching and training opportunities for staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Efficiency and effectiveness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Centralised services on a single site: this will allow greater efficiencies in terms of delivering correspondence,</td>
<td>None</td>
<td>None</td>
<td>Quantify impact of moving into the treatment centre</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
patient referrals and dealing with enquiries.
- Ability to streamline clinical pathways
- Service reconfiguration/expansion would facilitate joint working with other disciplines such as Psychology.
- Huge efficiency benefit associated with bringing all clinical activity into same clinic areas in terms of staffing clinics and running clinics, waiting areas and providing basic clinic checks such as weight, blood pressure etc.

**Demand and capacity/flow**
- Increased capacity
- Would be able to run medical and technologist clinics alongside each other thus providing better care for patients and better support for more junior staff (regarding both clinical decision making and teaching)
- Sleep Service consolidation into one site would free-up out-patient clinic capacity

**Cost**
- Increased income by generating capacity for additional IP/OP & DC activity
Sleep – Elective Patient Flow

Pre-hospital

Attendance

Inpatient

Discharge

Local Hospital Care

Referrals
GP/Cons to Cons

At each site

Patient Booked
Out Patient clinics
Day Case
Diagnostics

Treat & Discharge

Short Stay (<72hr)
Sleep Study

Home
Follow up clinic
Sleep OP Clinic

Treatment & Transfer to specialised Hubs
### Activity Modelling – Do nothing model (modelled by service – to be updated following completion of in-patient, daycase and out-patient activity modelling)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inpatients</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleep</td>
<td>231</td>
<td>204</td>
<td>207</td>
<td>210</td>
<td>213</td>
<td>216</td>
<td></td>
</tr>
<tr>
<td><strong>Day case</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleep</td>
<td>988</td>
<td>1,019</td>
<td>1,033</td>
<td>1,048</td>
<td>1,062</td>
<td>1,077</td>
<td></td>
</tr>
<tr>
<td><strong>Outpatients</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleep</td>
<td>12,469</td>
<td>13,999</td>
<td>14,195</td>
<td>14,394</td>
<td>14,595</td>
<td>14,800</td>
<td></td>
</tr>
</tbody>
</table>
Adult Intensive Care: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview</strong></td>
<td></td>
</tr>
</tbody>
</table>
| Adult Intensive Care Services are currently split across all three sites – Glenfield Hospital (GH), Leicester General Hospital (LGH) and Leicester Royal Infirmary (LRI). | Clinical Drivers for Change
|                       | There is a widely recognised and well-articulated need to consolidate acute services in Leicester, which are currently spread across three sites. The current configuration is suboptimal in clinical, performance and financial terms. This is exemplified by the fact that ICU (and services that depend on ICU) are located on all three sites. The scheme detailed in this FBC is the next key building block towards acute site consolidation and will bring significant clinical benefits for patients. |
| **Glenfield Hospital Adult Intensive Care Unit (AICU)** | Demand outstrips ICU capacity across UHL, resulting in cancellations in elective procedures (see Table 32) reliant on Level 2 and 3 care (due to a shortage in beds). The future strategy for ICU units at LRI and GH will be to consolidate care for Level 2 and 3 patients into the ‘super ICUs’. Aligned with this provision will be a robust cohort of beds for Level 1 care within specialties throughout the Trust, as well as critical care outreach services delivering a 24/7 service. |
| The current AICU at Glenfield Hospital comprises 22 physical beds of which 7 are single side rooms. The AICU is divided into three bays: Bay A is currently used primarily for post-cardiac surgical patients and emergency admissions; Bays B and C are often used for long-term patients, as these bays have reduced noise levels and improved natural light which reduces the incidence of delirium. The single rooms are used to isolate patients either for infection prevention reasons (both transmission of and/or exposure to infections) and for emergency admissions or transfers of patients admitted for tertiary care, or for privacy and dignity reasons (particularly in the case of the dying patient). The whole bed base is used flexibly depending on patient need and to ensure efficient use of the staffing capabilities with no ring fencing of beds for a particular level of care or type of service. The vast majority of admissions to the Glenfield AICU involve planned cardiac surgery patients. | **Table 32**
| **Benchmark (Right care/GIRFT/Model hospital/other benchmark)** | The Strategy for delivering ICU care at UHL supports both the national and local imperatives. There is a recognised move towards using critical care beds at an earlier stage in a patient's treatment. On an international level the UK has a low number of ICU beds compared to its population, and within the UK, UHL has a lower than average per capita provision of ICU beds. |

<table>
<thead>
<tr>
<th></th>
<th>Apr</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LRI</strong></td>
<td>13</td>
<td>5</td>
<td>23</td>
<td>17</td>
<td>8</td>
<td>4</td>
<td>1</td>
<td>12</td>
<td>7</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td><strong>LGH</strong></td>
<td>15</td>
<td>9</td>
<td>29</td>
<td>7</td>
<td>6</td>
<td>4</td>
<td>11</td>
<td>19</td>
<td>2</td>
<td>3</td>
<td>11</td>
<td>1</td>
<td>117</td>
</tr>
<tr>
<td><strong>GH</strong></td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>6</td>
<td>1</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>35</td>
<td>15</td>
<td>55</td>
<td>25</td>
<td>14</td>
<td>9</td>
<td>12</td>
<td>37</td>
<td>10</td>
<td>18</td>
<td>15</td>
<td>4</td>
<td>249</td>
</tr>
</tbody>
</table>
who are admitted from the cardiac surgery wards via theatres. There are also planned admissions of thoracic and vascular surgery patients from theatres that required level 2 or level 3 care on AICU. Once these patients can be stepped down to level 1 or ward level care, they are discharged to their referring specialty and followed up by the critical care outreach team.

Emergency admissions for level 2 and level 3 care are transferred to AICU from theatres, CDU, CCU, the wards, Cath lab or transfers from other institutions for tertiary cardio-respiratory as well as cardiac and thoracic surgery intervention at Glenfield Hospital for level 2 or level 3 care. Once these patients are stepped down to level 1 care, they are referred back to their referring specialty. All patients who are discharged to level 1 or ward beds are reviewed by the critical outreach team.

Another stream of patients are transferred from other medical facilities for tertiary care at Glenfield Hospital as level 3 care for Severe Acute Respiratory Failure (SARF) or level 4 care requiring Extra Corporeal Membrane Oxygenation (ECMO). The SARF and ECMO patients are retrieved from the referring medical facility by a transport team that runs in conjunction with the AICU workforce, which is available 24 hours a day.

The majority of these patients are transferred back to the referring hospital’s intensive care unit for further AICU management once they are stepped down to level 2 care. In a minority of cases, these patients are transferred to the respiratory team at Glenfield Hospital for ward care.

Interim AICU Expansion

In order to accommodate movement of services

**Critical Care UK and International Capacity Benchmarks**

**Quality & safety / Workforce sustainability**

The need to move Level 3 ICU away from LGH was first identified in 2014 owing to the increasing risk of clinical sustainability of the service. These include:

- The reduced opportunities for critical care staff to gain adequate experience in providing care for the most ill patients has been affected by a reduction of Level 3 patients cared for at LGH;
- Recruitment to substantive posts at LGH has failed repeatedly as posts have become unattractive owing to the loss of training designation and the reduction in patient acuity;
- Changes in the way medical training for intensive care staff is structured has led to the removal of training designation status at the LGH unit and therefore the ability to place trainees at LGH;
- The retirement of experienced consultant grade staff from LGH;
- A national shortage of experienced critical care nursing and medical staff compounding recruitment problems.

**Demand and capacity/flow**

Independent analysis was commissioned from Bazian in 2014 to assess the current and future requirements for ICU and HDU beds in UHL, work that was subsequently been updated in 2016 by Capita Health using the Simul8 model, which has validated the recommendations.
(HPB and transplant) from LGH to Glenfield an expansion of the AICU is planned. During building works to develop the AICU, the main unit will close five physical bed spaces (three beds in bay B and two side rooms). UHL is currently developing its winter plan for 2018/19; in relation to the opening of extra capacity to support increased emergency pressures during this period. The proposed solution at GH puts in place plans for an additional 4 ICU beds. The extra winter capacity required for ICU beds has been considered together with the loss of beds during the construction period. There are a number of options for the creation of an additional 9 ICU beds at GH; the actual solution implemented will be based on the level of pressures and surge experienced and the staffing levels needed across all 3 sites:

1) Use of 4 PACU beds for ICU Level 2

2) Use of 8 beds on ward 34 (cardiac), previously upgraded to accommodate ICU patients.

3) Use of satellite Level 2 beds in service areas to accommodate ICU Level 2 patients

4) Use of 2 PICU beds, which can be isolated from the rest of the ward.

The services at GH will work closely to manage this temporary reduction by the management of flows from ICU. The additional beds will be utilised flexibly in the same way as the main unit; however, we would avoid admitting level 3 or unstable level 2 patients in these areas if at all possible. The 2

The following recommendations were made by Bazian:

- Based on existing case mix of patients treated in UHL there are substantial benefits from merging smaller into larger units, where economies of scale can be achieved;
- There is a limit on what can be achieved practically – the movement of HDUs also requires the movement of specialities. The phasing of capital expenditure should also be considered;
- The merging of HDUs is recommended for quality and governance reasons, this could be undertaken in the medium term (1 to 5 years);
- If reconfiguration can be achieved in five years it is recommended that at least a 15% increase in capacity is planned for every 10 years. More precise predictions will depend on the effect of new interventions on length of stay.

UHL currently provides Level 3 adult critical care services at each of its three acute sites. This provision enables a range of specialities, which require a co-location with Level 3 critical care, to be delivered across all three sites.
areas will be run clinically as if it were within the walls of the existing unit (ie it is part of Critical Care). It will therefore be subject to the same philosophy, principles of care and access as the main unit.

**Transfer of services from LGH**

Hepato-biliary and renal transplant services will be transferred to Glenfield Hospital following the completion of the AICU extension. The expanded AICU following the building works will comprise of 33 physical bed spaces; of which 10 will be either side rooms or isolation rooms. As before the expansion, the whole bed base will be used flexibly depending on patient need and to ensure efficient use of the staffing capabilities with no ring fencing of beds for a particular level of care or type of service.

The final configuration of Glenfield will result in provision of critical care services to cardiorespiratory medicine, cardiac surgery, thoracic surgery, vascular surgery, hepato-biliary surgery, acute nephrology and renal transplantation, SARF, and ECMO. Because of the nature of these services, there will be an anticipated increase in elective and emergency admissions to the Glenfield AICU. A booking process to manage elective flow will be introduced to minimise cancellations on the day of surgery. Once these patients are stepped down to level 1 care, they will be discharged back to their referring speciality and followed up by the critical care outreach team.

**LRI**

**Current AICU**
The main Critical Care Unit has 21 physical beds
of which; 5 are single (isolation) rooms, the
remaining 16 beds comprise of two 6 bedded
bays and one 4 bedded bay (the Annex).
The single rooms are used to isolate patients
either for infection prevention reasons (both
transmission of and/or exposure to infections) or
for privacy and dignity reasons (particularly in the
case of the dying patient).
Of the remaining beds the ‘annex’ is frequently
used as an area for the long term patient as it has
a greater abundance of natural light, the
presence of which is associated with a lower
incidence of delirium. Due to its partially isolated
nature this area is not normally used for the
admission or on-going care of the notably
unstable patient.
The whole bed base is used flexibly depending
on patient need and to ensure efficient use of the
staffing capabilities with no ring fencing of beds
for a particular level of care or type of patient.
Once patients are stepped down to level 1 care,
they are referred back to their referring speciality.
All patients who are discharged to level 1 or ward
beds are reviewed by the critical care outreach
team.
There is in addition, a further bed base which has
been in place since 2015.
This comprises of a 6 bedded area located within
the walls of the theatre complex. It is run clinically
as if it were within the walls of the existing unit
(i.e. it is part of Critical Care not part of the
theatre complex). It is therefore be subject to the
same philosophy, principles of care and access
as the main unit.
Owing to its remote location from the rest of the
unit it requires its own dedicated resident medical
and nursing team (including a nurse in charge). It
is utilised flexibly in the same way as the main
unit but with an expectation that we will aim to
avoid admitting (or providing on-going care of) the notably unstable patient within it and due to the lack of natural light will avoid its use for long term patients. In total, therefore, the unit will comprise of 27 physical beds, 6 of which are side rooms and 6 are in an isolated site.

LGH

**Current Department of Critical Care Medicine (DCCM)**
The main Critical Care Unit has 12 physical beds of which 3 are single (isolation) rooms. The remaining 9 beds comprise of a 5 bedded ICU area and a 4 bedded HDU area, although all beds may be used flexibly according to the current demand for level 2 and level 3 care. The single rooms are used to isolate patients either for infection prevention reasons (both transmission of and/or exposure to infections) or for privacy and dignity reasons (particularly in the case of the dying patient).

Once patients are stepped down to level 1 care, they are referred back to their referring speciality. All patients who are discharged to level 1 or ward beds are reviewed by the critical care outreach team.

**Post Service moves**
This critical care unit is planned to comprise of a 4 bedded HDU to manage on-going demand for level 2 care for Urology, Obs & Gynae, Nephrology and Orthopaedics. This will be located within existing DCCM space. It will be subject to the same philosophy, principles of care and access as a level 3 intensive care unit. In addition to the 4 level 2 beds there will be 1 level 3 bed which will be utilised for the stabilisation of
unplanned Level 3 patients. The LGH will be staffed with medical and nursing staff to ensure patients requiring escalation to level 3 care will receive appropriate treatment immediately. Patients at LGH who unexpectedly require level 3 care will be admitted here for stabilisation prior to transfer to either LRI or GGH when clinically safe.

In order to continue to provide high quality level 2 (and level 3) care the unit will be staffed by consultant intensivists during weekday daytime. It is anticipated that the majority of decision-making, investigations and interventions will take place under the care of the consultant intensivist. Out-of-hours medical cover will be provided by a rota of consultant Intensivists and consultant general duties anaesthetists (with support from consultant Intensivists and LRI and GH when required). The unit will continue to require its own dedicated resident medical and nursing team (including a nurse in charge).

**Retrievals and transport**

A robust system to transport patients will be introduced to provide on-going level 3 care at either LRI or GH. This transport team will be based at GH and run in conjunction with the staffing planned for the interim and long term AICU models of care. Patients at LGH requiring level 3 support will be stabilised by the attending anaesthetic team (consultant or middle grade level) at LGH who will subsequently contact the Intensive Care Consultant on-call for GH or LRI depending on the patient's base speciality. The LGH team will remain with the patient, undertaking further stabilisation as dictated by the patient's condition until formal handover to the transport team.
occurs. The consultants on-call at GH and LRI, in collaboration with the on-call ICU consultant at the LGH, will decide whether the patient will be best managed on Adult Intensive Care at GH or LRI. A transport team will then be dispatched from the Glenfield AICU to retrieve the patient and transfer either to LRI or GH. The lead transport clinician will be an ICU consultant. The transport personnel will be an ICU/anaesthetic registrar or ECMO/transport fellow accompanied by an ICU nurse, both will be experienced in the transport of the critically ill. The consultants on-call for AICU and/or ECMO at GH, may be required to provide cover to AICU at GH enabling the registrar or fellow to undertake the transfer, whilst maintaining safe levels of cover in the ICU. It will be the responsibility of the on-call Consultant at GH (Consultant A) and senior sister/nurse in charge to decide upon the most appropriate clinician and nurse team to undertake the transfer. This will depend upon local resources, timeframes and patient condition at the time of referral. Transfers will be undertaken only when the patients' condition has been stabilised. If transfer is essential for emergency intervention at GH or LRI and the patient is deemed very unstable by the referring team the most senior experienced transfer clinician will be sent to retrieve.
Adult Intensive Care: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
</tr>
</thead>
</table>
| **How will the new model of care look?**
The Trust's five year strategy for delivering critical care services is the creation of two ‘super ICUs’ GH and LRI. These will care for Level 2, 3, and 4 (ECMO) patients, staffed and delivered to the national core standards to ensure the highest quality care in the most appropriate environment. This will be supported by a robust tier of Level 1 care beds within specialties throughout the organisation which will, in turn, be supported by critical care outreach services delivering 24/7 care. Models of care are provided in detail at the end of this document. | **Benchmark (Right care/GIRFT/Model hospital/other benchmark)**
The Trust’s ICU strategy also takes into consideration the revised core standards published by the National Society of Intensive Care Medicine (NSICM) in 2013. These were adapted by NHS England to develop their draft service specification for adult critical care facilities (D16). Adult critical care D16 has key ‘dashboard’ standards that provide commissioners with the opportunity to performance manage provider services to ensure that compliance with standards is achieved.
At present, the revised D16 is still in draft format and is not published on NHS England’s website. NHS England has confirmed that until such time as the specification moves from draft status UHL is not expected to deliver against it. It is expected that in the future all critical care services within UHL, including satellite HDU areas, will be monitored against these standards as part of the annual contract. |

**Benefit criteria for the Interim ICU scheme:**

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong> To provide a solution that maximises clinical quality and safety.</td>
<td>Reduced DATIX incidents, associated with this group of patients, relating to serious harm</td>
</tr>
</tbody>
</table>
| **B** To deliver, at the earliest possible opportunity, a sustainable Level 3 ICU service across the Trust | Reduced elective cancellations
Removal of risk for on-going provision of Level 3 service at LGH.
4 hour transfer time cross site for Level 3 patients. |
| **C** To deliver an ICU solution that facilitates recruitment and enables the delivery of high levels of teaching and training | Reduced staff turnover
Reduced vacancy factors
Reduced agency expenditure |
When will it be in place?

Interim ICU scheme (Level 3 off LGH) - 2020
LRI expansion - 2022
GH expansion - 2023

Who will provide what activity at which site?

The AICU’s will be managed by the adult Intensive Care teams at the LRI and GH sites.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>D</td>
<td>To ensure that the quality of the patient environment and experience remains a priority</td>
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<td></td>
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<tr>
<td>E</td>
<td>To provide a solution which fits with future Trust reconfiguration plans and is consistency with the DCP</td>
</tr>
<tr>
<td>F</td>
<td>To deliver a solution that ensures accessibility to services and maximises clinical adjacencies.</td>
</tr>
</tbody>
</table>

Quality & safety
The new units will be optimised within the budget to deliver quality space for clinical services – we will ensure that we deliver as close to HBN standard as possible.

Workforce sustainability
The provision and consolidation of staffing across two sites is a considerable qualitative and quantitative benefit from a staffing perspective and ultimately supports workforce efficiencies across all disciplines. The interim ICU scheme creates the challenge of supporting interim arrangements, which means that some of the benefits will not be realised until the long term critical care model is fully implemented at the end of the whole Reconfiguration

Some of the on-going workforce challenges will be addressed by the interim ICU project. For example, the removal of training designation status at LGH is a key driver of this project and highlighted the need to address the training requirements and experience for junior doctors as well as a wide range of staff. Recruitment to the LGH after losing its training designation has become less attractive and a national shortage of experienced critical care nursing and medical staff compounds the difficulty in recruiting and retaining staff. Maintaining a sustainable workforce across three sites accentuates workforce supply issues and hinders the ability to develop safe and high quality workforce support, particularly at nights and at weekends and stretches an already acknowledged deficit in terms of registered staff for Medical, Nursing and Therapeutic staff. Any move to consolidating services has a positive impact in terms of sustainable future workforce supply and workable rosters.

Efficiency and effectiveness
The interim ICU scheme allows for:
- A transfer of commissioned Level 3 and associated activity from LGH to GH.
relocation of services to this site allows for efficiency of flow through a larger physical footprint;

- The move of Level 3 and associated activity to LRI, creating a single site surgical emergency take, which delivers a more efficient patient pathway.

The creation of the super ICUs will further enhance efficiency and effectiveness of the units; HDU remaining at the LGH will re-locate to the GH and LRI; and the HDUs sitting within specialties will be consolidate to create a single level 2/level 3 unit in each of the acute sites.

**Demand and capacity/flow**

The current capacity gap in ICU provision across UHL, resulting in cancellations in elective procedures reliant on Level 2 and 3 care, will be rectified by the long term plans.

The Trust’s five-year clinical strategy includes the need to deliver critical care services through the creation of two ‘super ICUs’ by 2022/23 located at LRI and GH, ensuring that UHL has the right number of Augmented and Critical Care Beds in the right locations. This will enable UHL to retain Intensive Care training accreditation, recruit and train staff, improve efficiency and sustainability of the services as well as respond to changing demands for the service.

Detailed activity modelling has been carried out using demand and capacity over the last 5 years. This has identified the need for 49 Level 2/3 beds at LRI; and 66 level 2/3 beds at GH over the next 10 years; based on 85% occupancy. This includes the repatriation of HDU satellite beds, currently located within services base ward areas; 5 ACB beds at LRI, 6 thoracic, 4 respiratory and 4 renal/cardiac at GH)

**Capital Cost**

- Interim ICU Scheme (Level 3 off LGH): £30.8m
- LRI : Long term expansion: £22.6m
- GH : Long term expansion: £16.58m

**Cash releasing benefit**

The Interim ICU scheme attracts an enhanced cost of £3.6m in the intervening years whilst the HDU needs to remain at the LGH. Cash releasing benefits have been found to off-set this additional cost as shown below; specifically through theatre efficiencies with the move of day case activity to the LGH in the interim; thereby protecting elective activity.
Once the full scheme is delivered; £1.971m of savings will contribute to the benefits of the wider reconfiguration programme.

<table>
<thead>
<tr>
<th>Benefit</th>
<th>£'000 per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPB/Colo Rectal Reductions in ALOS (Non Cash releasing)</td>
<td>514</td>
</tr>
<tr>
<td>ECMO</td>
<td>302</td>
</tr>
<tr>
<td>Day Case Rates</td>
<td>100</td>
</tr>
<tr>
<td>Reduced cancellations due to lack of CCU bed</td>
<td>274</td>
</tr>
<tr>
<td>Additional Theatre efficiencies</td>
<td>2,312</td>
</tr>
<tr>
<td>Savings on Premium rates</td>
<td>250</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3,752</strong></td>
</tr>
</tbody>
</table>
## Managing the bed gap

<table>
<thead>
<tr>
<th></th>
<th>Beds released minimum - max</th>
<th>Resource required</th>
<th>Estimated £</th>
<th>Methodology for numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACU step down</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14th ITU consultant to enamelling recovery beds to be used at LRI</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Glenfield extension</td>
<td>0</td>
<td>-5</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Reduction in beds at the LGH</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-6</td>
</tr>
</tbody>
</table>

## Activity model

(Work in progress. To be inserted when in patient, day case and OP modelling is complete)
Clinical Models of Care

Model of Care – LRI Elective Anaesthetic Pathway

- Referring Hospital Transfer
  - In-patient Ward
  - Theatres arrivals Area
  - Theatres / Obstetrics Theatres
  - Mortuary

- Outpatient Department
  - Nurse led pre-assessment
  - High Risk pre-assessment
  - PACU
    - Less than 4 hours stay
  - Recovery

- ICU / HDU
  - Multi-Organ support for Level 2 and 3 patients (Excluding ECMO)
  - D16 standards of care
  - Shared care with referring Consultant

- Inpatient ward beds
- Surgical Day Case Unit
- Home
ICU / HDU

Emergency Admissions & General / Main Bay & side rooms
Level 2 & 3 patients
Unscreened & Screened patients (MRSA)

Weaning / Step down Bay
Level 2 & 3 patients
Single organ support/awake patients
Screened (MRSA)

Isolation rooms
• Gowning lobby
• Negative & positive pressure
Infected patients
Unscreened patients
33 to 50% of total bed capacity

Support services accessed outside of ICU/HDU
MRI / CT
Endoscopy
Angiography

Support services delivered on the ICU/HDU
EMCHC
Cardio physiology
Critical Care Outreach
Dietetics
Discharge Planning
Imaging
LIFFT
Neurophysiology
Occupational Therapy
Pharmacy
Phlebotomy
Physiotherapy
Psychology
Research
Respiratory physiology
Safeguarding
SALT
Specialist Nurses

PACU
If reduced to ≤ 4 hour stay will not need to be compliant to D16

Considered:
Standard side room Unscreened patients / End of life
Surgical bay Protected elective beds / screened patients
Medical bay Unscreened patients
Emergency / Trauma bay
HDU bay Splitting level 2 and level 3 patients
The model of the ICU/HDU suggests that we have a dedicated Emergency/Admission bay, a main bay and a step down bay. This isn’t the case, we have bay A and B which is our main ICU/HDU area, bay C is used for our lower acuity HDU area and could loosely be considered a step down area but it all depends upon patient mix and acuity.
Model of Care – GH Inpatient

Inpatient Ward
Clinical Decisions Unit / Coronary Care Unit
Cardiology
Respiratory Medicine
Cardiac Surgery
Thoracic Surgery
Breast Surgery
Renal Transplant
Hepato-biliary
Vascular Surgery
Urology

Deteriorating Patient

Patient Assessment / Review
ICU Consultant / Critical Care Outreach

Recovery / PACU
Theatres
CT / Imaging Dept.
Endoscopy Suite
Catheter Laboratory

ICU / HDU

Inpatient wards
Transfer to alternate site - within UHL or external
Mortuary
Home
Rare / End of life
Referring Hospital Transfer

In-patient Ward

Theatres arrivals Area

Theatres

Recovery
Thoracic / Renal Transplant / HPB

PACU
Vascular

ICU / HDU
- Multi-Organ support for Level 2, 3 and 4 patients (including ECMO)
- D16 standards of care
- Shared care with referring Consultant

Inpatient ward beds

Home

Outpatient Department

Nurse led pre-assessment
Cardiac Surgery

High Risk pre-assessment
Vascular / Thoracic Surgery / HPB

Mortuary

Model of Care – GH Elective Anaesthetic Pathway
Model of Care – GH ICU / HDU

**ICU / HDU**

**Bay A** (8 beds + 3 side rooms)
Level 2 & 3 patients
Predominantly Cardiac Surgery

**Bay B** (12 beds + 4 side rooms)
Level 2 & 3 patients

**Bay C** (4 beds + 2 side rooms)
Level 2 & 3 patients

**Bay D** (17 beds including side rooms)
Level 2 & 3 patients

**Isolation rooms**
- Gowning lobby
- Negative & positive pressure

Infected patients
Unscreened patients
33 to 50% of total bed capacity

**Renal - TBC**
Consider HDU move & staff skills – run as ‘Dialysis’ bay?

**Support services accessed outside of ICU/HDU**
- MRI / CT
- Endoscopy
- Angiography

**Support services delivered on the ICU/HDU**
- EMCHC
- Cardio physiology
- Critical Care Outreach
- Dietetics
- Discharge Planning
- Imaging
- Neurophysiology
- Occupational Therapy
- Pharmacy
- Physiotherapy
- Psychology
- Research
- Respiratory physiology
- Safeguarding
- SALT
- Specialist Nurses

**Considered:**
- **Standard side room** Unscreened patients / End of life
- **Surgical bay** Protected elective beds / screened patients
- **Medical bay** Unscreened patients
- **Bays for ECMO +/- Dialysis**
- **HDU bay** Splitting level 2 and level 3 patients
CMG: MSS
Models of Care Impacted by Reconfiguration:

ENT

Plastic Surgery

Elective Spinal Surgery

Orthopaedic Surgery (including Sports and Exercise medicine)

Ophthalmology
## Design of system-wide clinical models of care

**ENT, Specialist Surgery: Musculoskeletal and Specialist Surgery (MSS) Clinical Management Group (CMG)**

### ENT: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ENT service for Leicestershire is centralised at the Leicester Royal Infirmary and is part of the Musculoskeletal and Specialist Surgery CMG. There are currently 13 consultants, 11 of whom provide services to paediatrics. The team are supported by dedicated nursing resource alongside approximately 40 hearing practitioners. At the Leicester Royal Infirmary there is a children’s intensive care unit, high dependency unit and two paediatric wards providing facilities for inpatient and day case surgery with additional day case beds on the day ward. Adult ENT patients are managed on Ward 9 which is a 18 bedded mixed adult ward shared with plastic surgery and maxillofacial surgery. The Kinmonth Unit provides high dependency care for patients undergoing head and neck surgery. Our outpatient department is a dedicated ENT department supported by audiology. The outpatients department provides accommodation for the medical staff in fully equipped individual consulting rooms. The Glenfield Hospital has a paediatric ward, paediatric intensive care unit and a paediatric ENT outpatient facility supported by</td>
<td></td>
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<tr>
<td>Benchmark (Right care/GiRFT/Model hospital/other benchmark)</td>
<td></td>
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<tr>
<td>Benchmarking again the National Median for ENT:</td>
<td></td>
</tr>
<tr>
<td>- Below for daycase v elective activity</td>
<td></td>
</tr>
<tr>
<td>- Length of stay for elective admissions is higher than the average</td>
<td></td>
</tr>
<tr>
<td>- Length of stay for emergency admissions is slightly lower than the average</td>
<td></td>
</tr>
<tr>
<td>- Average late start in theatre is above the average</td>
<td></td>
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<tr>
<td>- Average intercase downtime if above the average</td>
<td></td>
</tr>
<tr>
<td>- Average early finish time is below the average</td>
<td></td>
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<tr>
<td>- Overruns are above the average</td>
<td></td>
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<tr>
<td>- Potential productivity opportunity if above the average</td>
<td></td>
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<tr>
<td>ENT Targets</td>
<td></td>
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<tr>
<td>2ww</td>
<td></td>
</tr>
<tr>
<td>18 wk RTT</td>
<td></td>
</tr>
<tr>
<td>6 wk Audiology Diagnostics</td>
<td></td>
</tr>
<tr>
<td>Quality &amp; safety</td>
<td></td>
</tr>
<tr>
<td>ENT risks:-</td>
<td></td>
</tr>
<tr>
<td>- Physical capacity in both outpatients and theatres</td>
<td></td>
</tr>
<tr>
<td>- Workforce capacity for delivery of elective and H&amp;N work</td>
<td></td>
</tr>
<tr>
<td>- Use of External Providers for outpatients and operative capacity</td>
<td></td>
</tr>
<tr>
<td>- Staffing</td>
<td></td>
</tr>
<tr>
<td>- Junior medical staffing gaps to support emergency flow within the hospital.</td>
<td></td>
</tr>
<tr>
<td>- Consultant provision of emergency care to meet with 7 day working standards – Business Case in Progress to support Hotweek working</td>
<td></td>
</tr>
<tr>
<td>Workforce sustainability</td>
<td></td>
</tr>
<tr>
<td>Section</td>
<td>Text</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td><strong>Consultants</strong></td>
<td>This is challenging due to a small pool of suitable qualified candidates with a large number of vacancies across the country, geographical location is not popular in East Midlands and volume and complexity of work along with insufficient infrastructure to support delivery of care is not attractive for candidates.</td>
</tr>
<tr>
<td><strong>Recruitment</strong></td>
<td>High volumes of complex cases, busy on-call whilst undertaking routine activity often with junior doctor’s gaps and insufficient infrastructure results in high levels of stress. Regular patient cancellations due to bed availability resulting into increased complaints and conflicting demands on consultant’s time.</td>
</tr>
<tr>
<td><strong>Retention</strong></td>
<td>There is a National shortage of trainees and training numbers are not currently being filled, on a regional level there have been a number of vacancies resulting into a 50% fill rate of registrar posts in most trusts. This results in challenges providing a same middle grade on-call rota. Due to the working patterns and the number of trainees allocated to the department there is minimal dedicated educational time which results in poor feedback. There is a high level of sickness is this cohort of doctors, in response to feedback the SHO’s have a new educational programme which includes 1:1 teaching with consultants in supervised emergency clinics. Despite these increased levels of support due to the high volume of emergency work for ENT we continue to see high levels of sickness absences.</td>
</tr>
<tr>
<td><strong>Registrars</strong></td>
<td>For each rotation we experience minimum 1 rota gap due to non-filled post, this results in challenges providing a first tier on-call rota. Due to the working patterns and the number of trainees allocated to the department there is minimal dedicated educational time which results in poor feedback. There is a high level of sickness is this cohort of doctors, in response to feedback the SHO’s have a new educational programme which includes 1:1 teaching with consultants in supervised emergency clinics. Despite these increased levels of support due to the high volume of emergency work for ENT we continue to see high levels of sickness absences.</td>
</tr>
<tr>
<td><strong>CT’s</strong></td>
<td>There is a National shortage of trainees and training numbers are not currently being filled. For each rotation we experience minimum 1 rota gap due to non-filled post, this results in challenges providing a first tier on-call rota. Due to the working patterns and the number of trainees allocated to the department there is minimal dedicated educational time which results in poor feedback. There is a high level of sickness is this cohort of doctors, in response to feedback the SHO’s have a new educational programme which includes 1:1 teaching with consultants in supervised emergency clinics. Despite these increased levels of support due to the high volume of emergency work for ENT we continue to see high levels of sickness absences.</td>
</tr>
<tr>
<td><strong>Clinical Fellows</strong></td>
<td>There is small cohort of appropriately qualified doctors suitable for these posts and we have had rolling vacancies over the past 2-3 years.</td>
</tr>
<tr>
<td><strong>ANP’s</strong></td>
<td>We have invested into two additional ANP roles within ENT to support the elective and emergency service and staff are currently be trained within these roles. Ideally we need to expand this cohort of practitioners but currently is not available and the training course takes 3 years to complete so the service will not see the full benefit until staff are fully trained.</td>
</tr>
</tbody>
</table>

**Audiology.** The ENT Department is working with the Paediatric Cardiac Service to provide paediatric ENT services on the Glenfield Hospital site.

The team support ENT community clinics, which are currently run in Loughborough, Melton Mowbray, Oakham, Market Harborough, Hinckley and Coalville.

The Department of ENT is an extremely busy one, providing a combination of 27 inpatient and day case operating lists. These are all run through the central operating department and day case unit.

Outpatient clinics are delivered at the LRI site, the Glenfield Hospital and community hospitals throughout Leicestershire including Coalville, Loughborough, Hinckley, Market Harborough, Melton Mowbray and Oakham.

Specialist clinics include the Paediatric Tracheostomy Multidisciplinary Clinic & Multidisciplinary hearing loss diagnostics clinic.

Children’s ENT surgery is primarily undertaken at the Leicester Royal Infirmary, however, surgery to support patients on the Intensive care unit or under the care of the Congenital Cardiac Service is undertaken at the Glenfield hospital. Approximately 15 cases per year are undertaken.

Over recent months the department has introduced a number of Audiology led clinics including tinnitus pathways, vestibular rehabilitation and Grommet follow up clinics.

ENT are open to a two site model if this guarantees elective bed capacity however the currently workforce configuration does not support two site working. An additional doctors at all levels would
A specialist Physiotherapist delivers a Physio led tinnitus pathway and Physio led balance clinics.

Audiology rehabilitation is undertaken within the Hearing Services centre at the LRI. As many clinics as possible are undertaken in a community settings at 14 community venues. Due to the reduced experience and changes in working patterns trainees are seeing less patients in an elective setting which has impacted on the capacity of the department. Dedicated training timetables are provided accordingly to trainees needs.

Nursing Staff

Two site working shouldn’t impact on inpatient nurse staffing however qualified nurse recruitment remains problematic this is trust wide. Two site working for outpatients may prove to be problematic due to outpatient nursing currently changing their rosters on a daily bases to meet the need of the service so if outpatient were to be across two site clinics would need to be more robust to reduce multiple manipulation in nursing rota’s.

Audiology

The continual expansion of the service and utilisation of audiologists to work as advanced practitioners, providing additional patient pathways to the ENT service, requires additional staff and therefore additional funding. The Hearing Services department generally does not have an issue with recruitment and retention, but a lack of funding to implement the additional pathways.

Efficiency and effectiveness

There are a number of areas within the patients pathway that could be improved these include:-

- Education of GP’s regarding effective referral criteria
- Speed of processing Referrals – increased Admin support
- Consultant dedicated time of triaging referrals
- Enhanced communication portal for patient enquiries
- Reduced rescheduling of appointments – increase in clinics required
- Notes availability in time for patient appointments
- Access to investigations within a timely manner
- Reporting times for investigations
- Virtual outcomes – review outcome form and agree pathway
- Follow Up Capacity and pathway management
- Theatre capacity – insufficient number of lists
- Access to beds – HDU/ICU
- Access to appropriate anaesthetic support
- Access to surgical equipment
- Lack of theatre and anaesthetic staff and reduced specialty experience
- Junior doctors crossing covering specialties on the night shift

Demand and capacity/flow

The Speciality has a performance score of 4 indicating that it has a consistent pressure to deliver RTT, Cancer and waiting times targets. In order to meet demand waiting list initiatives are routinely carried out at weekends using Medinet as their supplier of clinical resources. There is a high OP clinic cancellation rate
15,500 over a 12 month rolling period and DNA rates are above the target average of 5% sitting at an overall 8.6% over a 12 month rolling period. As with all UHL services the service has implemented PRISM Pathways to enable electronic GP referrals. The service has implemented advice and guidance in order to manage demand and support appropriate referral from Primary Care. In year the speciality are progressing with the use of GPwSIs to help manage demand. It is hoped that this will reduce the requirement on Medinet weekend clinics.

For ENT to deliver the strategic plan we will require additional theatre sessions and access to beds which will support recruitment of further substantive posts and discontinuation of the use of external Providers. Downtime for emergency winter pressures and lack of theatre staffing has contributed to the deteriorated of ENT’s RTT & Cancer waiting time.

ENT Consultants do not drop clinic commitments when on-call and this causes cancellations in both theatres and outpatients when emergencies do arise which is becoming more common over the past year due to the complexity of patients coming through the front door.

ENT currently have 29 in week sessions and 2.5 weekend sessions within the baseline but there is currently 1098 adults waiting for surgery and 619 of those have been waiting over 18 weeks and 638 Paediatrics waiting for surgery and 466 of those have been waiting over 18 weeks.

ENT Clinics run 7 days a week and the service relies on WLI activity to support the both the 2ww patient appointments, urgent and routine. ENT currently has 3255 patients waiting to be seen in an ENT outpatient’s environment and 662 of these have been waiting over 18 weeks.

On average ENT receive 50 2WW H&N referrals a week and have capacity for around 48 which leaves the department very short when leave is taken.

**Cost**

Workforce for covering rota gaps is a cost pressure and is essential to the running of the department.

External providers remain a significant cost pressure to maintain our RTT Performance which is still currently under the Trust Target.

WLI within ENT are undertaken on a weekly basis in light of high volumes of elective surgery cancellations and lack of capacity for RTT and the 2WW services.

**ENT: Summary of proposed changes**

...
1. Some ENT Activity will be delivered in community settings by GPwSIs to assist with demand management and use of specialist ENT resource. The impact will be to reduce the dependency on Medinet weekend outpatient clinics. This was implemented in May 2019 and we have started to see a reduction in referrals into UHL but need to work with the GPWSI around them accepting Medinet follow-up patients for us to start to see a reduction in Medinet usage.

2. RSS has been implemented within ENT – this is in the early stages and we will continue to review the patient’s pathway into the correct clinic.

3. Future clinical pathways will be developed as a consequence of system wide review of current ENT processes. It is felt that an early opportunity for proportion of de-waxing to be provided by UHL staff within community hubs or nurse led clinics within UHL.

4. Skin prick testing is currently offered within UHL as a test for allergic rhinitis. This could be offered within community locations rather than UHL.

5. Activity will be divided into five cohorts of patients; Elective (Daycase/23 Hr Stay), Emergency, Paediatric, H&N and Adult patients with complex needs. Elective (Daycase/23 hr stay) and outpatients including audiology – will be delivered at

---

**Quality & safety**

**What will this mean against rationale for change?**

**Benchmark (Right care/GIRFT/Model hospital/other benchmark)** -

If daycase and outpatient activity are undertaken in a identified setting away from emergency demands we would hope to see the below improvements within out service and benchmarking results:-

- Reduction in length of stay for elective admissions should decrease with our dedicated Daycase /23 hour HUB which will require an increased workforce and hotweek working for consultants
- Improvements in late start times in theatre due to bed availability and improved processes for Daycase activity
- Improvement in intercase downtime with improved processes theatre staffing recruitment to support this
- If theatre sessions start on time we will see a reduction in overruns
- If we can improve bed availability, processes, staffing, and recruitment there is scope for productivity to improve.

---

**New Configuration**

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
</table>
| What will this mean against rationale for change? | | | | The GPwSI Service was implemented in May 2019 and although we have seen an decrease in referrals into UHL we have noticed an increase in Consultant to Consultant Referrals which we are auditing. We will require the GPWsl’s to start taking some of the medinet Follow-up patients for us to be able to start to reduce our Medinet clinics down.
How will the new model of care look?
When will it be in place?
Who will provide what activity at which site?

6. To address demand, capacity and increase efficiency work is being progressed to improve productivity of theatre sessions. Increasingly the service would like to move to 3 session days in order to address the imbalance between demand and capacity but this would require additional theatre sessions and staffing to support.

The emergency Service at LRI will be provided by Hotweek consultant, Hotweek registrar and support core trainees.

Elective Service at PATCH will be delivered by an expanded cohort of consultants, registrars and core trainees. To support the two site model recruitment of additional doctors is mandatory and essential.

If additional capacity in a different setting is available we can move forward with increasing our workforce to enable us to cover cross site working for clinical activity, Ward rounds and on-calls and this will be supported by our hotweek consultant working pattern to provide an emergency care with 7 day working standards. Access to beds improvements will enable us to reduce our Independent Sector Costs.

**Workforce sustainability**

Recruitment and retention continues to be challenging within ENT a full recruitment would need to be undertaken prior to any two site model to enable safe working and emergency cover.

**Efficiency and effectiveness**

Dedicated centralised outpatients with adequate audiology availability, electronic notes availability, improved IT systems in place and improved patient pathways would benefit the efficiency of our clinics and patients journey.

Improved access to dedicated ENT daycase theatres with adequate trained staffing and improved processes in place will support the improvements in theatre scheduling and general running’s of lists.

Improved access to beds will reduce patient cancellations, improve RTT, reduce WLI activity and Independent Sector Services.

**Demand and capacity/flow**

**Cost**
Moving to a two site model will give ENT an opportunity for additional Daycase lists to support their RTT position, reduction in 52 week breaches and reduce patient cancellations due to lack of beds and improve patients experience.

Within the new model of care there is scope for more efficient day case theatre lists with less downtime which will support an increase in our average case per list and wait time for surgery. Within the emergency setting access to beds for cancer and clinically urgent patients should improve and this will support our cancer position within the trust.

Reduction in patient cancellations will support a reduction in WLI sessions and IS associated costs to the Trust.

Activity modelling (Work in progress. To be inserted when IP, Daycase and OP modelling is complete).
Clinical Model of Care

ENT– Emergency Patient Flow

Pre-hospital >> Attendance >> Inpatient >> Discharge

Local Hospital Care

Local Health and care initiatives

Triage

Emergency clinic – Treatment Room Ward 9

LRI

A&E

Treat & Discharge

Emergency in patient process unchanged

Ent-Specialised Services

Home

Outpatient clinic

Referring hospital
### Overview

The Plastic Surgery Service for Leicestershire is centralised at the Leicester Royal Infirmary and is part of the Musculoskeletal and Specialist surgery CMG. There are currently 6 Consultants, 5 Trainee Registrars, 2 Specialty Doctors, 4 SHO’s and a dedicated team of ANP’s and clinical nurse specialists.

Our Plastic and Reconstructive Surgery service offer a wide range of procedures including abdominal wall reconstructions, post cancer surgery reconstructions & cosmetic surgery. These procedures include immediate and delayed Breast reconstructions, flap reconstructions following Trauma.

Adult plastic surgery patients are managed on Ward 9 which is an 18 bedded mixed specialist surgery ward shared with ENT & Maxillofacial. Kinmonth Unit provides high dependency care for patients who have under major reconstructive work, and also the Ambulatory surgery unit

We have a trauma service which deals with accidents and emergencies including the repair of hand injuries and injuries to the skin, flesh and muscle, including burns.

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview</strong></td>
<td><strong>Benchmarking –</strong></td>
</tr>
<tr>
<td>The Plastic Surgery Service for Leicestershire is centralised at the Leicester Royal Infirmary and is part of the Musculoskeletal and Specialist surgery CMG. There are currently 6 Consultants, 5 Trainee Registrars, 2 Specialty Doctors, 4 SHO’s and a dedicated team of ANP’s and clinical nurse specialists. Our Plastic and Reconstructive Surgery service offer a wide range of procedures including abdominal wall reconstructions, post cancer surgery reconstructions &amp; cosmetic surgery. These procedures include immediate and delayed Breast reconstructions, flap reconstructions following Trauma. Adult plastic surgery patients are managed on Ward 9 which is an 18 bedded mixed specialist surgery ward shared with ENT &amp; Maxillofacial. Kinmonth Unit provides high dependency care for patients who have under major reconstructive work, and also the Ambulatory surgery unit. We have a trauma service which deals with accidents and emergencies including the repair of hand injuries and injuries to the skin, flesh and muscle, including burns.</td>
<td>• potential productivity opportunity with regards to theatres • below benchmark for touch time utilisation in theatre • 19% of current activity is carried out as additional, below average • Average late start in theatre is above the average • Average inter-case downtime if above the average • Average early finish time is below the average • Average Length of stay is higher than the national average for inpatients • Overruns are above the average • 96% of all elective work is day case – national average 96%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Quality &amp; safety</strong></th>
<th><strong>Retention</strong> – High volumes of complex cases, busy on-call whilst undertaking routine activity often with junior doctor’s gaps and insufficient infrastructure results in high levels of stress. Regular patient cancellations due to bed availability resulting into increased complaints and conflicting demands on consultant’s / medical staff’s time.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Workforce sustainability</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Recruitment</strong> – This is challenging due to a small pool of suitable qualified candidates with a large number of vacancies across the country, geographical location is not popular in East Midlands and volume and complexity of work along with insufficient infrastructure to support delivery of care is not attractive for candidates.</td>
</tr>
</tbody>
</table>
We have a dedicated Burns & Plastic Dressing Clinic which is predominately Nurse-led providing micro-pigmentation, supporting complex wound care, supporting both inpatients and community patients. Twice weekly outreach service into patients home to support with complex wound management is provided. The Trust is also supported with an in-reach service.

A lower leg clinic has been set up to reduce the A&E admissions for patients with complex lower leg injuries. The majority of the day case activity is carried out under Local Anaesthetic and in a clean room setting, rather than in theatres. The outpatient clinics are delivered at the LRI site in general outpatients, and also community hospitals throughout Leicestershire.

Plastic Surgery supports the skin cancer 2WW pathway, with the Plastic Surgeons attending MDT meetings. The service removes skin lesions and cancers such as melanoma and reconstructs the defect created in order to produce the most cosmetically pleasing result. There is collaborate working with Nuclear Medicine supporting these pathways.

ANP’s –

We have invested into ANP roles within Plastic Surgery to support the elective and emergency service and staff are currently trained within these roles. Ideally we would like to expand this cohort of practitioners but currently not available and the training course takes 3 years to complete so the service will not see the full benefit until staff are fully trained.

Plastics are open to a two site model if this guarantees elective bed capacity however the currently workforce configuration does not support two site working. Additional doctors at all levels would be required to facilitate a safe two site service.

Nursing Staff

Two site working shouldn’t impact on inpatient nurse staffing however qualified nurse recruitment remains problematic this is trust wide. Two site working for outpatients may prove to be problematic due to outpatient nursing currently changing their rosters on a daily bases to meet the need of the service so if outpatient were to be across two site clinics would need to be more robust to reduce multiple manipulation in nursing rota’s.

Efficiency and effectiveness

There are a number of areas within the patients pathway that could be improved these include:-

- Education of GP’s regarding effective referral criteria
- Speed of processing Referrals – increased Admin support
- Consultant dedicated time of triaging referrals
- Enhanced communication portal for patient enquiries
- Reduced rescheduling of appointments – increase in clinics required
- Notes availability in time for patient appointments
- Access to investigations within a timely manner
- Reporting times for investigations
- Virtual outcomes – review outcome form and agree pathway
- Follow Up Capacity and pathway management
- Theatre capacity – insufficient number of lists
- Access to beds – HDU/ICU
- Access to appropriate anaesthetic support
- Access to surgical equipment
- Lack of theatre and anaesthetic staff and reduced specialty experience
- Junior doctors crossing covering specialties on the night shift
### Demand and capacity/flow

Plastic Surgery Consultants do not drop clinic commitments when on-call and this causes cancellations in both theatres and outpatients when emergencies do arise, which is becoming more common over the past year due to the complexity of patients coming through the front door.

Plastic Surgery has 20 in-week elective sessions, with an additional 6 Trauma sessions within the baseline. No weekend activity is in the baseline. There are currently 544 adults waiting for surgery and 129 of those have been waiting over 18 weeks, giving a current performance of 76.3%.

Plastic Surgery Outpatient Clinics run 5 days a week. No additional / WLI clinics are needed to support the demand.

### Cost

Workforce for covering rota gaps is a cost pressure and is essential to the running of the department.

WLI within Plastic Surgery are undertaken on a weekly basis in light of high volumes of elective surgery cancellations and lack of capacity for RTT (Admitted)
Plastic Surgery: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity will be divided into five cohorts of patients;</td>
<td>What will this mean against rationale for change?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Elective (Day-case / 23 Hr Stay)</td>
<td><strong>Benchmark (Right care/GIRFT/Model hospital/other benchmark)</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>- Emergency</td>
<td>If day-case and outpatient activity are undertaken in a identified setting away from emergency demands we would hope to see the below improvements within our service and benchmarking results:-</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>- Paediatric</td>
<td>• Reduction in length of stay for elective admissions should decrease with our dedicated Daycase /23 hour HUB</td>
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<tr>
<td>- Adult patients with complex needs.</td>
<td>• Improvements in late start times in theatre due to bed availability and improved processes for Day-case activity</td>
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</tr>
<tr>
<td>Elective (Day-case / 23 hr stay) and outpatients will be delivered at the treatment centre</td>
<td>• Improvement in inter-case downtime with improved processes theatre staffing recruitment to support this</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Emergency – delivered at LRI Ward 9 &amp; Kinmonth</td>
<td>• If theatre sessions start on time we will see a reduction in overruns</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Paediatric – Delivered at Children’s Hospital</td>
<td>• If we can improve bed availability, processes, staffing, and recruitment there is scope for productivity to improve.</td>
<td></td>
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<tr>
<td>Complex Adults – delivered at LRI Ward 9 &amp; Kinmonth</td>
<td></td>
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<tr>
<td>To address demand, capacity and increase efficiency work is being progressed to improve productivity of theatre sessions.</td>
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</tr>
<tr>
<td>Elective Service at The treatment centre will be delivered by an expanded cohort of Consultants, Registrars and Core Trainees. To support the two site model recruitment of additional doctors is mandatory and essential.</td>
<td></td>
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</tr>
</tbody>
</table>

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Quality & safety
If additional capacity in a different setting is available we can move forward with increasing our workforce to enable us to cover cross site working for clinical activity, ward rounds and on-calls to provide an emergency care with 7 day working standards. Access to beds improvements will enable us to reduce our RTT recovery costs.

Workforce sustainability
Recruitment and retention continues to be challenging within Plastic surgery and a full recruitment review would need to be undertaken prior to any two site model to enable safe working and emergency cover.

Efficiency and effectiveness
Dedicated centralised outpatients with adequate electronic notes availability, improved IT systems in place and improved patient pathways would benefit the efficiency of our clinics and patients journey.

Improved access to dedicated Plastic surgery day-case theatres with adequate trained staffing and improved processes in place will support the improvements in theatre scheduling and general running’s of lists.

Improved access to beds will reduce patient cancellations, improve RTT, and reduce WLI activity.

Demand and capacity/flow
Cost
Moving to a two site model will give Plastic Surgery an opportunity for efficiencies in day-case lists to support their RTT position, reduction in breaches and reduce patient cancellations due to lack of beds and improve patients experience.

Within the new model of care there is scope for more efficient day case theatre lists with less downtime which will support an increase in our average case per list and wait time for surgery. Within the emergency setting access to beds for cancer and clinically urgent patients should improve and this will support our cancer position within the trust.

Reduction in patient cancellations will support a reduction in WLI sessions and associated costs to the Trust.
Clinical Model of Care

Plastic Surgery – Emergency Patient Flow

Pre-hospital ➔ Attendance ➔ Inpatient ➔ Discharge

Primary care/Community/Hubs

A&E ➔ Triage ➔ Emergen

Treat & Discharge

Assessment and Treatment

Emergency in-patient process unchanged

Hand trauma assessment – send home – within 24/48hours LA or GA day case intervention (future treatment Centre)

Assess – Admit - Treat

Treat & Transfer

Plastic Surgery - Specialised Services

Burns treatment - outreach from Birmingham

Specialised Centres – Birmingham Burns Centre

Home

Nurse led Burns and Plastics dressings’ clinic in future treatment centre

Follow up care at local hospital or follow up in OP
Plastic Surgery – Elective Patient Flow

Pre-hospital

Inpatient

Discharge

Local Hospital Care

Clinics in Alliance Community Hospital settings

Future: Potential for day case activity

Treatment

Centre

GH

Patient

Booked

Referral

Out Patient clinics

Day Case

OP Procedure in clean room

Nurse Led Burns and plastics dressings’ clinic

VAC Dressings

Nipple tattoo

Camouflage (burns)

Sentinel Lymph Node Biopsy – Nuclear Medicine LRI

Site: LRI

Short Stay (<72hr)

Cancer 2WW

Grafts and Reconstruction

No change to current patient pathway

Site: LRI

Plastic Surgery - Specialised Services

Treat & Discharge

Acute / non acute step down / home

Follow up care in OP clinic or Nurse Led Burns and plastics dressings’ clinic
**Design of system-wide clinical models of care**  
**Elective Spinal Surgery: Musculoskeletal and Specialist Surgery (MSS) Clinical Management Group (CMG)**

## Elective Spinal Surgery: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale for Change</th>
</tr>
</thead>
</table>
| **Overview**<br>The elective spinal service is currently based at the Leicester General Hospital. The service runs in line with elective orthopaedics sharing theatres, wards and pre-assessment. There is an outreach clinic which is run by a consultant and ESP at Northampton due to no spinal service within the Northampton and Nene area. The service is part of the Spinal Network and run a weekly MDT meeting to discuss complex spinal patients. | **Benchmark (Right care/GIRFT/Model hospital/other benchmark)**<br>NICE guidance for back pain and radicular back pain pathway are areas in which the spinal service are currently compliant and will continue to be.  
Through our GIRFT recommendations the service is looking at:  
- Coding – checking high rate of intradural patients and adolescent idiopathic scoliosis  
- Trust to contact Amplitude to discuss the possibility of performing a “data dump” from Blue Spier into the British Spine Registry  
- Cancellation on the day rate to look at a reduction  
- Review practical guidelines on facet joint injections again NICE Guidelines  
- Consider and review open claims of litigation and identify trends and learning  
Using the Model hospital tool we are working towards moving to the quartile 1 (lowest 25%), we currently sit in Quartile 2 for our cost per WA. Our biggest focus will be around our Staff cost per WAU as we are currently in Quartile 4.  
Through utilising CHKS we have identified our LOS within Spinal (Trauma & Orthopaedics) is 0.3 days less than our 17 peer trusts. But using this information we are trying to identify opportunities to move towards best in class. This has included things such as the roll out Red2Green on our base wards. | **Location**<br>The elective spinal service is currently based at the Leicester General Hospital. Spinal clinics are delivered from the LGH general outpatient department. Nerve root block lists are delivered through a clean room in the Sports and Exercise Medicine Department. Emergency spinal services are run through Trauma at the LRI with links with the Major Trauma Centre in Nottingham and Neurosurgery in Nottingham QMC. The emergency /trauma spine service also covers Kettering and Northampton. | **Quality and safety**<br>There are no outstanding CQC issues or actions.  
Risks associated currently within the spinal service also sit within elective orthopaedics with regard to the low staffing numbers on the wards and the problems around recruiting qualified nurses, despite effort being made into recruitment. Reconfiguration could potentially help with this issue.  
The spinal service is classed as a specialist centre for elective and trauma and hold regular MDT’s which discuss the clinical pathways of emergency and elective patients. To hold this title we ensure that the MDT...
Staffing
It has seven spinal consultants, two of which work half time at QMC Nottingham primarily on scoliosis patients, and one is part time undertaking nerve root blocks and clinics. Two surgeons also undertook clinics with the Paediatric Department at the Leicester General Hospital. Consultant numbers are currently 6 which allows 1:6 on call working cross site in conjunction with the elective spinal service, this delivers 24/7 safe emergency care. Outpatient clinics are supported by a Spinal Fellow and ESP's along with SpR's. The junior doctor workforce (SHO/SpR level) are run in conjunction with the elective orthopaedic service.

Teaching and training

Research and development

Workforce sustainability
Theatre staffing for the whole of theatres is challenged, it being a fallow year for ODP’s and nursing gaps in general over the organisation is challenged. Orthopaedics and spinal specifically have issues recruiting and the winter bed plans from 2018 and now 2019 will see further problems retaining staff due to their specialising in orthopaedics needing to change to medicine.

HEEM funding and registrar and SHO allocation will also have to be reduced due to the reduction in theatres for the whole of orthopaedics and spinal for 2018/19.

Efficiency and effectiveness
On the 1st of July 2018 a spinal triage service was set up in the Alliance. The predicted outcome of this service is that patients are signposted to the correct service at the point of referral and do not attend into secondary care unless they need to. The future of the service will see patients being seen by physio prior to coming to secondary care and only coming into a hospital setting if surgery is required.

Demand and capacity/flow
Elective spinal lists are not currently fully utilised due to timings of procedures not linking in with timings of lists. There is an average of 2 spinal cases per list which don’t usually fill the list. Extending the lists to 3 sessions lists would increase this and be more efficient. There are limited fillers for these lists also as the nerve root blocks go through a clean room environment so there are only coccyx manipulations which can be undertaken as fillers but the demand for these is a lot less than the capacity.

Within the current theatres structure out of the seven orthopaedic and spinal theatres only 4 are suitable to undertake spinal surgery which limits the flexibility and available theatres for the spinal surgeons. Their elective work has to be taken down when they undertake their on call at the LRI.
Elective Spinal Surgery: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds (Year)</th>
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<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
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</thead>
<tbody>
<tr>
<td>How will the new model of care look?</td>
<td>Improved Benchmark (Right care/GIRFT/Model hospital/other benchmark)</td>
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<tr>
<td></td>
<td>Increased Quality &amp; safety</td>
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<tr>
<td></td>
<td>Increased Workforce sustainability</td>
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<tr>
<td></td>
<td>• A workforce planned around generic theatres and day ward which will manage the expectations of the staff when recruiting.</td>
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<tr>
<td></td>
<td>Increased efficiency and effectiveness</td>
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<tr>
<td></td>
<td>• 3 sessions lists will increase efficiencies on spinal lists</td>
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<td></td>
<td>Balanced demand and capacity/improved flow</td>
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<tr>
<td></td>
<td>• MSK triage will ensure that patients will attend secondary care when they need to and receive treatment quickly on their first appointment Changes to the patients pathway and MSK triage will help to mitigate growth within the elective spinal service.</td>
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<tr>
<td></td>
<td>Cost</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>• Decrease/sustained cost</td>
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</tbody>
</table>

Elective spinal surgery will be delivered through reconfiguration at one site whereby the use of day case theatres for discectomies and coccyx manipulations will improve utilisation and the potential of 3 sessions lists in the inpatients theatres will again assist with utilising spinal lists. The nerve root blocks can be undertaken in the clean room and OPD clinics are envisaged to be the same but using the new Treatment Centre with less patients on the waiting list and less time waiting for an appointment due to their treatment prior to being sent to secondary care.

The LRI will continue to deliver the urgent spinal service due to ED being on site and access to a spinal ward.
When will the new service be in place?
The new service will be in place aligned to the timescale for the delivery of the Treatment Centre and Glenfield new build.

Who will deliver the service and at which site?
The same workforce will deliver the newly configured service.
Managing the bed gap
(NOTE: These assumptions form part of the overall elective orthopaedic initiatives and are not just related to elective spinal surgery)

<table>
<thead>
<tr>
<th></th>
<th>Beds released minimum - max</th>
<th>Resource required</th>
<th>Estimated £</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red to green ward methodology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Note: Split between elective orthopaedics and breast)</td>
<td>0 1 1 2 2 3 3 3 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective pre operative LOS reduction</td>
<td>0 0 0.2 0.3 0.2 0.3 0.5 0.7 0.5 0.7</td>
<td>None 0</td>
<td></td>
</tr>
<tr>
<td>Joint replacement opportunity</td>
<td>0 0 0 0 0 0 0 0 0 6</td>
<td>None 0</td>
<td></td>
</tr>
<tr>
<td>Elective post operative LOS reduction</td>
<td>0 0 2.0 2.0 2.0 2.0 4 4 5 6</td>
<td>None 0</td>
<td></td>
</tr>
</tbody>
</table>

Activity modelling (Work in progress. To be inserted when IP, Daycase and OP modelling is complete).
Elective Spinal Surgery - Elective Patient Flow

Pre-hospital

Primary care

Referrals

MSK

Triage/GP/Alliance/Physio:

Appointment
Booked

Diagnostics

Clinic/Virtual

Inpatient

Treat & Discharge

Nerve root block (undertaken in the clean room in sports medicine)

Discectomies (same day case)

Decompressions (inpatient)

Coccyx Manipulations (day case)

Spinal Fusions (inpatient)

Discharge

Acute/non-acute step-down/home

Follow up Clinic
Overview
Leicester Orthopaedics incorporates Elective Orthopaedics, Trauma, Paediatric Orthopaedics and Sports & Exercise Medicine. As one of the largest Orthopaedic Units in the country, with forty consultants, we treat many thousands of patients per annum.

Elective Orthopaedics
The Elective Orthopaedic department at the University Hospitals of Leicester NHS Trust run their outpatient activity at the Leicester General Hospital and the Glenfield Hospital. All surgical operations for our patients from these clinics are undertaken at the Leicester General Hospital in one of seven laminar flow operating theatres which cater for orthopaedics specifically.

The department runs over four wards at the Leicester General Hospital, ward 14, 16, 18 and 19. Ward 18 is the admissions ward and admissions also go through the Theatre Arrivals Area (TAA) next to the Orthopaedic theatres.

Some clinics and procedures for Elective Orthopaedics also get taken through the Sports and Exercise Medicine department.

Benchmarking
Performance and models of care have been reviewed using the Model Hospital, Patient Level Information and Costing Systems (PLICS) & Healthcare Analytic Systems (CHKS) to compare and benchmark against peers.

BADS: There is an opportunity to achieve compliance with BADS Guidance

<table>
<thead>
<tr>
<th>Orthopaedic Surgery</th>
<th>3720</th>
<th>3725</th>
<th>88.04%</th>
<th>282</th>
<th>7.58%</th>
<th>82</th>
<th>2.27%</th>
<th>81</th>
<th>2.18%</th>
<th>523</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthroscopy of knee including meniscal excision, meniscal or other repair</td>
<td>356</td>
<td>347</td>
<td>88.0%</td>
<td>38</td>
<td>9.6%</td>
<td>7</td>
<td>1.8%</td>
<td>4</td>
<td>1.0%</td>
<td>68</td>
</tr>
<tr>
<td>Autograft anterior cruciate ligament reconstruction</td>
<td>96</td>
<td>24</td>
<td>25.0%</td>
<td>65</td>
<td>68.0%</td>
<td>6</td>
<td>6.2%</td>
<td>1</td>
<td>1.0%</td>
<td>70</td>
</tr>
<tr>
<td>Bone operations without internal fixation and soft tissue correction</td>
<td>154</td>
<td>121</td>
<td>74.0%</td>
<td>28</td>
<td>17.1%</td>
<td>8</td>
<td>4.9%</td>
<td>7</td>
<td>4.3%</td>
<td>62</td>
</tr>
<tr>
<td>Carpal tunnel release</td>
<td>420</td>
<td>419</td>
<td>100.0%</td>
<td>1</td>
<td>0.2%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.0%</td>
<td>1</td>
</tr>
<tr>
<td>Diagnostic arthroscopic examination of total shoulder/joint</td>
<td>2</td>
<td>2</td>
<td>100.0%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Diuretics for ischaemia</td>
<td>12</td>
<td>12</td>
<td>100.0%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Examination/manipulation of joint under anaesthetic/adj. injection</td>
<td>1805</td>
<td>1771</td>
<td>98.0%</td>
<td>26</td>
<td>1.4%</td>
<td>5</td>
<td>0.3%</td>
<td>3</td>
<td>0.2%</td>
<td>30</td>
</tr>
<tr>
<td>Excision of ganglion</td>
<td>39</td>
<td>39</td>
<td>100.0%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Excision of region of peripheral nerve</td>
<td>35</td>
<td>30</td>
<td>86.0%</td>
<td>2</td>
<td>5.7%</td>
<td>1</td>
<td>2.5%</td>
<td>2</td>
<td>5.7%</td>
<td>12</td>
</tr>
<tr>
<td>Excision of nail/nailbed</td>
<td>27</td>
<td>24</td>
<td>89.0%</td>
<td>2</td>
<td>7.4%</td>
<td>0</td>
<td>0.0%</td>
<td>1</td>
<td>3.7%</td>
<td>5</td>
</tr>
<tr>
<td>Exploration of enthesial lesion (finger ligament)</td>
<td>59</td>
<td>59</td>
<td>95.0%</td>
<td>1</td>
<td>1.0%</td>
<td>2</td>
<td>2.0%</td>
<td>2</td>
<td>2.0%</td>
<td>26</td>
</tr>
<tr>
<td>Interpositional replacement of MCP or PIP joint</td>
<td>0</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Lengthening (not pinning) of tendons</td>
<td>68</td>
<td>46</td>
<td>68.0%</td>
<td>13</td>
<td>19.1%</td>
<td>7</td>
<td>10.3%</td>
<td>2</td>
<td>2.9%</td>
<td>32</td>
</tr>
<tr>
<td>Neurolysis and decompression of perineural or neuroma of median nerve at elbow</td>
<td>38</td>
<td>35</td>
<td>92.0%</td>
<td>2</td>
<td>5.3%</td>
<td>1</td>
<td>2.6%</td>
<td>0</td>
<td>0.0%</td>
<td>4</td>
</tr>
<tr>
<td>Posterior incision of ulnar nerve proximal to cubital tunnel syndromes including microsurgery</td>
<td>13</td>
<td>12</td>
<td>92.3%</td>
<td>9</td>
<td>60.0%</td>
<td>3</td>
<td>20.0%</td>
<td>1</td>
<td>6.7%</td>
<td>9</td>
</tr>
<tr>
<td>Removal of internal fixation from bone/soft tissue</td>
<td>227</td>
<td>183</td>
<td>81.0%</td>
<td>28</td>
<td>12.3%</td>
<td>6</td>
<td>2.6%</td>
<td>10</td>
<td>4.4%</td>
<td>72</td>
</tr>
<tr>
<td>Therapeutic arthroscopy of shoulder - arthroscopic decompression, cuff repair</td>
<td>219</td>
<td>127</td>
<td>61.0%</td>
<td>65</td>
<td>31.1%</td>
<td>10</td>
<td>4.8%</td>
<td>7</td>
<td>3.3%</td>
<td>79</td>
</tr>
<tr>
<td>Uncompartmental (temporarily invasive) knee replacement</td>
<td>69</td>
<td>0</td>
<td>0.0%</td>
<td>2</td>
<td>2.9%</td>
<td>26</td>
<td>38.0%</td>
<td>41</td>
<td>58.0%</td>
<td>135</td>
</tr>
</tbody>
</table>

Quality & safety
Patient experience and feedback is very positive on wards at the LGH. The main concern in out-patient concerns waiting times and communication. There are clinical risk issues associated with EMRADS.
This is a bespoke unit which has its own clean room area where small interventional procedures can be undertaken.

**Trauma**
Leicester Royal Infirmary is home to the Trauma orthopaedic service for Leicester, Leicestershire and Rutland. 20 Trauma and 5 spinal Consultants offer a 24/7, 365 days of the year service. Referrals are also taken from Northampton, Kettering and Lincoln for spinal emergencies. The service has 78 trauma beds and a dedicated Fracture clinic seeing over 15,000 new patients annually making the unit one of the busiest in the country.

The Trauma service treats all subspecialty conditions and has a dedicated spinal and Neck of Femur ward. The orthopaedic service is supported by dedicated orthogeriatricians who manage the complex medical needs of our patients.

The Trauma service has a dedicated suite of theatres staffed with specialist staff which enables the high volumes of surgery to take place in a timely manner.

**Paediatric Orthopaedics**
Once devoted to the care of children with spine and limb deformities, children’s orthopaedic surgeons now care for patients of all ages, from new-borns with clubfeet to young athletes requiring arthroscopic surgery to older people with arthritis.

**Teaching and Training**

| ITU is required for some revision cases and moving services to another site where there is level 3 facilities will enable patients access to these on site rather than moving sites when and ITU bed is required. |
| Pre-assessment will be required for all major Orthopaedic surgery, depending on the surgery depends on the level of input from PAC. The department is currently looking at and progressing with nurse led/anaesthetic pre assessment which will exclude the need for junior doctors. The advantages of this are that there is less waiting around for the patient on the day and they will have a smoother flow throughout the department. As pre assessment is currently on two sites and this will go to one the overheads of a single site pre assessment. |
| Workforce sustainability |
| Workforce issues associated with the lack of capacity over winter months which will impact on nurse retention on elective orthopaedic wards due to capacity being given over to meet emergency demand. |
| Theatre ODP staffing levels have been impacted by changes to training which has resulted in current shortfalls in theatre staffing levels |
| The impact of the interim ICU on elective consultant job plans is not fully known; however cover for known level 3 cases will need to be accommodated as these cases will be operated on at the LRI in the interim. |
| There have been some issues with regard to training our junior doctors, primarily down to the lack of operating during the winter months and the fact that the junior doctors have been manning a medical ward. This is something that will carry on being a challenge in the future with the plans currently for the next winter period whereby limited elective orthopaedic work due to the wards being taken over by trauma and staffing going to the LRI for Medicine. A thorough training programme has now been introduced for the junior doctors led by the admin Registrar which has proven so far to be successful but is at risk again when winter approaches. |
| Elective Orthopaedics recognises the need to continue to support research and innovation which encourages talent from outside the UK to apply for posts within UHL and elective orthopaedics. |
| For more day case work physio and OT would be required later on the wards to ensure patients are assessed for a safe discharge. |
| A newly appointed Advanced orthopaedic practitioner specialising in knees has been developed who helps to assist in theatre and runs independent follow up clinics. This model is expected to be rolled out in the future for other sub specialties within elective orthopaedics. |
| Efficiency and effectiveness |
| Safe, high quality, patient centred efficient care within the outpatient and ward setting. Red to green is undertaken on each inpatient ward for elective orthopaedics. |
| Pathways are already in place for the management of post-operative hip and knee replacement follow up appointments. |
| To optimise clinic space and reduce follow up attendances in year the service are looking to increase virtual follow up appointments supported with the use of MRI scan and review with a view to discharge as... |
| Research and development | appropriate. Theatre productivity is an area for improvement. Due to the complexity and case mix the speciality averages 1.8 ACPL. The aim is to achieve and ACPL of 2 with 2.06 as a stretch target. |
| Demand and capacity/flow | A new MSK triage service was implemented early in 2018 to managed demand for elective orthopaedic services. This has not addressed current backlogs and therefore there remains a significant gap between demand in capacity. There is currently a huge gap in demand and capacity for elective orthopaedics despite extra resource being given to the service over the past few years specifically with the implementation of 2 foot and ankle fellows, a shoulder fellow and two knee fellows and a hip fellow. Separating day case to a specific day case unit will be effective but the risk on the inpatient theatres is that there will be no fillers so opportunity to ensure the lists are full is lost. Length of stay is good for elective orthopaedics at the LGH in the Model Hospital. Non admitted backlogs are not reducing despite the introduction of MSK triage, therefore remote follow up requires development in line with LARC for other sub specialties. The service is aiming to reduce the back log in year. The use out sourcing to the private sector continues to be used to manage the imbalance between demand and capacity. As a consequence more complex patient s with comorbidities are operated on in UHL impacting the complexity of case mix, ALOS and the throughput on theatre lists as noted above. |
| Cost | The most significant cost pressures for elective orthopaedics result from loss of theatre sessions over winter months. Theatre sessions have been reduced from 70 – 62 per week and will be further reduced over the winter months to 26 Further cost improvement opportunities are available through looking at use of different types of prosthetics (hip and knee) and size of consignments to deliver long term savings There is a shift to use of one supplier for anchors one supplier. This is a move towards further standardisation and reduced variation. Further cost improvements can be made through looking at: |
| - Opportunities of being on one site |
| - BADS |
| - Best practice tariff |
| - Virtual follow ups |
| - ACPL |
Orthopaedic Surgery (Including Sports and Exercise medicine): Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds</th>
<th>Impact on IP Beds</th>
<th>Impact on 1st OP/FU Clinic numbers</th>
<th>Other Impact</th>
</tr>
</thead>
</table>
| **How will the new model of care look?** | Benchmarking
Benefits from reconfiguration will be:
- Delivery of more ACL surgery as a day case procedure as a consequence of 23 hour stay facilities and enhanced recovery
- Consideration for discectomies and other shoulder procedures to be undertaken as day case procedures

**Quality & safety**
The new ward templates will optimise infection prevention which will be further enhanced through the segregation of elective and emergency activity
The future for pre-assessment might not be orthopaedic specific which again would have cost efficiencies, though consent for these patients will still be required where and when this is undertaken is still a challenge due to various external factors.
Consolidation of staff in new premises will enhance recruitment and retention. Consolidation of out-patient staffing seeks to improve this

365 Occupied bed days | | | | | |

**Workforce sustainability**
Patients will continue where appropriate to be managed in community settings through the Alliance, through the triage hub or in primary care as appropriate and in keeping with agreed pathways

**When will it be in place?**
The new model of care will be fully implemented once the treatment centre, wards and theatres (Glenfield new build)
Who will provide what activity at which site?
The team of elective orthopaedic surgeons, supported by their nursing and theatre teams will provide this services from the Glenfield site co-located with diagnostic and support services.

Paediatric elective orthopaedic services will be provided for children up to their 19th birthday within the Children's Hospital.

Efficiency and effectiveness
Changes to pre-assessment pathways and the creation of a dedicated pre-assessment hub complimented by pre-operative assessment facilities within the day case area will serve to minimise elective cancellations.

Demand and capacity/flow
The use of outsourcing to the private sector and the management of demand and capacity will be improved as a consequence of reconfiguration and the separation of elective from emergency flows. This should also serve to reduce cancellations and therefore improve patient experience. As a consequence more complex patients with comorbidities are operated on in UHL impacting the complexity of case mix, ALOS and the throughput on theatre lists as noted above.

Cost
Opportunities will be sought to improve efficiency as a consequence of reconfiguration including the opportunity to repatriate orthopaedic activity and improve compliance against BADS Benchmarking.
Managing the bed gap

(NOTE: These assumptions have also been included in the model of care for elective spinal surgery as the bed based is the same as elective orthopaedics)

<table>
<thead>
<tr>
<th></th>
<th>Beds released minimum - max</th>
<th>Resource required</th>
<th>Estimated £</th>
<th>Methodology for numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red to green ward methodology (Note: Split between elective orthopaedics and breast)</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Elective pre-operative LOS reduction</td>
<td>0</td>
<td>0</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Joint replacement opportunity</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Elective post-operative LOS reduction</td>
<td>0</td>
<td>0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Activity modelling (Work in progress. To be inserted when IP, Day-case and OP modelling is complete).
Orthopaedic Surgery – Emergency Patient Flow

Pre-hospital Attendance Inpatient Discharge

Local Hospital Care

GP
999

Treatment & Transfer to specialised Hubs

At each site – Enhanced Emergency Hubs

Triage
Fracture Clinic
A&E

Treat & Discharge

Trauma (General)
Neck O Femur
Spinal
Hands
Hips
Foot & Ankle

Orthopaedic Surgery -Specialised Services

Hand
Spinal
Shoulder
Hips
Foot & Ankle
External Fixative frames

Physio/home
Follow up
Rehab/Virtual Clinic/Nurse Led Clinic/GP Follow UP
Orthopaedic Surgery – Elective Patient Flow

Pre-hospital Attendance Inpatient Discharge

Local Hospital Care

GP
MSK Triage via ERS
Alliance

Appointment
Booked

Diagnostics
Clinic/Virtual

Treat & Discharge

Short Stay Treatment

Hip & Knee – 3 days
Hand – Day Case
ACL
Foot & Ankle
Shoulders
Lumps & Bumps (Sarcoma)
Carpal tunnel
Pain Management Injections

Orthopaedic Surgery Sub Specialised Services

Hip & Knee
Hands
ACL
Foot & Ankle
Lumps & Bumps (Sarcoma)

Physio
Step Down
Rehab
Follow Up Clinic
LARC – Hip & Knee Virtual Clinic
The Sport & Exercise Medicine (SEM) department has been based at the Leicester General Hospital since 1993 and offers a multi-disciplinary team comprising Sports Medicine physicians, an Orthopaedic surgeon, extended-scope physiotherapists, a podiatrist and nurse practitioners.

We see new patients with a broad-range of musculoskeletal disorders including tendinopathies, joint problems, muscle injuries, and many other causes of musculoskeletal pain. We are able to offer a wide range of conservative and surgical management options within the department. In addition, we can assist with the management of medical conditions that impact upon, or can be improved by physical activity. We can provide specialist exercise medicine advice for patient groups such as those with physical disabilities or who are pregnant.

For this service there will be no change, it will be 'lifted and shifted' into the Treatment Centre. All patients that get treated via this service will all attend at the Treatment Centre.

The patients who require surgery from their appointments within Sports Medicine will benefit from the rationale for change as per the elective orthopaedics patients.
Primary care

Pre-hospital Attendance

Day Case Diagnostics

Discharge

Tendinopathies
Joint problem
Muscle injuries
Musculoskeletal pain
Specialist exercise medicine advice for patient groups such as those with physical disabilities or who are pregnant
Follow up care at local hospital
Acute/non-acute step-down/home follow up

PACH

Out patient clinics
Day Case
Patient booked

Alliance:
Outpatient clinics
Day Case
Diagnostics

Primary care

Pre-hospital Attendance

Day Case Diagnostics

Discharge
## Ophthalmology: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview</strong>&lt;br&gt;The Ophthalmology Service at UHL is the largest department in UHL based at the Leicester Royal Infirmary. Ophthalmology provides Emergency walk in, general and sub-specialist eye care in Corneal, Glaucoma, Uveitis, Medical Retina, Vitreo Retina, Oculoplastic and Neuro-ophthalmology for adults and children in Leicestershire.</td>
<td><strong>Benchmark (Right care/GIRFT/Model hospital)</strong>&lt;br&gt;• GIRFT we have completed implementing the GIRFT recommendations post visit and follow up discussion which was very successful.&lt;br&gt;• <strong>Eye Casualty (EED)</strong> performance has significantly improved over the past 12 months with the introduction of our 2nd Advance nurse practitioner. We are to introduce a floor manager to manage delays and issues in the department along with the newly accessible EED clinics and Rapid access clinics. We have introduced a pre triage service within the Ophthalmology emergency department; this was post the number in eye casualty becoming less manageable over time. The pre triage service was trailed for 4 weeks and the finding was exciting. We managed to complete an Audit of all patients who were pre triaged had been conducted by an ANP or Optometrist and found that 30% of those patients did not need to attend eye casualty and were re directed to Rapid access clinics, Optometrists on the high street or a General Ophthalmology appointment, the remaining were booked into the main eye cas unit. Full paper written and attached. New process for imaging and pathology implemented and we are at an all-time low for 4 hr target breaches with a consistent performance of above 95%. We are now developing the nursing team within the ophthalmology department including a cohort of nurse prescribers and delivering Nurse and Optom Led emergency clinics.&lt;br&gt;• <strong>Development of Non-medical staffing</strong> has been extremely successful in Ophthalmology in the last 12 months we have really managed to change things. We completed a business case for 3 Non medical ophthalmic practitioners and presented to trust board which was successful. We have employed all 3 and they have commenced in post. A training competency based package was built by the medical retina Consultant team and a policy written by the medical retina team and then published by the management team for non-medical staff to practice safely under the consultant’s supervision. Staff that commenced in post June 19 are now independently injecting and have started their own Follow up patient clinics and the 3rd has completed over 40 injections and is weel on the way to becoming an independent practitioner.&lt;br&gt;• <strong>Development of ANP staff</strong> has begun, we are in the process of training an ANP to complete Laser treatment on patients, and they have commenced training with our lead laser consultant and plan to be competent within the next 3-6 months. Both of our ANP staff have completed their prescribing and</td>
</tr>
<tr>
<td><strong>Cataract pathway team.</strong> Look after patients who are referred for possible cataract surgery, from the initial referral to post-operative care.</td>
<td></td>
</tr>
<tr>
<td><strong>Cornea and anterior segment.</strong> We care for patients with diseases and disorders of the cornea (the front of the eye), and with refractive and immunological problems. <strong>Glaucoma.</strong> We look after patients with glaucoma, or glaucoma suspects.</td>
<td></td>
</tr>
<tr>
<td><strong>Neuro-ophthalmology and adult strabismus, including nystagmus.</strong> We care for patients with neurological conditions affecting the eyes. We also look after adult patients with strabismus (or squints), and nystagmus (wobbly eyes).</td>
<td></td>
</tr>
</tbody>
</table>
Oculoplastics and orbit. We specialise in looking after patients with diseases and disorders of the eyelids, the tear drainage system, and the orbit surrounding the eye.

Paediatric eye services. We care for all children with visual disorders, including inpatients in the Children's hospital.

Medical retina. We look after patients suffering from diabetic retinopathy, uveitis, age-related macular degeneration, inherited retinal dystrophies and acquired retinal disorders.

Surgical retina. We perform laser and surgical procedures to treat conditions such as retinal tears/detachment, macular hole, epiretinal membrane, vitreous haemorrhage (bleed in the eye), complicated cataract surgeries and ocular trauma.

Uveitis and ocular inflammatory disease. Our service offers specialist care to patients suffering from Uveitis, or swelling within the eye.

Location
The department has three outpatient clinic areas (Balmoral, Windsor and Paediatric department), three operating theatres (Balmoral theatres) a clean room, minor operations room, two laser rooms and an eye casualty (EED). Additionally the service works across the county to provide community based treatment as part of the Better Care Together programme at all six of the peripheral hospitals. We also work in the community hospitals and a singular GP run their own emergency Review clinic for eye casualty follow up patients and actively manage a full emergency flow in the eye casualty department.

- **Development of the Optometrists** – We currently have one AOP Advanced Optom practitioner who currently supports the eye casualty department and is starting an Optom led Glaucoma service in the alliance. This individual currently prescribes and manages emergency patients in the eye casualty department and can run her own General, Rapid access and Emergency Uveitis clinics. We have just begun a project to support our Optometrist team to build on their clinical skills and we have aided the team to start their prescribing course as part of the wider development.

- **Development of the Optometrists** - The Glaucoma consultants have been working with 9 Local Optometrists to help then to complete their Glaucoma certificate. This is part of a bigger plan for us at UHL to be able to work with these optometrists out in their own practices discharging Long term stable Glaucoma patients for yearly monitoring so they no longer need to come to an acute setting and be seen, reducing the pressure on the Glaucoma service and providing a saving to commissioners pound. These Optoms have completed their training and are ready to go. UHL have refined their clinic process, completed a discharge pack and made amendments to the outcome forms to prepare for clinic risk stratification to allow us to start identifying patients who could be safely discharged into the community care of one of these Optoms. This is part of us moving a percentage of work into community settings at a lower cost in order to create space for patients who are in need of a more pressing appointment.

- **Development of the Optometrists** – Over the last year one of our uveitis consultants has been working with 2 Optometrists to develop the cataract service here at UHL. Currently patients are seen by a Dr and listed for Cat surgery in a one stop. Post discussion and agreement in our internal OBM meeting it was agreed that the consultant would start a programme to enable teaching of Optoms to allow them to list and consent for cataract surgery. Training has commenced with a package available to allow the Optoms to safely and clearly build of their skills. We also plan on working with the UHL alliance to help them develop this In the community by providing them Optoms through the SLA agreement and supporting with their recruitment and training.

- **High Impact Intervention** - We have completed on the High impact intervention project for LTFU patients with NHS England. We have implemented 6 failsafe officers to monitor the LTFU backlog. We have completed an Audit of patients who were 25% overdue their LTFU appointment and managed to risk stratify these patients working with the specialist nursing team and Orthoptics. We have been working on reducing the LTFU backlog which we have struggled with for some time due to lack of capacity. We were the only trust to be able to present our data and provide a clear picture of our position and progress. Post the High impact intervention work we did some manual work, the management team decided to do a triage of all LTFU patients in Paediatrics and Medical Retina. The consultants and Orthoptics teams worked with us to triage 3000 last letters for Paediatrics and 1500 letters for medical retina all overdue their long-term follow up outpatients. During this process they were assed to see if they needed to be seen, put on a virtual for review, discharged or seen in outpatients. While implementing this we managed to add Victuals to the specialist nursing job plans.
### Staffing
302 WTE staff consisting of 26 Consultant Ophthalmologists and their teams of 14 fellows 9 registers and 2 junior doctors. We have 2 ANP’s, 1 AOP, a full nursing team in eye casualty and on the suite. Optometrists, orthoptists, ophthalmic imagers, technicians and administration support.

- **Electronic Development** – Implementation of Medisight – It was a GIRFT recommendation to possibly implement an electronic notes system. We are now happy to say we are 30% complete into the implementation of medisight note less records. We have currently managed to go note free in Cataract outpatients, Cataract Operating, Medical retina Injections, Emergency EED clinics. We are also trialling the letter module on medisight where the patient is presented their letter at out patients in ophthalmology when they leave instead of having to wait for a posted version. We plan to roll out the system across the entirety of ophthalmology and progress is advancing.

- **Relocation of Non acute work** – We completed a business case back in March 2019 to put forward us providing Medical Retina eye injections in the community in a GP based environment but delivered by a non-medical injector or clinician that works within UHL. Post presenting we were successful for two steeples Wigston GP practice where we first commenced a trial and Audit of patient’s feedback. This was extremely successful with a full patient feedback report. We have managed to have no issues and refined the process and are able to see people more efficiently. This has helped us to create space for urgent follow ups in UHL for the Glaucoma team. We plan on moving further work into the community that doesn’t require an acute setting.

- **Departmental changes** – We have implemented 3 sessions working for theatres and outpatients where we now deliver evening operating, outpatients and injections. We have commenced 7 day working and deliver outpatients on a Saturday and Adhoc on Sundays. We also have regular baseline operating on Saturdays and Adhoc operating on Sundays for cataract surgery.

### Quality & safety/Clinical adjacencies
- Service complaints have remained stable, we currently are up to date with complaints and generally there are concerns around appointment times which we are working to resolve with the backlog clearance and movement on activity.

### Workforce sustainability
- **Consultants**
- **Recruitment** – We have an issue with Consultant recruitment for Glaucoma, there are a number of vacancies online advertised and very few candidates available. We have employed a Glaucoma fellow on a year’s fellowship and we have employed a substantive medical glaucoma/general consultant to support the surgical team. We have recently appointed a Uveitis Consultant who is also supporting on cataract work specifically around training optometrist to lead on cataract clinics.
• **Specialist Trainees**
  We have a full complement of specialist trainees this includes:
  3 x Ocular Plastics Fellows
  1 x Neuro Ophthalmology Fellow
  1 x Paed Neuro Ophthalmology Fellow
  1 x Eye Casualty Fellow
  1 x Medical Retina Fellow
  1 x Uveitis Fellow
  1 x Glaucoma Fellow
  2 x Corneal Fellows
  3 x VR fellows

• **ANP’s**
  We have 2x ANP (Advanced Nurse Practitioners) in eye casualty that is part of the emergency workforce; They Both prescribe and have dedicated time in their job plan to train the other eye casualty staff nurses and main ED staff to treat eyes out of hours.

• **Specialist Nursing**
  We have 8 specialist nurses:
  2x Ocular Plastics – Providing Minor Ops independently with a 3rd being recruited
  2x Corneal who provide clinics and cross linking services
  1x Uveitis
  1x Glaucoma
  1x AMD - provides ARMD clinics, Research clinics, Victuals and is training to become an Ophthalmic practitioner.
  1x Eye Casualty – Provides category 4 treat and discharge for eye casualty – starting prescribing course.

• **Optometry**
  We have just recruited 32 Optoms in Ophthalmology all working full and or part time. We have offered a means tested opportunity for prescribing course funding based on the hours working in the Leicester Ophthalmology dept. We currently have 2 full time vacancies in optometry which we are currently out to advert for. The optometry team will be taking on new challengers such as pre triage in eye casualty and optometry led cataract clinics on completion of training. These new Optoms will be providing the first UHL community working in the alliance where we have offered to help develop an optometry service in order to help ourselves and distribute some of the patient work load.

• **Ophthalmic Practitioners**
  We have recruited 3 Ophthalmic practitioners to support the ARMD team with injections and clinics that were a recent addition due to successful business case and model.

• **Other**
  Appraisal rate and mandatory training are also below the desired target at around 94% and is again mainly due to service pressures and time constraints, though the team continue to work hard on
improving this and staff are booked in, the volume of staff is difficult to keep on top of but we are in
an improving position.
Sickness is at an all-time Low in Ophthalmology and we are very proud of this, we do have 2
members of staff on long term sickness but we have a full house at present.

Efficiency and effectiveness

Demand and capacity/flow
The ophthalmology department is a high volume department receiving in excess of 29,000 referrals per
annum equating to approximately 120,000 outpatients attendances (29,000 new and 90,000 follow ups) held
in 244 clinics a week. A number of these attendances create a further 2-3 on the day attendances in relation
to ophthalmic imaging, visual fields and pressure testing which in term equates to around 250,000 patient
contacts. We have reduced this moving forward with smart working with staffing hours and starting One stop
clinics with plans to implement more once space issues are resolved with relocation of activity plans in
process.
It delivers a further 350 Inpatients, 6000 day case procedures and 10,000 eye injections per annum, along
with 20,000 EED attendances, which we are trying to reduce with education and alternative options being
made available including the introduction of pre triage.
• Despite this high volume of activity the National demand for ophthalmology services continues to
increase year on year due to an aging and multi morbid population.
• The demand for services significantly exceeds capacity and the service requires more clinics a week
to meet current demand and reduce reported risk to patients awaiting follow up with approximately
12500 patients at least overdue their planned follow up date.
• With the implementation of RSS, we will be able to implement a much more effective triaging system
which will reduce the number of visits to eye casualty and filter the patients into the OPD to make
EED more efficient and reduce attendance. We have already switched on the RSS cataract service
September 2019 and waiting to see what the differences in referrals are. We spent months preparing
so hopefully we will see an effective result.
• Ophthalmology does need more theatre lists with consultants now sharing a majority of lists that are
available in the baseline. We have implemented a 3rd session in theatres on a Monday, Tuesday,
Wednesday and Thursday to try and push activity and create some movement moving forward. We
have managed to maintain the 18 week plus RTT wait for theatres but cannot reduce to to capacity.
We have moved over 300 patients into the PCL pillar of UHL and sent 100 patients to the alliance
and community services where they are suffering for available space. We have made efficiencies in
theatres adding 2 cataract patients to each list increasing overall activity with a 7 minute turn around
between each case on a theatre list. We also deliver Cataract weeks where the consultants give up
their regular operating and operate on cataract patients for us to aid keeping the numbers as low as
we can.
• We have been running super weekends in theatres delivering 150 patient injections in one day or 45
cataracts in just one Saturday. We now have increased pressure due to lack of Anaesthetic support, theatre teams at the weekends and an issue with the planning of Anaesthetic cover. We have an increasing number of General anaesthetic patients waiting for theatre. This is due to general lack of Anaesthetic staffing in UHL and the new pension rules that the government introduced to help destroy any opportunity of us continuing to treat patients in a timely manner.

- We have now implemented a 3rd session in the evening for outpatients, currently we do not have enough admin staff to roll out anymore evening sessions. We have managed to secure taking on some apprentice staff to support the apprentice scheme to become future pathway support coordinators.
- RTT has been maintained above national target of 92% until 3 months ago when the pension issue hit anaesthetic staff in theatres and currently reports at 90% overall for combined for admitted and non-admitted. RTT for outpatients remains at 95% with only 40 patients over 18 weeks for Adult and 3 over 18 weeks for Paeds. Missing outcomes are clear.

This option will allow the service to continue to develop whilst maintaining the excellent performance delivery in RTT, emergency flow, patient experience, financial surplus, research and the clinical expertise and reputation currently experienced.

**Cost**

External providers remain a significant cost pressure to maintain our backlog and RTT performance. Your world see New General Patients on a Friday and FU patients on a Saturday and Sunday. We do manage this within budget, we have negotiated a new tariff where we break even or make surplus on the activity. No independent sector insourcing loses money in Ophthalmology.

WLI within Ophthalmology are undertaken on a weekly basis in light of high volumes of elective surgery, and large numbers of LTFU patients. Currently we have No locum spend.
Ophthalmology: Summary of proposed changes

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<td><strong>What will the service look like?</strong></td>
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<td>Following the presentation of the Ophthalmology Clinical Model Strategy paper at the Jan 2018 Reconfiguration Programme Board (RPB) the options discussed have been considered by the Trust and Service and the preferred option is for the Service in its entirety, including the Eye Emergency Department (EED), with the exclusion of the Ophthalmology Paediatric Speciality and theatres to move to the Glenfield Treatment Centre in 2019.</td>
<td><strong>Improved Benchmark (Right care/GIRFT/Model hospital/other benchmark)</strong></td>
<td>No Change N/A – We have our own dedicated recovery suit and theatres.</td>
<td>We can’t get INP beds due to Medicine and other specialties taking priority due to the complexity of the patients, the ones that do need INP beds are normally cancelled on the day. We are having some work done to try and accommodate our own GA patients in volume but currently rely on ASU and Ward 9.</td>
<td>The split in Paed and adult will affect specialty work due to location of clinician. Logistically we will need to work through issues with workforce splitting.</td>
<td>Pending start of RSS</td>
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<td><strong>When will it be in place?</strong></td>
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<td>Adult Services will be moved in accordance with the timescales for the delivery of the Treatment Centre. Childrens model of care will be implemented in line with the development timescales for the new Children's Hospital. Optometry and Orthoptics for Children up to 19 years of age will remain in the current</td>
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Who will provide what activity at which site?

The UHL team will provide all the activity delivered at LRI and GGH. The alliance will continue to provide the activity in the alliance.

- starting with ARMD within the Ophthalmology department. This system will enable us to link notes with diagnostic testing results and the production of patient's letters. Moving forward with the Patch project when cross site working will be implemented for Ophthalmology Medisoft will be able to link the LRI and GH electronically for notes, scans and letters. We have introduced this system and 30% completion of implementation so far.
  - Theatre Capacity insufficient number of lists – We have recently managed to get a further 4 evening sessions a week, Mon Tue Wednesday and Thursday. We do have a lack of Anaesthetic support for our GA work and a struggle to staff weekend activity in theatres not Ophthalmology.
  - Access to Beds for overnight General Anaesthetic cases throughout the winter months is next to impossible for us as a department obviously the priority is given to Cancer and Urgent patients. Medicine occupy our beds for most of the year resulting in cancellations on the suite due to lack of bed space.
  - Demand and capacity/flow

**Increased efficiency and effectiveness**

- Subspecialty support for patient flow continued in-reach into EED reducing delay in treatment; supporting 4hr target delivery. Imaging delays.
- Releases some space at LRI in outpatients, EED and Theatres
- Paediatric Ophthalmology delivered in Children's hospital at LRI in line with current Trust Strategy/NHSI Plan but will result in us splitting the entire Ophthalmology team in two, resulting in recruitment needs due to splitting of services such as photography and visual fields as this would need to be provided on both sites Paeds vs adults.
- Adult consultants see Paeds patients in ophthalmology. Due to sub specialty the consultants
would need to leave their clinics or theatres to go and see children on another site.

- Enable us to make sure the patient is not in an inappropriate clinic and reduce the amount of multiple visits to the department.
- Allow us to complete some of the more complex work rather than general work which is having a strong impact on current capacity.

**New Models of Care**

- The Paediatric element of Ophthalmology will need to move into the new Children's hospital.
- Paediatric Ophthalmology consultants will move into the Children's hospital for complex work and younger children. Any other Paediatric care will be seen by the appropriate specialty for Ophthalmology within the Children's hospital footprint.
- Paediatric emergencies will be seen in main Eye Casualty or a RAC/EED review clinic if more appropriate. This enables the patient to be seen by the appropriate clinician for the sub specialty.
- If a Paediatric patient requires emergency surgery we will need an Ophthalmology Paediatric Theatre including a Paediatric Anaesthetist as children in ophthalmology are all listed as General Anaesthetic procedures only. This will need to be located in the Children’s hospital. If not the patient will need to be transferred to Level 6 Balmoral LRI to be operated on. Geographically this is unacceptable.
- We plan to move as much activity that is clinically appropriate out into the alliance and community which we have currently started and delivered on, including FU outpatients. This activity will still be seen by UHL clinicians.
- Emergency adults were going to be seen in main ED as part of the new Main ED floor however there was not enough space to accommodate us and we remain at LRI in our own small area.
- Adult operating will remain in LRI Balmoral level 6, as
much activity as possible will be moved into clean rooms and we have started 3rd session operating and 7 day working within the department.

- We will require outpatient's clean rooms in order for us to do injection work, Minor plastics Ops and laser diagnostic.

Activity modelling (Work in progress. To be inserted when IP, Daycase and OP modelling is complete).
Clinical Model of Care – Adult and Paed Ophthalmology Patient Flow

Pre-hospital Attendance Inpatient Discharge

Referral Support Service RSS

Emergency: UHL PRE TRIAGE for EED

Emergency: Eye Emergency Department

Risk stratified follow up management

Elective: Adult and Paediatrics
- Rapid access
- Adult/Paed Optometry
- Out patients
- Adult/Paed Orthoptics
- Day case
- Ophthalmology diagnostics eg: Visual fields, Photography, Biometry
CMG: RRCV

Models of Care Impacted by Reconfiguration:

Cardiac Rehab

Pulmonary Rehab

Clinical Immunology & Allergy

Renal, ESRF & Transplant
Design of system-wide clinical models of care  
Cardiac Rehab: Renal, Respiratory & Cardiovascular (RRCV) Clinical Management Group (CMG)

Cardiac Rehab: Current position

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<th>Current Configuration</th>
<th>Rationale For Change</th>
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<td>Cardiac Rehab is a nurse-led multi-disciplinary service which supports inpatient and provides outpatient activity across all three acute sites, however predominately at the Glenfield Hospital, in the form of cardiac referrals. The team also see patients at the National Centre for Sports and Exercise Medicine (NCSEM) in Loughborough. National recommendations indicates that patients in scope include all cardio-vascular patients (to include angina, post MI, ACS, post CABG, post PCI, CHF, ICD implant, arrhythmias, peripheral vascular disease) and potentially post stroke/TIA. The service structure follows national guidance. The team support patients whilst they are in hospital with an acute event, and follows them up post discharge. Patients are invited to a detailed assessment by the team to assess their physical and emotional well-being and risk factor profile. The programme is varied depending upon the needs of the patient. National guidance recommends 12 weeks of supervised exercise training (currently UHL offer 6, falling below national guidance) and education. Cardiac Rehab at UHL is already pioneering in its delivery of web-based care where this is done.</td>
<td>At the time of the initial assessment a risk profile is completed for the patient. This is based upon their risk factor profile, their baseline exercise capacity, cardiac status, co-morbidities and psychological wellbeing. Many low to moderate risk Cardiac Rehab participants do not need to attend a programme based at an acute site. Provided the adequate risk assessments are in place, many clinics are more suitably delivered in community leisure locations – benefiting from improved facilities, adjacency with facilities in which active lifestyle in promoted following discharge by the service, same site adjacency with Heart Smart (a community-based cardiac rehab service to which UHL patients are referred following discharge). In order to ensure appropriate planning, the Cardiac Rehab team hold monthly demand and capacity meetings, where they review data for drop outs, outcome reviews and link to new ways of working. Opportunities to deliver care in a community setting are discussed at these meetings, and the decision regarding appropriate. We know that attendance to a cardiac rehabilitation programme reduces readmission rate and presentation to A&amp;E therefore if we can 1) increase capacity and 2) offer cardiac rehabilitation closer to home etc. we may be able to increase the demand upon the programme and thus reduce the demand on emergency services.</td>
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appropriate for the patient. The development of online modules mean that some patients need not attend the acute site for appointments, allowing them to complete much of their treatment at home, at a time of their choosing, backed up by telephone appointments as required. The feedback from this programme has been excellent, with 70% of patients demonstrating improvement in the Incremental Shuttle Walk Test (similar improvement to those patients who received care in the hospital). This strategy for delivery of web-based care at home will continue to be developed in the future.

Cardiac rehabilitation reduce readmissions through the reduction of risk factors, improved self-management strategies and a reduction of including anxiety and improvement of overall wellbeing (See Making the Case for Cardiac Rehabilitation. DoH publication).
Cardiac Rehab: Summary of proposed changes

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<tr>
<th>New Configuration</th>
<th>Benefits</th>
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<tr>
<td>The cardiac rehab team will continue to support inpatients predominately on the Glenfield Hospital site.</td>
<td>The benefits of delivering care for low to moderate risk patients are as follows:</td>
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<td>In future plans, low to moderate risk outpatient appointments (approx. 50% of all outpatient activity) will be delivered in community leisure locations. (see above re low and medium risk)</td>
<td>• Supports strategies to deliver care closer to the home, including those articulated in the Five Year Forward View and LLR Better Care Together programme;</td>
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<td>A four-month pilot to move cardiac rehab from the LRI to Aylestone Leisure Centre was undertaken and this is now permanently in place, the team will look to roll this model out across the service over the coming years, until all low to moderate risk activity is delivered offsite, either at local community facilities or through alternative technologies. We are currently exploring web based /digital based rehabilitation programmes for low/moderate risk patients and patients with chronic heart failure.</td>
<td>• Removes care from the setting in which the patient may have had their event, which can have an emotional and psychological impact on patients;</td>
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<tr>
<td>The remaining high-risk appointments will continue to take place at the Glenfield Hospital, due to the necessary acute adjacencies. For example, The team are working with the pulmonary rehabilitation team to develop a 'breathlessness programme' to offer a collaborative programme to both patients with chronic respiratory disease and chronic heart failure. International data suggests that these</td>
<td>• Delivery of care in a setting which promotes future uptake of exercise after discharge could be of long-term benefit to the patient, reducing risk of future episodes and readmissions, referrals back into the service and improving health and wellbeing;</td>
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<td>• Improves quality of outcomes – physical and psychological, therefore reduces costs to the wider health economy;</td>
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<td>• Ease of referral into community-based Heart Smart programmes, which also take place in the community leisure centres;</td>
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<td>• Improves demand and capacity plans for Cardiac Rehab in the acute setting.</td>
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diseases co-exist in approximately 30% of the population.

Post rehabilitation the team refers patients into the community-based Heart Smart programmes.
Pulmonary Rehab: Current position

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<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
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<tr>
<td><strong>The Chronic Obstructive Pulmonary Disease (COPD) and pulmonary rehab team is primarily situated at the Glenfield Hospital. It provides outpatient activity for stable COPD patients taking referrals from consultant clinics and GP’s. The evidence for rehabilitation reducing readmissions is for both stable and post hospitalisation for an exacerbation of COPD.</strong></td>
<td><strong>Acute Pathway</strong>&lt;br&gt;Currently approx. 20% of COPD patients hit the LRI, however the team are trying to streamline the pathway through ICE referrals and promotion of the service to clinical teams across the Trust. We would aim to have all patients admitted with a primary diagnosis of COPD to be transferred to GH for specialist care. A proportion of patients at LRI are not treated by the nurse specialist team as there is currently no specialist presence on site. The COPD Specialist team picks up patients admitted with a diagnosis by electronic referral (ICE). A significant proportion (&gt;60%) are reviewed by the COPD specialist team at UHL. The care bundle is delivered (referral to smoking cessation, check inhaler technique, check oxygen requirements, and refer to pulmonary rehabilitation). A critical component for the patients and the health care system is attendance at a pulmonary rehabilitation programme within 4 weeks of discharge (clinically and cost effective NICE, Cochrane Review) but uptake is poor. We would propose to work with patients to develop an acceptable format of rehabilitation that would suit the needs of the patient and drive up attendance to secure reductions in readmissions. In order to ensure appropriate planning, the COPD and Pulmonary Rehab team hold monthly demand and capacity meetings, where they review data for drop outs, outcome reviews and link to new ways of working. Uptake to Pulmonary Rehab programmes can help to reduce readmissions and ALOS, improving quality of life outcomes (physical and psychological), therefore reducing costs to the health economy. (NICE, National Pulmonary Rehabilitation Audit reports) <strong>Stable pathway</strong>&lt;br&gt;The challenge with the stable patients is referral and completion of rehabilitation. We have completed work with colleagues in primary and secondary care to improve ease of referral (on PRISM) and promote rehabilitation across LLR. We also propose to extend the delivery of alternative forms of rehabilitation (SPACE for COPD manual and</td>
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walking test (eg the shuttle room in respiratory physiology). The programme is conducted in the physiotherapy gym using various complexities of exercise equipment, both endurance and resistance, oxygen therapy, walking aids etc.

The team comprises specialist therapists, nurses and assistant practitioners. The wider team engages with pharmacists, dieticians, respiratory consultants and they all contribute to the programme.

The COPD specialist nurses to provide inpatient support for post exacerbation and responding to referrals primarily from respiratory wards. The staff delivering the care provide systematic evidence based care that is reported in the COPD Discharge bundle and reduces unwarranted variations in care with the exception of patients in the LRI where there is no representation from the COPD specialist team.

The National Asthma and COPD Audit Programme, collects data from the acute admission and pulmonary rehabilitation on a continuous basis (no audit support). With respect to the care delivered by the COPD nurse specialist team we are in the top 10 in the top 10 in country for delivery of the discharge bundle.

What are the positive points about Leicester

The pulmonary rehabilitation service has a national and international reputation for its service delivery and innovative approach to adapting models of care to suit the needs of website) to increase capacity with only marginal impact on staffing requirements. Breathlessness programme- will potentially avoid duplication for patients with co-morbid cardiac and respiratory disease.
the patients and increase the scope of delivery. We have pioneered alternative forms of remotely supervised rehabilitation for patients who are unable or unwilling to attend traditional centre based rehabilitation programmes.

Consequently not all Pulmonary Rehab outpatient appointments need to take place in a face to face format, and as such, some could be delivered through a web-based programme, similar to Activate Your Heart (Cardiac Rehab) – this has been in developed by the pulmonary rehab team as a part of the pulmonary rehabilitation programme to encourage self-management support for later stages of the disease. The SPACE for COPD website and manual are both currently offered. Both the SPACE for COPD (self-management programme of activity coping and education) workbook and website are evidence based alternatives and have undergone rigorous testing. Both interventions comprise all the aspects of a traditional rehabilitation format, covering for example disease management, symptom control and a individually prescribed and progressed exercise programme.

All candidates undergo an initial complex assessment of their disease severity, symptom burden, psychological wellbeing and exercise capacity (conducting a field based exercise test). The patients are complex patients usually with complex co-morbidities. The programme uses gym equipment and other hospital based equipment (sophisticated exercise therapies for complex patients), walking aids
and oxygen therapy. A proportion of patients also rely on hospital transport. A well-equipped gym would be a reasonable alternative for moderate to low risk patients (based upon accessibility and patient transport).

There is a challenge-recruiting patients to the post exacerbation pulmonary rehabilitation programme. If we can recruit patients we know there is a significant reduction in hospital bed days for any subsequent readmission (local data has been peer reviewed and published Revitt O et al CRD 2013).

Secondly referral to rehabilitation is poor. Approximately 10% of eligible patients are referred (NHS Digital data). There is a drive through the respiratory leadership at NHS England to increase the referral rate for this high effective and cost effective intervention.

We are currently developing and evaluating a new symptom based rehabilitation service for the multi-morbid patient rather than offering two disease based programmes, that for any individual patient may occur sequentially (Breathlessness Rehabilitation).
### Pulmonary Rehab: Summary of proposed changes

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<tr>
<th>New Configuration</th>
<th>Benefits (to here)</th>
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<tr>
<td><strong>Acute pathways</strong></td>
<td><strong>Acute pathways</strong></td>
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<td>OPD discharge bundle is being progressed by COPD nurses. (see above for details of the discharge bundle) to reduce unwarranted variation in LoS. (local data in peer reviewed journal Sewell L et al RCP Journal 2017)</td>
<td>Improving the quality of provision will ensure there is reduced unwarranted variation in the care of patients with COPD. Ensuring equity of care will have the potential to impact upon the ALoS</td>
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<td>TO increase referral to pulmonary rehabilitation to drive down readmission rates and LoS for those who do readmit. Work needs to be progressed and supported to do this, and secure the potential gains.</td>
<td>There is strong and compelling evidence to show that pulmonary rehabilitation is a highly effective intervention reducing readmissions and LoS and improving the well-being of patients with chronic respiratory disease. (NICE/NHS England outcomes framework/Impress/Cochrane Reviews)</td>
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<tr>
<td>If we could increase the number of post hospitalised patients to attend rehabilitation we would expect a reduction in readmissions and LoS. Early data (Warrington V Int J COPD) has shown that deploying the SPACEforCOPD manual at the time of discharge reduced readmissions significantly (twice as many readmissions in the control group compared to the intervention group (P&gt;0.05). This would require funding of the manuals.</td>
<td>1. If we could increase the number of post hospitalised patients to attend rehabilitation we would expect a reduction in readmissions and LoS. This may require some service reconfiguration and evaluation.</td>
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<td><strong>Stable pathway</strong></td>
<td><strong>Stable pathway</strong></td>
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<td>Pulmonary Rehab at UHL has developed a web and manual-based care package called SPACE for COPD where this is appropriate for the patient, following the success of a similar strategy in cardiac rehab. The development of online modules will mean that some patients need not attend the acute</td>
<td>Benefits of the Pulmonary Rehabilitation web-based care package:</td>
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<td>- Supports strategies to deliver care closer to the home, including those articulated in the Five Year Forward View and LLR Better Care Together programme</td>
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<td>- 24/7 care</td>
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<td>- Standardised reliable information</td>
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<td>- Open communication</td>
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site for appointments, allowing them to complete much of their treatment at home, at a time of their choosing, backed up by telephone appointments and email access as required. This strategy for delivery of web-based care at home will continue to be developed in the future.

Closer working with the LPT pulmonary rehab team, to create integrated pathways which will benefit patients, provide efficiencies and help to create a flexible workforce. These are outlined within STP plans.

| • Individualised programme  
| • Goal settings  
| • Structured  
| • Easily integrated into clinical service  
| • Track patient progress  
| • Reduction in the number of patients who need to visit the acute site. |

Feedback regarding the success of the manual and web-based care programme is being continually monitored by the health psychology and pulmonary rehab team.

There are two important aspects that were included in the original STP scheme for cardio-respiratory Integration with LPT pulmonary rehab teams will allows a better patient pathway, with delivery of care closer to the home, and subsequent service efficiencies, as outlined within STP plans.

1. Work on this is already underway, through shared space at the National Centre for Sport and Exercise Medicine (NCSEM) in Loughborough. This may help to mitigate growth.

2. Explore the development of multi-morbid rehabilitation programmes to meet national imperatives including GIRTF, NICE and provide a comprehensive programme to all cardio-respiratory patients.
# Design of system-wide clinical models of care

Clinical Immunology and Allergy: Renal, Respiratory & Cardiovascular (RRCV) Clinical Management Group (CMG)

## Clinical Immunology & Allergy: Current position

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<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
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<td><strong>Service overview</strong></td>
<td><strong>Benchmarking</strong></td>
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| Core Allergy services manage conditions such as pets, hay fever etc. plus drug and food allergies. Core Immunology Services manage patients where immune system disorders lead to hypersensitivity and allergies as above. | Reviewing system such as ‘Model Hospital & PLICS to compare against peers  
Immunology and Allergy Services both have accreditation standards to attain, registration and full compliance is currently not mandatory. |
| **Specialised services** | **Quality & safety** |
| Immunology specialised service provides Immunotherapy both in the Trust setting and supports home therapy for Immunoglobulins – this service is supported by the specialist immunology nurse team. Specialised services include challenge testing for food and drug diagnosis and advice to reduce risk of anaphylaxis. Immunology high cost therapies are needed as part of the treatment protocols for Immunology patients. These services also provide Integrated working with Kettering for Immunology and Allergy activity. | Risk assessments have been completed on occasion over the last 2 years to highlight risks mainly due to staffing gaps and vacancies  
Small specialised team for both Clinical Immunology and Allergy with limited flexibility to provide cover for A/L and long term sickness absence and no prospective cover within current job plans  
Limited clinic facilities to provide day case challenges for Immunology and Allergy |
| **Location** | **Workforce sustainability** |
| Allergy services are based at the Glenfield Site in out-patient areas only, no bed base or ward facilities for the Allergy service. Immunology services are facilitated between LRI and LGH and do have inpatient activity. | Small specialised consultant team for both Clinical Immunology and Allergy with limited flexibility to provide cover for A/L and long term sickness absence and no prospective cover within current job plans  
Limited number of medical trainees choosing Immunology or Allergy as a specialist area  
Allergy Consultants from Respiratory Services have commitments for CDU and other Respiratory clinics in their job plan  
Immunology Consultants from Pathology Services have laboratory commitments in their job plan  
Small specialised nursing team for each service with limited flexibility to provide cover for A/L and long term sickness absence and no prospective cover within contracts  
Immunology Service currently having to fund additional nursing support from Outpatients due to increased activity and Immunoglobulin waiting list  
Clinical Immunology and Allergy services have both had significant vacancy gaps over the last two years due to varying reasons this is mainly due the speciality service requirements, these have now been filled with staff members undertaking training which is anticipated to be completed 2021. |
|  | **Efficiency and effectiveness** |
|  |  |
however weekly Immunotherapy clinics are held on Ward 1 at the LGH. (1 bay used for patients receiving immunological therapies, chairs and trollies only. 4 days per week). Demand and Capacity is principally through day case and outpatient activity

**Staffing**
Activity is provided by Allergy/Respiratory consultants who are assigned to Respiratory, RRCV CMG budget and Immunology/allergy consultants who are assigned to Pathology, CSI CMG budget.

Clinical Immunology and Allergy Services are supported by independent, small teams of Specialised nurses to provide nurse led clinics as well as specialised techniques such as skin prick tests.

**Teaching and Training**
Clinical Immunology and Allergy Services are committed to maintaining the positive experience of medical students on rotation.

**Research and Development**
- Safe, high quality, patient centred efficient care: Clinical Immunology and Allergy Services are committed to improving the out-patient experience. There has been a significant increase in out-patient referrals for which we have needed to close to out of area referrals for Allergy.
- Increased efficiencies could be identified if the Services had dedicated clinic/day case space on one site
- Stabilisation and/or increase in staffing resource would support improved efficiency and effectiveness however different models should also be compared.

**Demand and capacity/flow**
- Focus to assist in the identification of wasted time in a patient’s journey and to facilitate early discharges and improve patient activity.
- Allergy has seen a steady increase in out-patient attendances and new outpatient referrals. Much of this increase has been driven by increase in environmental allergies. Both the Clinical Immunology and Allergy teams are implementing the required actions for the NHS e-referral Service: Paper Switch off Programme and ensuring Pathway and Referral Implementation System (PRISM) templates are being incorporated to support Specialist referrals. This includes Advice and Guidance. PRISM provides information to GPs to ensure correct pathways are followed for each condition.

**Cost**
Trust Strategic Planning requesting Capital Costs to support the patient treatment centre at Glenfield which will support the Clinical Immunology and Allergy Services to work on the same site but may have Pathology Laboratory impact.
Clinical Immunology & Allergy: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How will the new model of care look?</strong></td>
<td><strong>What will this mean against rationale for change?</strong></td>
<td><strong>Day case in Clinical Immunology &amp; allergy to increase</strong></td>
<td><strong>Limited impact</strong></td>
<td><strong>Increase of outpatients’ clinics – particularly specialist clinics</strong></td>
<td><strong>Specialist staffing vacancies</strong></td>
</tr>
<tr>
<td>1. Immunology and Allergy Services are currently reviewing whether separate services will be beneficial to gain accreditation status. Immunology would be part of the CSI CMG and Allergy remain in RRCV CMG</td>
<td><strong>Benchmarking</strong></td>
<td><strong>Improved efficiency’s by reviewing of processes and workforce</strong></td>
<td><strong>Limited capacity due to current clinic facilities</strong></td>
<td><strong>Improved efficiency’s by reviewing of processes and workforce</strong></td>
<td><strong>Appropriate CMGs to take responsibility of service if separated</strong></td>
</tr>
<tr>
<td>2. Long term plan to transfer to patient Treatment Centre at Glenfield and improve facilities to perform day case and outpatients activity</td>
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<tr>
<td>3. Improve staffing resource for Clinical immunology and allergy Services with implementation of robust plans for flexible innovative working.</td>
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<tr>
<td>4. Integrated Care Model with Kettering Hospital – including joint consultant appointment across the two Trusts</td>
<td><strong>Quality &amp; safety</strong></td>
<td><strong>Limited capacity due to current clinic facilities</strong></td>
<td><strong>Unlimited capacity due to current clinic facilities</strong></td>
<td><strong>Unlimited capacity due to current clinic facilities</strong></td>
<td><strong>Unlimited capacity due to current clinic facilities</strong></td>
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<tr>
<td><strong>When will it be in place?</strong></td>
<td></td>
<td><strong>Unless new facilities for the patient treatment centre is completed</strong></td>
<td><strong>Appropriate CMGs to take responsibility of service if separated</strong></td>
<td><strong>Appropriate CMGs to take responsibility of service if separated</strong></td>
<td><strong>Appropriate CMGs to take responsibility of service if separated</strong></td>
</tr>
<tr>
<td>1. Separation of Clinical Immunology and Allergy Services in 2018/19 financial year</td>
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<tr>
<td>2. Recruitment of an Allergy Trust grade Dr to commence November 2018</td>
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<tr>
<td>3. Recruitment of an additional Immunology specialist nurse by July 2018 (Business Case approved in</td>
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</table>
principle May 2018 for a Band 6 nurse – awaiting financial confirm and challenge authorisation)

4. Recruitment to shared Kettering and UHL post - Oct 2018

5. The future reconfiguration of services into the Treatment Centre in accordance with Reconfiguration timelines.

<table>
<thead>
<tr>
<th>Who will provide what activity at which site?</th>
</tr>
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<tbody>
<tr>
<td><strong>Medium Term</strong></td>
</tr>
<tr>
<td>1. Activity will be provided at Glenfield site, UHL for Allergy</td>
</tr>
<tr>
<td>2. Activity will be provided at LRI, LGH, UHL for Immunology</td>
</tr>
<tr>
<td>3. Integrated Services for Kettering &amp; UHL with clinics on both sites</td>
</tr>
<tr>
<td><strong>Long Term</strong></td>
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<tr>
<td>4. Activity will be provided at Glenfield site, UHL in the proposed patient treatment centre</td>
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<table>
<thead>
<tr>
<th>Workforce sustainability</th>
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<tbody>
<tr>
<td>• Regular consultant presence with increased number of clinics</td>
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<tr>
<td>• Alternative models for medical staffing cover implemented to aid efficiencies with current resources. E.g. review training and role/responsibilities Nurse and junior medical staffing to provide stability</td>
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<thead>
<tr>
<th>Efficiency and effectiveness</th>
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<tr>
<td>• Consultants have increased time allocated to patient care Monday through Friday which will improve patient flow and patient experience. Implementing strategies to change would identify the need for improved structure and policies and procedures to provide efficiencies which cannot be done under the current structure</td>
</tr>
<tr>
<td>• Review possibility of 7 day services to increase efficiency and effectiveness</td>
</tr>
<tr>
<td>• Robust procedures and policies to meet future demands for Clinical Immunology and Allergy patients</td>
</tr>
<tr>
<td>• Integrated Kettering/UHL Consultant to reduce waiting lists and patient journey</td>
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<tr>
<td>• Early supported discharge services by providing advice or treatment promptly</td>
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<table>
<thead>
<tr>
<th>Demand and capacity/flow</th>
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<tr>
<td>• Reduced length of stay</td>
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<tr>
<td>• Improvement in performance targets</td>
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</table>
| **Capital Cost**  
Trust Strategic Planning requesting Capital Costs to support the patient treatment centre at Glenfield which will support the Clinical Immunology and Allergy Services to work on the same site but may have Pathology Laboratory impact. |  |  |  |
|---|---|---|---|
| **Cash releasing benefit**  
Long term plans potentially could provide additional revenue. The increase and the development of the specialist clinics |  |  |  |

**Clinical Model of Care**

- *Whilst current staffing levels are creating a backlog for patients being seen, there are opportunities to develop a regional specialist allergy centre. This would raise the profile and provide not just growth in clinical including fee-paying elements of the service but also research and education in this field.*
Allergy and Immunology – Emergency Patient Flow

Pre-hospital

Local Hospital Care

Local Health and care initiatives

Local Hospital Care - Enhanced Emergency Hubs

Triage

AMU

GPAU

A&E

AFU

Treat & Discharge

At each site – Enhanced Emergency Hubs

Local

Short Stay (<72hr)

Follow up care at local hospital

Acute/non-acute step-down/home

Treat & Transfer

Allergy and Clinical Immunology - Specialised Services

Inpatient

Discharge

Treatment & Transfer to specialised Hubs

Local Hospital Care
Allergy and Immunology – Elective Patient Flow

Pre-hospital → Attendance → Inpatient → Discharge

Local Hospital Care

Local Health and care initiatives

Treat & Discharge

At each site

Patient Booked

Out Patient clinics

Day Case

Diagnostics

Referral

Allergy and clinical Immunology - Specialised Services

Acute/non-acute step-down/home

Follow up care at local hospital

Treatment & Transfer to specialised hubs
Managing the Bed Gap
No impact

Activity modelling
OVERALL SUMMARY – DO NOTHING MODEL:

ALLERGY

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<th>Do Nothing Growth 20/21 (DC)</th>
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OVERALL SUMMARY – DO SOMETHING MODEL:

ALLERGY

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Assumptions

- No increase in inpatients work
- Increase in Day Case due to increase in medical staffing limited by space
- Increase of outpatient numbers due to increased number of medical staffing and speciality clinics
OVERALL SUMMARY – DO SOMETHING MODEL:

IMMUNOLOGY

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<th>Service</th>
<th>17/18 actual activity (IP)</th>
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Assumptions

- No increase in inpatients work
- Increase in Day Case due to increase in medical staffing limited by space
- Increase of outpatient numbers due to increased number of medical staffing and speciality clinics
Design of system-wide clinical models of care
Nephrology & Renal Transplant Service: Renal, Respiratory & Cardiovascular (RRCV) Clinical Management Group (CMG)

Nephrology & Renal Transplant Service: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
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<tbody>
<tr>
<td><strong>Overview of the service</strong></td>
<td>The transplant inpatient bed base will move to the GH site as part of the relocation of Level 3 ICU and associated services Business Case, in 2020. The criticality of moving transplant first relates to its requirement, in accordance with the National Service Specification, to be co-located with both Level 3 ICU and also with access to a 24/7 emergency theatre. It is recognised that moving transplant without the renal service would result in problems from a staffing and patient safety point of view. Therefore a compromise was agreed in 2015 that only the in-patient transplant service would move to GH with an undertaking that the other inpatient nephrology services would be brought together as soon as possible with a target timeline of 2 to 6 months separation. Plans will be developed to move nephrology services into space vacated by EMCHC at GH during 2020/21 and funded by Trust CRL. This will be achieved in stages one and two described below. Stages three and four are important reference points as these describe the longer term plan.</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td><strong>Stage one</strong> – Relocate Transplant and complex general surgery and vascular access services to the Glenfield Hospital to optimise clinical interdependencies with ICU (12 beds).</td>
</tr>
<tr>
<td>The LGH has the following services and facilities</td>
<td><strong>Stage two</strong> - Interim two site working – Nephrology inpatient, day-case and outpatient services (including renal dialysis) will remain at the LGH site. There is a need to provide medical and nursing cover at inpatient haemodialysis facilities at GH. 42 beds will remain on the LGH site with access to level 2 HDU and short-term level 3 support if a patient deteriorates unexpectedly. Such patients would be stabilised on the LGH site and transferred to GH if on-going level 3 care is required by the dedicated urgent patient transfer service.</td>
</tr>
<tr>
<td>Inpatient facilities 56 beds (including 13 side rooms) comprising - Ward 17 transplant ward 14 beds (3 x 4bedded bay) and 2 en-suite side rooms Ward 15A high dependency 7 beds (including 3 side rooms one of which en-suite); also 2 haemodialysis(HD) beds used flexibly Ward 15N female nephrology ward 17 beds (2 side rooms)</td>
<td><strong>Stage three</strong> – To deliver and optimise the Nephrology and Transplant clinical interdependencies. Nephrology inpatient services will move to the Glenfield site with a reduced bed base. The service is currently working with United Lincolnshire Hospitals NHS Trust (Lincoln County) to develop a patient pathway where Lincolnshire patients can be treated in their local hospital rather than having to travel to Leicester for treatment. It is estimated that this activity will equate to a reduction of four beds.</td>
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</table>
Ward 10 male nephrology ward 18 beds (6 side rooms)

There are 7 weekly elective theatre sessions for vascular access, live donor transplantation and other allied surgeries.
- Elective theatre capacity, not co-located with the ward.

Transplant Laboratory (Histocompatibility and Immunogenetics). Provides an accredited tissue typing service for the renal network.

LGH Outpatient Facilities:
- Renal Ambulatory Care Facility co-located on Ward 10, comprising 7 beds (1 Chair)

The following groups of patients are managed through the renal ambulatory care facility:
- Planned nursing interventions (e.g. intravenous iron, other drug administration, blood transfusions)
- Planned invasive interventions (e.g. native and transplant kidney biopsies, vascular line insertions, peritoneal dialysis catheter insertions, vascular radiology interventions)
- Planned medical reviews of nephrology and transplant patients
- Unplanned medical reviews following referrals from primary care, haemodialysis centres or self-referrals including triage for admission

Stage 4 – Nephrology and Transplant /General surgery day-case and outpatients activity will transfer to the treatment centre/kidney centre.

Benchmark (Right care/GIRFT/Model hospital/other benchmark)
The service is reviewed against the requirements and activities in line with our patient views and the Department of Health building notes/guidance (HBN 07/02) in terms of service improvement, renal registry, national service specifications and is currently working with GIRFT team who plan to visit the service in the autumn of 2018. At the time of writing the Model Hospital does not provide guidance in terms of renal services however within the principles of Model Hospital the teams are working to deliver a reduced LOS comparable with peer benchmarking.

Quality & safety
The service has robust open processes in place and are assured of service delivery in terms of national peer review transplant, transplant lab accreditations and renal registry and quality indicators (Regional, local, national). Quality and safety will have to be maintained throughout the transition phase.

Once transplant and renal services are reconfigured and repatriated on the GH site the service patients and the workforce will benefit from:
- the co-location of interventional radiology and pharmacy services
- The renal service being able to provide a ‘renal in reach service to cardiology, vascular and respiratory.
- A reduction in patients having to transfer across site.

Workforce sustainability
This work is supported by our workforce group which includes HR/HOS/Support Services/Nursing and Management team. Note need to work closely with Theatres and ICU. It is likely that the medical workforce may need to increase during the transition phase and the work to identify the impact is underway. There is already considerable pressure on middle grades rotas and the proposals in ‘Broadening Foundation Training’ are likely to mean a reduction in FY doctors. The service are already looking at innovative solutions to workforce problems including additional specialist nurses in transplant surgery and vascular access to support inpatient and outpatient work and kidney donor offers and physician associates in nephrology. The move to 24/7 services (proposed by NHS England) provide an additional challenge although the details of this are yet to be finalised.

Discussions are due to take place with other surgical specialities (vascular, hepato-biliary and general surgery) at GH regarding a joint junior rota.

Efficiency and effectiveness:
- The service is working with Lincoln County Hospital to repatriate patients back to Lincoln so that they
The day care facility is open from Monday to Friday 08:00-18:00 and the vast majority of patients are not admitted.

- **LGH Haemodialysis Unit**
  Providing haemodialysis treatment for approximately 192 patients open 6 days a week (including nocturnally). Most patients receive HD three times a week.

**Home Therapies Service** (approx. 175 patients across the network. Includes home training and a Peritoneal Dialysis (PD) training area of ward 15).

**Staffing**
The service has an MDT approach and the service elements are supported by a wide range of support services including, Interventional radiology, renal transplant laboratory, administrative and managerial support, renal research facility, renal technical and supplies department, renal dietetics, specialist pharmacists, pathology and full range of other therapies.

**Teaching and Training**

**Research and Development**
Renal Research Unit
(30 trials ongoing circa 500 patients)

- can be treated closer to home – resulting in a possible reduction of up to 4 - 6 beds.
- Acute Kidney Injury development working with primary care to reduce hospital admission.
- Reduced pressure on ED. Patients have told us that they' would like direct access to renal services rather than having to go via ED.’
- The service are exploring how we can deliver dialysis capacity at the right place at the right time options include increasing home dialysis, shared and minimal care facilities.

**Outpatient Services (average 50 rooms per week)**
The Service is committed to providing safe, high quality, patient centred efficient care through centralised services with access to all relevant diagnostic services. As the Nephrology and Transplant service evolves the case mix for outpatients may change e.g.: a higher number of transplants equates to an increase in outpatients for Nephrology. Transplant patients are also repatriated to the network within agreed timeframes. The service has seen an increase in general surgery (renal) activity however this is under review. There is also an increased focus on specialist clinics and the development of virtual clinics.

**Discharge Process:**
The length of stay for Nephrology and Transplant is in line with peers however delays can be experienced due to haemodialysis capacity across the network. The service is working with Lincoln County Hospital NHS Trust to look at the repatriation of patients from Lincolnshire. Over the past three years the service has also delivered new dialysis units in Northampton, Kettering and Peterborough and we are currently entering into a procurement and service review to provide additional capacity for Lincolnshire, Leicestershire and Rutland. Early discussions have taken place with NHS England in terms of support to develop appropriate social service support for dialysis patients.

**Demand and capacity/flow**
The models of care for Nephrology and Transplant have been reviewed to improve capacity and flow and improve utilisation including options to ensure that dialysis capacity is in line with demand (current and future). The haemodialysis population is growing at about 3.6% per year (renal registry 19th annual report). Appropriate theatre list scheduling is in place to improve efficiencies and theatre utilisation.
Nephrology & Renal Transplant Service: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How will the new model of care look?</strong> Following a period of separation, the new model of care will re-join the Nephrology and Renal Transplant inpatient wards on the Glenfield Hospital site. Nephrology and Transplant /General surgery day-case and outpatients activity will transfer to either the planned treatment centre at the GH site or the proposed Kidney Centre, providing inpatient and outpatient haemodialysis slots, outpatient procedures.</td>
<td>The co-location of Renal Transplant/Vascular access Services with Cardiology / Cardiothoracic Services, Vascular Surgical Services and interventional radiology at Glenfield Hospital brings synergies that will further enhance the outcome of renal patients with multiple co-morbidities. This service move would further establish the UHL Transplant Unit as the premier unit in the East Midlands and would see an increase in tertiary level activity. This will help establish one stop c vascular access clinics and urgent endovascular intervention for vascular access within 24hrs and reduce burden on haemodialysis vascular catheters/beds and focus on putting the patients first. This will expedite early discharges and impact beds and potential elective cancellations. With the opportunity afforded by the redevelopment of transplant and vascular services into a streamlined multidisciplinary approach will not only benefit the patients but will help develop training and research opportunities.</td>
</tr>
<tr>
<td><strong>When will it be in place?</strong> Stage 1: Transplant inpatient ward move from LGH to GH site (new build ward). This will be complete by Summer 2020. Stage 3: Nephrology inpatient wards move from LGH to GH site. This is planned to happen within 6 months of stage 1. Stage 4: Nephrology and Transplant/General surgery day-case and outpatients activity delivered from the GH site. Date TBC</td>
<td>Quality &amp; safety</td>
</tr>
<tr>
<td><strong>Who will provide what activity at which site?</strong> Services will be provided by UHL at the GH site and haemodialysis services will continue to be provided across the East Midlands.</td>
<td>• The quality of the patient experience and environment remains a priority and is maintained. • The co-location of transplant and renal services with vascular, cardiology and respiratory is likely to improve the clinical outcomes. • Once transplant and renal services are reconfigured and repatriated on the GH site the service patients and the workforce will benefit from: • the co-location of interventional radiology and pharmacy services. • The renal service being able to provide a 'renal in reach service to cardiology, vascular and respiratory. • Consolidating services onto one site will allow us more flexibility in our medical and nursing workforce, helping to fill vacancies and reducing premium spend.</td>
</tr>
</tbody>
</table>

Workforce sustainability

- Medical staffing and on-call rota efficiencies
- Overtime and all premium pay reduction due to consolidation of services on one site
- High quality of care delivered by a competent and specialist educated workforce resourced to meet the needs of the case-mix and workload

Efficiency and effectiveness

- This move will facilitate improvements in patient care and realisation of efficiencies and increased productivity that can be gained by consolidating vascular access services on one site, e.g. one stop...
Network covering Leicestershire and Rutland and the surrounding counties, Northamptonshire, Lincolnshire, Peterborough city and parts of Cambridgeshire.

Haemodialysis will be provided on the Transplant and in patient ward and at the Kidney Centre with flow and outreach to the satellite units.

<table>
<thead>
<tr>
<th>clinic, endovascular intervention.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cancellations on the day of surgery are currently experienced by the service as a direct consequence of chronic and emergencies competing for beds on the LGH Site. Locating transplant surgery at GH will also allow the development of a seamless service for patients with one stop access clinics, complex access interventions and radiological/surgical rescue.</td>
</tr>
</tbody>
</table>

**Cost**

• Reduction in costs incurred during transition period by re-consolidating services onto one site
• Cost benefits associated with medical efficiencies through consolidation of rotas and on call.
• Reduction in premium spend
Nephrology & Renal Transplant - Emergency and elective patient flow

**Acute Referral Transplant (GH)/Nephrology (LGH)**

1. **Acute Referral**
   - CTR/AVF/PD
   - Other Hospital
   - GP/Nephrology/Dialysis unit
   - NHSBT Tx

2. **Malfunctioning VA/PDI or Transplant problem.**

3. **GH Assessment Area/Transplant Ward**

4. **Theatre (inc access out of hours cadaveric)**

5. **ITU/HDU**

6. **Patient Transfer - Retrieval team**

7. **LGH Nephrology Ward 10**

8. **LGH Ward 15 Acute (HDU)**

9. **LGH Ward 15 Nephrology**

10. **Discharge/Home/Community**

11. **Pre Op Assessment**

12. **Day-case (LGH 2 beds)**

13. **Elective Referral**
   - Living Related Tx
   - Endocrine/General surgery
   - Vascular Access (VA)
CMG: Women’s & Children’s

Models of Care Impacted by Reconfiguration:

Gynaecology

Neonatology & Neonatal Intensive Care

Obstetrics, Maternity & Antenatal Screening

Children’s Services
Gynaecology & Gynaecology Oncology: Current Situation

Current Configuration

What is the Current Configuration?
Gynaecology services are delivered across 2 sites: the Leicester General Hospital (LGH) and the Leicester Royal Infirmary (LRI).

The LGH has the following services and facilities:
- Elective Inpatient ward – this operates with 23 beds Monday – Friday, 15 beds on Saturday and 10 beds on Sunday.
- Elective theatre capacity, not co-located with the ward.
- Use of the robot in theatre 3 (shared with Urology).
- Daycase ward with ambulatory outpatient procedure facility.
- Gynaec Outpatient Department, which provides the location for some outpatient clinics, as well as some outpatient procedures.

The LRI has the following services and facilities:
- Gynaecology Assessment Unit (GAU) is located on Level 1 Kensington Building – this is an emergency inpatient ward with 12 beds. The Termination of Pregnancy (TOP) service also operates from this ward in a dedicated 4 bedded area (reduced capacity at present – previously was 8 patients).
- Day case theatres are utilised, with recovery on ASU – where space available. Current lack of capacity has resulted in frequent (mis)use of GAU following elective daycase surgery.
- The Early Pregnancy Assessment Unit (EPAU) is located

Rationale For Change

Benchmark (Right care/GIRFT/Model hospital/other benchmark)
Performance and models of care have been reviewed using the Model Hospital, Patient Level Information and Costing Systems (PLICS) & Healthcare Analytic Systems (CHKS) to compare and benchmark against peers.

BADS: For Gynaecology services there are potentially 1292 bed days savings opportunity when benchmarked against the BADS guidelines (see information below):

As models of care evolve, ambulatory procedures will increasingly be delivered in alternative settings e.g. a transfer of location e.g. some activity, in alignment with best practice will move from a daycase to OPD location. Examples include:
- Endometrial polypectomy – already done as an outpatient treatment (special tariff)
in the Jarvis Building. This unit is open Monday – Friday, and the weekend service runs from the GAU.

- Gynae Outpatient Department is situated on Level 0 Kensington Building. Colposcopy and Hysteroscopy is also carried out in this area.
- Assisted conception unit – all aspects of infertility investigation and treatment (including male infertility)

Outpatient and Daycase services provided at:
- Loughborough
- Coalville (clinic only)
- Melton Mowbray
- Oakham (clinic only)
- Market Harborough (clinic only)
- Hinckley

Urogynaecology; Endometriosis; and recurrent miscarriage are all services provided for a population greater than Leicestershire. In addition Gynae Oncology and PAGS is a tertiary service.

**Staffing**

<table>
<thead>
<tr>
<th>Gynaecology - Current Staffing as at 1st April 2018</th>
<th>Establishment (WTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Group</td>
<td></td>
</tr>
<tr>
<td>Additional Clinical Services</td>
<td>46.71</td>
</tr>
<tr>
<td>Administrative and Clinical</td>
<td>42.52</td>
</tr>
<tr>
<td>Allied Health Professionals</td>
<td>1.20</td>
</tr>
<tr>
<td>Estates and Ancillary</td>
<td>3.34</td>
</tr>
<tr>
<td>Healthcare Scientists</td>
<td>7.07</td>
</tr>
<tr>
<td>Medical and Dental (not including Medical Staff practising in Obs &amp; Gynae)</td>
<td>14.01</td>
</tr>
<tr>
<td>Nursing and Midwifery Registered</td>
<td>65.63</td>
</tr>
<tr>
<td>Other</td>
<td>1.05</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>180.24</strong></td>
</tr>
</tbody>
</table>

**Teaching and training**

As a University teaching hospital there are both under and post graduate teaching commitment.

- Diagnostic Hysteroscopy - already done as an outpatient
- Endometrial ablation - already done as an outpatient treatment (special tariff)
- Colposcopy - already done as an outpatient

**Quality & safety**

Gynaecology services are currently split into 5 distinct locations across 2 hospital sites. This means that our specialist and highly skilled nurses and medics are spread very thinly, making it sometimes extremely difficult to provide the staffing levels to provide the quality of care which we would wish.

The current configuration of inpatient services at the LRI mean that patients coming in for a TOP are treated in an area immediately adjacent to obstetrics, which can be difficult to manage.

- Should the reconfiguration of Level 3 ITU away from the LGH site be an issue requiring management for any period of time there will be significant safety factors of concern for Elective Gynaecology and in particular Gynae oncology services.
- Lack of senior presence during the day for ward assessment and for inpatient review of inter-specialty referral has been a risk for some time and will need to be addressed. This is a result of split-site working and the limited availability of senior decision making medical staff, has only been partially addressed and has been reflected in SUI RCA reports as a significant risk to patient safety. This risk is on the Trust risk register as a “lack of continuity of patient care due to consultant cross site working”.

**Workforce sustainability challenges**

- The current split site configuration necessitates Consultant cover on two sites, resulting in challenging rotas and the need for increased on-call cover. National shortage of medics and nurses, and the need to ensure efficiency in workforce, means that this is not a sustainable situation for an indefinite period of time.
- A reduction in training numbers for junior staff and a reduction in the hours they are able to work; coupled with difficulty in appointing to training posts and trust grade/fellow posts has led to gaps in rotas and expensive premium pay commitments.
- Reduced capability of specialist trainees to work independently and an expectation of increased teaching and training commitment of senior clinicians impacting on their ability to provide service.
- The on-call “medical” cover arrangements will be evaluated as changes to the Maternity medical rotas may make cover from the Delivery Suite at LRI unsustainable because of a lack of middle grade staff and inappropriate skillset of Consultant Obstetricians not practicing Gynaecology. Enhanced Nursing roles are already in place and may need augmentation but the out of hours service may also require
**Research and development**

The Gynaecology and gynaecology service participate in recruitment to research studies and active research programmes are in place.

- Increase consultant presence for extended periods of time.
- The implications of running services across two sites on the training of specialist trainees will need to be reviewed. Particular reference will need to be made to both day time and out of hours rotas as well as the need to support service activity e.g. clinics and theatre assistance.

**Efficiency and effectiveness:**

- Currently there is an inefficient configuration of services e.g. day case activity in main theatres, Gynae theatres geographically separated, conflict between Gynae emergency theatre use and the elective Obstetric pathway.
- There is pressure on the GAU when adult female medical patients are an outlier on the ward.
- The configuration of elective theatre provision, the lack of co-location of elective Gynae theatres with a dedicated day case facility is inefficient.
- The current configuration of the service at the LGH with the two Gynae wards at the extreme opposite ends of the LGH site compromises efficiency and staff availability for clinical care.
- Intermixing of obstetrics and Gynae patients means women having miscarriage are collocated with maternity patients – an issue which leads to complaints and CQC previously identified that we have failed to address this issue.

**Outpatient Services:**

The Women’s & Children’s Clinical Management Group are committed to providing safe, high quality, patient centred efficient care which will be enabled through centralised services with access to all relevant diagnostic services. Gynaecology services continue to see an increase in referrals particularly for cancer. Ensuring that the right clinician is in the right place will ensure efficient and expedited care.

Further work is being undertaken to ensure repeat clinic visits are reduced by increasing the implementation of “one-stop-shop” and multi-disciplinary appointments. The philosophy will be to adopt a rapid diagnostic assessment and treatment approach, with a reduction in routine follow up appointments where there is no evidence that this adds clinical benefit.

A number of procedures are running or in the process of being implemented in the community, including:
- Pipelle biopsies
- IUS fitting
- Diagnostic hysteroscopy service
- Support Pessaries for prolapse
Removal of Cervical Polyps

Further work will continue to be undertaken on the Recurrent Miscarriage and Fertility Patients Pre-Referral Pathways to ensure that there is continued effort to reduce visits and time to treatment.

The models of care will be further adapted to improve RTT for PMB. Working includes:
- GPs could reduce referrals by following guideline in future by undertaking USS first and referring only those with ET≥4mm or recurrent bleeding – to involve GPSI as RSS is developed in Gynaecology
- PRISM 2WW needs to block referrals not meeting referral criteria
- Urgent referrals to be facilitated for those not meeting referral criteria with risk of malignancy

Demand and capacity/flow
The models of care for Gynaecology have been reviewed with a view to improve capacity and flow. The existing split site service does not allow this to be as efficient as it would be on one site. Demand and capacity/flow will be aligned to ensure patients are treated in a timely manner and in line with national targets.

There are capacity challenges associated with delivering 2WW diagnostic and 62 day targets as well as the ability to reduce and sustain lower levels of RTT backlogs despite use of the Alliance to reduce RTT backlog of day cases.

Theatre capacity and efficiency is inadequate to deal with the current and rising demand and this is being addressed. A new theatre timetable provides additional capacity once theatre workforce is addressed and the timetable implemented. Appropriate planning and flow would allow for an increase in average cases per list (ACPL) in theatres, thus improving efficiency. A dedicated project is in place to improve efficiency. Therefore additional theatres lists along with improved in-list efficiency will address the demand capacity gap along with a continued shift to other settings. For example a lot of progress has been made in moving ambulatory procedures to alternative settings e.g. Daycase to Ambulatory setting with expansion to the ambulatory service underway.
- Endometrial polypectomy
- Hysteroscopy
- Endometrial ablation
- Sonata Fibroid treatment – under trial in theatre at present
- Urogynaecology procedures (Botox, Cystoscopy and in the future Bulkamid

Discharge Process:
The length of stay for gynaecological surgery is in line with peers however the current configuration of services across sites does not allow for the discharge processes to be as efficient as they otherwise could be due to cross site medical staffing rotas already referred to.

**Cost**

There are opportunities to reduce the cost of the service by consolidating onto one site, which would potentially allow a reduced medical on call rota, reduced vacancy rates and reduced premium spend on staff. Improvement in efficiency could also provide more income to the service, by ensuring activities are kept in hours and therefore avoiding premium spend on waiting list initiatives and out of hours working.

The current two site model leads to there being an inability to sustain service safety and adequacy within the budget provided by Gynaecology PBR, leading to higher spend and a substantial service loss and severely limited opportunities for CIP. Use of Alliance to reduce RTT backlog of day cases has negative impact on income.
Gynaecology & Gynaecology Oncology – Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How will the new model of care look?</td>
<td>Benchmark (Right care/GIRFT/Model hospital/other benchmark)</td>
<td>Quality &amp; safety</td>
<td>Consolidating services onto one site will allow us much more flexibility in our medical and nursing workforce; helping to fill vacancies and reducing premium spend. The TOP service will be moved to an entirely Gynaecology setting as a part of Phase I, away from Obstetrics, which will provide a much more appropriate location for the service.</td>
<td>Review of Gynae 0-2 day’s length of stay procedures to day case procedures. £100K opportunity across Gynae and Paediatrics</td>
<td>Review of Gynae medical staffing and on-call rota when move to one site working</td>
</tr>
<tr>
<td></td>
<td>Workforce sustainability</td>
<td>Review of Gynae medical staffing and on-call rota efficiencies</td>
<td>Overtime and all premium pay reduction due to consolidation of services</td>
<td>Decreased vacancy rates with consolidation onto one site</td>
<td>£100K benefit across all workforce initiatives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Gynae medical staffing and on-call rota efficiencies</td>
<td>- Overtime and all premium pay reduction due to consolidation of services</td>
<td>- Decreased vacancy rates with consolidation onto one site</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td>- Co-location is not likely to allow reduction of staffing but it will enable the service to utilise the current workforce better in a better configured model and remove many of the inefficiencies noted.</td>
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<tr>
<td></td>
<td>Efficiency and effectiveness</td>
<td>Efficiency and effectiveness</td>
<td>Theatres:</td>
<td>Theatres:</td>
<td>Theatre efficiencies including application of operational principles. Efficiencies delivered through increased ACPL will enable weekend lists to be delivered in week – target ACPL 2.89 by quarter 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Theatres:</td>
<td>- Efficiencies delivered through increased ACPL will enable weekend lists to be delivered in week – target ACPL 2.89 by quarter 4</td>
<td>- Reduce Waiting List Initiatives (WLIs) at the weekend reducing reliance on premium pay</td>
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<tr>
<td></td>
<td></td>
<td>- Reduce follow ups to release outpatient capacity to see more new patient appointments.</td>
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<tr>
<td></td>
<td></td>
<td>Outpatients:</td>
<td>- Reduction in DNAs to improve outpatient efficiencies</td>
<td>- Reduction in DNAs to improve outpatient efficiencies</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>- Ensure maximal usage of clinic capacity</td>
<td>- Ensure maximal usage of clinic capacity</td>
<td>- Ensure maximal usage of clinic capacity</td>
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</tr>
</tbody>
</table>
Building will bring together Colposcopy and outpatient services, provided a more consistent outpatient offering. Gynae Oncology services which require the robot will be delivered from Glenfield Hospital, and patients will be cared for within the Urology bed base, as the activity for Gynaecology alone does not necessitate a robot on the LRI site.

**When will it be in place?**
Phase I will bring together GAU, EPAU and Colposcopy on Level 3 Balmoral, with good adjacency with the Central Operating Department. This will be complete by Summer 2019. Phase II will move services from the LGH to the LRI and this will be complete in 2023.

**Who will provide**

### IT Opportunities:
- Consolidate back office staff from 3 sites to one utilising the electronic patient notes programme from 2020
- Reduction in typists with introduction of DICT3 in November 19

### Wards:
- Reduction in number of Gynae beds in line with demand
- 5 day Gynae ward aligned with moving theatre lists in week

### BADS:
- Review of Gynae 0-2 day’s length of stay procedures to day case procedures.

### Demand and capacity/flow
- Repatriation of Gynae Alliance theatre and outpatient work into UHL

### Cost
- Cost benefits associated with medical efficiencies through consolidation of rotas and on call
- Cash releasing benefits arising from the theatres efficiencies and reduction in WLI’s
- Back office efficiencies through the consolidation of units

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**Target**
- ACPL 2.89 by quarter 4
- £300K CMG total opportunity
- Repatriation of work from IS
<table>
<thead>
<tr>
<th>what activity at which site?</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Services will be provided by UHL at the LRI, with the exception of Gynaec Oncology services which require the robot located at Glenfield Hospital.</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>
Clinical Model of Care

Gynaecology & Gynaecology Oncology – Emergency Patient Flow

Pre-hospital Attendance Inpatient Discharge

Local Hospital Care

Local Health and care initiatives

Local Hospital Care

Triage

LRI

Treat & Discharge

Gynaecology-Specialised Services

- Complex Gynaecology
- >48h Stays

Short Stay

- Ectopics/Miscarriage
- Ovarian accident/torsion
- Acute Pelvic Infection
- Endometritis

Follow up care at local hospital (we are the local hospital!)

Acute/non-acute step-down/home
Gynaecology & Gynaecology Oncology – Elective Patient Flow

Pre-hospital

Attendance

Inpatient

Discharge

Local Hospital Care

Local Health and care initiatives

LRI site

Patient Booked

Out Patient clinics

Day Case

Diagnostics

Treat & Discharge

Short Stay (<72hr)

General Gynaecology

Colposcopy

Hysteroscopy

TOPs

Gynaecology-Specialised Services

- Oncology
- Urogynaecology including tertiary referral unit for complications of Mesh repairs and joint surgery with colorectal and urology teams
- Minimal access surgery
- Intermediate and major gynaecology
- Tertiary referral centre for endometriosis with MDT working with colorectal and urological teams

Acute/non-acute step-down/home

Follow up care at local hospital
### Overview
The Inpatient Neonatal Services include:
- Neonatal Intensive Care (LRI)
- High Dependency Care (LRI)
- Special Care Baby Care (LRI & LGH)

### Location
The existing configuration splits Neonatal services across two hospital sites.
At the LRI there is a level 3 Neonatal Intensive Care Unit (NICU) with 18 cots which can provide flexible Intensive Care (IC) and High Dependency (HD). In addition to this is the Special Care Baby Unit (SCBU) which has 12 cots.
At the LGH is a designated Special Care Baby Unit (SCBU) with 12 cots.
The service is part of the East Midlands Neonatal Operational Delivery Network (ODN) (south) and University Hospitals Leicester NHS Trust (UHL) hosts both the tertiary centre and the CenTre transport team, both located at the LRI site.

### Transitional care
Transitional care is provided within the maternity setting, however requires expansion through the provision of a transitional unit, which would improve compliance with the service specification, improve family integrated care, infant feeding rates, facilitate early discharge and improve the flow of patients through and out of the department.

### Benchmark (Right care/GIRFT/Model hospital/other benchmark)
A national review of neonatal services across the UK was carried out by the NHS England Quality Surveillance Program; the UHL neonatal service was visited in October 2017. Findings from the review, areas of concern and recommendations for improvement are included in the sections below.

UHL takes part in the National Neonatal Audit Programme (NNAP) which monitors aspects of the care that has been provided to babies on neonatal units in England, Scotland and Wales. The service is in line with national data in most areas. It was noted that the Trust sees less babies in the neurodevelopmental follow up program than other areas. Follow up guidelines have recently changed and the service is now required to see all babies of less than 30 weeks gestation at a corrected age of 2 years (previously <28 weeks). A workforce plan and appropriate resources have been allocated to resolve this issue and follow up rates continue to improve.

Recommendations arising from the GIRFT regarding Paediatric surgery, suggest that guidelines are breached for neonatal staffing on two sites.

### Design of system-wide clinical models of care
Neonatology & Neonatal Intensive Care, Women’s & Children’s CMG

### Neonatology & Neonatal Intensive Care: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
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<tbody>
<tr>
<td>Overview</td>
<td>Benchmark (Right care/GIRFT/Model hospital/other benchmark)</td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>
The plan is to have 52 cots, provisionally made up of:

13 ITU (an increase of 3)
13 HDU (an increase of 5)

These cots will continue to be used flexibly.

There will be 12 special care (the other 12 becoming transitional care)
14 transitional care (2 additional cots to manage babies currently admitted via ED)

**Staffing**
Currently there are 9 Whole Time Equivalent (WTE) non-resident on-call consultant Neonatologists and 3 WTE resident on-call consultant Neonatologists covering the rota, providing 24 hour consultant cover. The current split-site configuration means that consultant out-of-hours cover is required on two sites, and the team also provides cover to the CenTre Transport service 40% of the time. Tier 1 and Tier 2 medical staffing is adequate, as gaps in the junior medical rota are filled by Advanced Neonatal Nurse Practitioner (ANNP) roles. There are predicated tier 2 gaps in the next few months. Over the last three years the ANNP workforce has increased, and currently includes 9.03 WTE positions.

The following lead positions exist within the team:
- Clinical lead
- Risk Lead
- Lead for data and audit
- Lead for guidelines
- Lead for staffing and rotas

Intensive care is now underway and data is currently being compiled

**Quality & safety**
- As a consequence of split site working there remains a significant risk that a baby will come to harm should consultant presence be required simultaneously on both units. This risk is on the Trust risk register and is currently compounded by significant rota gaps in the junior doctor rotas.
- Quality and Safety will be an ongoing problem if the current configuration on two sites is sustained and Level 3 intensive care withdrawn from LGH for any significant period of time. The following represent issues that significantly compromise service. All Nursing and Medical staff establishments and rotas will need review and augmentation, to ensure safety of maintaining the SCBU and resuscitation capability at LGH and the NICU at the LRI. Appropriate support services for the SCBU at LGH will need to be maintained.
- Facilities at the LGH site are much older with cot spaces having limited space, some rooms without en-suite facilities, with access to sharing one toilet and one shower provision. Mothers and families are therefore offered a differential service between the LGH and LRI. There are concerns about the ability of the LGH site to conform with Infection Prevention standards
- The CQC support both a single site service due to the risks posed by the current model and an increase in capacity.
• Lead for postnatal wards and NIPE
• Lead for chronic lung disease
• Lead for Neurodevelopmental follow up
• Lead for Transport
A named consultant has responsibility for developmental assessments of babies born at less than 30 weeks gestation, which is carried out at age 2 years corrected.

Nursing staff regularly rotate from site to site, on a three monthly basis.

The Neonatal Outreach service has 3.81 WTE nurses at band 6, 1.0 WTE at band 8 and 0.39 WTE band 5 and 1.0 WTE band 4 alongside a 0.5 WTE band 4 admin support, providing support to families prior to discharge and offer training, such as resus training to parents and carers. The community provision for naso-gastric tube feeding within a home setting has recently been expanded.

The service has a designated Pharmacist (Monday-Friday), a paediatric Dietician, Speech and Language Therapist (SLT) and 0.10WTE psychological support is provided by Leicestershire Partnership Trust (LPT). The service is also supported by 1.8 WTE play specialists.

Teaching and Training
The unit actively supports training programmes. The QiS course is run in conjunction with De Montfort University) is facilitated by the recruitment of two band 7 clinical educators. The service assists with running the foundation in neonatal care, HDU and ITU modules. The team are also involved in ANNP training in conjunction with Sheffield University.

Workforce sustainability
Serious concern about split site working and our compliance with national standards for consultant staffing were raised by a National Review of Neonatal services UK - NHS England Quality Surveillance Program October 2017. In addition workforce issues are recorded on the Trust risk register.

Workforce sustainability
- The British Association of Perinatal Medicine (BAPM) staffing standards, now being implemented by Specialised Commissioners, identify the NICU at the LRI should have plans to deliver a dedicated 24/7 consultant presence - At evenings and weekends, the consultant covers the LRI, LGH and the CenTre transport service. The LGH site has 12 Special Care babies and it would not be practical or affordable to have separate consultant staffing 24/7 for this site. Other hospitals running a special care baby unit have co-located paediatric services meaning that dedicated medical staff are not required.
- Significant mitigation has been put in place to minimise the risk of a consultant being required on both sites: this includes the appointment of a new tier of resident consultants (2 out of 6 currently in post) and enhanced cover to the LGH site during 9-5 hours.
- The UHL Neonatal service is a popular unit, therefore does not suffer from recruitment issues to the same extent that other units do. Recruitment of Junior Doctors is particularly low in paediatrics and the national plan from Colleges to decrease training numbers...
UHL have a national training reputation particularly in simulation based training and resuscitation training. At the LRI is an all-inclusive area, delivering simulation training; Point of Care Neonatal Simulation Training Programme which has a national reputation for excellence.

**Specialist/Specialised Services**
Network-agreed pathways are in place for in-utero and postnatal transfers for neonatal special care, high dependency and intensive care, neonatal surgical care, neonatal specialist cardiac care, ophthalmology, discharge and follow up, including palliative care. The Department of Specialist Paediatric and Neonatal Surgery is led by a team of 7 Consultant Paediatric Surgeons, supported by other key members of the team. The consultants have their own areas of subspeciality (two Urologists; two upper Gastrointestinal and Thoracic; two lower Gastrointestinal and one Oncological surgeon). Two of the surgeons provide expertise to fetal diagnostic clinics and there is a Multi-Disciplinary Team (MDT) meeting twice a month providing antenatal counselling and care to parents whose unborn babies have been diagnosed to have a potential surgical problem. As a designated level 3 unit for the CNN, the service complies with the agreed service specification and care pathways across the network and the East and West Midlands specialised commissioning hubs.

**Research**
The Neonatal service takes an active role in recruiting for multicentre research trials. The Unit also takes part in the National Neonatal may impact on recruitment going forward. This has been significantly mitigated by UHL’s ANNP program. The predicted shortfall of staff is a key driver for a single site model.

- Ongoing nurse recruitment is a significant challenge and previously there has been a reliance on overseas recruitment. There is currently a vacancy gap of 8.25WTE, which is lower than it has been due to recent international recruitment success.
- A further challenge to recruitment is the delay in obtaining visas and in acquiring documentation, meaning that medical and nursing staff cannot start work immediately.
- Staffing capacity remains an issue: a business case for further expansion of nursing, medical staff and allied professionals will be submitted 2018 with the assumption that the cost of this will be offset against new income.
- There is a shortfall in allied health professional support for the service across both sites, particularly dieticians, OT, Physio and Psychologists to be in line with national recommendations.

**Efficiency and effectiveness**
- Having a 2 site model leads to staffing inefficiency: nursing numbers have to account for unexpected admissions on both sites
- A 2 site service leads to significant duplication in equipment and resources with the associated financial impact.

**Demand and capacity/flow**
- Analysis carried out by the East Midlands ODN showed overall cot
Audit Programme (NNAP) which monitors aspects of care that has been provided to babies on Neonatal units in England, Scotland and Wales.

Occupancy (NICU and SCBU combined) in Leicester at 102-111% between the months of January and May 2018. This is compared to occupancy across the network of 73-83% over the same period. This demonstrates that flow across the network is not working as effectively as it could.

- In 2016 to 2017 the overall cot occupancy continued to rise due to increased neonatal admissions and increasing survival at the extremes of prematurity; including improvements in the survival and care for babies with complex congenital abnormalities from inborn and those referred from elsewhere in the region. Admissions by British Association Perinatal Medicine (BAPM) 2011 on first day; for IC was 292, HD was 119 and SC 1,380. The neonatal service reached maximum capacity and the units were running at >90% capacity from January to September 2016; 100% capacity from October to December 2016. This review shows that the neonatal service has insufficient capacity and regularly works at over 100% capacity. There are plans for expansion, but these are dependent on nursing recruitment.

- There are challenges around non-compliance of QiS trained nurses; only 55% of the NMC registered staff holding a QiS Course. As a consequence the unit has to flex the acuity of cots dependent on trained nurses, frequently resulting in cot closures (UHL turn away ~10 acute referrals per week). The requirement to staff units across two sites compounds this pressure, particularly as the SCBU
at the LGH has to be staffed at a level higher than BAPM standards due to the isolation of the unit. This impacts nursing ratios at the LRI where the most acutely unwell babies are cared for.

- A lack of a formalised transitional care pathway which may have increased the rate of term babies admitted to the unit. Through the Children’s Hospital Project, appropriate PICU and HDU capacity will ease transition of older babies to paediatric services.

**Cost**

Around £1.9 million of income is lost each year due to capacity issues. In addition to this, having the service split across two sites leads to duplication of equipment (2 blood gas machines, 2 ultrasound scanners, duplication of lab services, X-ray, Imaging, etc.) and reduced economies of scale for consumables.
Neonatology & Neonatal Intensive Care: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on Cots (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
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<tbody>
<tr>
<td><strong>What will the new model look like?</strong>&lt;br&gt;The new configuration will be a single neonatal Unit based at the Leicester Royal Infirmary which will support the needs of all neonates in Leicestershire (and beyond), co-located with the delivery suite.&lt;br&gt;The new unit will be planned to allow for cot expansion, through thorough demand and capacity planning. A transitional care unit will be developed which will support flow through and out of the department. Plans will improve quality of care, particularly by allowing us to increase staffing on the unit by negating the need to cover two sites. Plans will be as per service specification guidance. Facilities will also include an out-patient assessment area to run a rapid access clinic for newborn issues, for instance feeding problems, jaundice, or abnormalities found on the newborn infant physical examination delivered by the advanced neonatal nurse practitioner workforce. Cot numbers are described above.</td>
<td>Benchmark (Right care/GIRFT/Model hospital/other benchmark)&lt;br&gt;We have plans to develop a 14 cot transitional care facility to replace our current 12 Special care cots at the LGH. Transitional care, where a carer is present has the potential to decrease avoidable term admissions which is a national priority. We would expect transitional care facilities to improve rates of breast feeding on discharge, which are currently poor. There are national standards for the delivery of transitional care and this model would fit well with the national agenda.</td>
<td>Evaluation of capacity and flow through the Neonatal unit to identify lost opportunity through external patient refusals. According to data compiled by the regional network, UHL lose ~£1.9m of income in 2017/18 due to cot closures and lack of capacity.</td>
<td>Opportunity to review neonatal step down pathway to special care process to ensure ITU capacity availability is consistent. The new model of care for patients on a transitional care pathway will improve flow through neonatal services, and help to reduce ALOS (£300K included in benefits plan). Equipment costs associated with CenTre transport reduced as no requirement for inter site patient transfers when located on one site (£30K included in benefits plan).</td>
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<td><strong>When will it be in place?</strong>&lt;br&gt;Based on the current programme submitted as a part of the STP, the project is due for completion in 2023.</td>
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ITU on the LGH site, will be fully mitigated as a consequence of reconfiguration.

- All mothers and their neonates will be offered a consistent standard of service within the same high specification facilities that afford maximum privacy, dignity and family space.
- Work in other hospitals suggests that transitional care services are highly rated by parents and improve patient satisfaction metrics. The development of provision of a 14 cot transitional care facility will deliver this for the mothers and their babies cared for at UHL.
- The National Service Framework states the importance of dedicated paediatric facilities. Having all neonatal services on the same site as all paediatric services will ensure full compliance with this guidance.

**Workforce sustainability**

- Reconfiguration of neonatal service and consolidation onto one site will ensure that the serious concern about split site working and compliance with national standards for consultant staffing (National review of neonatal services UK - NHS England Quality Surveillance Program October 2017) are fully addressed.
- The Trust will become compliant with the British Association of Perinatal Medicine (BAPM) staffing standards, implemented by Specialised Commissioners, through the delivery of a dedicated 24/7 consultant presence.
- Focusing resources on one site will help to improve patient and family
experience, ease our staffing of Senior Decision Makers where they are needed, allow us to provide 24/7 on site consultant presence, and likely improve our NNAP benchmark data across the service.

- The costs of the required additional nursing and medical staff would be easily offset by the additional patient care income.
- A centralised dedicated neonatal service will be attractive to staff and will enable improved recruitment and retention, decreased vacancy rates, and improved sickness rates to Trust average rates.
- Benefits will deliver opportunities to review medical staffing and on-call rotas. Similarly there will be opportunities to review nurse staffing and skill mix as a result of co-location of services.
- A further workforce benefit will be through potential for a staffing review associated with reduced need for inter-site patient transfers using CenTre transport.
- Allied Health Professional (Dieticians, SLT, and Psychology) resources will be focused on one site, avoiding the current inefficient model which requires staff to travel across sites, meaning that one site suffers if the other site is covered.

Efficiency and effectiveness
- Efficiencies in staffing will allow for more flexible use of staff and allow us to open additional neonatal capacity.
- Reconfiguration will help to eliminate the duplication of equipment and resources. It will remove the need to ambulance
transfer of neonates between the LGH and the LRI, thus a reduction of ~230 ambulance transfers. This will create indirect savings, improving efficiency of the team to transfer patients to/from DGH’s and other Trusts.

**Demand and capacity/flow**

- Lack of intensive care capacity has been highlighted by both the East Midlands Operational Delivery Neonatal network and the CQC. Opportunity to review neonatal step down to special care process to ensure ITU capacity availability is consistent.
- Improvements to flow through the Neonatal Unit, enabled by robust capacity planning, Senior Decision Making on site at all times and the use of a transitional care unit will improve patient experience and help to reduce the average length of stay for some patients.
- Long term modelling would suggest that we would need an increase in neonatal cots for the region, based on network pathways and referral patterns. This would mean that babies from the wider region would receive specialist care closer to home. Having an appropriate capacity would enhance the ability of our allied services to work effectively, particularly EMCHC and Paediatric surgery. This would mitigate the need for new born referrals with surgical or cardiac problems to be sent to other centres as there will be neonatal capacity available locally.
- Reconfiguration will enable the provision of a 14 cot transitional care facility to replace the 12 Special Care cots.
currently at the LGH. Transitional care, where a carer is present has the potential to decrease avoidable term admissions which is a national priority.

- The development of an outpatient assessment area to run a rapid access clinic for newborns, will help reduce admissions to the Children’s Hospital and will reduce ED attendance for babies in the first week of life.
- Increased roles for the ANNP will include rapid access clinics which will help to avoid admissions to the Paediatric Emergency Department (PED), and the ability to admit to TC/PN ward for certain conditions (breast feeding failure, jaundice, etc.). This will improve flow, patient experience, breast feeding rates and decrease inappropriate use of the PED when arising from these circumstances.

Cost
- Equipment costs associated with CenTre transport reduced as no requirement for inter site patient transfers when located on one site.
- Overtime and all premium pay reduction due to consolidation of services
- Recovery of income which is currently lost each year due to capacity issues.
Managing the bed gap
No impact

Activity model
There is ongoing work with regard to capacity - the cot configurations above balance the predicted cot capacity requirements with the practicalities of staffing additional cots

The plan is to have 52 cots, provisionally made up of:-

13 ITU (an increase of 3)
13HDU (an increase of 5

These cots will continue to be used flexibly.

There will be 12 special care (the other 12 becoming transitional care)
14 transitional care (2 additional cots to manage babies currently admitted via ED)
Clinical Model of Care: Neonatology & Neonatal Intensive Care

[Diagram showing the care pathway from pre-birth to post-birth, including antenatal care, neonatal unit admission, and various clinical pathways.]
Care pathways should be ready in conjunction with the DOH document 'Toolkit for high quality Neonatal Services' 04/11/09
Design of system-wide clinical models of care
Obstetrics, Maternity & Antenatal screening: Women’s and Children’s Clinical Management Group (CMG)

Obstetrics, Maternity & Antenatal screening: Current position

<table>
<thead>
<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
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</thead>
<tbody>
<tr>
<td><strong>Overview</strong></td>
<td><strong>Benchmark (Right care/GIRFT/Model hospital/other benchmark)</strong> Service reviews</td>
</tr>
<tr>
<td>Midwifery led services are provided by UHL as follows:</td>
<td>The Better Births guidance has shaped our plans for maternity services, ensuring we are focusing on nationally identified targets. The main areas we must focus on in LLR are:</td>
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<tr>
<td>• Midwifery Led Unit (MLU) adjacent to obstetrics at Leicester Royal Infirmary (LRI);</td>
<td>• Reducing the number of stillbirths (currently 6.79/1000 must be halved by 2025)</td>
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<tr>
<td>• MLU adjacent to obstetrics at Leicester General Hospital (LGH);</td>
<td>• Increasing the number of women receiving midwifery-led care (currently only 25% of women choose midwife-led delivery options)</td>
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<tr>
<td>• Standalone Midwifery Led Unit (MLU) at St Mary’s Hospital, Melton Mowbray*;</td>
<td>• Increasing the number of women who receive whole-pathway continuity (currently only 2% of women receive this but the national target is to provide continuity to 20% of women entering the pathway in March 2019)</td>
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<tr>
<td>• Community midwifery services;</td>
<td>• Increasing the number of women who receive Personal Care Planning (PCP) that puts women in control of choosing the way they access their antenatal, birth and postnatal care.</td>
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<td>• Home births.</td>
<td>• Increasing access to perinatal mental health services</td>
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<td></td>
<td>*St Mary’s Birthing Centre is LLR’s only standalone midwifery-led unit and is situated just west of Melton Mowbray town centre. The centre is staffed 24 hours a day and offers two birthing rooms as well as eight post-natal beds on a ward, differing from the majority of MLUs which offer birthing rooms only (i.e. following birth, the mother and baby go home with no overnight stay).</td>
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<td>Between 1997 and 2010, four large clinical reviews were carried out to evaluate the sustainability of Women's services and propose a model that would be sustainable for the foreseeable future (30-40 years). The last of these was in response to Lord Darzi’s Next Steps review of the NHS. All reviews came to the conclusion that Women's services, particularly maternity services, were not sustainable in their current form and that the acute Women’s services should be collocated on one site, as well as recommending the closure of St. Mary's Birth Centre even before a significant decline in births over recent years. Since 2010, further service developments have placed additional strain on services.</td>
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<td></td>
<td><strong>Maternity:</strong></td>
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<td>• A rising birth rate which fortunately appears to have plateaued.</td>
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<td>• Increased acuity of the Maternity population; Increase in vulnerable groups and complex health needs.</td>
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<td></td>
<td>• Standards for staffing in Obstetrics and Midwifery that expect increased numbers of staff and increased presence of senior decision makers with higher levels of clinical skills.</td>
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<td>• A reduction in training numbers for junior staff and a reduction in the hours they are able to work; coupled with difficulty in appointing to training posts and trust grade/fellow posts leading to gaps in rotas and</td>
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</table>

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expensive premium pay commitments.

- Reduced capability of specialist trainees to work independently and an expectation of increased teaching and training commitment of senior clinicians impacting on their ability to provide service.
- Lack of obstetric sonographers and nursing vacancies means that it is challenging to maintain adequate staffing over the two sites. Already, there are times when the safety of care at either the LRI or LGH is compromised by the availability of resources. Service reviews do not consider this sustainable for the long term.
- Developments in practice including screening, acute and elective care, to facilitate better and often more intensive Obstetric and Gynaecological care.
- Loss of Maternity Day Care at LGH as part of the Interim Solution leading to admission for inpatient observation and pressure on the limited number of inpatient beds.
- Increased prescriptive clinical guidance and medico-legal challenge leading to defensive Obstetric practice, increased complaints and litigation.
- Substantial increase in litigation costs in the NHS with Maternity litigation costs a major factor. This explicitly links safety to cost as any compromise to safety is liable to contribute to increased litigation cost, hence making very poor business sense in both Quality and Finance.
- Developments in practice including screening, acute and elective care, to facilitate better and often more intensive Obstetric and Gynaecological care.
- The implementation of a number of Maternity programmes including Each Baby Counts, Saving Babies Lives and most recently maternity transformation required by Better Births.
- Loss of Maternity Day Care at LGH as part of the Interim Solution leading to admission for inpatient observation and pressure on the limited number of inpatient beds.
- Some buildings are old; not fit for purpose with increasing estates costs to ensure sustainability – this is especially true of St Mary’s Birthing Centre.
- Facilities designed for approximately 8,500 deliveries per year are now being used for approximately 10,500 deliveries per year.
- A continually reducing birth rate at the Midwifery – led unit at St Mary’s resulting in it becoming increasingly more unviable.

These factors have led to a severely compromised service, resulting in:

- Duplication of rotas and services across the two sites, and consequently a substantial staffing deficit across the two sites which is worse at the LGH.
- An inability to sustain service safety and adequacy within the budget provided by Maternity tariff, leading to a substantial service loss and severely limited opportunities for CIP.
- A need for all clinicians to work across site with the compromises and inefficiencies that result.
- Rotas for all services being severely and increasingly challenged, reaching the point where radical solutions may be required to sustain safe services.
- Pressure on inpatient bed capacity on both sites, particularly in Maternity partly because of defensive
practice and partly because of a lack of Maternity Day Care, a central component of the models of care developed for the Women's Hospital Project in preparation for co-location of maternity services.

- Inefficient configuration of services e.g. day case activity in main theatres, Gynae theatres geographically separated, conflict between Gynae emergency theatre use and the elective Obstetric pathway etc.

Further issues arise associated with the move of Level 3 ITU provision away from the LGH site. Whilst there are interim plans in place to maintain services should the co-location away from level 3 ITU remain for some considerable period of time the service could be significantly compromised.

The following documents have been taken into account in developing the staffing model for a co-located service:

- Birth Rate Plus -: Regularly reviewed and ongoing
- Better Births - March 2016
- Safer Maternity Care - 2017
- Providing Quality Care for Women: RCOG (2016)
- Saving babies Lives: 2016
Obstetrics, Maternity & Antenatal screening: Summary of proposed model of care

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits What will this mean against rationale for change?</th>
<th>Impact on DC beds (Year)</th>
<th>Impact on IP Beds (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
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<tbody>
<tr>
<td>How will the new model of care look? The proposal is to remodel services to create a new maternity hospital at the Leicester Royal Infirmary (LRI) and, subject to the outcomes of a consultation, a midwife-led unit at the Leicester General Hospital (LGH). The new maternity hospital will allow for the sustainability of improved safety within maternity services and enable us to remodel the workforce as we will not have consultants and midwives split over two sites. It will also reduce the number of transfers that take place to and from neonatal services.</td>
<td>Benchmark (Right care/GIRFT/Model hospital/other benchmark)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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<td>Quality &amp; safety To improve outcomes for mothers and their babies reconfiguration of our services will:</td>
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<tr>
<td>• Providing an environment for safe and sustainable maternity and neonatal services.</td>
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<tr>
<td>• A flexible, skilled and competent workforce that's able to meet the needs of services.</td>
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<tr>
<td>• Providing personalised care with a named midwife.</td>
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<tr>
<td>• Providing a range of choice options and improved continuity.</td>
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<tr>
<td>• Establishing a Maternity Voices Partnership to ensure women have a voice.</td>
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<td>• Delivering care through a network of integrated pathways across the LMS, supporting outcomes in relation to key local issues like Infant Mortality and Perinatal Mental Health pathways.</td>
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<tr>
<td>• Develop integrated pathways across neonatal serves and community paediatrics.</td>
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<tr>
<td>Patient experience will be improved through:</td>
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<td>• For the majority of women, the new</td>
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</table>

Our vision for maternity, neonatal and children’s services in LLR is to provide safe, high quality care for women, their babies and their families through integrated models of care, which reflect individual preferences, choice and needs based on best practice to improve outcomes and experience. All women in LLR will be provided with the following maternity birth options:

- A new maternity hospital located at the LRI with obstetric (doctor) led inpatient maternity services in a shared care (care from both midwives and doctors) unit.
- An alongside midwifery birth centre provided adjacent to the obstetric unit as a part of the new maternity hospital at the LRI.
• An additional standalone midwifery birth centre could be piloted at the LGH (subject to public consultation); remaining for the long term if there are enough births to ensure clinical sustainability (c.500 births per annum).
• Home births, supported by a Home Birth midwifery team, will be available and promoted where appropriate for low-risk births (recognising the evidence that this is as safe as birth in a midwifery birth centre).

The new model of care will feature:
• Antenatal services provided in the community.
• Antenatal care of women with complicated pregnancies will be provided in outpatient community, remote and virtual clinics.
• Specialist clinics and a Day Care Unit both located at the LRI.
• Women who decide not to go to the LRI will have alternative options including community-based care or to give birth at other trusts.
• There were approximately 5,165 births which were commissioned for mothers from LLR from a range of cross-boundary providers including Peterborough, Kettering, Nottingham, Nuneaton and Burton in 2016/17.

The Local Maternity Services (LMS) plan is a key part of the wider Sustainable Transformation Partnership (STP) strategy. Services will be provided via a hub-and-spoke model with teams of midwives working as part of a bigger multi-professional team. Access to services will be via three key locations will be more accessible and more equitable.
• A new modern maternity unit will be available.
• Workforce will be more robust and sustainable to provide models of care that will allow a personalised approach.

**Workforce sustainability**
• Along with the implementation of the Better Births guidance, maternity services feature heavily in the STP plan through the proposed consolidation of activity currently taking place at both the LRI. Although we have aimed to implement the principles of Better Births by 2021 through our existing resources, an additional 5 consultants to provide 168 hours cover at the LRI if the LGH service is transferred. Additional consultants are required to meet national guidance in terms of 24 hour a day cover;
• Additional investment in midwives to meet birth rate plus ratios
• Additional nursing staff to deliver the requirements for a maternity assessment unit.

**Efficiency and effectiveness**
• Reduction in beds
• Pathway redesign and review

**Demand and capacity/flow**

**Cost**
• MDT Working/co location
• Reduction in premium expenditure
routes; GP, midwife and self-referral via maternity website.

Who will provide what activity at which site?

The community midwife will have a key role in the pathway being the woman’s named midwife and acting as her care coordinator, but working closely with her GP, obstetrician (if required) and health visitor.

The majority of antenatal and postnatal care will be delivered by small teams of midwives (7-10 per team) and offered from a range of community venue including GP practices, children’s centres and community hospitals. Postnatally, women will receive individual care based on NICE guidance by the same team of midwives. Women will be offered choice in how to access support including drop-in breast feeding support groups.

We are approaching continuity of care in several ways:
Working in smaller teams to provide more robust continuity antenally and postnatally.
Ensuring consistency in delivery via guidelines, policies and procedures.
Ensuring consistency of communications from staff to women via training and engagement events.
As noted in feedback from early adopters of Better Births, women thought it was more important to have consistency of information and approach rather than seeing the same professional.

When will it be in place?

- Skill mix change
- Consolidation of on call rotas and consolidation of 98 hour cover from the LGH
- Reduction in management overheads
- Reduction in expenditure associated with duplication of equipment
Total predicted births: up to 11,000 (recognising lifespan of facility)
Postnatal Model of Care

Immediate Postnatal Care: Mother & Baby
- Birth at Home
- Birth in a Birth Centre
- Birth on Delivery Suite/Theatre

Maternity Assessment Unit (MAU)
- Maternity Day Care
- Admit to Delivery Suite if concerns
- Admitted to Postnatal Ward

Post-natal Care in community as per NICE:
- Postnatal clinic
- Telephone contact
- Home Visit
- Family/Social Support Services
- Debriefing
- Counselling
- Birth reflections
- Bereavement

Neonatal Care: Baby
- Neonatal Services
- Neonatal Care — Baby * Mother’s needs as required

Transfer to Health Visitor

* See Neonatal Model of Care

Pink text boxes = intermediate
Green text boxes = normal
Antenatal Services – Model of Care

- Antenatal Clinic
- Scanning/Counselling
- Fetal Medicine Clinic
- Day Care
Women's Birth Options - The Hub

Delivery Suite 1

Specialist Activity

Theatres
HDU
Neonates

Delivery suite 2

Midwife led

Home Birth
Birth centre / MLU
Obstetric Delivery suite

What are our birthing options?
### Design of system-wide clinical models of care

**Children’s Services: Women's & Children's Clinical Management Group (CMG)**

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<tr>
<th>Current Configuration</th>
<th>Rationale For Change</th>
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<tr>
<td><strong>Overview</strong></td>
<td>In order to meet NHSE Congenital Heart Disease (CHD) standards, we must move the paediatric EMCHC from the Glenfield to the LRI, in order to be co-located with the rest of paediatric services. The deadline for this is December 2020, and the capital is allocated within the Trust's CRL and charitable income. This is also a GIRFT recommendation.</td>
</tr>
</tbody>
</table>
| Leicester Children’s Hospital at University Hospitals of Leicester (UHL) NHS Trust provides:  
  ▶ Secondary Paediatric Services to just over one million residents of Leicester, Leicestershire and Rutland (LLR);  
  ▶ Tertiary Paediatric Services to the population of LLR and patients from surrounding counties;  
  ▶ Quaternary Paediatric Services (e.g. Primary Ciliary Dyskinesia and ECMO) to the population of LLR and patients from across the country. | Workforce sustainability  
The current split across two sites means that workforce is spread more thinly than it would need to be if services were consolidated onto one site. Bringing together services, particularly the intensive care units, will create more flexibility in the workforce.  
Quality and Safety  
CQC recommendations and National Service Framework guidance support separating paediatric and adult flows.  
Efficiency and effectiveness  
Co-location of all children’s services will help to improve efficiency through the Children’s Hospital, improving workforce sustainability, and creating a safer environment for care.  
Demand and capacity  
Co-location of all paediatric areas with theatres, and improvement of the theatres admission process will help to improve patient flow.  
The Leicester Children’s Hospital currently treats all patients up to their 16th birthday, with some patients with chronic illness or learning disabilities until they are older, to ease transition into adult services. National Service Framework guidance now recommends that a Children’s Hospital provides the care for appropriate patients up to their 19th birthday, in an age appropriate setting.  
Co-location of all outpatient and diagnostic services will help to deliver a ‘one-stop shop’ approach to patient care.  
The current configuration of services, particularly day case, does not allow flow through the patient pathway, with ‘blockages’ which can delay theatre procedures and MRI scans. |
| **Location**          |  
The majority of children’s services are currently situated at the LRI, predominantly within the Windsor and Balmoral buildings, comprising six seven wards (inc day case and inpatient), a PICU and HDU, paediatric outpatient department and Children’s Development Centre. In addition to this, there are some clinics carried out in paediatric clinics in adult specialty departments.  
The East Midlands Congenital Heart Centre (EMCHC) comprises a ward, PICU and outpatient department, and this is located at the Glenfield Hospital. |
<p>| <strong>Staffing</strong>          |<br />
|<br />
|</p>
<table>
<thead>
<tr>
<th>Staff Group</th>
<th>Establishment (WTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin &amp; Clerical</td>
<td>78.14</td>
</tr>
<tr>
<td>Allied Health Professionals</td>
<td>15.24</td>
</tr>
<tr>
<td>Career Grades</td>
<td>2.58</td>
</tr>
<tr>
<td>Consultant</td>
<td>62.14</td>
</tr>
<tr>
<td>Healthcare Assistants</td>
<td>20.59</td>
</tr>
<tr>
<td>Healthcare Scientists</td>
<td>10.00</td>
</tr>
<tr>
<td>Maintenance &amp; Works</td>
<td>2.00</td>
</tr>
<tr>
<td>Medical Locum</td>
<td>14.70</td>
</tr>
<tr>
<td>Nursing Qualified</td>
<td>333.98</td>
</tr>
<tr>
<td>Nursing Unqualified</td>
<td>86.50</td>
</tr>
<tr>
<td>Other Medical &amp; Dental Staff</td>
<td>77.10</td>
</tr>
<tr>
<td>Other Sci, Therap &amp; Tech</td>
<td>4.00</td>
</tr>
<tr>
<td>Other Staff</td>
<td>2.16</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>709.13</strong></td>
</tr>
</tbody>
</table>

* Includes EMCHC Business Case approval of 2019/20 Investment
Children’s Services: Summary of proposed changes

<table>
<thead>
<tr>
<th>New Configuration</th>
<th>Benefits</th>
<th>Impact on Beds (Year)</th>
<th>Impact on Day Case (Year)</th>
<th>Impact on 1st OP/FU Clinic numbers (Year)</th>
<th>Other Impact (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What will the new model look like?</strong></td>
<td>Bringing all Children’s services together into one consolidated Children’s Hospital will have huge benefits in terms of patient experience and environment, co-locations and associated efficiencies, workforce flexibility and demand and capacity.</td>
<td></td>
<td></td>
<td></td>
<td>Reduce follow ups to release outpatient capacity to see more new patient appointments. Reduction in DNAs to improve OP efficiency. Impact on income from extended days £41K Review use of virtual / telephone clinics for suitable follow ups</td>
</tr>
<tr>
<td>All children’s services, including the paediatric EMCHC, will be co-located into one area of the Leicester Royal Infirmary site.</td>
<td><strong>Workforce Sustainability</strong> Bringing together all paediatric services will create a more flexible workforce, who do not have the pressures of being spread thinly across two sites. A particular example is the consolidation of the two Paediatric Intensive Care Units, which will enable us to bring together staff on one unit, with associated benefits to nursing and medical cover and the opportunity to review the workforce skill mix. In addition to this: • Review of staffing and skill mix in across the children’s ward and PICU to mitigate vacancies • Increased recruitment and retention • Improve sickness rates to Trust average rates</td>
<td></td>
<td></td>
<td></td>
<td>Review potential for staffing and theatres efficiency savings: in line with changing standards and configuration plans</td>
</tr>
<tr>
<td>The Childrens hospital will follow the NSF guidance providing care for patients up to the 19th Birthday in an age appropriate setting.</td>
<td><strong>Quality and Safety</strong> The decision to increase the upper age limit of the Leicester Children’s Hospital to a patient’s 19th birthday, will mean that we have the chance to provide an age appropriate environment for young people in our care. This will help to ease transition into adult services. This is aligned to National Service Framework guidance. Appropriately theatre planning to ensure capacity for paediatric emergency sessions would reduce the mean time from admission to surgery, for which the GIRFT review showed us as an outlier. This may also reduce the average length of stay post procedure due to patients being operated on more quickly. National peers reviews continued to be used by the CH to guide or improve our services.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The ambulatory care centre will house paediatric outpatient, diagnostic, clinical support and day case services, to promote a ‘one-stop shop’ approach to patient care.</td>
<td>Co-location of all inpatient wards will make caring for children with co-morbidities much easier, as the opinion of specialty consultants will be close by.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The consolidation of the two</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
PICU’s will ensure the specialist care that we provide to our most sick patients will be focused in one area, improving quality of care. Paediatric ECMO will also take place within this unit.

The paediatric theatre department will focus specialist paediatric care within one area.

**When will it be in place?**

The paediatric EMCHC will be co-located with other paediatric services on the LRI site by December 2020. The co-location of the rest of the Children’s Hospital is interdependent with the Maternity Hospital. Relying on refurbishment of Kensington Building.

Ophthalmology services for Patients up to the age of 19, Orthoptics and Optometry will be delivered from a location within LRI.

**Who will provide the activity and on which site?**

Children’s services will be delivered from the new children’s hospital based at the LRI. The service will be delivered by the existing

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<table>
<thead>
<tr>
<th>Compliance and Benchmarking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance with the NHSE Congenital Heart Disease (CHD) co-location standard, which must be met by December 2020. Alignment with CQC recommendations and National Service Framework guidance support separating paediatric and adult flows, to ensure that patients are treated within age appropriate facilities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Efficiency and Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-location of all children’s services will help to improve efficiency, with the following examples:</td>
</tr>
<tr>
<td>• Consolidation of the two PICU’s into one larger unit will make staffing this area more efficient, improving workforce sustainability, and creating a safer environment.</td>
</tr>
<tr>
<td>• Co-location of all paediatric areas with theatres, and improvement of the theatres admission process will help to improve patient flow, thus ensuring a more efficient paediatric theatre department, reducing cancellations and waiting lists.</td>
</tr>
<tr>
<td>• Co-location of all outpatient and diagnostic services will help to deliver a ‘one-stop shop’ approach to patient care, allowing a child to be seen by multiple specialties and support services in one visit, improving quality of care, reducing waiting times and avoiding unnecessary visits to the hospital.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demand and Capacity / Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provision of bespoke MRI will promote efficiency.</td>
</tr>
<tr>
<td>• Availability of a paediatric emergency theatre will reduce the ALOS. This will have impact on the quality of care for the patient and bed availability.</td>
</tr>
<tr>
<td>• Consolidation of Elective paediatric pathways will enable greater improved efficiency and integration by reducing competing priorities with other services</td>
</tr>
<tr>
<td>• A new Children’s hospital with a clear identity and improved working environment will enhance staff satisfaction, recruitment and retention.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outpatients</th>
</tr>
</thead>
<tbody>
<tr>
<td>workforce, including staff who will move to the LRI as a consequence of the EMCHC moves to the LRI.</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>• A new Children’s hospital with an improved footprint will enable greater efficiency of working and new models of care.</td>
</tr>
<tr>
<td>IT Opportunities</td>
</tr>
<tr>
<td>• Consolidate back office staff from 3 sites to one utilising the electronic patient notes programme from 2020.</td>
</tr>
</tbody>
</table>
Activity model

(Work in progress. To be inserted when in patient, day case and OP modelling is complete)
Children’s Services – Emergency Patient Flow

Pre-hospital → Attendance → Inpatient → Discharge

Primary care

Emergency:
- Triage
- PED
- CSSU

Emergency:
- Anaesthesia
- Allergy
- ENT
- Gastroenterology
- General Medicine
- General Surgery
- High Dependency Unit (HDU)
- Maxillofacial surgery
- Neurology
- Orthopaedic Surgery and Trauma
- Plastic Surgery
- Metabolic
- Endocrine / Diabetes
- Dermatology
- Non-malignant Haematology
- Immunology
- Infectious disease
- Nephrology
- Ophthalmology
- Rheumatology
- Respiratory and Long Term Ventilation
- Urology
- East Midlands Congenital Heart Centre
- ECMO (EMCHC)
- Paediatric Intensive Care Unit (PICU)
- Oncology and malignant Haematology

Acute/non-acute step-down/home
Follow up care at local hospital