Equity of Access to Specialised Services

Analysis for NHS England (Midlands region)

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Executive summary

Most health services for patients with acute conditions are commissioned and delivered locally. Some services, however, are designated as 'specialised' either because the conditions they treat are rare of or because the treatment itself is especially novel or complex. These specialised services are commissioned regionally or nationally and are delivered by a small number of specialist NHS Trusts. Whilst the volumes of these services may be low in comparison to more generic acute services, they are expensive and responsible for a considerable proportion of total NHS expenditure.

The principle of equity requires that health services are distributed in line with a population's ability to benefit. Patients with similar levels of need should have an equivalent chance of accessing a service irrespective of their personal characteristics or the area in which they live. Whilst equity is a concern for all health services, it is a particular issue for specialised services which are delivered in low volumes and at a small number of geographically dispersed sites. This report assesses the extent to which specialised services are equitably distributed across the geographic sub-populations of the West Midlands.

Estimates of both service supply (to a population) and service need are required to assess equity. Detailed datasets support the measurement of the supply of many forms of specialised service. But these data are far from comprehensive. Measuring the level of need for a service is more complex. Direct measurements of need are rarely available and so proxies for population need, relevant to the specific services are commonly used instead. In this report we assess the geographic equity of 53 specialised service lines, setting out our approach for estimating both supply and need. Whilst these assessments cannot be definitive, they offer managers and clinicians a sense of the scale of this issue at hand and can guide the prioritisation of those areas and services which require the most urgent attention.

Our analysis provides strong prima-facie evidence of widespread geographic inequities in access to specialised services. Patients in some areas such as Birmingham and Solihull and Nottingham appear to be much more likely to receive specialised services than their counterparts with similar levels of need in more rural areas such as Derbyshire, Herefordshire, Worcestershire, and Lincolnshire.

We recommend that those with responsibility for commissioning and delivering specialised services consider the detailed findings in this report, confirm the prima-facie evidence with more detailed service reviews and develop plans to ensure that services are equitably distributed in future.

Contents

1. Introduction

1.1 Background

Specialised services support people with a range of rare and complex conditions. They often involve treatments for patients with rare cancers, genetic disorders or complex medical or surgical conditions. Specialised services are not available in every local hospital because they have to be delivered by specialist teams of doctors, nurses and other health professionals who have the necessary skills and experience. Unlike most forms of healthcare, which are planned and arranged locally by Clinical Commissioning Groups (CCG), specialised services are planned nationally and regionally by NHS England and NHS Improvement (NHSE&I).

Differences in the care and support patients receive in different parts of the country has long been a subject of concern to health care commissioners. The issue is of particular importance to NHSE&I as the commissioner of specialised services given the limited supply and geographic dispersion of these services.

NHSE&I (Midlands) asked the Strategy Unit to analyse the variation in provision of specialised services across the Midlands region. The primary aim of the analysis is to identify where inequity of provision or access exists at a CCG population level. Understanding the distribution of specialised services provision to patients across the Midlands is important to ensure that patients are able to access these services according to their needs and that equity of access is maximised. Identifying those areas where inequities exist will help NHSE/I and local systems to investigate and address the causes of disparities and ensure all patients have equal access to specialised services.

2. Data, Methods and Scope

2.1 Data

Specialised services are commissioned and paid for in a number of ways. A significant proportion is delivered under block contracting arrangements and, in these cases, robust and detailed activity datasets are not always available.

The Identification Rules (IRs) set out the process by which healthcare activities are identified as specialised. The data used to support the commissioning process consist of both standard and non-standard flows of various quality and content. There are four different methods of identification[1]:

1. Application of technical logic against standard inpatient and outpatient data flows. The technical logic creates selection criteria based on the presence of a combination of main specialty or Treatment Function Codes, procedure and/or diagnosis codes, age of patient and name of provider organisation

2. Comparison of service provision against a list (i.e. list of high cost drugs and devices)

3. Comparison of healthcare activities against patient registries/clinical databases

4. If none of the three previous methods of identification are possible creation of local (to provider) data capture processes to illustrate patients who meet the criteria of being specialist

Given that robust and accessible datasets are not routinely available for all of the above methods this analysis considers a subset of specialised services activity that is identified by method 1 above. Whilst this may not provide a comprehensive picture of specialised services provision it does ensure that the analysis undertaken compares activity recorded on a consistent basis according to an agreed and established set of rules.

The baseline activity data used within this analysis includes all Inpatient admissions and outpatient attendances within the 2018/19 financial year that were assigned to a Specialised Services National Programme of Care (NPoC) , the presence of which flags the activity as specialised based on method 1 of the IR rules outlined above. The data is drawn from the National Commissioning Data Repository.[2] 2018/19 data was used, since this was the latest full year of data available when the analysis began.

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[1] Manual for Prescribed Specialised Services 2018/19 https://www.england.nhs.uk/wp-content/uploads/2017/10/prescribed-specialised-services-manual.pdf
[2] Tables tbl_Data_SEM_APCE and tbl_Data_SEM_OPA in the NHSE_SUSPlus_Live database.

Specialised services commissioned by NHS England have been grouped into six **National Programmes of Care** (NPoC):

- Internal medicine – includes respiratory, hepatobiliary and circulatory system, Endocrinology, vascular disease, cardiothoracic, digestion, renal, colorectal, dermatology and rheumatology.

- Cancer – includes radiotherapy, chemotherapy and cancer surgery
- Mental health – includes adult MH, secure services, CAMHS, and perinatal MH

- Trauma – includes major trauma, spinal services, neurosciences, ear and ophthalmology, critical care and pain services.

- Women and children – includes medical genetics, childrens surgery, paediatric medicine, paediatric neurosciences, congenital heart services, metabolic disorders, Paediatric intensive care, neonatal intensive care and women's services

- Blood and infection – includes blood and marrow transplantation, blood disorders, infectious diseases, haemoglobinopathies and immunology and allergy services.

The data considered within this analysis covers five of the six NPoC categories. (The mental health category is not included as a result of low levels of identified inpatient and outpatient activity for these programmes of care). Within each NPoC category the data is further categorised into **Clinical Reference Group (CRG) Subcategories** (covering broad areas of activity such as Respiratory services) and **Service Lines** (covering more specific activity cohorts such as activity relating to specific diseases). The analysis within this report is typically at an individual service line level.

In total there are 126 service line activity cohorts. However, a number of these have relatively low levels of activity recorded which meant that meaningful comparisons between CCGs was not possible. Service lines with more than 1,500 admissions or attendances in 2018/19 were included in this analysis. A small number of service lines were grouped together in order to reach the threshold for inclusion where it was considered appropriate to do so (i.e. clinically related service lines, which when grouped, could be meaningfully and usefully compared to a single indicator of need).

2.2 Methods

The aim of the analysis was to provide an assessment of equity of access to specialised services. Our approach was to compare activity / need ratios within service lines across CCGs in the Midlands. Activity ratios were calculated using the number of Inpatient admissions (or outpatient attendances) and an estimate of the level of need within the CCG.

Establishing the level of need for each category of specialised services is not straightforward. Whilst the simplest approach would be to use population size as a proxy indication of need this would not take account a number of factors that might affect the true level of need for a particular condition

within a particular area such as population age and sex structure, morbidity, deprivation or other factors that might impact on the level of underlying need within a locality.

Our approach was therefore to identify or derive a more appropriate indicator of need for each service line considered. To do this we reviewed a range of potential sources. These included a search of academic literature to identify prevalence studies for the patient cohort of interest, published prevalence data, national or primary care disease registries and a variety of other sources. Where specific condition prevalence or need data could not be found (or was not applicable where a service line cohort covered multiple conditions) we used other proxies for need including weighted population estimates or population age subsets. Details about the source of the need estimates used including a rationale for its use where appropriate are provided within each service line section within the detailed results.

2.3   Scope

Whilst inequity can take many forms (by gender, ethnicity, socio-economic status etc.) this analysis is concerned with geographic inequity of provision. Specifically, it identifies differences in access to specialised services between CCG areas within the West Midlands.[3]

The following map illustrates the geography covered and identifies the CCG's within this report.

Figure 1 Mapped CCGs

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[3] Our analysis may directly or indirectly adjust for sociodemographic factors that influence levels of need within CCGs (such as age, deprivation and ethnicity), but does not assess inequity within these factors.

CCG key

Birmingham and Solihull	BMS	Shropshire	SHR	Lincolnshire East	LEA
Coventry and Rugby	COV	Telford and Wrekin	TWR	Lincolnshire West	LWI
South Warwickshire	SWA	Cannock Chase	CCH	South Lincolnshire	SLI
Warwickshire North	WNO	East Staffordshire	EST	South West Lincolnshire	SWL
Herefordshire	HER	North Staffordshire	NST	Corby	COR
Redditch and Bromsgrove	RBR	S.E. Staffs. and Seisdon Peninsula	SES	Nene	NEN
South Worcestershire	SWO	Stafford and Surrounds	SAS	Mansfield and Ashfield	MAS
Wyre Forest	WYF	Stoke on Trent	SOT	Newark and Sherwood	NSH
Derby and Derbyshire	DER	Dudley	DUD	Nottingham City	NCI
East Leicestershire and Rutland	ELR	Sandwell and West Birmingham	SWB	Nottingham North and East	NNE
Leicester City	LEI	Walsall	WAL	Nottingham West	NOW
West Leicestershire	WLE	Wolverhampton	WOL	Rushcliffe	RUS

This report considers activity at a service line level and includes those service lines with at least 1,500 admissions or attendances. The following table shows all of the services lines within each NPoC where at least one admission or attendance was recorded. Those that are included within this report are highlighted in blue (either as individual or grouped service lines).

Table 1 Activity levels by CRG sub-category and service line

	Inpatient admissions	Outpatient attendances	Total Activity
A - INTERNAL MEDICINE			
A01 - SPECIALISED RESPIRATORY	**9,300**	**6,931**	**16,231**
Ataxia Telangiectasia Service (Adults)	8		8
Cystic Fibrosis	**1,584**	**6,256**	7,840
Interstitial Lung Disease	**6,135**	533	6,668
Management of Central Airway Obstruction	199		199
Pulmonary Hypertension (Adults)	1,374	142	1,516
A02 - HEPATOBILIARY AND PANCREAS	**11,883**	**20,999**	**32,882**
Cancer: Biliary Tract	1,133		1,133
Cancer: Liver	**5,804**		5,804
Cancer: Pancreatic	**4,308**		4,308
Hepatobiliary and Pancreas	483	20,999	21,482
Liver Transplantation	155		155
A03 - SPECIALISED ENDOCRINOLOGY		**30,227**	**30,227**
Endocrinology		**30,227**	30,227
A04 - VASCULAR DISEASE	**1,188**	**18,097**	**19,285**
Vascular Services	1,188	**18,097**	19,285
A05 - CARDIOTHORACIC SERVICES	**25,938**	**265,316**	**291,254**
Cardiac Surgery	**8,437**		8,437
Cardiology: Cardiac Electrophysiology and Ablation Services	**5,907**		5,907
Cardiology: Inherited Heart Disorders	1,336		1,336
Cardiology: pPCI And Structural Heart Disease Complex Invasive Cardiology	**10,256**		10,256
Heart and Lung Transplantation	2		2

	Inpatient admissions	Outpatient attendances	Total Activity
Specialised Cardiology and Cardiac Surgery Outpatients		**265,316**	265,316
A06 - RENAL SERVICES	**3,153**	**27,791**	**30,944**
Access for Dialysis	**2,543**		2,543
Renal Transplantation	**610**	**27,791**	28,401
A07 - SPECIALISED COLORECTAL SERVICES	**1,927**		**1,927**
Cancer: Anal	1,073		1,073
Colorectal Faecal Incontinence	647		647
Complex Inflammatory Bowel Disease	18		18
Transanal Endoscopic Microsurgery	189		189
A08 - SPECIALISED DERMATOLOGY	**3,738**	**432**	**4,170**
Cancer: Skin	**3,343**		3,343
Dermatology	340	235	575
Epidermolysis Bullosa	55	197	252
A09 - SPECIALISED RHEUMATOLOGY		**15,165**	**15,165**
Rheumatology		**15,165**	15,165
B - CANCER			
B03 - SPECIALISED CANCER	**50,455**	**753,022**	**803,477**
Cancer: Brain and Central Nervous System	**1,650**		1,650
Cancer: Head and Neck	**7,600**		7,600
Cancer: Malignant Mesothelioma	1,553		1,553
Cancer: Oesophageal And Gastric Cancer	**8,771**		8,771
Cancer: Penile	**222**		222
Cancer: Soft Tissue Sarcoma	1,261		1,261
Cancer: Specialised Kidney Bladder and Prostate	**2,675**		2,675
Cancer: Testicular	**695**		695
Choriocarcinoma Service	49		49
Complex Thoracic Surgery	**4,417**		4,417
Primary Malignant Bone Tumours	253		253
Rare Cancers (Adults)	**8,160**	**738,903**	747,063
Specialist Gynaecological Cancers	**12,446**		12,446
Stereotactic Radiosurgery	**9**		9
Thoracic Surgery		**14,119**	14,119
Urology - Penile Prosthetics Surgery	**72**		72
Urology - Urethral Reconstruction Surgery	**622**		622
B05 - CHILDREN AND YOUNG ADULT CANCER SERVICES	**15,076**	**20,646**	**35,722**
Cancer: Teenager and Young Adults	**3,658**	**4,407**	8,065
Paediatric Oncology	**11,212**	**16,175**	27,387
Retinoblastoma	206	64	270
C – MENTAL HEALTH			
C01 - SPECIALISED MENTAL HEALTH SERVICES	**174**		**174**
Eating Disorders	160		160
Mental Health Services for The Deaf (Adults)	14		14
C03 - CHILD AND ADOLESCENT MENTAL HEALTH SERVICES	**625**		**625**
Mental Health Services for The Deaf (Children and Adolescents)	1		1
Tier 4 Child and Adolescent Mental Health Services (CAMHS)	624		624
D - TRAUMA			

	Inpatient admissions	Outpatient attendances	Total Activity
D02 - MAJOR TRAUMA	**1,383**	**12,951**	**14,334**
Specialised Burn Care	**1,383**	**12,951**	14,334
D03 - SPINAL SERVICES	**1,695**	**4,664**	**6,359**
Complex Spinal Surgery	860		860
Spinal Cord Injury	835	**4,664**	5,499
D04 - NEUROSCIENCES	**32,827**	**60,665**	**93,492**
Neurology	**21,712**	**35,744**	57,456
Neuromyelitis Optica	15		15
Neurophysiology	19	**6,967**	6,986
Neuroradiology	25		25
Neurosurgery	**11,056**	**17,954**	29,010
D06 - SPECIALISED EAR AND OPHTHALMOLOGY SERVICES	**7,763**	**94,861**	**102,624**
Bone Anchored Hearing Aids	473		473
Cochlear Implants	279		279
Middle Ear Implants	26		26
Ophthalmology (Adults)	**5,318**		5,318
Ophthalmology (Children)	**1,667**	**94,861**	96,528
D07 - SPECIALISED PAIN		**852**	**852**
Pain Management		852	852
D10 - SPECIALISED ORTHOPAEDIC SERVICES	**295**		**295**
Orthopaedic Surgery	282		282
Orthopaedic Surgery - Revisions	13		13
E – WOMEN AND CHILDREN			
E01 - MEDICAL GENETICS		**9,955**	**9,955**
Medical Genetics		**9,955**	9,955
E02 - SPECIALISED SURGERY IN CHILDREN	**14,613**	**202,359**	**216,972**
Childrens Services - Pain Management	2	207	209
Childrens Services - Surgery	**7,032**	**202,152**	209,184
Childrens Services - Trauma and Orthopaedics	**7,115**		7,115
Cleft Lip and Palate	464		464
E03 - PAEDIATRIC MEDICINE	**24,311**	**86,196**	**110,507**
Infectious Diseases (Children)	9		9
Paediatric Medicine: Endocrinology and Diabetes	959	**14,656**	15,615
Paediatric Medicine: Gastroenterology Hepatology and Nutrition	**16,014**	**18,420**	34,434
Paediatric Medicine: Haematology	531	**16,767**	17,298
Paediatric Medicine: Renal	**3,693**	**13,659**	17,352
Paediatric Medicine: Respiratory	**2,252**	**15,845**	18,097
Paediatric Medicine: Rheumatology	853	**6,849**	7,702
E04 - PAEDIATRIC NEUROSCIENCES	**3,300**	**22,663**	**25,963**
Paediatric Neurosciences	**3,300**	**22,663**	25,963
E05 - CONGENITAL HEART SERVICES	**1,779**	**41,912**	**43,691**
Congenital Heart Disease (Adults)	884	**5,882**	6,766
Paediatric Cardiac	879	**36,030**	36,909
Pulmonary Hypertension (Children)	16		16
E06 - METABOLIC DISORDERS		**1,074**	**1,074**
Metabolic Disorders		1,074	1,074

	Inpatient admissions	Outpatient attendances	Total Activity
E09 - SPECIALISED WOMENS SERVICES	**1,612**		**1,612**
Complex Minimal Access Gynaecology Surgery	806		806
Reconstructive surgery for adolescents (female genital tract)	806		806
F- BLOOD AND INFECTION			
F01 - BLOOD AND MARROW TRANSPLANTATION	**1,297**	**14,075**	**15,372**
Blood and Marrow Transplantation	1,297	**14,075**	15,372
F02 - SPECIALISED BLOOD DISORDERS	**564**	**5,548**	**6,112**
Haemophilia	564	**5,548**	6,112
F04 - INFECTIOUS DISEASES	**20**		**20**
Infectious Diseases (Adults)	20		20
F05 - HAEMOGLOBINOPATHIES	**6,049**		**6,049**
Sickle Cell	**3,006**		3,006
Thalassaemia	**3,043**		3,043
F06 - SPECIALISED IMMUNOLOGY AND ALLERGY SERVICES	**4,908**	**8,036**	**12,944**
Allergy	423	**2,593**	3,016
Immunology	**4,485**	**5,443**	9,928

2.4   Format of outputs

The results are presented in two sections. The first provides a summary of the results, by NPoC category, illustrating for each service line whether a CCG has a high or low rate of activity relative to estimated need.

The second section provides detailed results for individual prescribed service lines. It is ordered according to the five NPoC categories and the Clinical Reference Group subcategories within each of these. The presentation of the results for each service line include:
- A description of the activity included i.e. the prescribed service line (or lines were grouped).
- A description of the need data used to calculate the activity rate including its source and rationale for its use and any pertinent issues or limitations that might affect the validity of the results.
- A funnel plot to identify CCGs that appear to have significantly higher (or lower) levels of specialised activity relative to the estimated need.
- A map locating CCGs with high or low rates and the location of providers eligible to provide specialised services of the relevant type.
- A table quantifying activity and need within individual CCGs.

Interpreting the outputs

A funnel plot can be interpreted in the same way as a scatter plot. In the example below, each CCG is represented by a dot. The position of a dot relative to the vertical axis represents the ratio of activity to need for the CCG (Activity / need ratio = activity/indicator of need). The location of a dot on the horizontal axis represents the CCG's indicative level of need. A funnel and horizontal line are superimposed on the scatter plot. The line represents the Midlands activity / need ratio. The funnel

shows the three-sigma limit for each level of need (the dotted funnel lines). If a point is outside the funnel there is a 99.7% likelihood that the difference from the regional ratio is not due to chance (i.e. there is a special cause for this variation). In the case of the two sigma limit (the dotted lines closer to the average rate), the likelihood is 95.5%.

Figure 2 example of a funnel plot
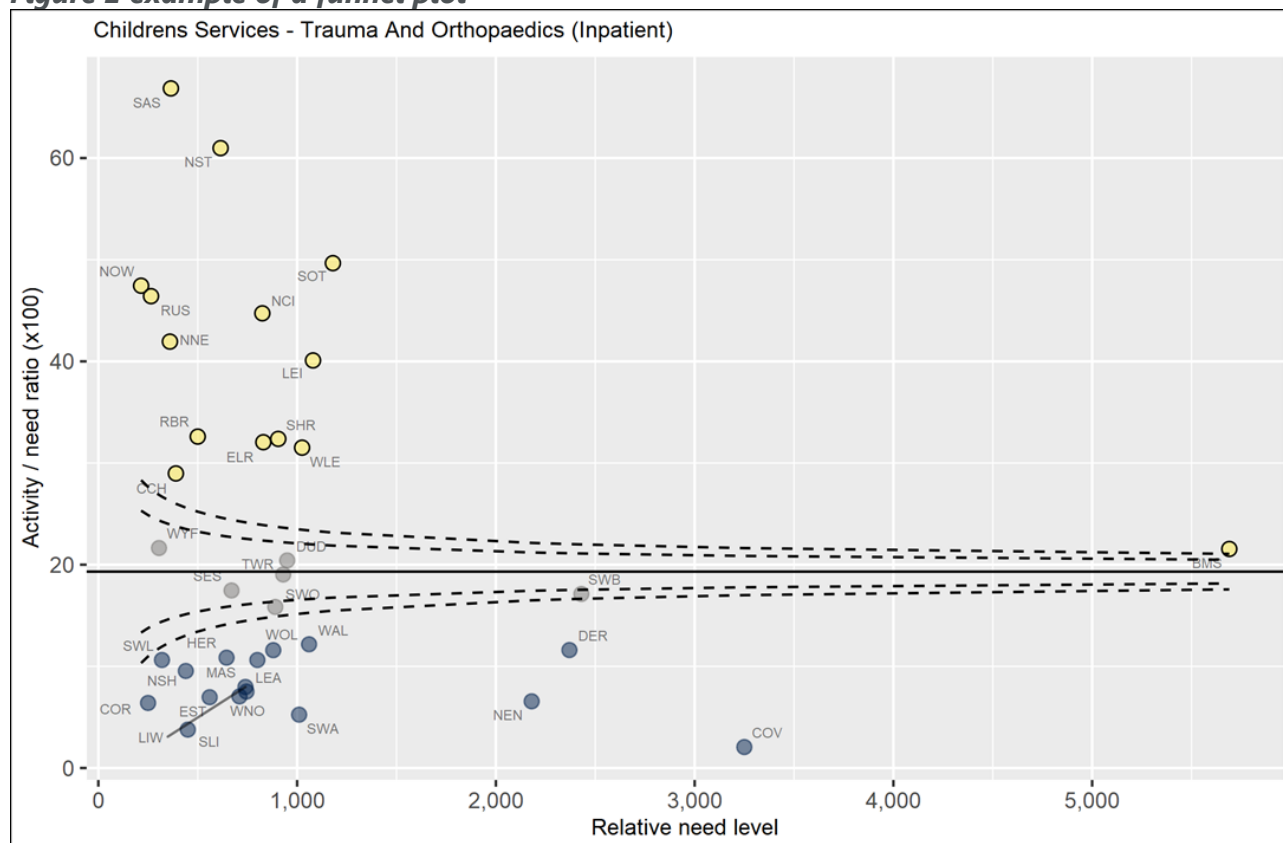
The heat maps presented in this report (example below) correspond to the funnel plots and illustrate geographically those CCGs that have significantly higher or lower activity / need ratios . Some specialised services can only be delivered by specified providers, where this is the case these providers are also shown on the map.

Illustrating variation geographically may help to identify where access may be affected by proximity to specialised provision. It could also identify clusters of CCGs that may be operating differently regarding use of specialised services.

Figure 3 example of a map (a key to CCGs and hospitals is provided in the key below)

Childrens Services - Trauma And Orthopaedics (Inpatient)
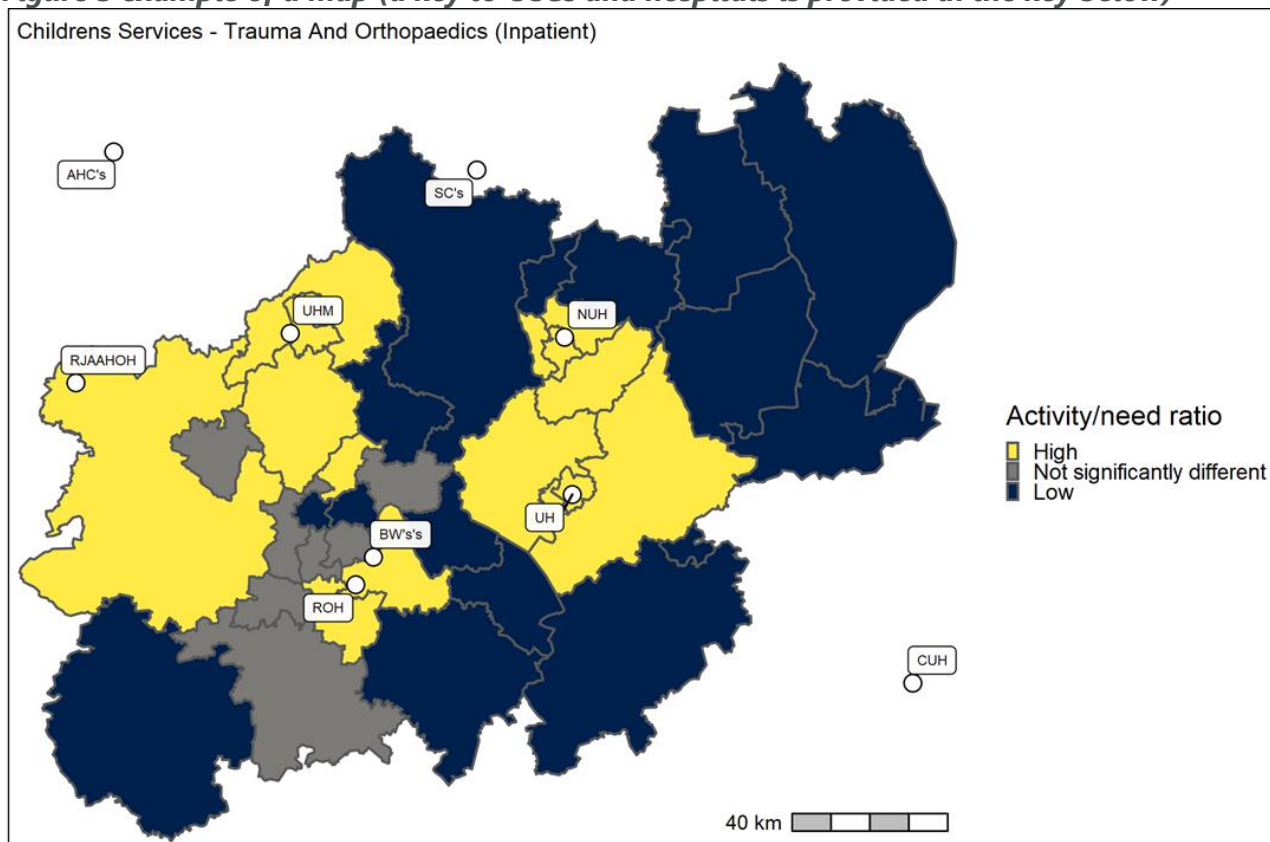
Key to specialist providers

Hospital	Organisation name
AHC's	Alder Hey Children's NHS Foundation Trust
AUH	Liverpool University Hospitals NHS Foundation Trust
BW's	Birmingham Women's and Children's NHS Foundation Trust
C	The Christie NHS Foundation Trust
CUH	Cambridge University Hospitals NHS Foundation Trust
DTH	University Hospital of Derby and Burton NHS Foundation Trust
EH	East and North Hertfordshire NHS Trust
GH	Gloucestershire Hospitals NHS Foundation Trust
KGH	Kettering General Hospital NHS Foundation Trust
LHH	Liverpool Heart and Chest NHS Foundation Trust
LUH	Luton and Dunstable University Hospital NHS Foundation Trust
LW's	Liverpool Women's NHS Foundation Trust
NGH	Northampton General Hospital NHS Trust
NUH	Nottingham University Hospitals NHS Trust
PAH	Pennine Acute Hospitals NHS Trust
PH	Royal Papworth Hospital NHS Foundation Trust
RW	The Royal Wolverhampton NHS Trust
S	Stockport NHS Foundation Trust
SBH	Sandwell and West Birmingham Hospitals NHS Trust
SC's	Sheffield Children's NHS Foundation Trust

Hospital	Organisation name
SH	Shrewsbury and Telford Hospital NHS Trust
SHHS	St Helens and Knowsley Hospitals NHS Trust
SR	Salford Royal NHS Foundation Trust
STH	Sheffield Teaching Hospitals NHS Foundation Trust
UH	University Hospitals of Leicester NHS Trust
UHB	University Hospitals Birmingham NHS Foundation Trust
UHC	University Hospitals Coventry and Warwickshire NHS Trust
UHM	University Hospitals of North Midlands
ULH	United Lincolnshire Hospitals NHS Trust
WAH	Worcestershire Acute Hospitals NHS Trust
WC	The Walton Centre NHS Foundation Trust
WUTH	Wirral University Teaching Hospital NHS Foundation Trust

This report quantifies and illustrates the scale of variation in access to specialised services. It identifies those CCGs that appear to have particularly high or low levels of access to specialised services given the estimated level of need. A high rate does not necessarily indicate oversupply nor a low rate undersupply. A high rate in one or more CCGs may, for example, reflect a shortage of capacity in other areas.

Further analysis or investigation is likely to be required to fully understand the causes of unequal access and the subsequent action to address it. This report provides useful information that can be used to identify and prioritise where that further work is most needed to ensure that patients received fair and equal access to specialised services regardless of where they live.

When considering service lines with apparent inequity of access there are a number of possible explanations that should be considered or investigated. Understanding these will help to inform what action is needed to address access issues. Possible explanations might include:

Data or methodological artefacts
- Data quality – for example, is all specialised activity recorded properly such that the algorithms are able to flag it as such
- Idiosyncrasies in the identification rules which may differentially assign activity as specialised in different areas.
- Indicator of need does not reflect true level of need – in many cases we have used a proxy for need which in some cases may not reflect the true level of need within an area.

Differences in referral behaviour
- Variation in local guidance relating to referrals to specialised services
- Variation in referral practices or referrer knowledge of service availability and referral process
- Propensity of consultants in non-specialist hospitals to refer or transfer patients to specialist providers

Differences in the service structures, processes or capacity
- Different approaches to the management and treatment of conditions

- Differences in treatment regimes such as higher frequency of follow up outpatient appointments
- Geographically inaccessible services – long distances to access specialised services may result in lower levels of referrals or low levels of uptake
- Lack of capacity within an area – many specialised services are provided by specialist professionals which by their nature are often difficult to recruit.

Differences in patient behaviour
- Patient's knowledge of specialised services
- Patient's willingness or capacity to demand access to specialised services
- Patients' ability to pay for travel or give up time to attend treatments.
- Patient preference in terms of trade-offs between the treatment benefits and costs or potential harms
- Patients relocating to live closer to specialised services where repeated access over a sustained period may be required

There are some specific issues relating to the way in which specialised services are identified and paid for that are worthy of note when interpreting the findings in this report. For some service lines, the identification rules (described on page 2 above) are somewhat blunt and capture a wider set of activities than might ordinarily be considered to be 'specialised'. For example, the paediatric orthopaedics service line captures all paediatric orthopaedic activity undertaken at defined set of providers. In other cases, the rules are quite specific, but deliver somewhat counterintuitive results. The rules for the interstitial lung disease (ILD) service line for example, identifies all inpatient activity where the hospital record includes a diagnosis of ILD whether or not this condition precipitated the admission. This may result in an activity being identified as specialised when the activity itself was general in nature. For other service lines, the rules contain Provider Eligibility Lists (PELs) which limit those activities which are identified as specialised with reference not only to what care is provided, but also to the provider that delivered the care. This is for example the case with specialised neurology services. In these cases, an activity delivered by a provider on the PEL might be identified as specialised, whilst the equivalent activity delivered by another provider may not. Note that this does not alter the activity that takes place but simply whether the activity is considered to be specialised and therefore whether NHSE or the local CCG are required to cover the associated costs. Such differences may at face value appear to indicate inequities in access, when in reality, the inequity lies in the funding responsibility. This, in itself, is worthy of note.

3. Summary Results

3.1 CCG and service line summary

The following charts provide a summary of the results by CCG and service line for each NPoC category.

A yellow rectangle indicates that the activity/need ratio for that CCG is significantly above the ratio for the Midlands as a whole, a dark blue rectangle indicates that the activity/need ratio is significantly below the Midlands ratio. Grey indicates the activity/need ratio is not significantly different from the Midlands ratio. A blank rectangle indicates that there was no activity data for this CCG.

Internal Medicine

There are high levels of inequity in access to specialised internal medicine services, with notably higher levels of inequity in inpatient services for interstitial lung disease, cancer services and outpatient services for specialised rheumatology and cardiology. Lower levels of inequity were seen for inpatient services for cardiology: PCI and structural heart disease and colorectal services.

Relative to need, higher levels of specialised internal medicine services are seen in
- Birmingham and Solihull CCG

and lower levels in
- Derby and Derbyshire CCG,
- Shropshire CCG and
- three out of the four CCGs in Lincolnshire (South Lincolnshire CCG, South West Lincolnshire and Lincolnshire East CCG).
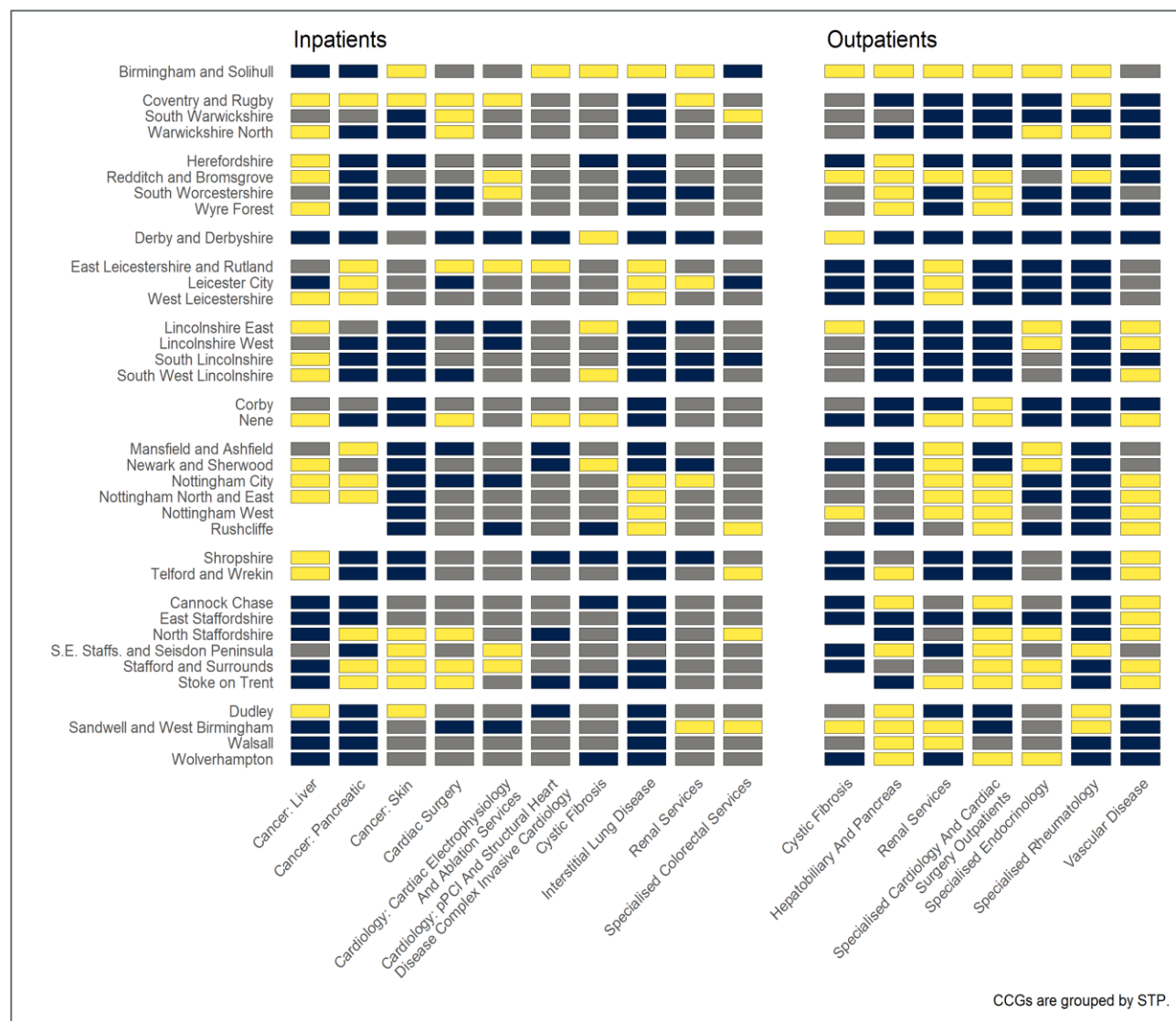
Cancer

There are high levels of inequity in access to most forms of specialised cancer services with exceptions being in urological cancer and complex thoracic surgery.

Relative to need, higher levels of specialised cancer services are seen in
- East Staffordshire CCG,
- Newark and Sherwood CCG,
- Nottingham City and
- Nottingham North and East CCG and
- East Staffordshire CCG.
-

Lower levels were seen in
- South Worcestershire CCG,
- Lincolnshire West CCG,
- South West Lincolnshire CCG,
- Shropshire CCG,
- Walsall CCG and
- Wolverhampton CCG

CCGs are grouped by STP.
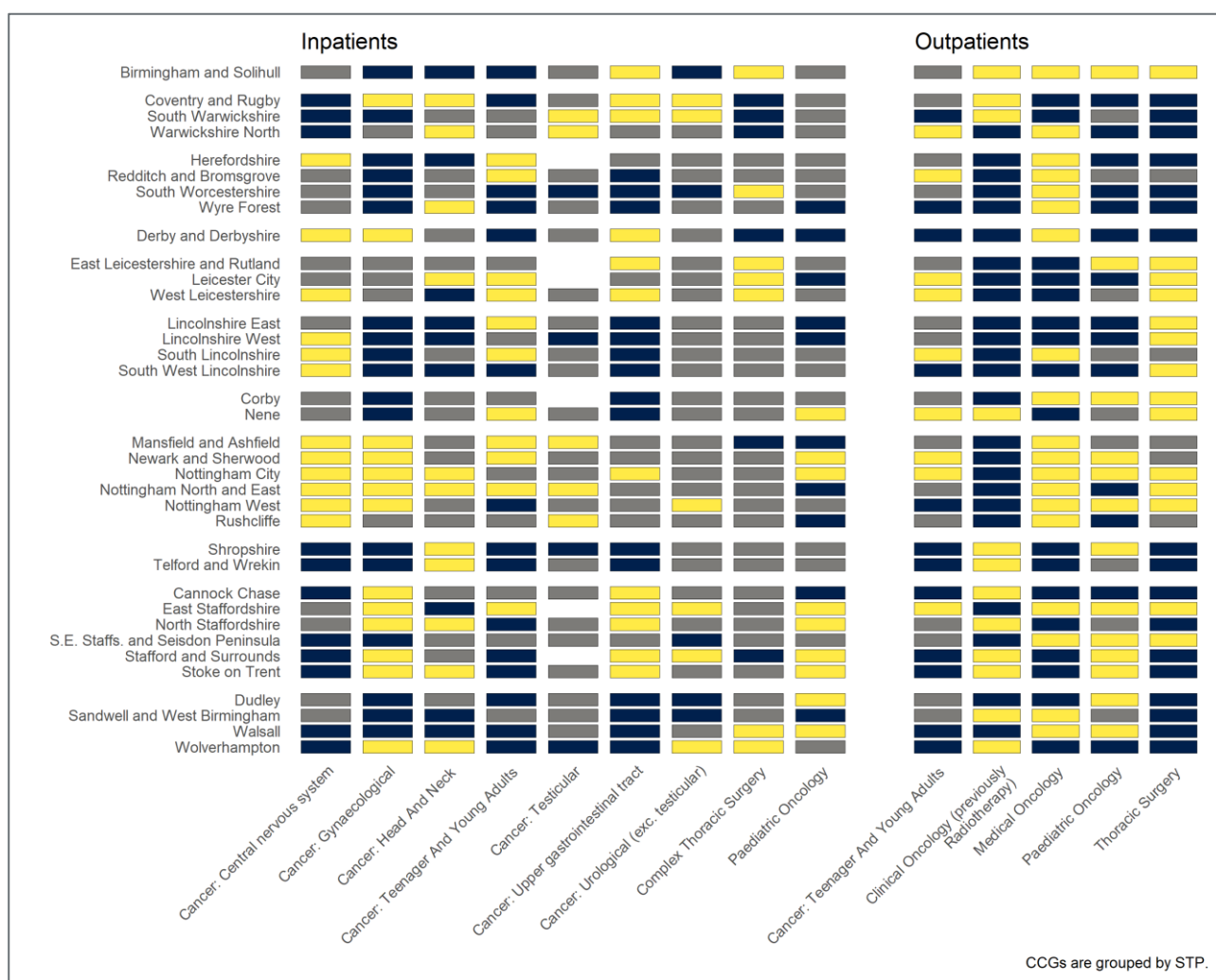
Trauma

There are high levels of inequity in access to services included within the Trauma NPoC, with notably higher levels of inequity in specialised inpatient neurology services, and outpatient neurophysiology services and children's ophthalmology. Lower levels of inequity are seen in inpatient burn care services and inpatient children's ophthalmology.

Relative to need, higher levels of specialised trauma services are seen in
- Birmingham and Solihull CCG,
- North Staffordshire CCG and Stoke-on-Trent CCG and
- Coventry and Rugby CCG,
-

and lower levels in
- East Leicestershire and Rutland CCG, Leicester City CCG and West Leicestershire CCG,
- Mansfield and Ashfield CCG,
- Telford and Wrekin CCG and
- Walsall CCG and Wolverhampton CCGs.
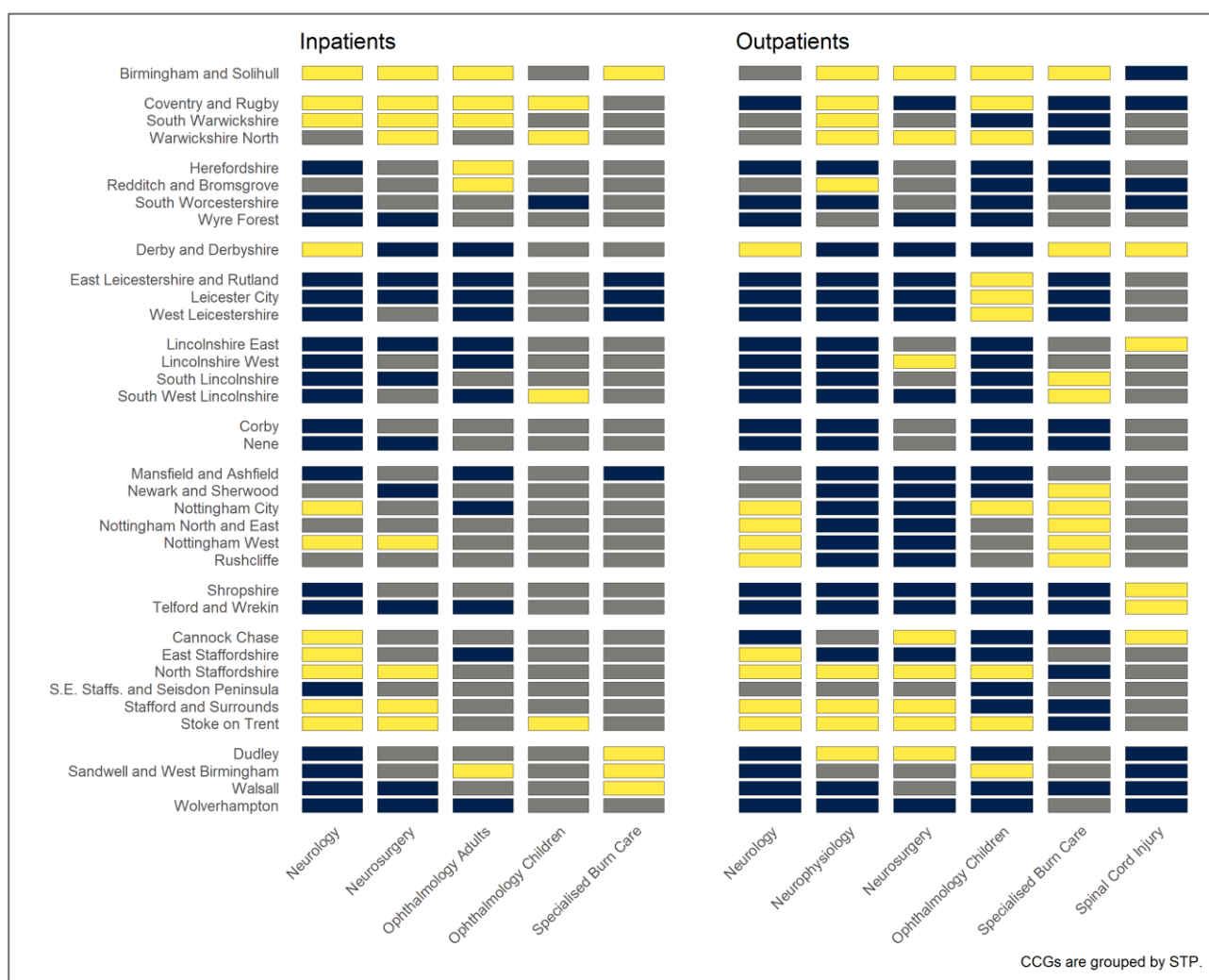
Women and Children

There are high levels of inequity in access to specialised services for women and children, with notably higher levels of inequity in inpatient trauma and orthopaedics, outpatient medical genetics, outpatient paediatric endocrinology, outpatient Haematology and outpatient respiratory services.

Relative to need, higher levels of specialised services for women and children are seen in
- Birmingham and Solihull CCG,
- all three Leicestershire CCGs,
- Nottingham City CCG and Nottingham North and East CCG,
- Rushcliffe CCG,
- North Staffordshire CCG, Stafford and Surrounds CCG and Stoke-on-Trent CCG,
-

and lower levels in
- all four Hereford and Worcestershire STP CCGs,
- Derby and Derbyshire CCG,
- South Lincolnshire CCG, Lincolnshire East CCG and Lincolnshire West CCG,
- Nene CCG,
- Shropshire CCG, and
- Wolverhampton CCG
-
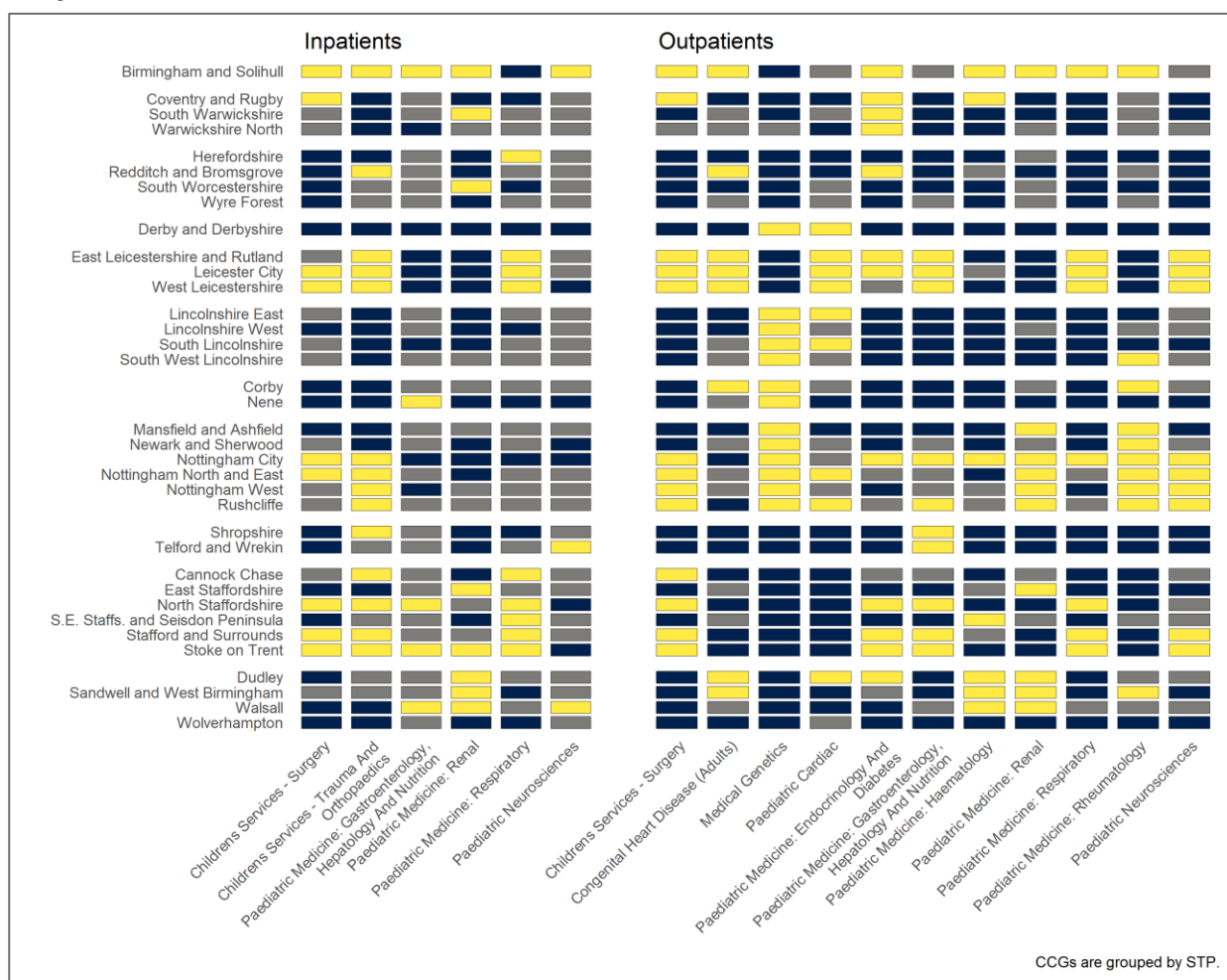
Blood and Infection

There are high levels of inequity in access to of specialised blood and infection services, with notably higher levels of inequity in outpatient haemophilia services and lower levels of inequity in inpatient services for sickle cell.

Relative to need, higher levels of blood and infections services are seen in
- East Leicestershire and Rutland CCG and
- West Leicestershire CCG
-

and lower levels in
- Coventry and Rugby CCG and South Warwickshire CCG,
- Lincolnshire West CCG, Lincolnshire East CCG and South West Lincolnshire CCG and
- Telford and Wrekin CCG and
- Stafford and Surrounds CCG.
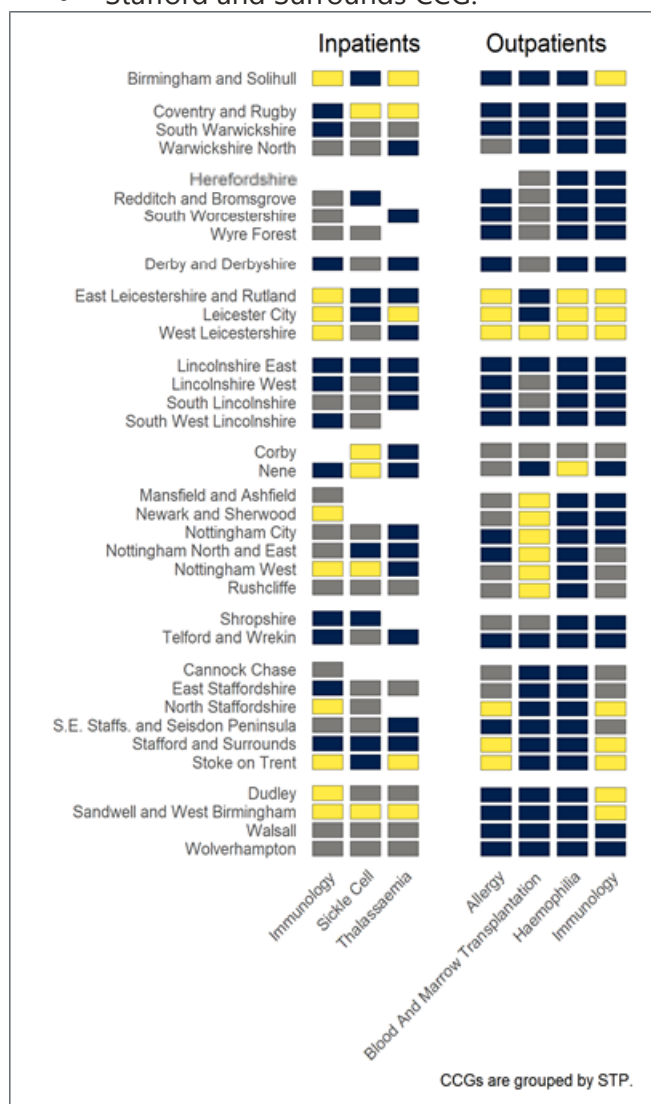
3.2   CCG summary

Figure 4 summarises the results across all service lines by CCG. It illustrates, for inpatient and outpatient services, the **net** number of service lines where the activity/need ratio was significantly above the regional rate (calculated as the number of service lines significantly above minus the number significantly below).

Table 2 provides a more detailed quantification by CCG and STP showing how many service lines were in each group (above the regional ratio, below the regional ratio or not significantly different (NSD)).

Birmingham and Solihull CCG had very high net figures for both inpatient and outpatient service lines. By contrast a number of CCGs including Derby and Derbyshire, South Worcestershire, Shropshire CCG, Lincolnshire West and Wolverhampton all had very low net figures for both inpatients and outpatient service lines. Coventry and Rugby and South Warwickshire CCGs were unusual outliers in that they had a high net inpatient figure but a very low net outpatient figure. The subsequent table further indicates that patients in some wider geographical areas have lower levels of access to specialised services. Access to both inpatient and outpatient specialised services appears to be particularly low for patients in some of the more rural parts of the region notably Lincolnshire, Derbyshire and Hereford and Worcestershire.

Figure 4. Net inpatient and outpatient service lines where the activity/need ratio was above the regional average (service lines above average minus service lines below)
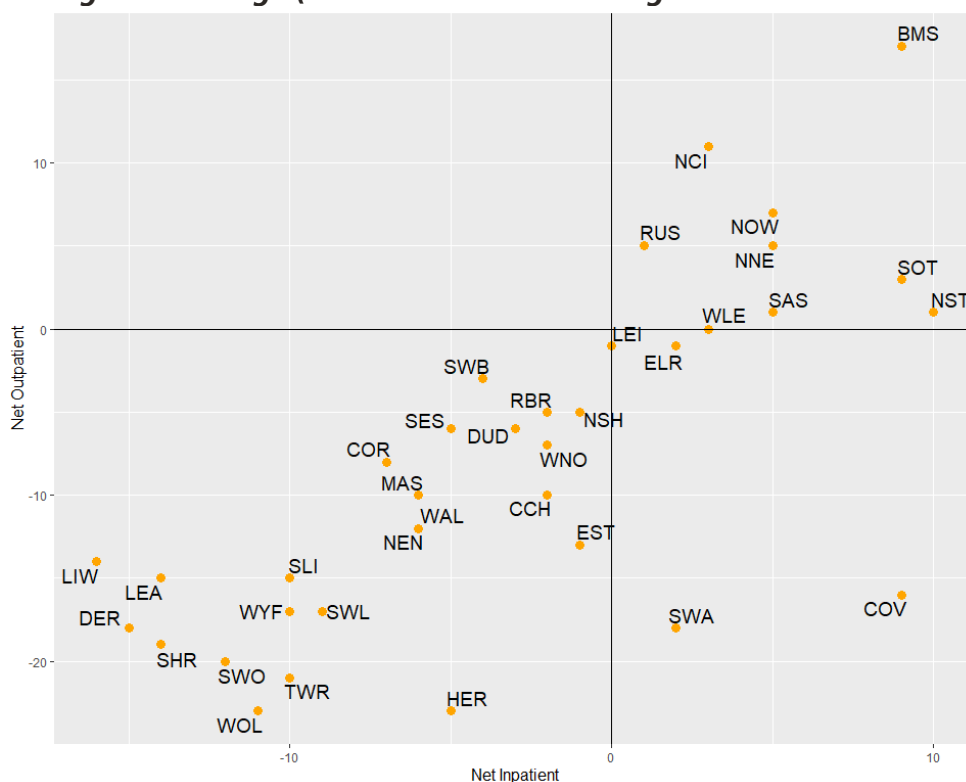
Table 4 Summary of service lines by CCG

	Inpatient Services				Outpatient Services			
	service lines above	N.S.D	Sevice lines below	Net	service lines above	N.S.D	Sevice lines below	Net
Birmingham and Solihull STP	18(55%)	6(18%)	9(27%)		22(67%)	6(18%)	5(15%)	
Birmingham and Solihull	18(55%)	6(18%)	9(27%)	**9**	22(67%)	6(18%)	5(15%)	**17**
Coventry and Warwickshire STP	32(32%)	44(44%)	23(23%)		18(18%)	25(25%)	59(58%)	
Coventry and Rugby	17(52%)	8(24%)	8(24%)	**9**	7(21%)	4(12%)	23(68%)	**-16**
South Warwickshire	9(27%)	17(52%)	7(21%)	**2**	3(9%)	10(29%)	21(62%)	**-18**
Warwickshire North	6(18%)	19(58%)	8(24%)	**-2**	8(24%)	11(32%)	15(44%)	**-7**
Herefordshire and Worcestershire STP	15(12%)	66(53%)	44(35%)		18(14%)	32(24%)	83(62%)	
Herefordshire	5(17%)	14(48%)	10(34%)	**-5**	2(6%)	6(18%)	25(76%)	**-23**
Redditch and Bromsgrove	5(16%)	20(63%)	7(22%)	**-2**	10(30%)	8(24%)	15(45%)	**-5**
South Worcestershire	3(9%)	14(44%)	15(47%)	**-12**	3(9%)	8(24%)	23(68%)	**-20**
Wyre Forest	2(6%)	18(56%)	12(38%)	**-10**	3(9%)	10(30%)	20(61%)	**-17**
Derbyshire STP	5(15%)	8(24%)	20(61%)		7(21%)	2(6%)	25(74%)	
Derby and Derbyshire	5(15%)	8(24%)	20(61%)	**-15**	7(21%)	2(6%)	25(74%)	**-18**
Leicester, Leicestershire and Rutland STP	32(33%)	38(39%)	27(28%)		45(44%)	10(10%)	47(46%)	
East Leicestershire and Rutland	10(31%)	14(44%)	8(25%)	**2**	15(44%)	3(9%)	16(47%)	**-1**
Leicester City	11(34%)	10(31%)	11(34%)	**0**	15(44%)	3(9%)	16(47%)	**-1**
West Leicestershire	11(33%)	14(42%)	8(24%)	**3**	15(44%)	4(12%)	15(44%)	**0**
Lincolnshire STP	11(8%)	60(46%)	60(46%)		22(16%)	30(22%)	83(61%)	
Lincolnshire East	3(9%)	13(39%)	17(52%)	**-14**	7(21%)	5(15%)	22(65%)	**-15**
Lincolnshire West	1(3%)	15(45%)	17(52%)	**-16**	5(15%)	10(29%)	19(56%)	**-14**
South Lincolnshire	3(9%)	17(52%)	13(39%)	**-10**	5(15%)	9(26%)	20(59%)	**-15**
South West Lincolnshire	4(13%)	15(47%)	13(41%)	**-9**	5(15%)	6(18%)	22(67%)	**-17**
Northamptonshire STP	9(14%)	33(52%)	22(34%)		15(22%)	18(26%)	35(51%)	
Corby	1(3%)	22(71%)	8(26%)	**-7**	7(21%)	12(35%)	15(44%)	**-8**
Nene	8(24%)	11(33%)	14(42%)	**-6**	8(24%)	6(18%)	20(59%)	**-12**
Nottingham and Nottinghamshire STP	48(25%)	101(53%)	41(22%)		79(39%)	59(29%)	66(32%)	
Mansfield and Ashfield	5(16%)	15(48%)	11(35%)	**-6**	7(21%)	10(29%)	17(50%)	**-10**
Newark and Sherwood	7(23%)	16(52%)	8(26%)	**-1**	9(26%)	11(32%)	14(41%)	**-5**
Nottingham City	12(36%)	12(36%)	9(27%)	**3**	20(59%)	5(15%)	9(26%)	**11**
Nottingham North and East	10(30%)	18(55%)	5(15%)	**5**	14(41%)	11(32%)	9(26%)	**5**
Nottingham West	9(29%)	18(58%)	4(13%)	**5**	15(44%)	11(32%)	8(24%)	**7**
Rushcliffe	5(16%)	22(71%)	4(13%)	**1**	14(41%)	11(32%)	9(26%)	**5**
Shropshire and Telford and Wrekin STP	7(11%)	27(42%)	31(48%)		10(15%)	7(10%)	50(75%)	
Shropshire	3(9%)	12(38%)	17(53%)	**-12**	5(15%)	5(15%)	24(71%)	**-19**
Telford and Wrekin	4(12%)	15(45%)	14(42%)	**-10**	5(15%)	2(6%)	26(79%)	**-21**
Staffordshire and Stoke on Trent STP	60(31%)	89(46%)	44(23%)		67(34%)	40(20%)	91(46%)	
Cannock Chase	5(16%)	19(61%)	7(23%)	**-2**	7(21%)	9(27%)	17(52%)	**-10**
East Staffordshire	7(22%)	17(53%)	8(25%)	**-1**	7(21%)	7(21%)	20(59%)	**-13**
North Staffordshire	15(47%)	12(38%)	5(16%)	**10**	14(44%)	5(16%)	13(41%)	**1**
S.E. Staffs. and Seisdon Peninsula	3(9%)	22(67%)	8(24%)	**-5**	7(21%)	13(39%)	13(39%)	**-6**
Stafford and Surrounds	13(41%)	11(34%)	8(25%)	**5**	15(45%)	4(12%)	14(42%)	**1**
Stoke on Trent	17(52%)	8(24%)	8(24%)	**9**	17(52%)	2(6%)	14(42%)	**3**
The Black Country and West Birmingham STP	24(18%)	60(45%)	48(36%)		33(25%)	24(18%)	77(57%)	
Dudley	6(18%)	18(55%)	9(27%)	**-3**	11(32%)	6(18%)	17(50%)	**-6**
Sandwell and West Birmingham	8(24%)	13(39%)	12(36%)	**-4**	12(35%)	7(21%)	15(44%)	**-3**
Walsall	6(18%)	15(45%)	12(36%)	**-6**	6(18%)	9(27%)	18(55%)	**-12**
Wolverhampton	4(12%)	14(42%)	15(45%)	**-11**	4(12%)	2(6%)	27(82%)	**-23**

4. Detailed service line results

4.1 Internal medicine

4.1.1 Specialised Respiratory

There were three service lines within the specialised respiratory activity category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. These were:

- Interstitial Lung Disease (inpatient) and
- Cystic Fibrosis (inpatient and outpatient).

Interstitial Lung Disease (Inpatient)

Activity data - Inpatient admissions with (IR flag M29) Interstitial Lung Disease (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this service line as Interstitial Lung disease covers a range of conditions with a range of causes both natural and industrial. Since the frequency of the majority of ILDs is influenced by age, gender, ethnicity, and smoking habits[4,5] it was decided that the General and Acute weighted population[6] was a reasonable proxy for need in this case.

Limitations: The general and acute weighted population is a general indicator of overall healthcare need within a CCG. It is based on the CCG population but is adjusted to take account of a number of factors related to healthcare need such as age and gender. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

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[4] Valeyre D, Duchemann B, Nunes H, et al. (2014) Interstitial lung diseases. In: Annesi-Maesano I, Lundbäck B, Viegi G, *Respiratory Epidemiology (ERS Monograph)*. Sheffield, European Respiratory Society, 2, pp. 79–87.

[5] Kelly et al. (2014) Rheumatoid arthritis-related interstitial lung disease: associations, prognostic factors and physiological and radiological characteristics—a large multicentre UK study. *Rheumatology*, 53, pp. 1676-1682.

[6] Source: NHS (2018). Overall Weighted Populations CCG allocation 2019/20 to 2023/24. https://www.england.nhs.uk/wp-content/uploads/2019/05/j-overall-weighted-populations.xlsx

Interstitial Lung Disease (Inpatient)

Interstitial Lung Disease (Inpatient)
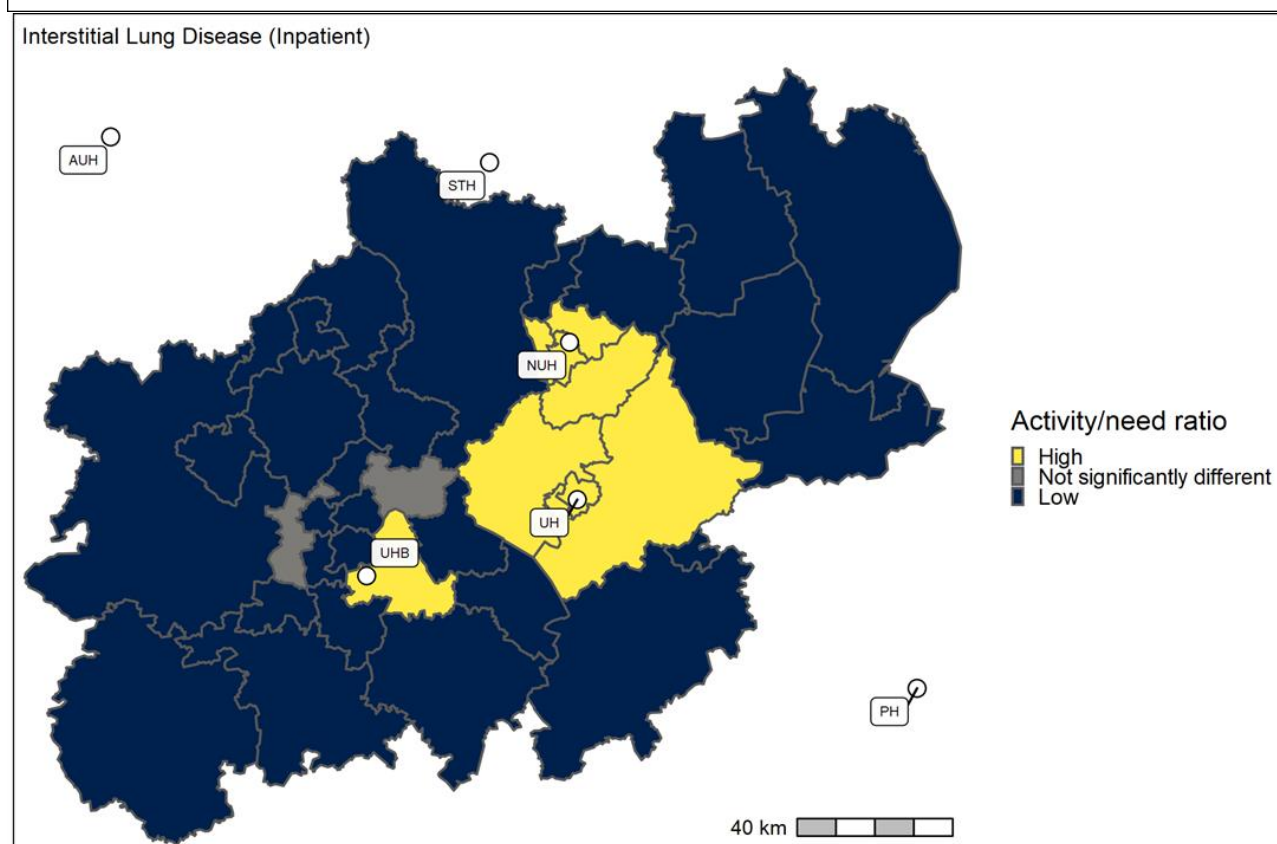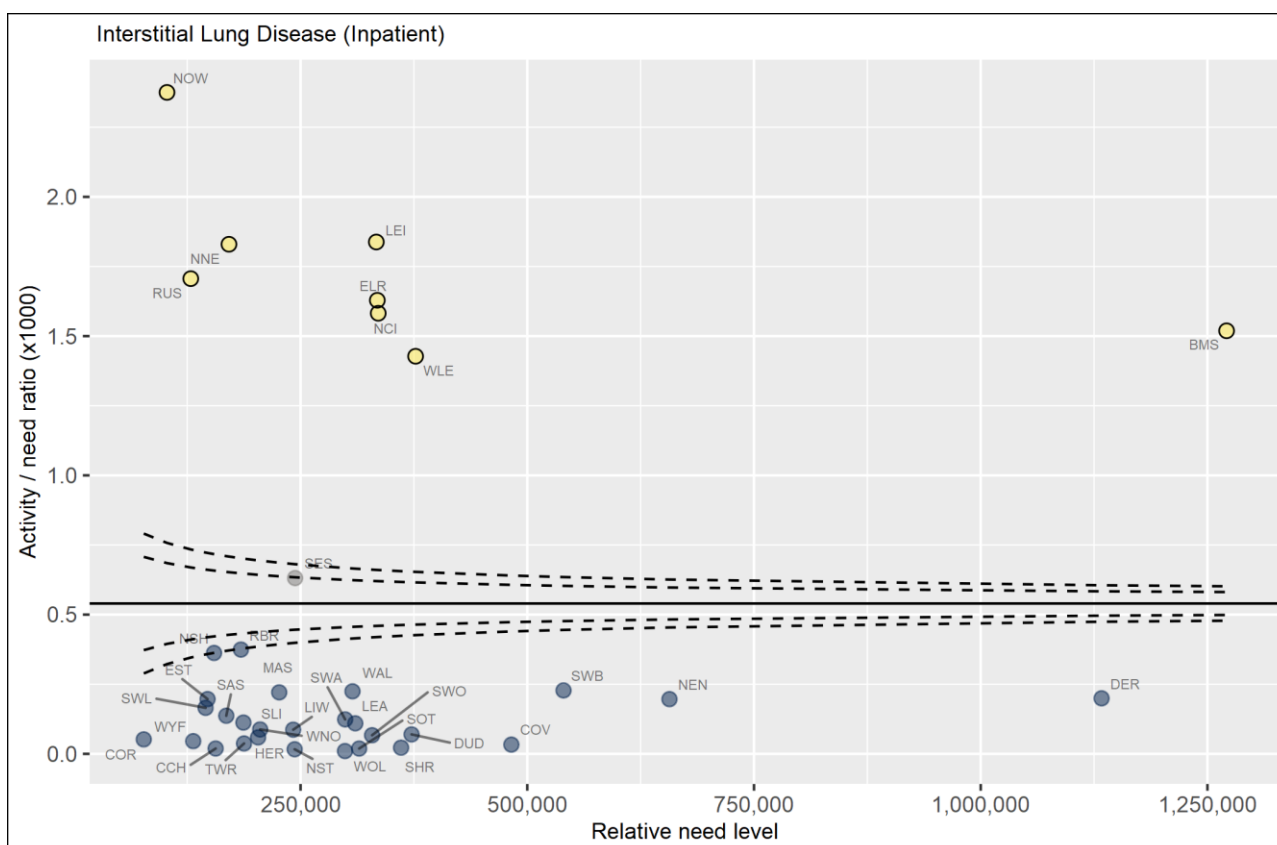
Activity and need data by CCG. Interstitial Lung Disease (Inpatient).

Activity ratio is per 1,000 need

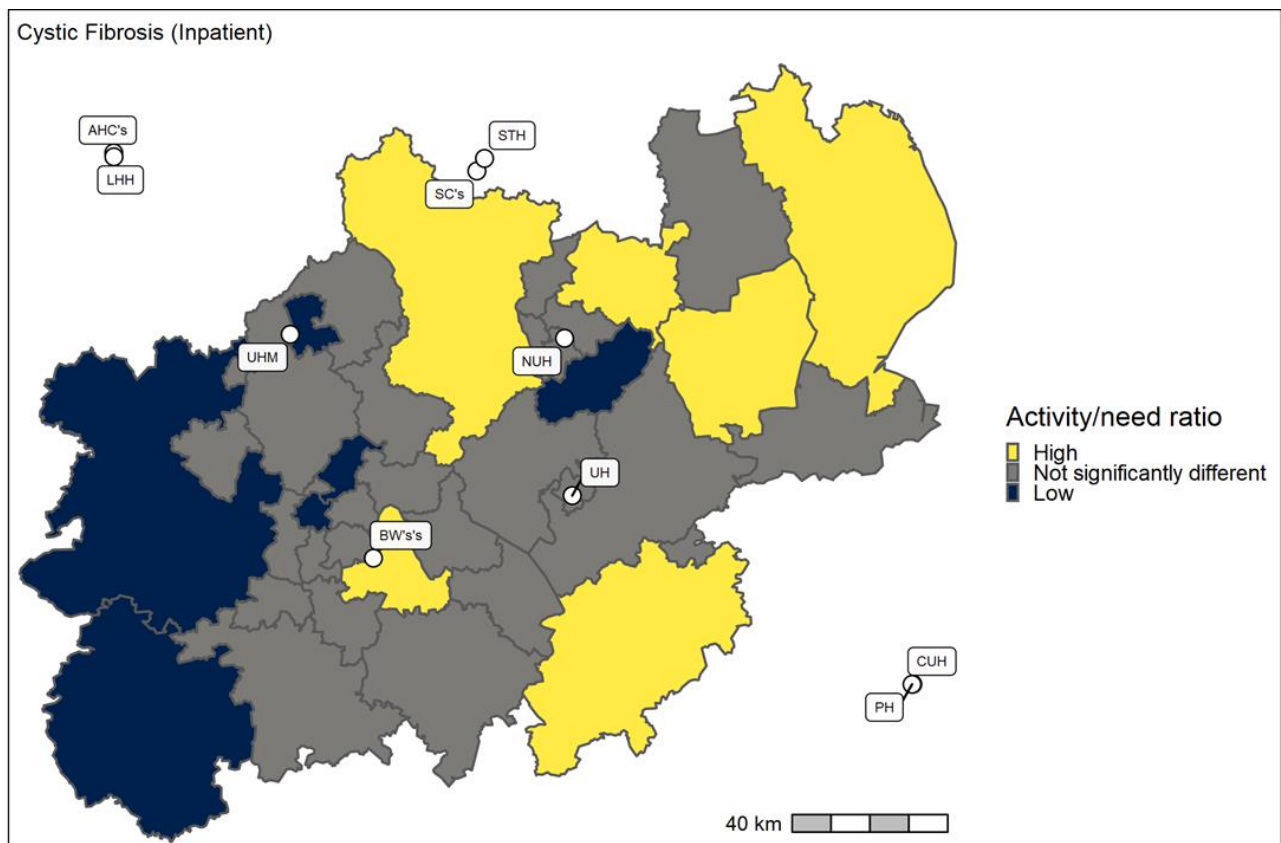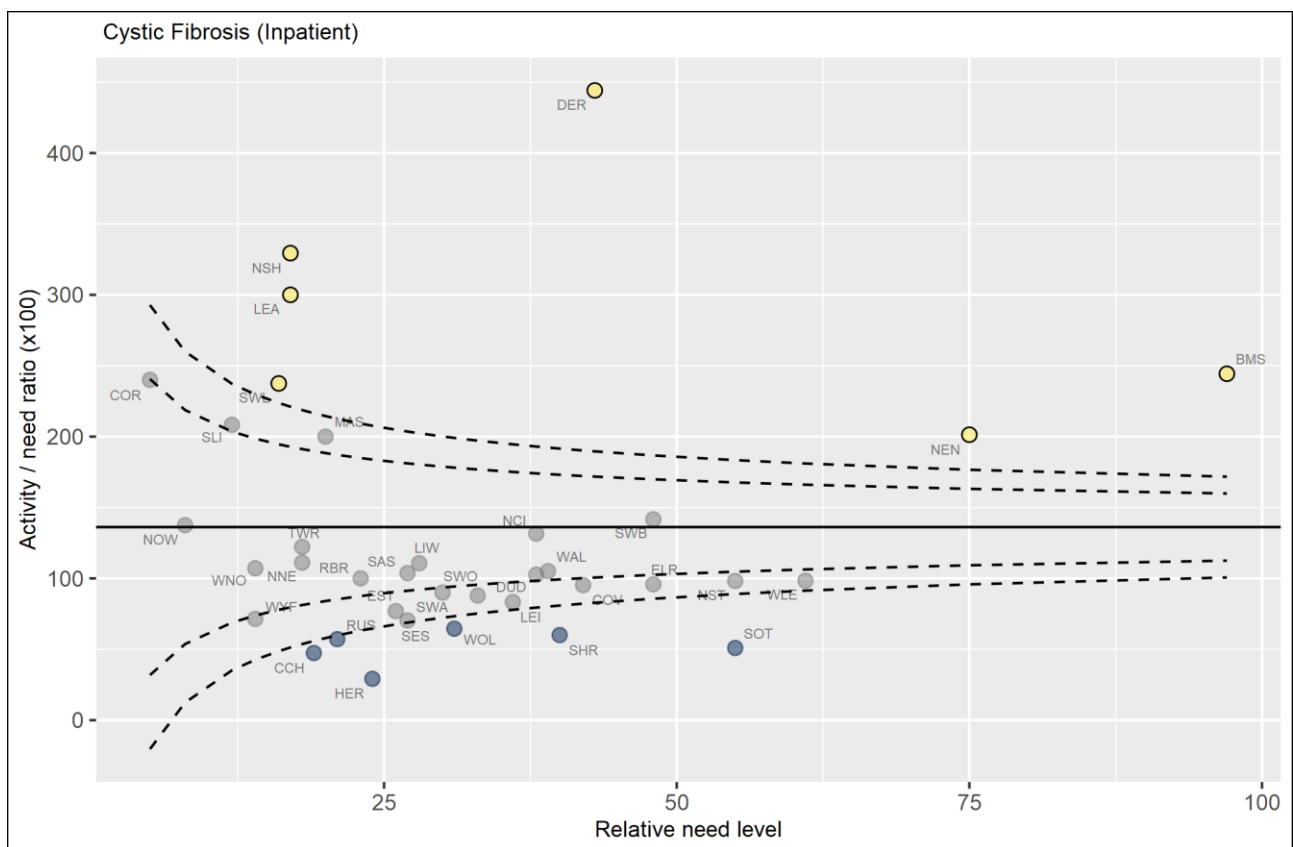| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Nottingham West CCG	NOW	102,736	244	2.375
NHS Leicester City CCG	LEI	333,532	613	1.838
NHS Nottingham North and East CCG	NNE	171,057	313	1.830
NHS Rushcliffe CCG	RUS	128,932	220	1.706
NHS East Leicestershire and Rutland CCG	ELR	334,636	545	1.629
NHS Nottingham City CCG	NCI	335,645	531	1.582
NHS Birmingham and Solihull CCG	BMS	1,271,116	1931	1.519
NHS West Leicestershire CCG	WLE	376,852	538	1.428
Not significantly different				
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	243,974	154	0.631
Low				
NHS Redditch and Bromsgrove CCG	RBR	184,267	69	0.374
NHS Newark and Sherwood CCG	NSH	154,593	56	0.362
NHS Sandwell and West Birmingham CCG	SWB	539,975	123	0.228
NHS Walsall CCG	WAL	307,277	69	0.225
NHS Mansfield and Ashfield CCG	MAS	226,464	50	0.221
NHS Derby and Derbyshire CCG	DER	1,133,256	226	0.199
NHS East Staffordshire CCG	EST	147,461	29	0.197
NHS Nene CCG	NEN	656,778	129	0.196
NHS South West Lincolnshire CCG	SWL	145,295	24	0.165
NHS Stafford and Surrounds CCG	SAS	168,092	23	0.137
NHS South Warwickshire CCG	SWA	299,193	37	0.124
NHS South Lincolnshire CCG	SLI	186,991	21	0.112
NHS Lincolnshire East CCG	LEA	310,316	34	0.110
NHS Warwickshire North CCG	WNO	205,431	18	0.088
NHS Lincolnshire West CCG	LIW	241,922	21	0.087
NHS Dudley CCG	DUD	372,413	26	0.070
NHS South Worcestershire CCG	SWO	328,858	22	0.067
NHS Herefordshire CCG	HER	203,157	12	0.059
NHS Corby CCG	COR	77,088	4	0.052
NHS Wyre Forest CCG	WYF	131,646	6	0.046
NHS Telford and Wrekin CCG	TWR	187,682	7	0.037
NHS Coventry and Rugby CCG	COV	482,461	16	0.033
NHS Shropshire CCG	SHR	360,838	8	0.022
NHS Cannock Chase CCG	CCH	156,366	3	0.019
NHS Stoke on Trent CCG	SOT	314,622	6	0.019
NHS North Staffordshire CCG	NST	243,497	4	0.016
NHS Wolverhampton CCG	WOL	298,979	3	0.010

Cystic Fibrosis (Inpatient)

Activity data - Inpatient admissions with (IR flag 10Z) Cystic Fibrosis (2018/19).

Indicative level of need – Number of patients with an inpatient admission during the last 10 years where the primary or secondary diagnosis field contained a diagnosis code for cystic fibrosis (E840, E841, E848, E849 or P75X); source: SUS+. The rational for this being that cystic fibrosis is a longstanding condition and most patients with the condition are likely to have required an admission during a ten-year period. Thus, identifying all patients with an admission during this period is likely to be a reasonable proxy for all patients with the condition.

Cystic Fibrosis (Inpatient)

Cystic Fibrosis (Inpatient)
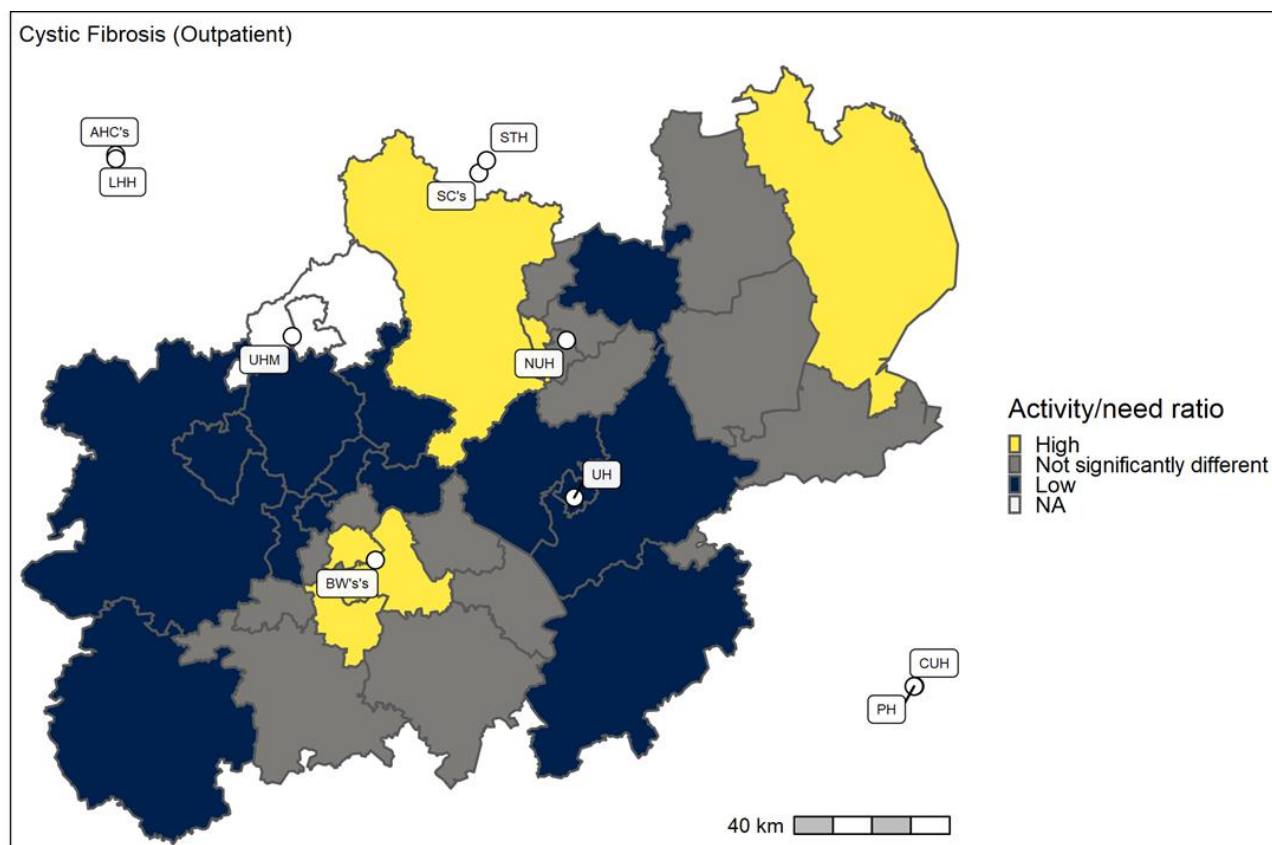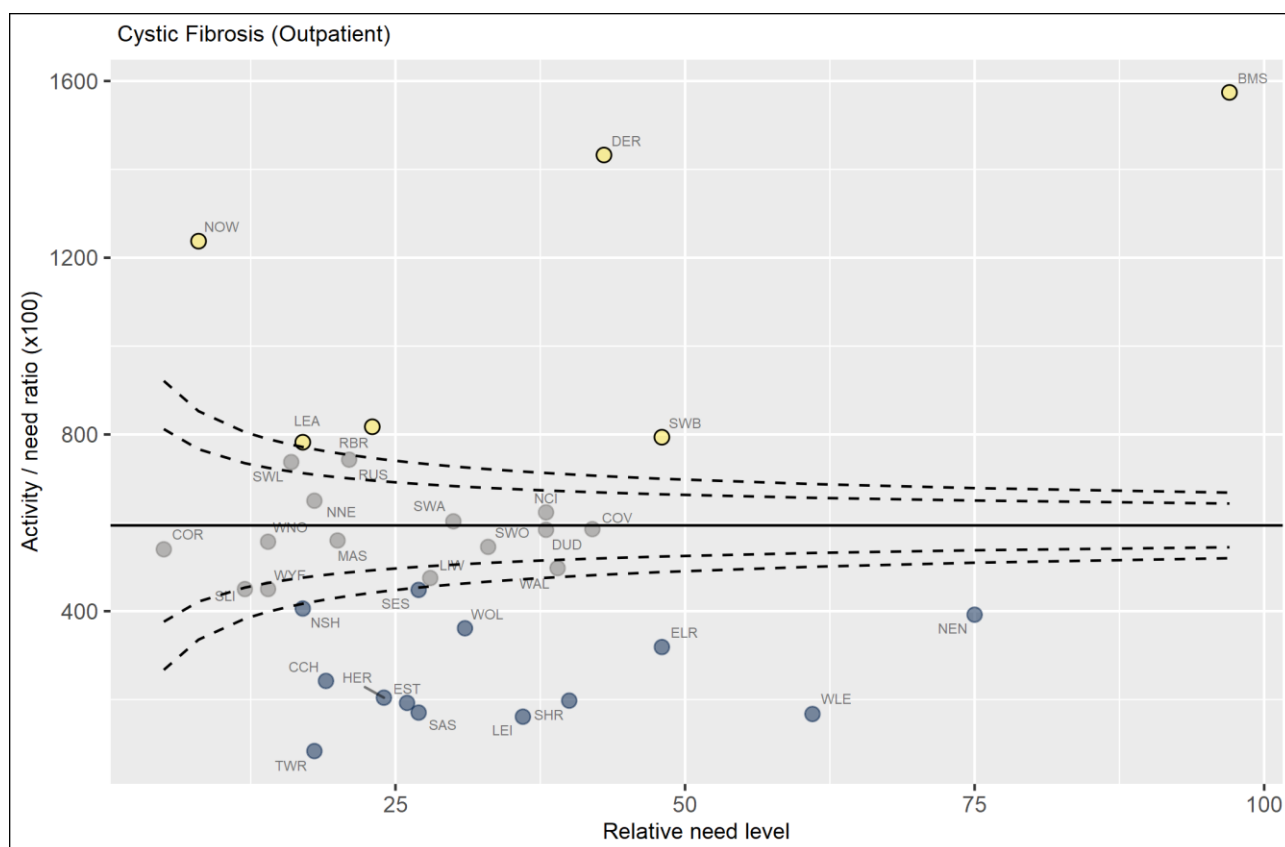
Activity and need data by CCG. Cystic fibrosis (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/need ratio
High				
NHS Derby and Derbyshire CCG	DER	43	191	444.2
NHS Newark and Sherwood CCG	NSH	17	56	329.4
NHS Lincolnshire East CCG	LEA	17	51	300.0
NHS Birmingham and Solihull CCG	BMS	97	237	244.3
NHS South West Lincolnshire CCG	SWL	16	38	237.5
NHS Nene CCG	NEN	75	151	201.3
Not significantly different				
NHS Corby CCG	COR	5	12	240.0
NHS South Lincolnshire CCG	SLI	12	25	208.3
NHS Mansfield and Ashfield CCG	MAS	20	40	200.0
NHS Sandwell and West Birmingham CCG	SWB	48	68	141.7
NHS Nottingham West CCG	NOW	8	11	137.5
NHS Nottingham City CCG	NCI	38	50	131.6
NHS Telford and Wrekin CCG	TWR	18	22	122.2
NHS Nottingham North and East CCG	NNE	18	20	111.1
NHS Lincolnshire West CCG	LIW	28	31	110.7
NHS Warwickshire North CCG	WNO	14	15	107.1
NHS Walsall CCG	WAL	39	41	105.1
NHS Stafford and Surrounds CCG	SAS	27	28	103.7
NHS Dudley CCG	DUD	38	39	102.6
NHS Redditch and Bromsgrove CCG	RBR	23	23	100.0
NHS West Leicestershire CCG	WLE	61	60	98.4
NHS North Staffordshire CCG	NST	55	54	98.2
NHS East Leicestershire and Rutland CCG	ELR	48	46	95.8
NHS Coventry and Rugby CCG	COV	42	40	95.2
NHS South Warwickshire CCG	SWA	30	27	90.0
NHS South Worcestershire CCG	SWO	33	29	87.9
NHS Leicester City CCG	LEI	36	30	83.3
NHS East Staffordshire CCG	EST	26	20	76.9
NHS Wyre Forest CCG	WYF	14	10	71.4
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	27	19	70.4
Low				
NHS Wolverhampton CCG	WOL	31	20	64.5
NHS Shropshire CCG	SHR	40	24	60.0
NHS Rushcliffe CCG	RUS	21	12	57.1
NHS Stoke on Trent CCG	SOT	55	28	50.9
NHS Cannock Chase CCG	CCH	19	9	47.4
NHS Herefordshire CCG	HER	24	7	29.2

Cystic Fibrosis (Outpatient)

Activity data - Outpatient attendances with (IR flag 10Z) Cystic Fibrosis (2018/19).

Indicative level of need – Number of patients with an inpatient admission during the last 10 years where the primary or secondary diagnosis field contained a diagnosis code for cystic fibrosis (E840, E841, E848, E849 or P75X); source: SUS+. The rational for this being that cystic fibrosis is a longstanding condition and most patients with the condition are likely to have required an admission during a ten year period. Thus, identifying all patients with an admission during this period is likely to be a reasonable proxy for all patients with the condition.

Cystic Fibrosis (Outpatient)

Cystic Fibrosis (Outpatient)

Activity and need data by CCG. Cystic fibrosis (Outpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Birmingham and Solihull CCG	BMS	97	1,527	1,574.2
NHS Derby and Derbyshire CCG	DER	43	616	1,432.6
NHS Nottingham West CCG	NOW	8	99	1,237.5
NHS Redditch and Bromsgrove CCG	RBR	23	188	817.4
NHS Sandwell and West Birmingham CCG	SWB	48	381	793.8
NHS Lincolnshire East CCG	LEA	17	133	782.4
Not significantly different				
NHS Rushcliffe CCG	RUS	21	156	742.9
NHS South West Lincolnshire CCG	SWL	16	118	737.5
NHS Nottingham North and East CCG	NNE	18	117	650.0
NHS Nottingham City CCG	NCI	38	237	623.7
NHS South Warwickshire CCG	SWA	30	181	603.3
NHS Coventry and Rugby CCG	COV	42	246	585.7
NHS Dudley CCG	DUD	38	222	584.2
NHS Mansfield and Ashfield CCG	MAS	20	112	560.0
NHS Warwickshire North CCG	WNO	14	78	557.1
NHS South Worcestershire CCG	SWO	33	180	545.5
NHS Corby CCG	COR	5	27	540.0
NHS Walsall CCG	WAL	39	194	497.4
NHS Lincolnshire West CCG	LIW	28	133	475.0
NHS South Lincolnshire CCG	SLI	12	54	450.0
NHS Wyre Forest CCG	WYF	14	63	450.0
Low				
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	27	121	448.1
NHS Newark and Sherwood CCG	NSH	17	69	405.9
NHS Nene CCG	NEN	75	294	392.0
NHS Wolverhampton CCG	WOL	31	112	361.3
NHS East Leicestershire and Rutland CCG	ELR	48	153	318.8
NHS Cannock Chase CCG	CCH	19	46	242.1
NHS Herefordshire CCG	HER	24	49	204.2
NHS Shropshire CCG	SHR	40	79	197.5
NHS East Staffordshire CCG	EST	26	50	192.3
NHS Stafford and Surrounds CCG	SAS	27	46	170.4
NHS West Leicestershire CCG	WLE	61	102	167.2
NHS Leicester City CCG	LEI	36	58	161.1
NHS Telford and Wrekin CCG	TWR	18	15	83.3

4.1.2   Hepatobiliary and Pancreas

There were three service lines within the Hepatobiliary and Pancreas activity category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. These are:

- Cancer: Liver (inpatient),
- Cancer: Pancreatic (inpatient) and
- Hepatobiliary and Pancreas (outpatient).

Cancer: Liver (Inpatient)

Activity data - Inpatient admissions with (IR flag 01W) Cancer: Liver (2018/19).

Indicative level of need – 10 year Prevalence of cancer of the Liver and Intrahepatic Bile Ducts. Source: Cancer Prevalence data Public Health England 2018[7]. Long term cancer prevalence is not an ideal indicator of current need within a CCG but is considered better than a population based numerator.

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[7] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Cancer: Liver (Inpatient)

Cancer: Liver (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low
- NA

40 km
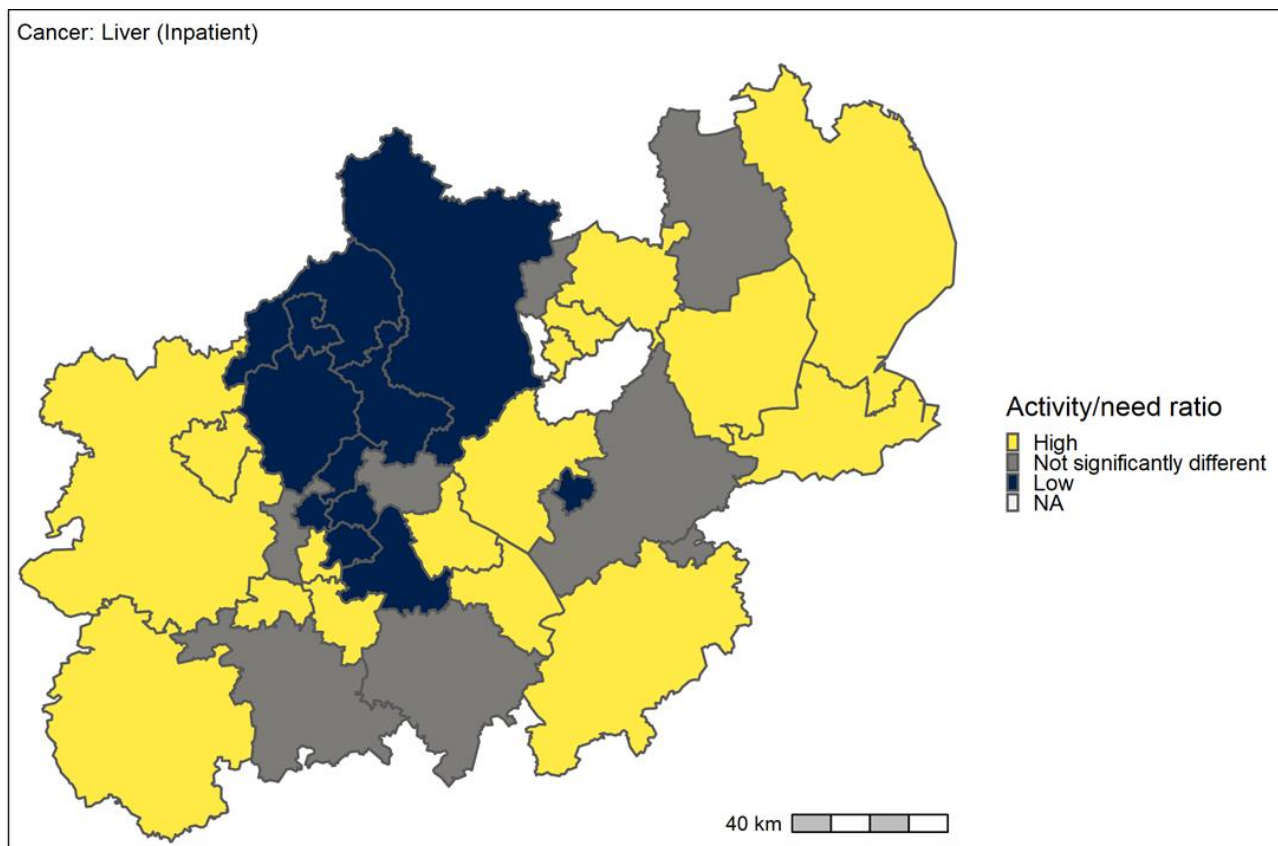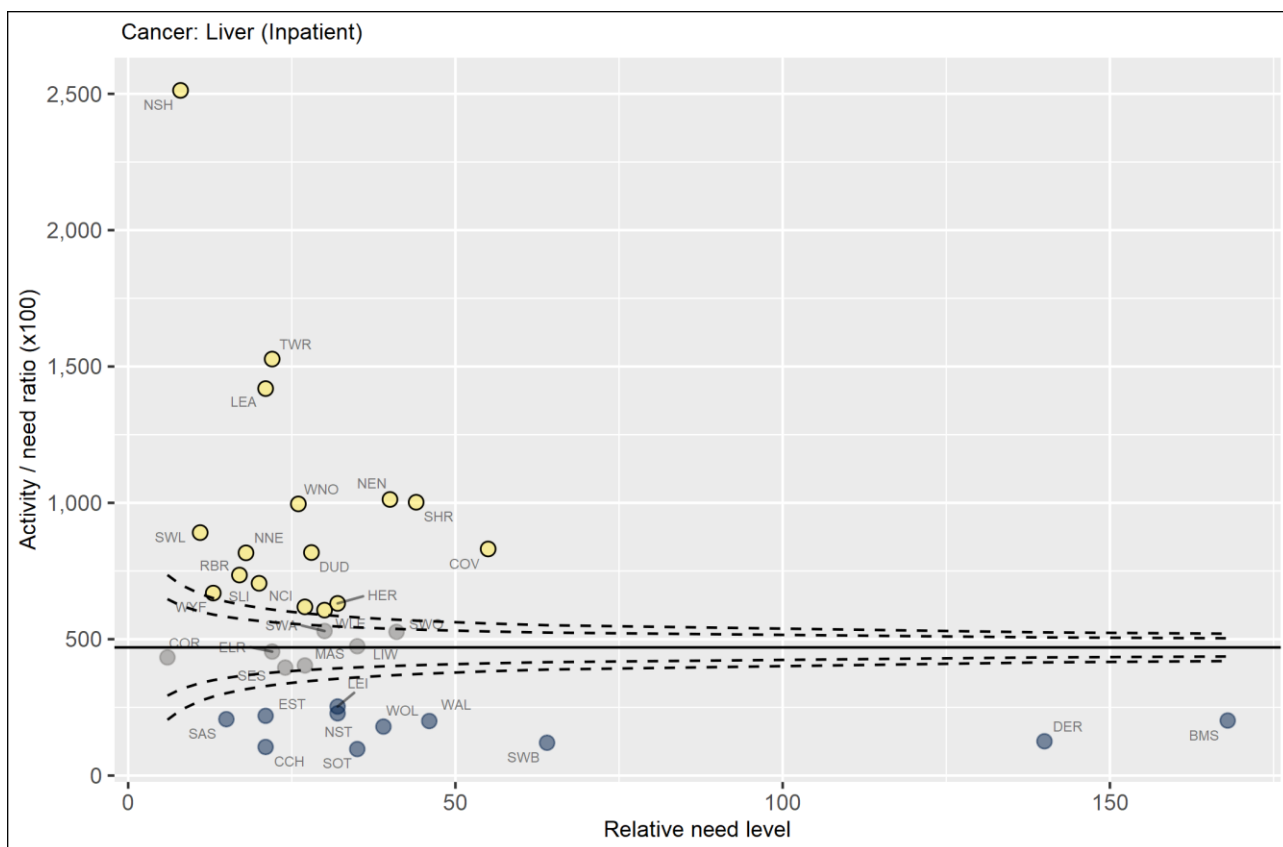
Activity and need data by CCG. Cancer: Liver (Inpatient).

Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/need ratio
High				
NHS Newark and Sherwood CCG	NSH	8	201	2,512.5
NHS Telford and Wrekin CCG	TWR	22	336	1,527.3
NHS Lincolnshire East CCG	LEA	21	298	1,419.0
NHS Nene CCG	NEN	40	405	1,012.5
NHS Shropshire CCG	SHR	44	441	1,002.3
NHS Warwickshire North CCG	WNO	26	259	996.2
NHS South West Lincolnshire CCG	SWL	11	98	890.9
NHS Coventry and Rugby CCG	COV	55	457	830.9
NHS Dudley CCG	DUD	28	229	817.9
NHS Nottingham North and East CCG	NNE	18	147	816.7
NHS Redditch and Bromsgrove CCG	RBR	17	125	735.3
NHS South Lincolnshire CCG	SLI	20	141	705.0
NHS Wyre Forest CCG	WYF	13	87	669.2
NHS Herefordshire CCG	HER	32	202	631.2
NHS Nottingham City CCG	NCI	27	167	618.5
NHS West Leicestershire CCG	WLE	30	182	606.7
Not significantly different				
NHS South Warwickshire CCG	SWA	30	159	530.0
NHS South Worcestershire CCG	SWO	41	216	526.8
NHS Lincolnshire West CCG	LIW	35	166	474.3
NHS East Leicestershire and Rutland CCG	ELR	22	100	454.5
NHS Corby CCG	COR	6	26	433.3
NHS Mansfield and Ashfield CCG	MAS	27	109	403.7
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	24	95	395.8
Low				
NHS Leicester City CCG	LEI	32	81	253.1
NHS North Staffordshire CCG	NST	32	73	228.1
NHS East Staffordshire CCG	EST	21	46	219.0
NHS Stafford and Surrounds CCG	SAS	15	31	206.7
NHS Birmingham and Solihull CCG	BMS	168	339	201.8
NHS Walsall CCG	WAL	46	92	200.0
NHS Wolverhampton CCG	WOL	39	70	179.5
NHS Derby and Derbyshire CCG	DER	140	176	125.7
NHS Sandwell and West Birmingham CCG	SWB	64	77	120.3
NHS Cannock Chase CCG	CCH	21	22	104.8
NHS Stoke on Trent CCG	SOT	35	34	97.1

Cancer: Pancreatic (Inpatient)

Activity data - Inpatient admissions with (IR flag 19V) Cancer: Pancreatic (2018/19).

Indicative level of need – 10 year prevalence of Pancreatic Cancer. Source: Cancer Prevalence data Public Health England 2018[8]. Long term cancer prevalence is not an ideal indicator of current need within a CCG but is considered better than a population based numerator.

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[8] Public Health England and NHS (2018). Cancer Prevalence in England 23-year prevalence by demographic and geographic measures.

Cancer: Pancreatic (Inpatient)

Cancer: Pancreatic (Inpatient)
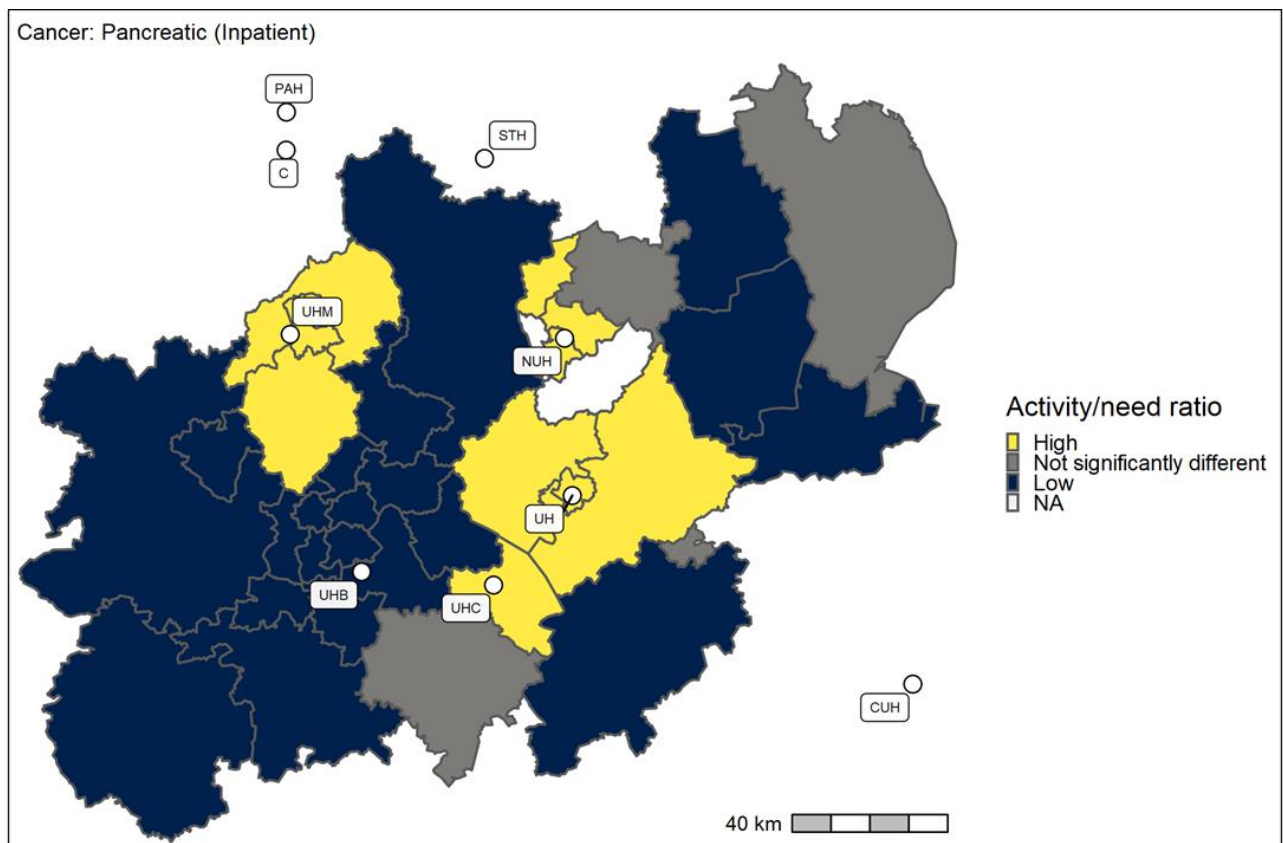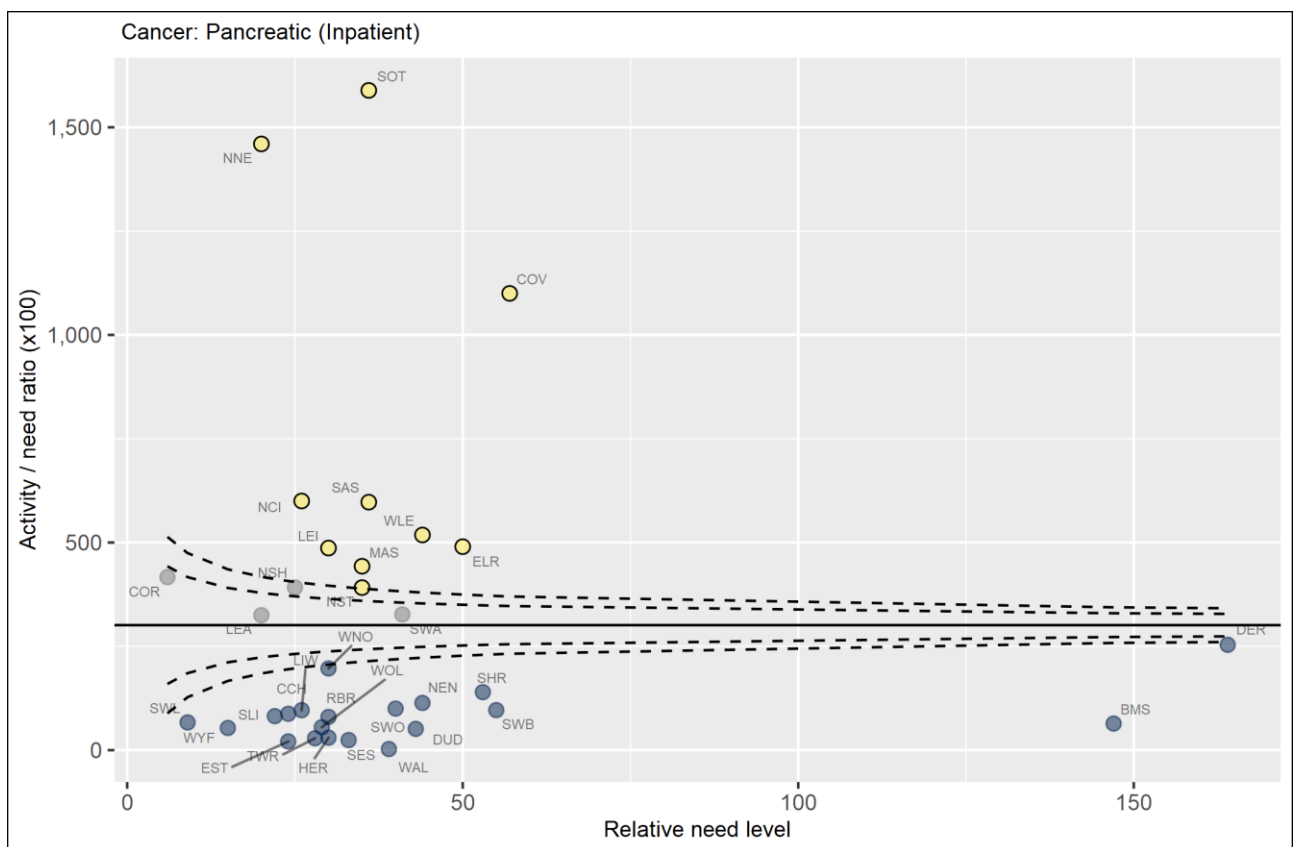
Activity and need data by CCG. Cancer: Pancreatic (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/need ratio
High				
NHS Stoke on Trent CCG	SOT	36	572	1,588.9
NHS Nottingham North and East CCG	NNE	20	292	1,460.0
NHS Coventry and Rugby CCG	COV	57	627	1,100.0
NHS Nottingham City CCG	NCI	26	156	600.0
NHS Stafford and Surrounds CCG	SAS	36	215	597.2
NHS West Leicestershire CCG	WLE	44	228	518.2
NHS East Leicestershire and Rutland CCG	ELR	50	245	490.0
NHS Leicester City CCG	LEI	30	146	486.7
NHS Mansfield and Ashfield CCG	MAS	35	155	442.9
NHS North Staffordshire CCG	NST	35	137	391.4
Not significantly different				
NHS Corby CCG	COR	6	25	416.7
NHS Newark and Sherwood CCG	NSH	25	98	392.0
NHS South Warwickshire CCG	SWA	41	134	326.8
NHS Lincolnshire East CCG	LEA	20	65	325.0
Low				
NHS Derby and Derbyshire CCG	DER	164	416	253.7
NHS Warwickshire North CCG	WNO	30	59	196.7
NHS Shropshire CCG	SHR	53	74	139.6
NHS Nene CCG	NEN	44	50	113.6
NHS South Worcestershire CCG	SWO	40	40	100.0
NHS Sandwell and West Birmingham CCG	SWB	55	53	96.4
NHS Lincolnshire West CCG	LIW	26	25	96.2
NHS Cannock Chase CCG	CCH	24	21	87.5
NHS South Lincolnshire CCG	SLI	22	18	81.8
NHS Redditch and Bromsgrove CCG	RBR	30	24	80.0
NHS South West Lincolnshire CCG	SWL	9	6	66.7
NHS Birmingham and Solihull CCG	BMS	147	94	63.9
NHS Wolverhampton CCG	WOL	29	16	55.2
NHS Wyre Forest CCG	WYF	15	8	53.3
NHS Dudley CCG	DUD	43	22	51.2
NHS Herefordshire CCG	HER	30	9	30.0
NHS Telford and Wrekin CCG	TWR	28	8	28.6
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	33	8	24.2
NHS East Staffordshire CCG	EST	24	5	20.8
NHS Walsall CCG	WAL	39	1	2.6

Hepatobiliary and Pancreas (Outpatient)

Activity data - Outpatient attendances with (IR flag 19Z) Hepatobiliary and Pancreas (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this prescribed service line as it covers a wide range of treatment conditions (and associated procedures). We have therefore used the General and acute weighted CCG population as a proxy for need in this instance.
Limitations: The general and acute weighted population is a general indicator of overall healthcare need within a CCG. It is based on the CCG population but is adjusted to take account of a number of factors related to healthcare need such as age and gender. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

Hepatobiliary And Pancreas (Outpatient)

Hepatobiliary And Pancreas (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

40 km

Activity and need data by CCG. Hepatobiliary and Pancreas (Outpatient).
Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Birmingham and Solihull CCG	BMS	1,271,116	6,092	4.793
NHS Redditch and Bromsgrove CCG	RBR	184,267	741	4.021
NHS Sandwell and West Birmingham CCG	SWB	539,975	1,612	2.985
NHS Dudley CCG	DUD	372,413	958	2.572
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	243,974	622	2.549
NHS South Worcestershire CCG	SWO	328,858	834	2.536
NHS Walsall CCG	WAL	307,277	757	2.464
NHS Telford and Wrekin CCG	TWR	187,682	455	2.424
NHS Wyre Forest CCG	WYF	131,646	318	2.416
NHS Cannock Chase CCG	CCH	156,366	347	2.219
NHS Wolverhampton CCG	WOL	298,979	660	2.208
NHS Herefordshire CCG	HER	203,157	444	2.185
Not significantly different				
NHS Nottingham West CCG	NOW	102,736	213	2.073
NHS Stafford and Surrounds CCG	SAS	168,092	323	1.922
NHS South Warwickshire CCG	SWA	299,193	569	1.902
NHS Nottingham City CCG	NCI	335,645	622	1.853
NHS Shropshire CCG	SHR	360,838	651	1.804
NHS Nottingham North and East CCG	NNE	171,057	263	1.537
Low				
NHS Warwickshire North CCG	WNO	205,431	303	1.475
NHS North Staffordshire CCG	NST	243,497	317	1.302
NHS Corby CCG	COR	77,088	98	1.271
NHS Stoke on Trent CCG	SOT	314,622	366	1.163
NHS Rushcliffe CCG	RUS	128,932	138	1.070
NHS West Leicestershire CCG	WLE	376,852	367	0.974
NHS East Staffordshire CCG	EST	147,461	130	0.882
NHS Nene CCG	NEN	656,778	574	0.874
NHS Coventry and Rugby CCG	COV	482,461	406	0.842
NHS Derby and Derbyshire CCG	DER	1,133,256	936	0.826
NHS Newark and Sherwood CCG	NSH	154,593	119	0.770
NHS East Leicestershire and Rutland CCG	ELR	334,636	242	0.723
NHS Leicester City CCG	LEI	333,532	175	0.525
NHS Mansfield and Ashfield CCG	MAS	226,464	113	0.499
NHS South West Lincolnshire CCG	SWL	145,295	46	0.317
NHS Lincolnshire West CCG	LIW	241,922	73	0.302
NHS Lincolnshire East CCG	LEA	310,316	79	0.255
NHS South Lincolnshire CCG	SLI	186,991	36	0.193

4.1.3 Specialised Endocrinology

There was just one service line within the Specialised Endocrinology category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. This was:

- Endocrinology (outpatient).

Endocrinology (Outpatient)

Activity data - Outpatient attendances with (IR flag 27Z) Endocrinology plus attendances with the NPoC CRG code AO3 (Specialised Endocrinology) but did not have a prescribed service line code recorded.

Indicative level of need – A directly related indicator or quantification of need could not be found for this service line as it covers a wide range of treatment conditions related to the endocrine glands and hormones. We have therefore used the General and acute weighted CCG population as a proxy for need in this instance.

Limitations: The general and acute weighted population is a general indicator of overall healthcare need within a CCG. It is based on the CCG population but is adjusted to take account of a number of factors related to healthcare need such as age and gender. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

Specialised Endocrinology (Outpatient)

Specialised Endocrinology (Outpatient)

Activity/need ratio
- High
- Low
- Not significantly different

40 km

Activity and need data by CCG. Specialised Endocrinology (Outpatient).

Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Birmingham and Solihull CCG	BMS	1,271,116	6,932	5.453
NHS Newark and Sherwood CCG	NSH	154,593	649	4.198
NHS Stoke on Trent CCG	SOT	314,622	1,308	4.157
NHS Lincolnshire West CCG	LIW	241,922	1,001	4.138
NHS North Staffordshire CCG	NST	243,497	912	3.745
NHS Lincolnshire East CCG	LEA	310,316	1,075	3.464
NHS Wolverhampton CCG	WOL	298,979	1,023	3.422
NHS Stafford and Surrounds CCG	SAS	168,092	525	3.123
NHS Warwickshire North CCG	WNO	205,431	629	3.062
NHS Mansfield and Ashfield CCG	MAS	226,464	682	3.012
Not significantly different				
NHS Shropshire CCG	SHR	360,838	1,050	2.910
NHS Sandwell and West Birmingham CCG	SWB	539,975	1,545	2.861
NHS South West Lincolnshire CCG	SWL	145,295	414	2.849
NHS Redditch and Bromsgrove CCG	RBR	184,267	525	2.849
NHS Telford and Wrekin CCG	TWR	187,682	530	2.824
NHS Cannock Chase CCG	CCH	156,366	439	2.808
NHS Nottingham West CCG	NOW	102,736	279	2.716
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	243,974	650	2.664
NHS Dudley CCG	DUD	372,413	978	2.626
NHS Walsall CCG	WAL	307,277	777	2.529
NHS South Lincolnshire CCG	SLI	186,991	438	2.342
Low				
NHS Rushcliffe CCG	RUS	128,932	288	2.234
NHS Nottingham North and East CCG	NNE	171,057	381	2.227
NHS Derby and Derbyshire CCG	DER	1,133,256	2,487	2.195
NHS South Warwickshire CCG	SWA	299,193	519	1.735
NHS Nottingham City CCG	NCI	335,645	525	1.564
NHS West Leicestershire CCG	WLE	376,852	589	1.563
NHS East Leicestershire and Rutland CCG	ELR	334,636	480	1.434
NHS Leicester City CCG	LEI	333,532	452	1.355
NHS Herefordshire CCG	HER	203,157	265	1.304
NHS Nene CCG	NEN	656,778	854	1.300
NHS South Worcestershire CCG	SWO	328,858	426	1.295
NHS Corby CCG	COR	77,088	89	1.155
NHS Wyre Forest CCG	WYF	131,646	140	1.063
NHS East Staffordshire CCG	EST	147,461	141	0.956
NHS Coventry and Rugby CCG	COV	482,461	436	0.904

4.1.4 Vascular Disease

There was just one service line within the Vascular Disease category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. This was:

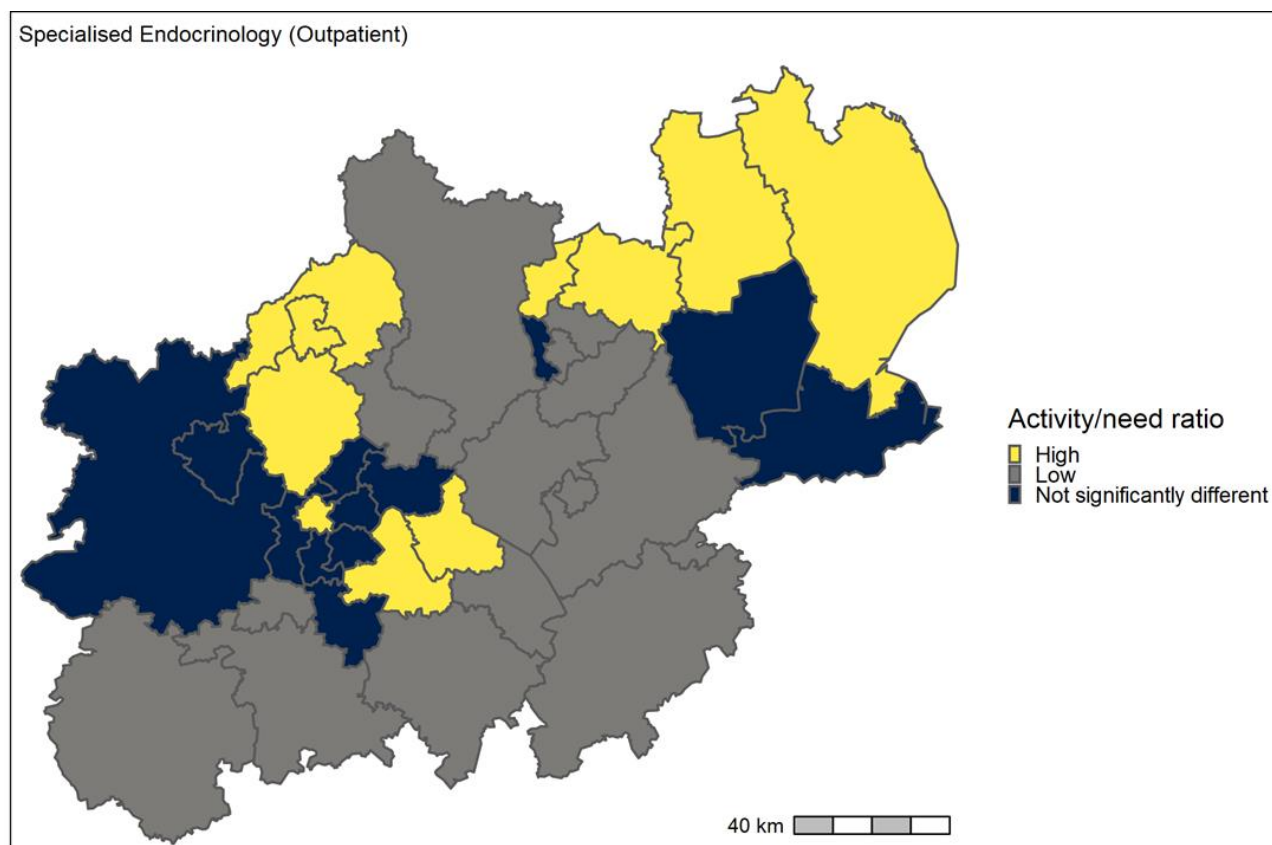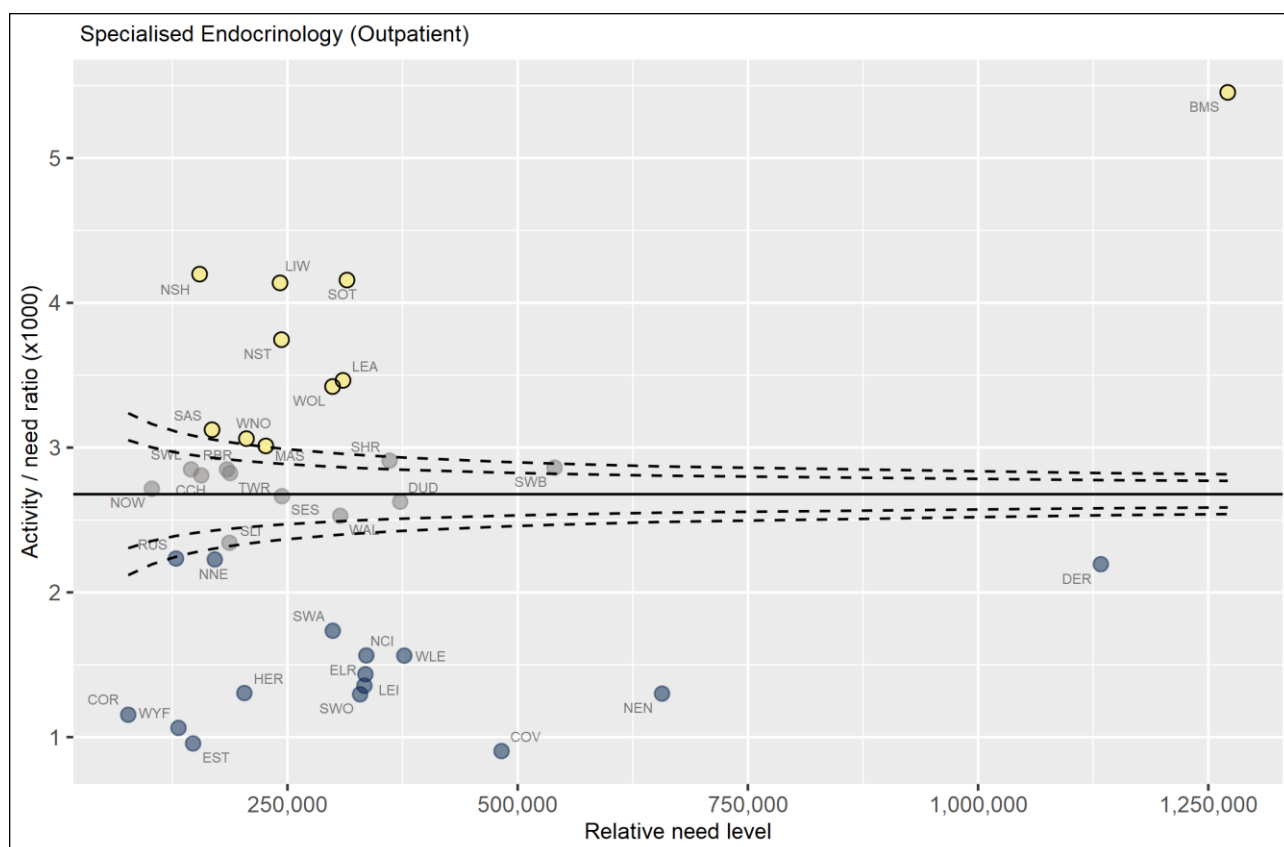- Vascular Disease (outpatient).

Vascular Disease (Outpatient)

Activity data - Outpatient attendances with (IR flag 27Z) Vascular Disease (2018/19) plus attendances that NPoC CRG code AO4 (Vascular Disease) but did not have a prescribed service line code recorded.

Indicative level of need – QOF prevalence for peripheral arterial disease (2018/19)[9].

Limitations: QOF prevalence data may underestimate true population prevalence. Importantly this underestimation may vary by practice and by CCG such that a high utilisation rate for a CCG on this service line may reflect under recording of patients with the condition rather than a higher level of access.

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[9] NHS England (2019). Quality and Outcomes Framework 2018-19 Recorded disease prevalence, achievements, and exceptions Clinical Commissioning Group (CCG) level.

Vascular Disease (Outpatient)

Vascular Disease (Outpatient)

Activity/need ratio
- High
- Low
- Not significantly different

Activity and need data by CCG. Vascular Disease (Outpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Lincolnshire East CCG	LEA	2,262	1,303	57.6
NHS Stafford and Surrounds CCG	SAS	986	557	56.5
NHS Nottingham North and East CCG	NNE	778	421	54.1
NHS Telford and Wrekin CCG	TWR	1,355	670	49.4
NHS Shropshire CCG	SHR	2,729	1,296	47.5
NHS East Staffordshire CCG	EST	717	327	45.6
NHS South West Lincolnshire CCG	SWL	996	433	43.5
NHS Nottingham West CCG	NOW	676	281	41.6
NHS Lincolnshire West CCG	LIW	1,408	582	41.3
NHS Rushcliffe CCG	RUS	624	257	41.2
NHS North Staffordshire CCG	NST	1,499	578	38.6
NHS Nottingham City CCG	NCI	1,812	685	37.8
NHS Stoke on Trent CCG	SOT	2,345	856	36.5
NHS Nene CCG	NEN	4,188	1,374	32.8
NHS Cannock Chase CCG	CCH	914	296	32.4
Not significantly different				
NHS East Leicestershire and Rutland CCG	ELR	1,807	511	28.3
NHS Mansfield and Ashfield CCG	MAS	1,230	336	27.3
NHS West Leicestershire CCG	WLE	2,284	621	27.2
NHS Leicester City CCG	LEI	1,506	409	27.2
NHS Birmingham and Solihull CCG	BMS	6,773	1,823	26.9
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	1,219	313	25.7
NHS South Worcestershire CCG	SWO	1,858	475	25.6
NHS Newark and Sherwood CCG	NSH	963	239	24.8
Low				
NHS Redditch and Bromsgrove CCG	RBR	1,090	237	21.7
NHS Derby and Derbyshire CCG	DER	8,866	1,819	20.5
NHS Dudley CCG	DUD	2,073	422	20.4
NHS South Lincolnshire CCG	SLI	1,143	226	19.8
NHS Wyre Forest CCG	WYF	919	168	18.3
NHS Corby CCG	COR	672	122	18.2
NHS Warwickshire North CCG	WNO	1,174	167	14.2
NHS Sandwell and West Birmingham CCG	SWB	2,588	361	13.9
NHS South Warwickshire CCG	SWA	1,532	210	13.7
NHS Walsall CCG	WAL	1,878	85	4.5
NHS Coventry and Rugby CCG	COV	2,780	95	3.4
NHS Herefordshire CCG	HER	1,328	43	3.2
NHS Wolverhampton CCG	WOL	1,631	18	1.1

4.1.5   Cardiothoracic Services

There were four services lines within the cardiothoracic services category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. These were :
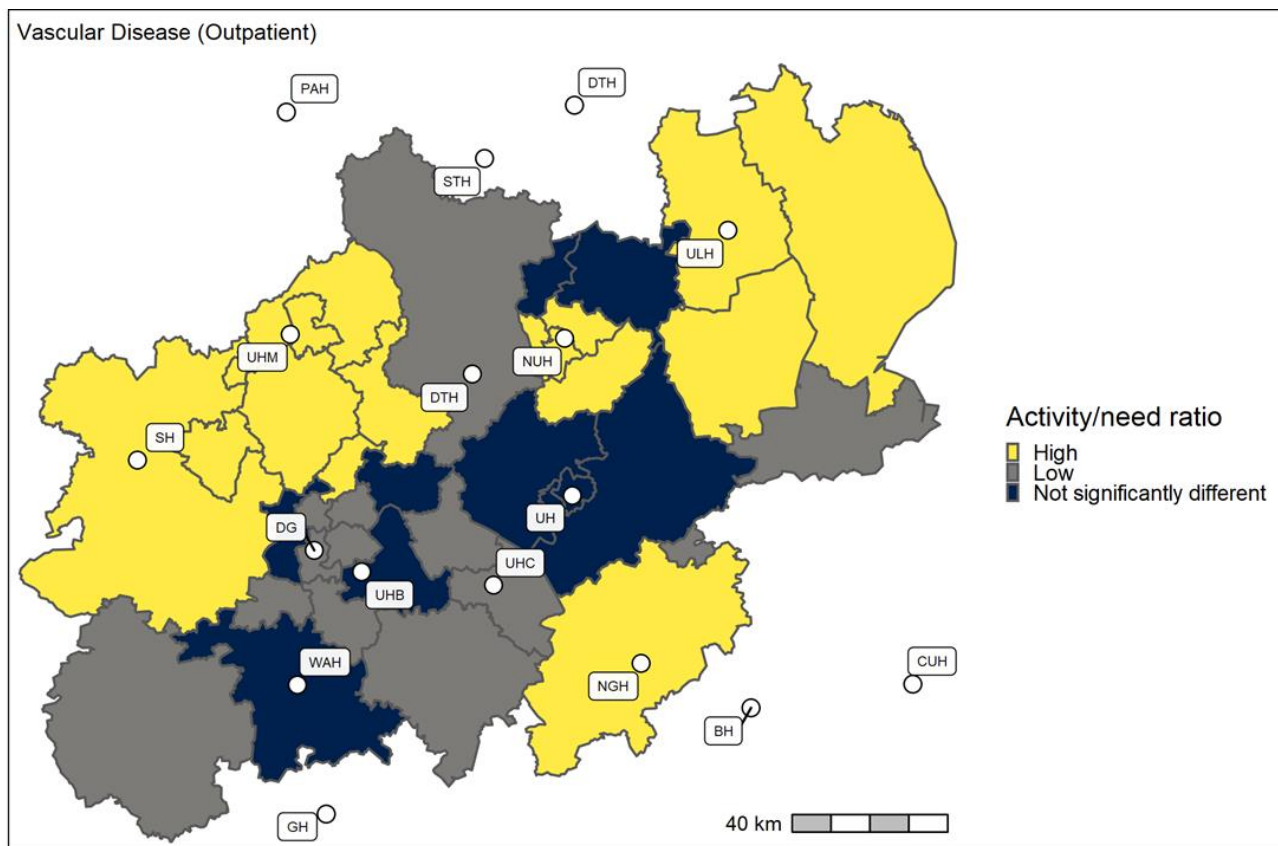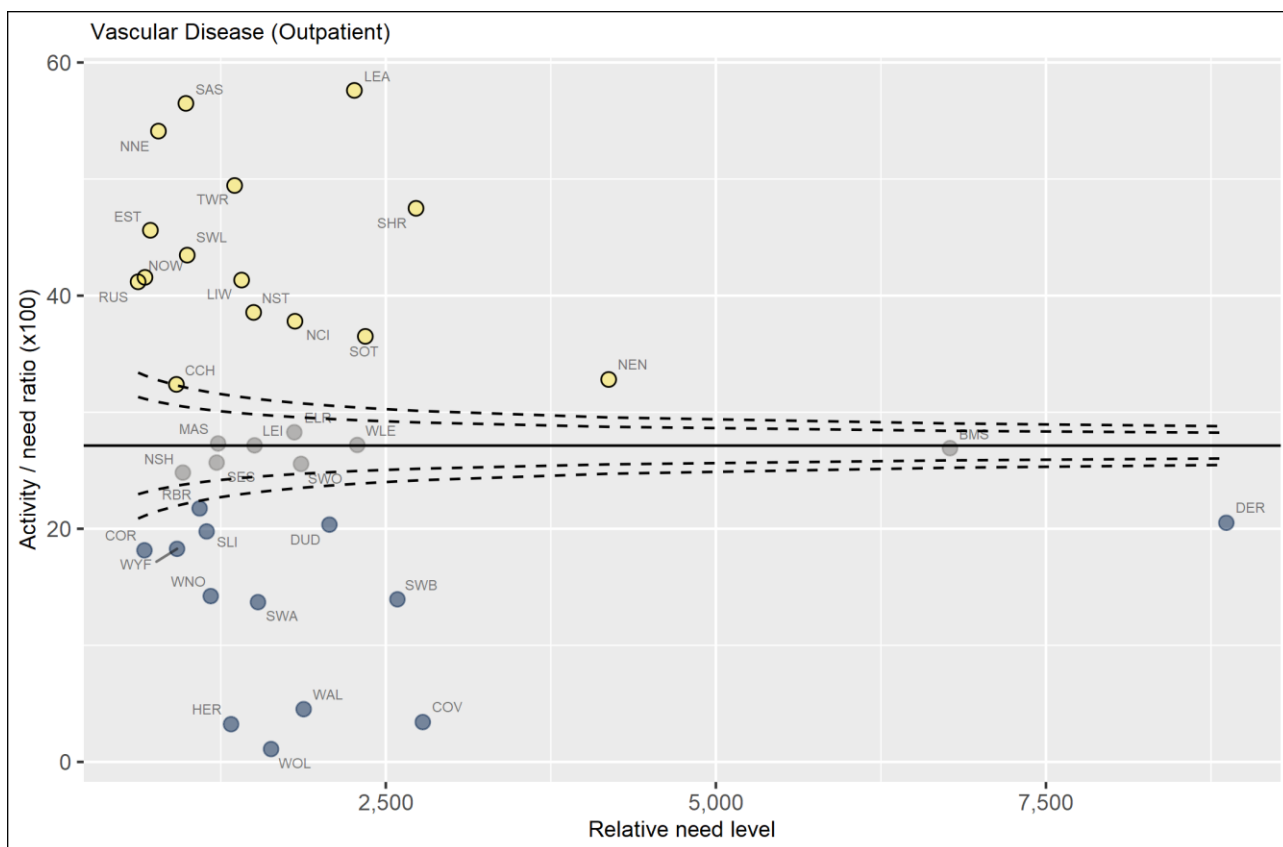
- Cardiology: pPCI and structural heart disease complex invasive cardiology (inpatient),
- Cardiac Surgery (inpatient),
- Cardiology: Cardiac Electrophysiology and Ablation Services and Specialised Cardiology (inpatient) and
- Cardiac Surgery (outpatient).

Cardiology: pPCI And Structural Heart Disease Complex Invasive Cardiology (Inpatient)

Activity data - Inpatient admissions with (IR flag 13F) Cardiology: pPCI and Structural Heart Disease Complex Invasive Cardiology (2018/19).

Indicative level of need – QOF prevalence for coronary heart disease (2018/19) [10]. Activity under this service line relates to a number of complex heart surgery procedures typically angioplasty and heart repair procedures as such the prevalence of CHD is considered to be a reasonable proxy for need in this case that is better than a general indicator of need such as the weighted population.

Limitations: QOF prevalence data may underestimate true population prevalence. Importantly this underestimation may vary by practice and by CCG such that a high utilisation rate for a CCG on this service line may reflect under recording of patients with the condition rather than a higher level of access.

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[10] NHS England (2019). Quality and Outcomes Framework 2018-19 Recorded disease prevalence, achievements and exceptions Clinical Commissioning Group (CCG) level.

Cardiology: pPCI And Structural Heart Disease Complex Invasive Cardiology (Inpatient)

Cardiology: pPCI And Structural Heart Disease Complex Invasive Cardiology (Inpatient)

Activity and need data by CCG. pPCI And Structural Heart Disease Complex Invasive Cardiology (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/need ratio
High				
NHS Nene CCG	NEN	20,629	783	3.8
NHS Birmingham and Solihull CCG	BMS	38,496	1,389	3.6
NHS East Leicestershire and Rutland CCG	ELR	10,556	351	3.3
Not significantly different				
NHS Corby CCG	COR	2,715	99	3.6
NHS Herefordshire CCG	HER	6,699	224	3.3
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	7,849	257	3.3
NHS Leicester City CCG	LEI	10,144	331	3.3
NHS East Staffordshire CCG	EST	4,550	148	3.3
NHS Sandwell and West Birmingham CCG	SWB	17,211	551	3.2
NHS Warwickshire North CCG	WNO	5,860	186	3.2
NHS West Leicestershire CCG	WLE	11,639	369	3.2
NHS Nottingham North and East CCG	NNE	4,410	139	3.2
NHS Lincolnshire West CCG	LIW	8,127	255	3.1
NHS South Warwickshire CCG	SWA	8,710	261	3.0
NHS South Worcestershire CCG	SWO	10,222	299	2.9
NHS Coventry and Rugby CCG	COV	12,247	348	2.8
NHS Nottingham West CCG	NOW	3,897	109	2.8
NHS Telford and Wrekin CCG	TWR	5,887	161	2.7
NHS Redditch and Bromsgrove CCG	RBR	6,125	165	2.7
NHS Cannock Chase CCG	CCH	5,253	141	2.7
NHS Nottingham City CCG	NCI	8,895	235	2.6
NHS Walsall CCG	WAL	11,260	292	2.6
NHS South Lincolnshire CCG	SLI	6,685	167	2.5
NHS Wyre Forest CCG	WYF	4,453	111	2.5
NHS Wolverhampton CCG	WOL	8,879	219	2.5
NHS South West Lincolnshire CCG	SWL	5,487	135	2.5
NHS Lincolnshire East CCG	LEA	12,146	294	2.4
NHS Stafford and Surrounds CCG	SAS	5,293	124	2.3
NHS Rushcliffe CCG	RUS	4,160	87	2.1
Low				
NHS Derby and Derbyshire CCG	DER	38,208	961	2.5
NHS North Staffordshire CCG	NST	8,228	186	2.3
NHS Stoke on Trent CCG	SOT	10,421	234	2.2
NHS Shropshire CCG	SHR	11,581	257	2.2
NHS Dudley CCG	DUD	13,095	226	1.7
NHS Newark and Sherwood CCG	NSH	5,306	69	1.3
NHS Mansfield and Ashfield CCG	MAS	7,757	93	1.2

Cardiac Surgery (Inpatient)

Activity data - Inpatient admissions with (IR flag 13E) Cardiac Surgery (2018/19).

Indicative level of need – QOF prevalence for coronary heart disease (2018/19) [11]. Activity under this service line includes all activity with a treatment specialty of cardiac or cardiothoracic surgery. Whilst this may include activity resulting from conditions other that CHD the prevalence of CHD is considered to be a reasonable proxy for need in this case that is better than a general indicator of need such as the weighted population.

Limitations: QOF prevalence data may underestimate true population prevalence. Importantly this underestimation may vary by practice and by CCG such that a high utilisation rate for a CCG on this service line may reflect under recording of patients with the condition rather than a higher level of access.

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[11] NHS England (2019). Quality and Outcomes Framework 2018-19 Recorded disease prevalence, achievements and exceptions Clinical Commissioning Group (CCG) level.

Cardiac Surgery (Inpatient)

Cardiac Surgery (Inpatient)
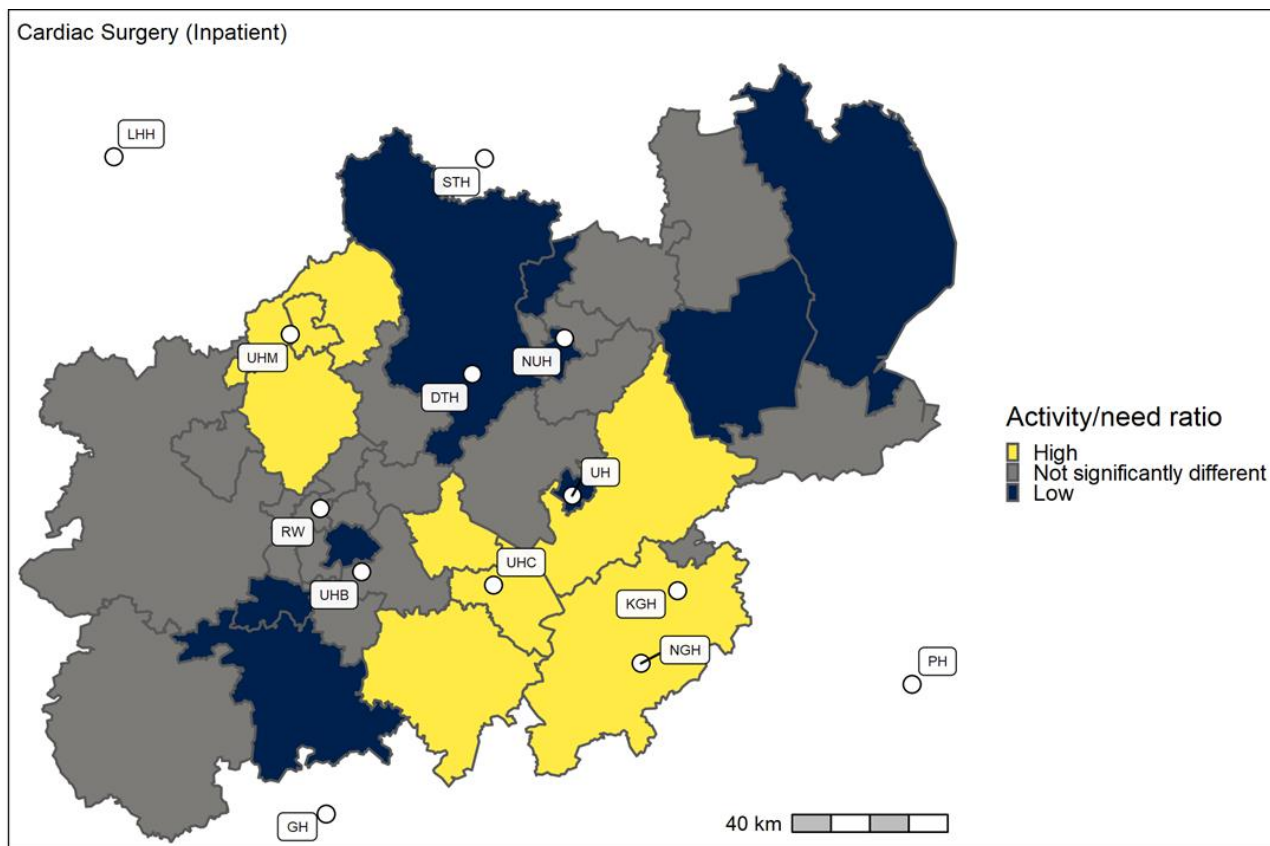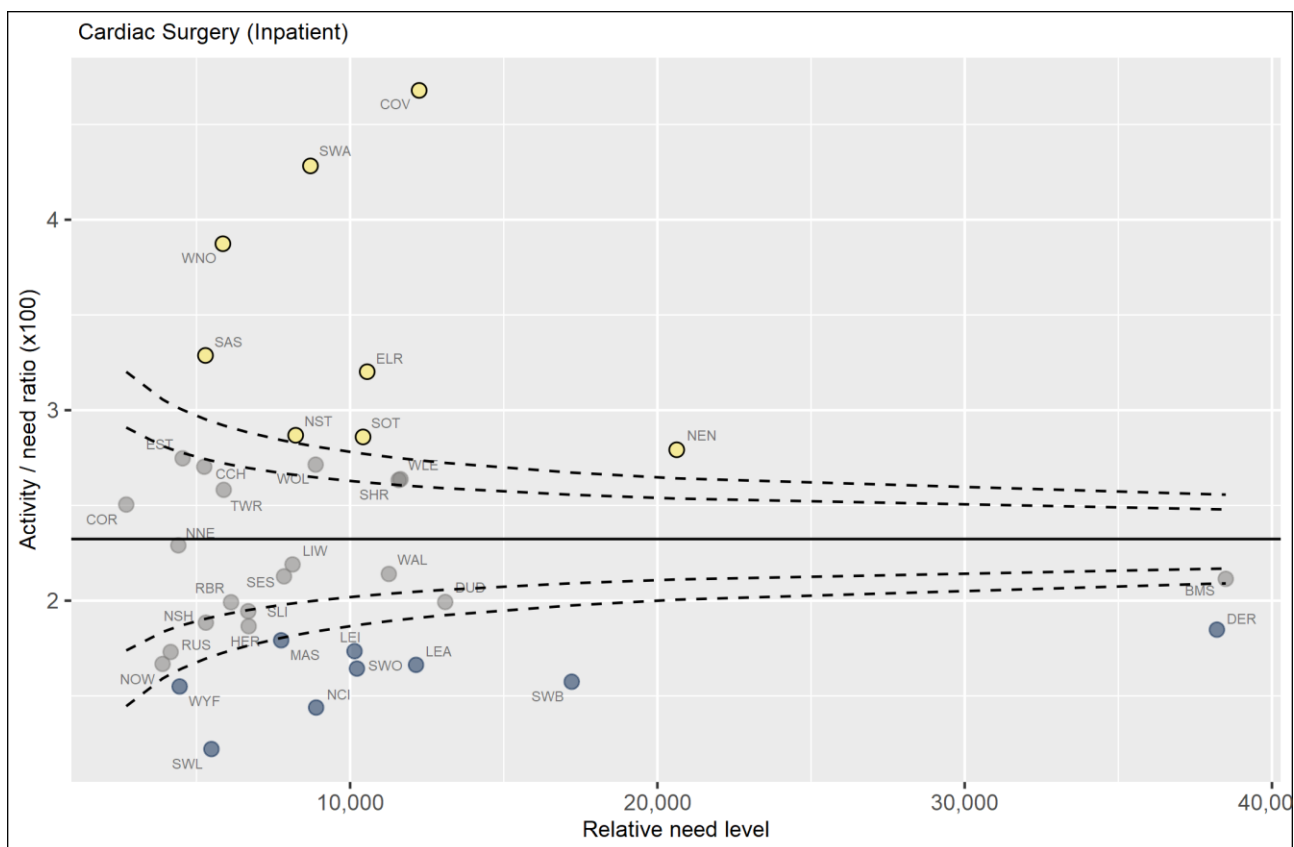
Activity and need data by CCG. Cardiac Surgery (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Coventry and Rugby CCG	COV	12,247	573	4.7
NHS South Warwickshire CCG	SWA	8,710	373	4.3
NHS Warwickshire North CCG	WNO	5,860	227	3.9
NHS Stafford and Surrounds CCG	SAS	5,293	174	3.3
NHS East Leicestershire and Rutland CCG	ELR	10,556	338	3.2
NHS North Staffordshire CCG	NST	8,228	236	2.9
NHS Stoke on Trent CCG	SOT	10,421	298	2.9
NHS Nene CCG	NEN	20,629	576	2.8
Not significantly different				
NHS East Staffordshire CCG	EST	4,550	125	2.7
NHS Wolverhampton CCG	WOL	8,879	241	2.7
NHS Cannock Chase CCG	CCH	5,253	142	2.7
NHS West Leicestershire CCG	WLE	11,639	307	2.6
NHS Shropshire CCG	SHR	11,581	305	2.6
NHS Telford and Wrekin CCG	TWR	5,887	152	2.6
NHS Corby CCG	COR	2,715	68	2.5
NHS Nottingham North and East CCG	NNE	4,410	101	2.3
NHS Lincolnshire West CCG	LIW	8,127	178	2.2
NHS Walsall CCG	WAL	11,260	241	2.1
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	7,849	167	2.1
NHS Birmingham and Solihull CCG	BMS	38,496	814	2.1
NHS Dudley CCG	DUD	13,095	261	2.0
NHS Redditch and Bromsgrove CCG	RBR	6,125	122	2.0
NHS South Lincolnshire CCG	SLI	6,685	130	1.9
NHS Newark and Sherwood CCG	NSH	5,306	100	1.9
NHS Herefordshire CCG	HER	6,699	125	1.9
NHS Rushcliffe CCG	RUS	4,160	72	1.7
NHS Nottingham West CCG	NOW	3,897	65	1.7
Low				
NHS Derby and Derbyshire CCG	DER	38,208	706	1.8
NHS Mansfield and Ashfield CCG	MAS	7,757	139	1.8
NHS Leicester City CCG	LEI	10,144	176	1.7
NHS Lincolnshire East CCG	LEA	12,146	202	1.7
NHS South Worcestershire CCG	SWO	10,222	168	1.6
NHS Sandwell and West Birmingham CCG	SWB	17,211	271	1.6
NHS Wyre Forest CCG	WYF	4,453	69	1.5
NHS Nottingham City CCG	NCI	8,895	128	1.4
NHS South West Lincolnshire CCG	SWL	5,487	67	1.2

Cardiology: Cardiac Electrophysiology and Ablation Services (Inpatient)

Activity data - Inpatient admissions with (IR flag 13B) Cardiac Electrophysiology and Ablation Services (2018/19).

Indicative level of need – QOF prevalence for coronary heart disease (2018/19) [12]. Activity under this service line relates to cardiac electrophysiology and ablation services as such the prevalence of CHD is considered to be a reasonable proxy for need in this case that is better than a general indicator of need such as the weighted population.

Limitations: QOF prevalence data may underestimate true population prevalence. Importantly this underestimation may vary by practice and by CCG such that a high utilisation rate for a CCG on this service line may reflect under recording of patients with the condition rather than a higher level of access.

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[12] NHS England (2019). Quality and Outcomes Framework 2018-19 Recorded disease prevalence, achievements and exceptions Clinical Commissioning Group (CCG) level.

Cardiology: Cardiac Electrophysiology And Ablation Services (Inpatient)

Cardiology: Cardiac Electrophysiology And Ablation Services (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low

40 km
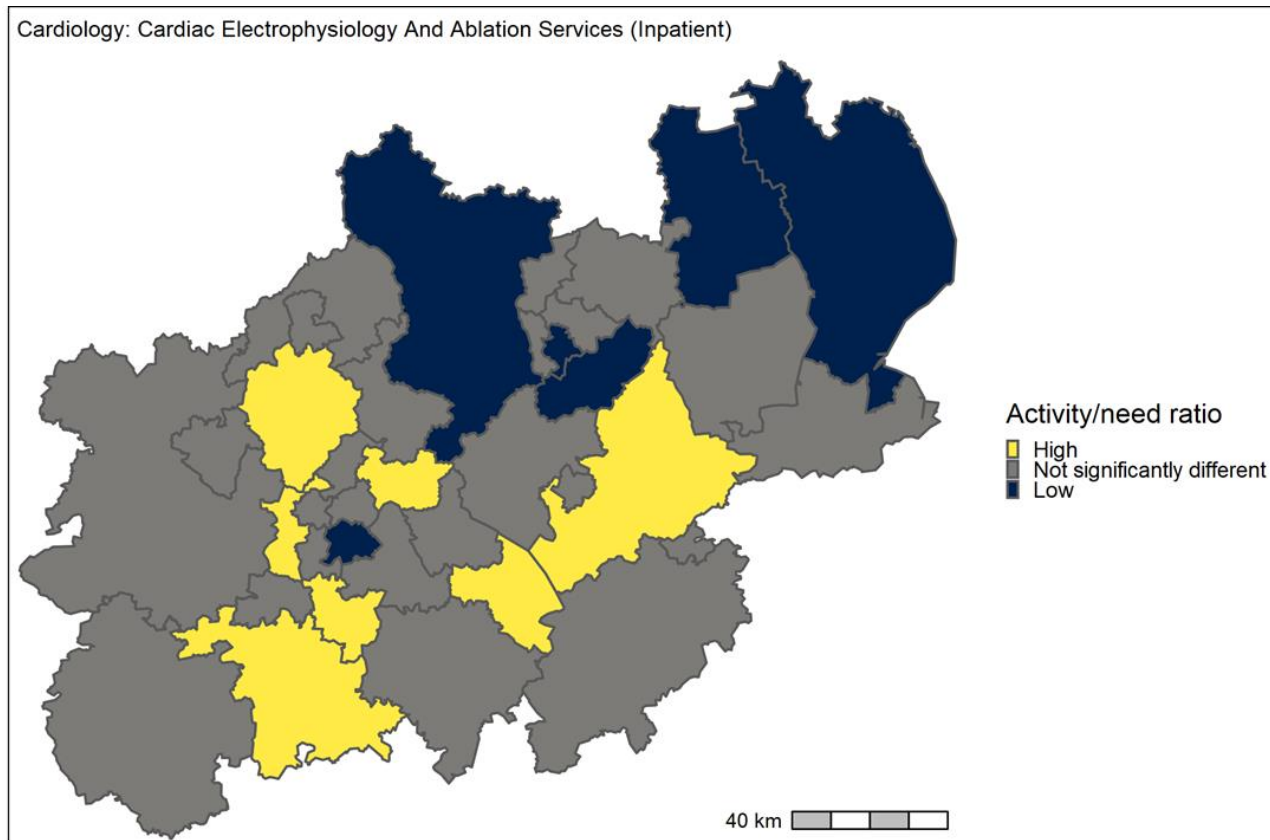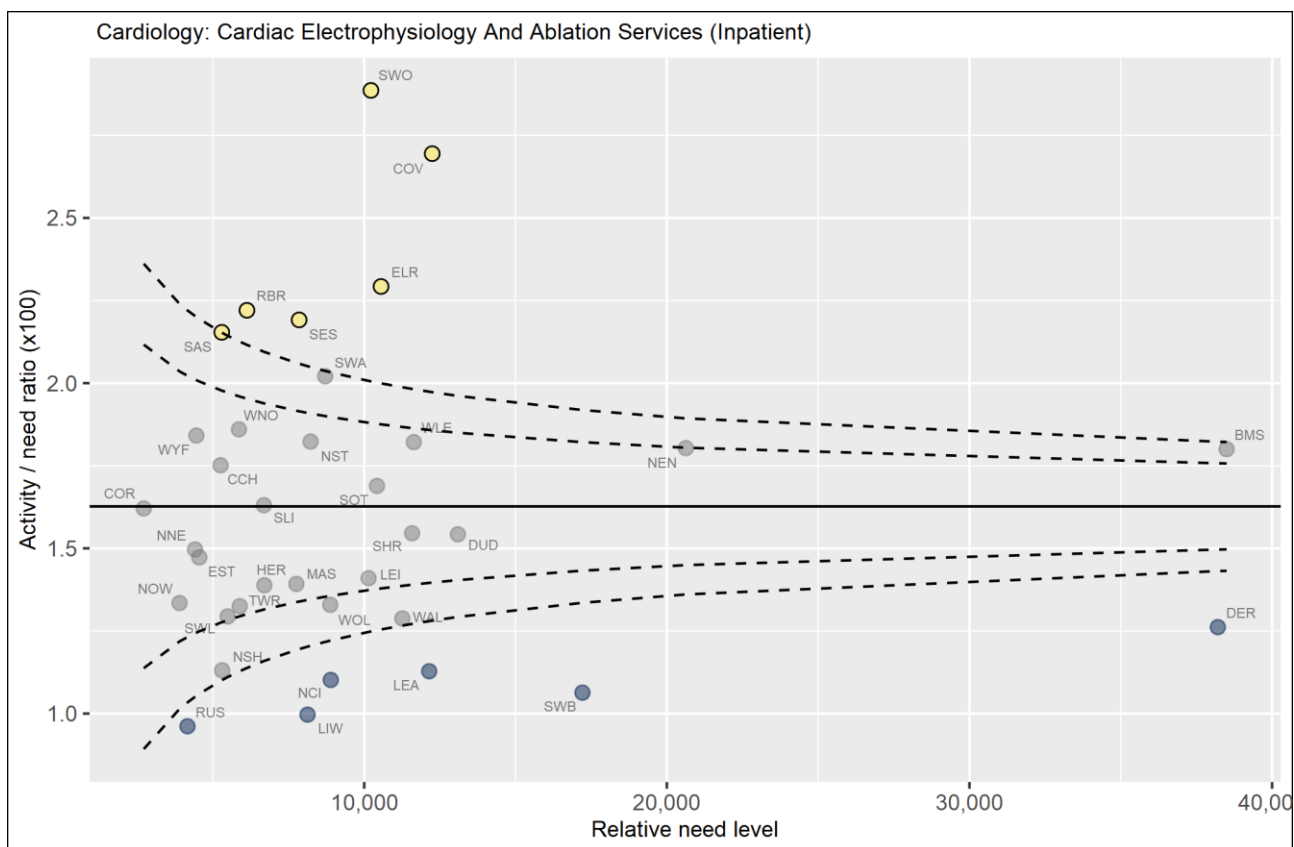
Activity and need data by CCG. Cardiac Electrophysiology and Ablation Services (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS South Worcestershire CCG	SWO	10,222	295	2.9
NHS Coventry and Rugby CCG	COV	12,247	330	2.7
NHS East Leicestershire and Rutland CCG	ELR	10,556	242	2.3
NHS Redditch and Bromsgrove CCG	RBR	6,125	136	2.2
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	7,849	172	2.2
NHS Stafford and Surrounds CCG	SAS	5,293	114	2.2
Not significantly different				
NHS South Warwickshire CCG	SWA	8,710	176	2.0
NHS Warwickshire North CCG	WNO	5,860	109	1.9
NHS Wyre Forest CCG	WYF	4,453	82	1.8
NHS North Staffordshire CCG	NST	8,228	150	1.8
NHS West Leicestershire CCG	WLE	11,639	212	1.8
NHS Nene CCG	NEN	20,629	372	1.8
NHS Birmingham and Solihull CCG	BMS	38,496	693	1.8
NHS Cannock Chase CCG	CCH	5,253	92	1.8
NHS Stoke on Trent CCG	SOT	10,421	176	1.7
NHS South Lincolnshire CCG	SLI	6,685	109	1.6
NHS Corby CCG	COR	2,715	44	1.6
NHS Shropshire CCG	SHR	11,581	179	1.5
NHS Dudley CCG	DUD	13,095	202	1.5
NHS Nottingham North and East CCG	NNE	4,410	66	1.5
NHS East Staffordshire CCG	EST	4,550	67	1.5
NHS Leicester City CCG	LEI	10,144	143	1.4
NHS Mansfield and Ashfield CCG	MAS	7,757	108	1.4
NHS Herefordshire CCG	HER	6,699	93	1.4
NHS Nottingham West CCG	NOW	3,897	52	1.3
NHS Wolverhampton CCG	WOL	8,879	118	1.3
NHS Telford and Wrekin CCG	TWR	5,887	78	1.3
NHS South West Lincolnshire CCG	SWL	5,487	71	1.3
NHS Walsall CCG	WAL	11,260	145	1.3
NHS Newark and Sherwood CCG	NSH	5,306	60	1.1
Low				
NHS Derby and Derbyshire CCG	DER	38,208	482	1.3
NHS Lincolnshire East CCG	LEA	12,146	137	1.1
NHS Nottingham City CCG	NCI	8,895	98	1.1
NHS Sandwell and West Birmingham CCG	SWB	17,211	183	1.1
NHS Lincolnshire West CCG	LIW	8,127	81	1.0
NHS Rushcliffe CCG	RUS	4,160	40	1.0

Specialised Cardiology and Cardiac Surgery Outpatients (Outpatient)

Activity data - Outpatient spells with (IR flag 13Z) Specialised Cardiology and Cardiac Surgery Outpatients (2018/19).

Indicative level of need – QOF prevalence for coronary heart disease (2018/19) [13]. Activity under this service line relates to a number of complex heart surgery procedures as such the prevalence of CHD is considered to be a reasonable proxy for need in this case that is better than a general indicator of need such as the weighted population.

Limitations: QOF prevalence data may underestimate true population prevalence. Importantly this underestimation may vary by practice and by CCG such that a high utilisation rate for a CCG on this service line may reflect under recording of patients with the condition rather than a higher level of access.

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[13] NHS England (2019). Quality and Outcomes Framework 2018-19 Recorded disease prevalence, achievements and exceptions Clinical Commissioning Group (CCG) level.

Specialised Cardiology And Cardiac Surgery Outpatients (Outpatient)

Specialised Cardiology And Cardiac Surgery Outpatients (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

Activity and need data by CCG. Specialised Cardiology and Cardiac Surgery Outpatients (Outpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Wolverhampton CCG	WOL	8,879	21,942	247.1
NHS Stafford and Surrounds CCG	SAS	5,293	11,706	221.2
NHS Cannock Chase CCG	CCH	5,253	9,786	186.3
NHS North Staffordshire CCG	NST	8,228	14,575	177.1
NHS Stoke on Trent CCG	SOT	10,421	16,964	162.8
NHS Nene CCG	NEN	20,629	26,610	129.0
NHS Corby CCG	COR	2,715	3,381	124.5
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	7,849	9,122	116.2
NHS Nottingham North and East CCG	NNE	4,410	5,069	114.9
NHS Redditch and Bromsgrove CCG	RBR	6,125	6,972	113.8
NHS Birmingham and Solihull CCG	BMS	38,496	42,019	109.2
NHS Nottingham West CCG	NOW	3,897	3,713	95.3
NHS South Worcestershire CCG	SWO	10,222	9,594	93.9
NHS Rushcliffe CCG	RUS	4,160	3,770	90.6
NHS Nottingham City CCG	NCI	8,895	8,039	90.4
NHS Wyre Forest CCG	WYF	4,453	3,470	77.9
Not significantly different				
NHS Walsall CCG	WAL	11,260	8,046	71.5
Low				
NHS East Staffordshire CCG	EST	4,550	2,873	63.1
NHS Sandwell and West Birmingham CCG	SWB	17,211	10,839	63.0
NHS Telford and Wrekin CCG	TWR	5,887	2,496	42.4
NHS Dudley CCG	DUD	13,095	5,306	40.5
NHS East Leicestershire and Rutland CCG	ELR	10,556	4,223	40.0
NHS South Warwickshire CCG	SWA	8,710	3,089	35.5
NHS Shropshire CCG	SHR	11,581	3,753	32.4
NHS West Leicestershire CCG	WLE	11,639	3,434	29.5
NHS Newark and Sherwood CCG	NSH	5,306	1,554	29.3
NHS Warwickshire North CCG	WNO	5,860	1,664	28.4
NHS Leicester City CCG	LEI	10,144	2,500	24.6
NHS Derby and Derbyshire CCG	DER	38,208	9,285	24.3
NHS South Lincolnshire CCG	SLI	6,685	1,350	20.2
NHS Coventry and Rugby CCG	COV	12,247	2,379	19.4
NHS Mansfield and Ashfield CCG	MAS	7,757	1,401	18.1
NHS Herefordshire CCG	HER	6,699	1,208	18.0
NHS South West Lincolnshire CCG	SWL	5,487	851	15.5
NHS Lincolnshire West CCG	LIW	8,127	1,028	12.6
NHS Lincolnshire East CCG	LEA	12,146	1,305	10.7

4.1.6 Renal Services

There are four services lines within the Renal services category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. These were:
- Access for dialysis (inpatients and Outpatients) and
- Renal transplant (inpatients and Outpatients).

In this case we grouped the two service lines together.

Dialysis and Renal transplant (inpatients)

Activity data - Inpatient admissions with (IR flag 11C Access for dialysis or 11T Renal transplant)

Indicative level of need - QOF prevalence for chronic kidney disease (2018/19) [14]. Activity under this service line relates to a number of renal services procedures as such the prevalence of CKD is considered to be a reasonable proxy for need in this case that is better than a general indicator of need such as the weighted population.

Limitations: QOF prevalence data may underestimate true population prevalence. Importantly this underestimation may vary by practice and by CCG such that a high utilisation rate for a CCG on this service line may reflect under recording of patients with the condition rather than a higher level of access.

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[14] NHS England (2019). Quality and Outcomes Framework 2018-19 Recorded disease prevalence, achievements and exceptions Clinical Commissioning Group (CCG) level.

Renal Services (Inpatient)

Renal Services (Inpatient)

Activity/need ratio
High
Not significantly different
Low

Activity and need data by CCG. Renal Services (Inpatient).

Activity ratio is per 100 need

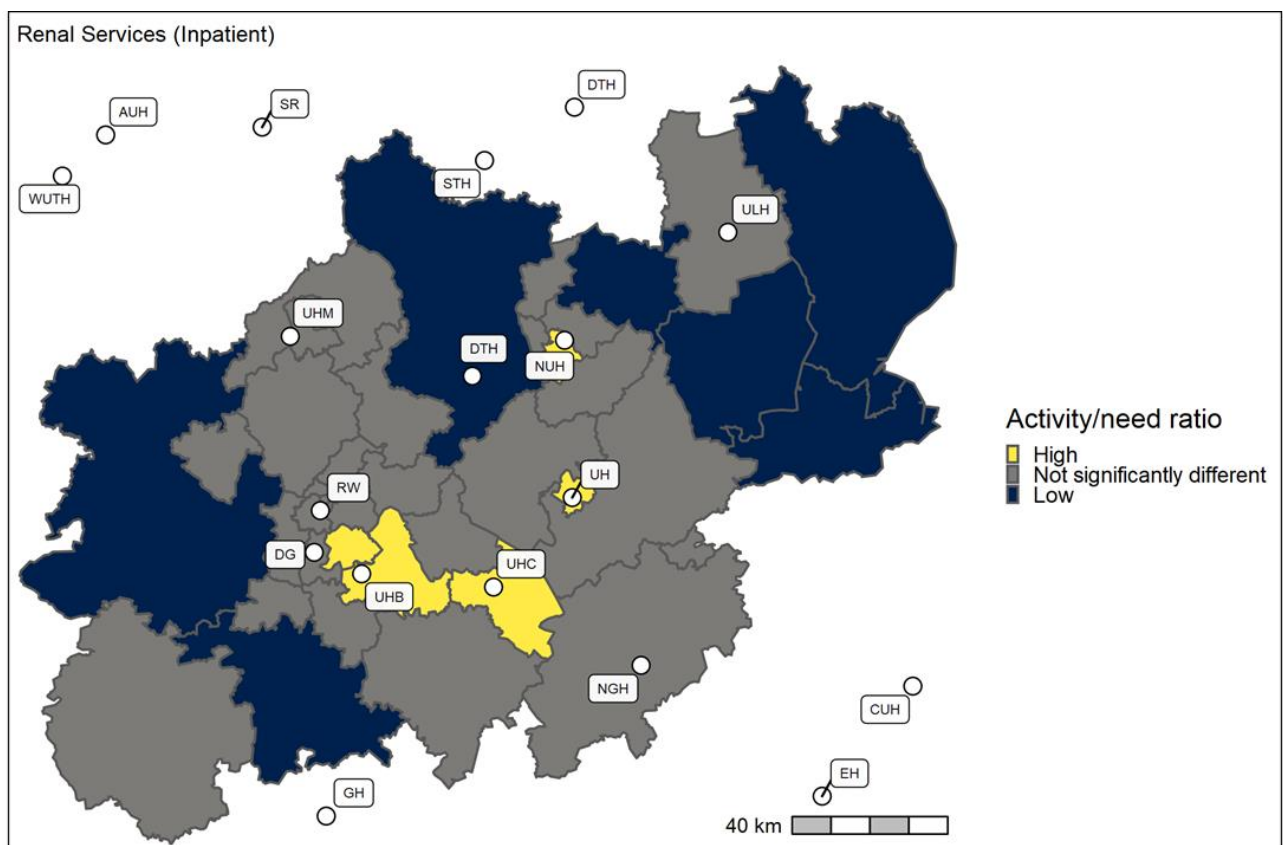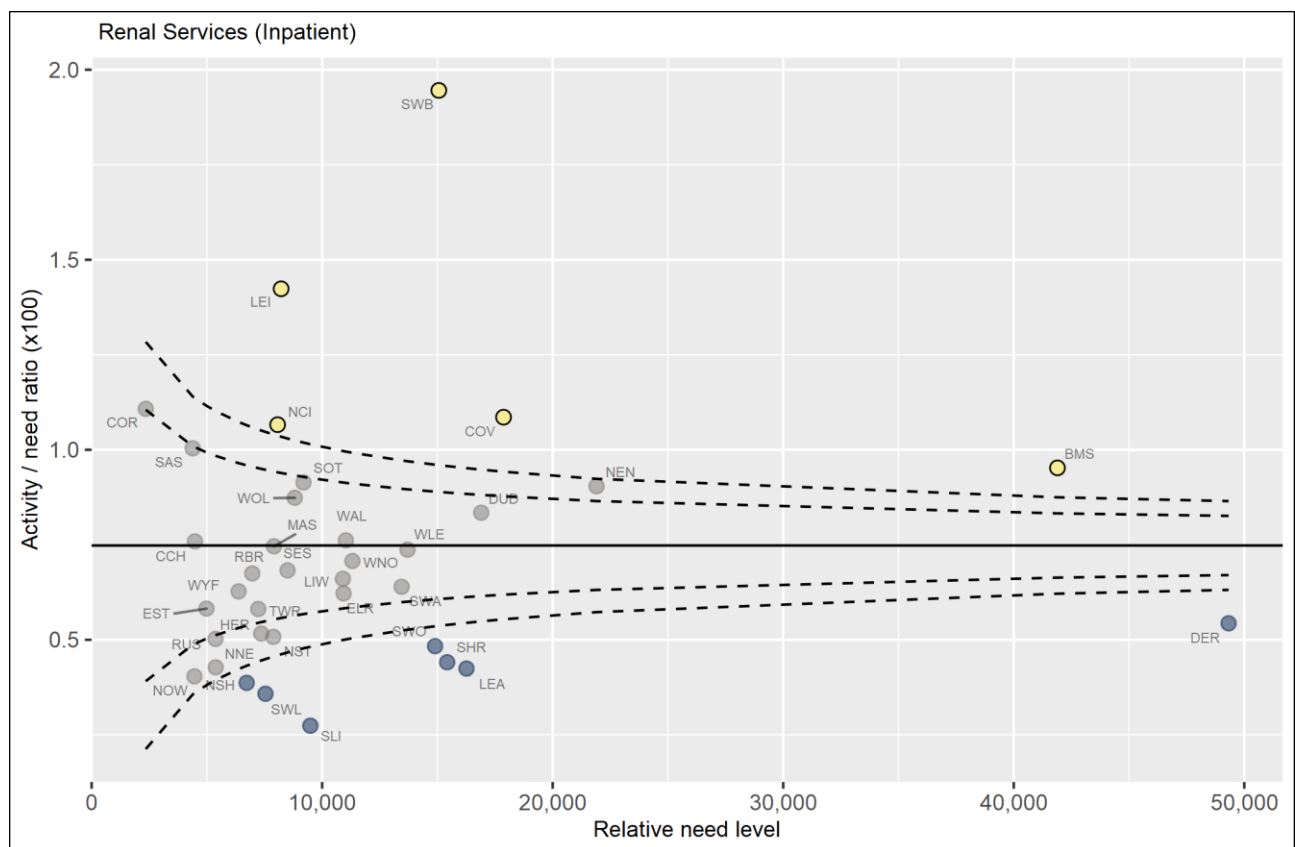| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Sandwell and West Birmingham CCG	SWB	15,060	293	1.9
NHS Leicester City CCG	LEI	8,219	117	1.4
NHS Coventry and Rugby CCG	COV	17,868	194	1.1
NHS Nottingham City CCG	NCI	8,067	86	1.1
NHS Birmingham and Solihull CCG	BMS	41,897	399	1.0
Not significantly different				
NHS Corby CCG	COR	2,347	26	1.1
NHS Stafford and Surrounds CCG	SAS	4,383	44	1.0
NHS Stoke on Trent CCG	SOT	9,189	84	0.9
NHS Nene CCG	NEN	21,902	198	0.9
NHS Wolverhampton CCG	WOL	8,813	77	0.9
NHS Dudley CCG	DUD	16,899	141	0.8
NHS Walsall CCG	WAL	11,029	84	0.8
NHS Cannock Chase CCG	CCH	4,480	34	0.8
NHS Mansfield and Ashfield CCG	MAS	7,909	59	0.7
NHS West Leicestershire CCG	WLE	13,704	101	0.7
NHS Warwickshire North CCG	WNO	11,311	80	0.7
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	8,497	58	0.7
NHS Redditch and Bromsgrove CCG	RBR	6,968	47	0.7
NHS Lincolnshire West CCG	LIW	10,900	72	0.7
NHS South Warwickshire CCG	SWA	13,447	86	0.6
NHS Wyre Forest CCG	WYF	6,375	40	0.6
NHS East Leicestershire and Rutland CCG	ELR	10,930	68	0.6
NHS East Staffordshire CCG	EST	4,982	29	0.6
NHS Telford and Wrekin CCG	TWR	7,228	42	0.6
NHS Herefordshire CCG	HER	7,356	38	0.5
NHS North Staffordshire CCG	NST	7,878	40	0.5
NHS Rushcliffe CCG	RUS	5,375	27	0.5
NHS Nottingham North and East CCG	NNE	5,380	23	0.4
NHS Nottingham West CCG	NOW	4,457	18	0.4
Low				
NHS Derby and Derbyshire CCG	DER	49,320	268	0.5
NHS South Worcestershire CCG	SWO	14,898	72	0.5
NHS Shropshire CCG	SHR	15,423	68	0.4
NHS Lincolnshire East CCG	LEA	16,262	69	0.4
NHS Newark and Sherwood CCG	NSH	6,724	26	0.4
NHS South West Lincolnshire CCG	SWL	7,540	27	0.4
NHS South Lincolnshire CCG	SLI	9,489	26	0.3

Dialysis and Renal transplant (Outpatients)

Activity data - Outpatient attendances with (IR flag 11C Access for dialysis or 11T Renal transplant)

Indicative level of need - QOF prevalence for chronic kidney disease (2018/19) [15]. Activity under this service line relates to a number of renal services procedures as such the prevalence of CKD is considered to be a reasonable proxy for need in this case that is better than a general indicator of need such as the weighted population.

Limitations: QOF prevalence data may underestimate true population prevalence. Importantly this underestimation may vary by practice and by CCG such that a high utilisation rate for a CCG on this service line may reflect under recording of patients with the condition rather than a higher level of access.

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[15] NHS England (2019). Quality and Outcomes Framework 2018-19 Recorded disease prevalence, achievements and exceptions Clinical Commissioning Group (CCG) level.

Renal Services (Outpatient)

Renal Services (Outpatient)
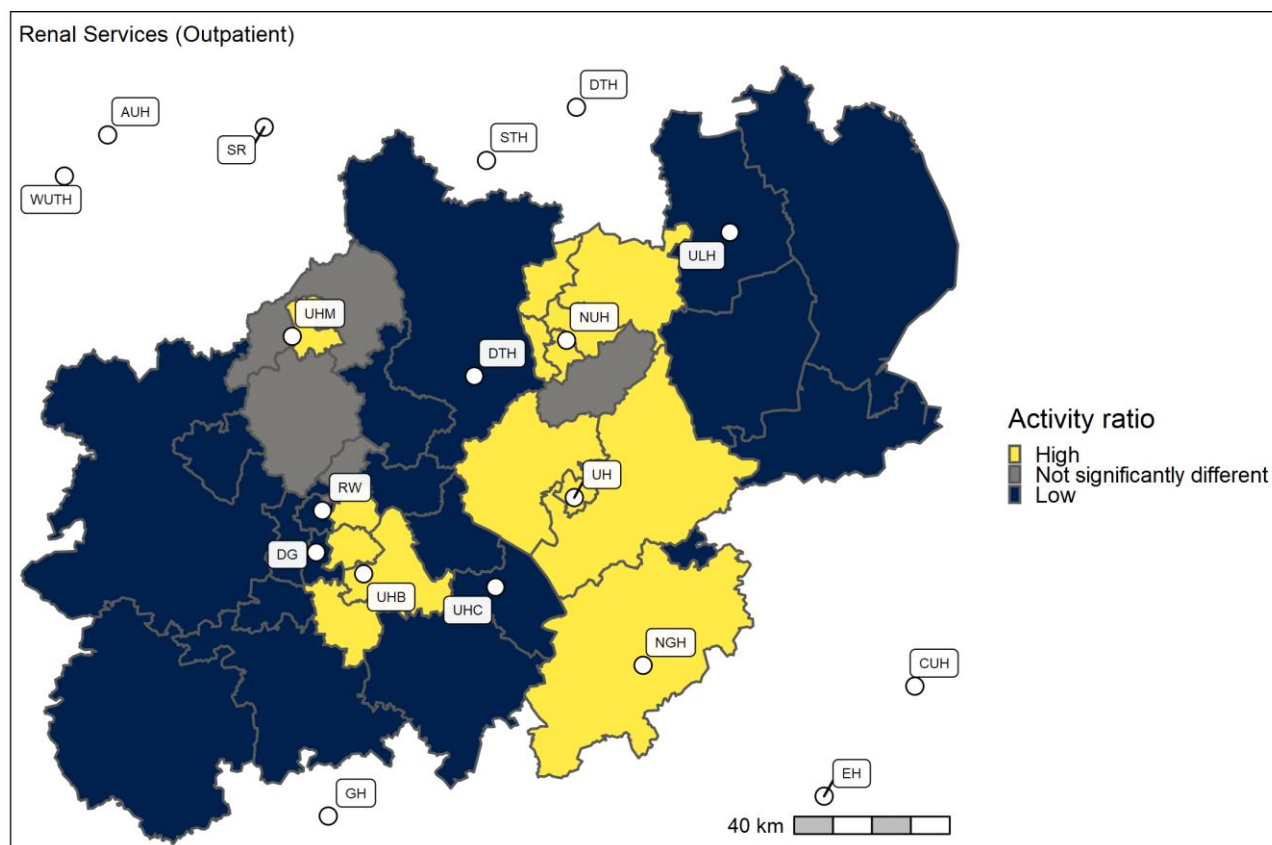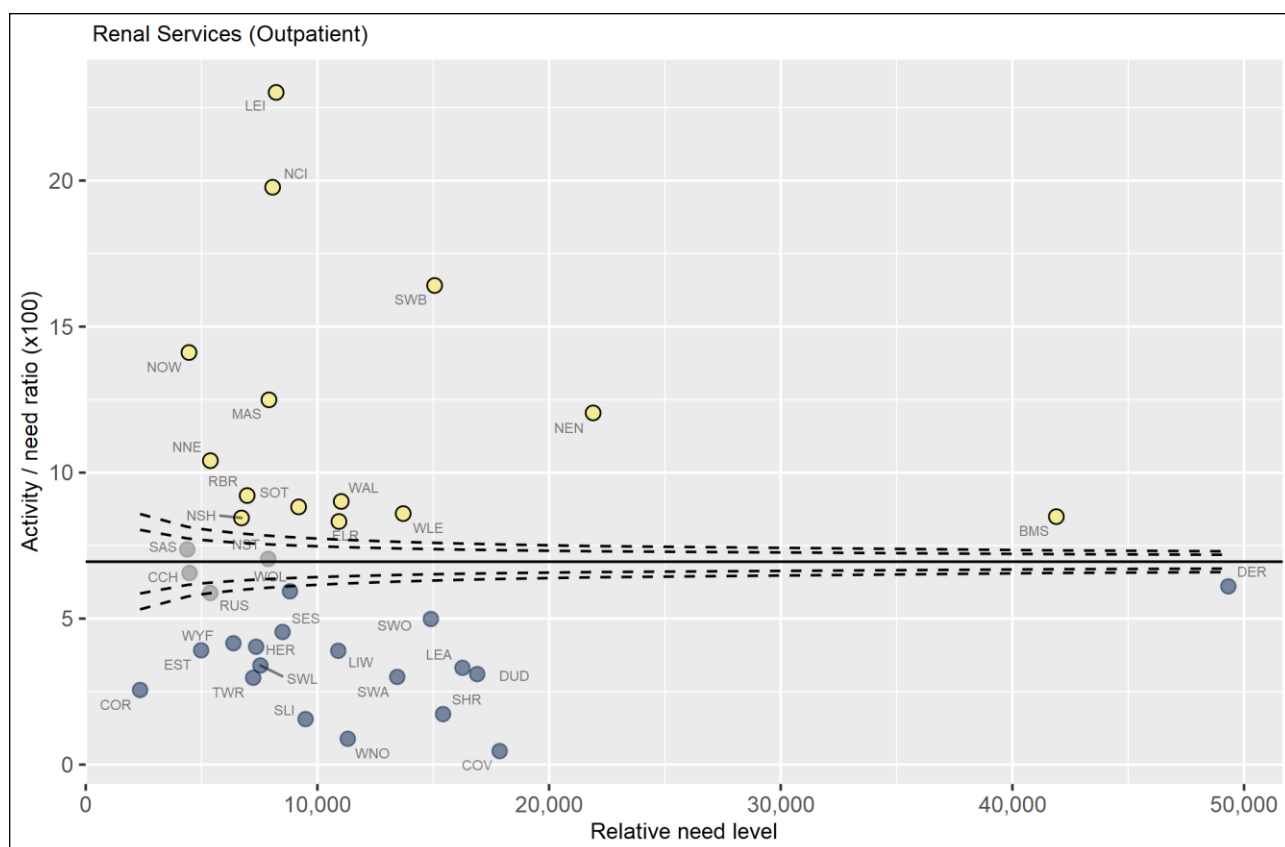
Activity and need data by CCG. Renal Services (Outpatient).

Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Leicester City CCG	LEI	8,219	1,892	23.0
NHS Nottingham City CCG	NCI	8,067	1,595	19.8
NHS Sandwell and West Birmingham CCG	SWB	15,060	2,471	16.4
NHS Nottingham West CCG	NOW	4,457	629	14.1
NHS Mansfield and Ashfield CCG	MAS	7,909	988	12.5
NHS Nene CCG	NEN	21,902	2,638	12.0
NHS Nottingham North and East CCG	NNE	5,380	560	10.4
NHS Redditch and Bromsgrove CCG	RBR	6,968	642	9.2
NHS Walsall CCG	WAL	11,029	994	9.0
NHS Stoke on Trent CCG	SOT	9,189	811	8.8
NHS West Leicestershire CCG	WLE	13,704	1,178	8.6
NHS Birmingham and Solihull CCG	BMS	41,897	3,558	8.5
NHS Newark and Sherwood CCG	NSH	6,724	568	8.4
NHS East Leicestershire and Rutland CCG	ELR	10,930	910	8.3
Not significantly different				
NHS Stafford and Surrounds CCG	SAS	4,383	323	7.4
NHS North Staffordshire CCG	NST	7,878	555	7.0
NHS Cannock Chase CCG	CCH	4,480	294	6.6
NHS Rushcliffe CCG	RUS	5,375	316	5.9
Low				
NHS Derby and Derbyshire CCG	DER	49,320	3,011	6.1
NHS Wolverhampton CCG	WOL	8,813	523	5.9
NHS South Worcestershire CCG	SWO	14,898	743	5.0
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	8,497	386	4.5
NHS Wyre Forest CCG	WYF	6,375	265	4.2
NHS Herefordshire CCG	HER	7,356	297	4.0
NHS East Staffordshire CCG	EST	4,982	195	3.9
NHS Lincolnshire West CCG	LIW	10,900	425	3.9
NHS South West Lincolnshire CCG	SWL	7,540	256	3.4
NHS Lincolnshire East CCG	LEA	16,262	539	3.3
NHS Dudley CCG	DUD	16,899	524	3.1
NHS South Warwickshire CCG	SWA	13,447	404	3.0
NHS Telford and Wrekin CCG	TWR	7,228	215	3.0
NHS Corby CCG	COR	2,347	60	2.6
NHS Shropshire CCG	SHR	15,423	267	1.7
NHS South Lincolnshire CCG	SLI	9,489	148	1.6
NHS Warwickshire North CCG	WNO	11,311	100	0.9
NHS Coventry and Rugby CCG	COV	17,868	83	0.5

4.1.7   Specialised Colorectal Services

There are four service lines within the Specialised Colorectal subcategory. In this case in order to reach the threshold of 1500 for inclusion it was decided to consider the activity at subcategory level rather than service line.

Activity data - Inpatient admissions within the NPoC subcategory AO7 (Specialised Colorectal Services) (2018/19).

Indicative level of need - A directly related indicator or quantification of need could not be found for this activity subcategory as it covers a wide range of treatment conditions (and associated procedures). We have therefore used the General and acute weighted CCG population as a proxy for need in this instance.

Limitations: The general and acute weighted population is a general indicator of overall healthcare need within a CCG. It is based on the CCG population but is adjusted to take account of a number of factors related to healthcare need such as age and gender. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

Specialised Colorectal Services (Inpatient)
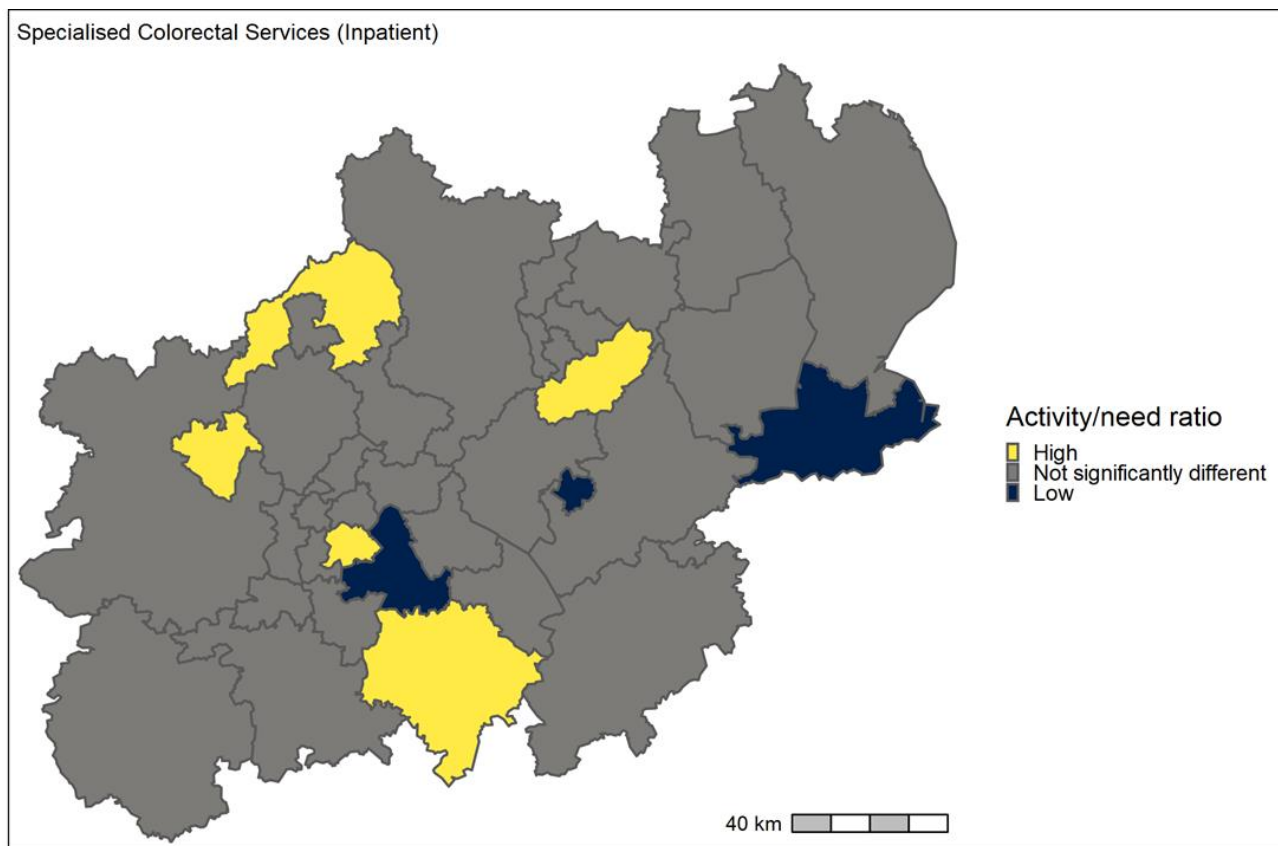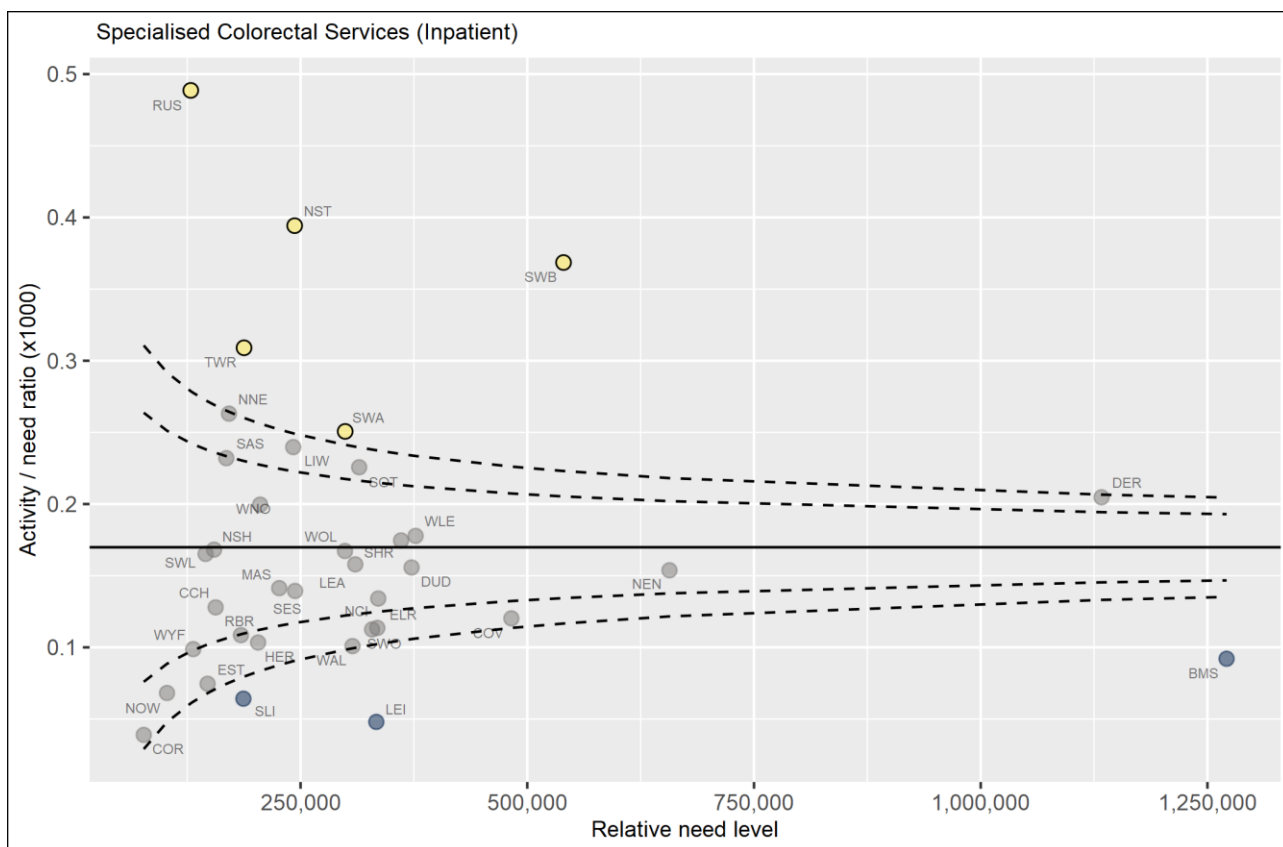
Activity and need data by CCG. Specialised Colorectal Services (Inpatient).
Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Rushcliffe CCG	RUS	128,932	63	0.489
NHS North Staffordshire CCG	NST	243,497	96	0.394
NHS Sandwell and West Birmingham CCG	SWB	539,975	199	0.369
NHS Telford and Wrekin CCG	TWR	187,682	58	0.309
NHS South Warwickshire CCG	SWA	299,193	75	0.251
Not significantly different				
NHS Nottingham North and East CCG	NNE	171,057	45	0.263
NHS Lincolnshire West CCG	LIW	241,922	58	0.240
NHS Stafford and Surrounds CCG	SAS	168,092	39	0.232
NHS Stoke on Trent CCG	SOT	314,622	71	0.226
NHS Derby and Derbyshire CCG	DER	1,133,256	232	0.205
NHS Warwickshire North CCG	WNO	205,431	41	0.200
NHS West Leicestershire CCG	WLE	376,852	67	0.178
NHS Shropshire CCG	SHR	360,838	63	0.175
NHS Newark and Sherwood CCG	NSH	154,593	26	0.168
NHS Wolverhampton CCG	WOL	298,979	50	0.167
NHS South West Lincolnshire CCG	SWL	145,295	24	0.165
NHS Lincolnshire East CCG	LEA	310,316	49	0.158
NHS Dudley CCG	DUD	372,413	58	0.156
NHS Nene CCG	NEN	656,778	101	0.154
NHS Mansfield and Ashfield CCG	MAS	226,464	32	0.141
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	243,974	34	0.139
NHS Nottingham City CCG	NCI	335,645	45	0.134
NHS Cannock Chase CCG	CCH	156,366	20	0.128
NHS Coventry and Rugby CCG	COV	482,461	58	0.120
NHS East Leicestershire and Rutland CCG	ELR	334,636	38	0.114
NHS South Worcestershire CCG	SWO	328,858	37	0.113
NHS Redditch and Bromsgrove CCG	RBR	184,267	20	0.109
NHS Herefordshire CCG	HER	203,157	21	0.103
NHS Walsall CCG	WAL	307,277	31	0.101
NHS Wyre Forest CCG	WYF	131,646	13	0.099
NHS East Staffordshire CCG	EST	147,461	11	0.075
NHS Nottingham West CCG	NOW	102,736	7	0.068
NHS Corby CCG	COR	77,088	3	0.039
Low				
NHS Birmingham and Solihull CCG	BMS	1,271,116	117	0.092
NHS South Lincolnshire CCG	SLI	186,991	12	0.064
NHS Leicester City CCG	LEI	333,532	16	0.048

4.1.8 Specialised Dermatology

There was just one service line within the specialised dermatology category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. This was:

- Skin cancer (inpatient).

Cancer: Skin (Inpatient)

Activity data - Inpatient admissions with (IR flag 24Y) Cancer: Skin (2018/19).

Indicative level of need – 2017 Prevalence Rates (per 100,000 people) by Cancer Type[16] (melanoma of skin), adjusted to gender using population estimates.

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[16] The Cancer Prevalence Dashboard was generated by the NCRAS partnership with the Transforming Cancer Services Team for London (TCST), and is based on the recently published 2017 London Prevalence Dashboard.

Cancer: Skin (Inpatient)

Cancer: Skin (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low
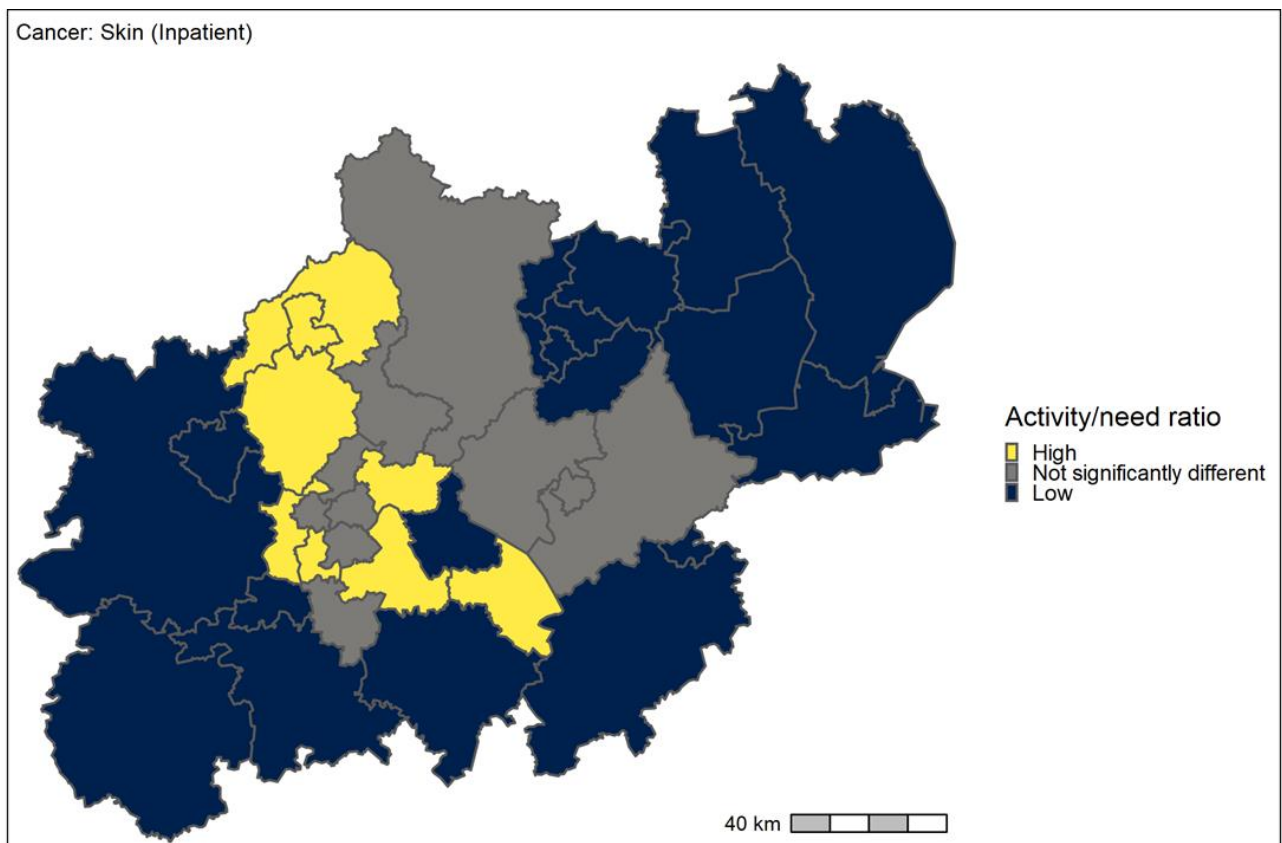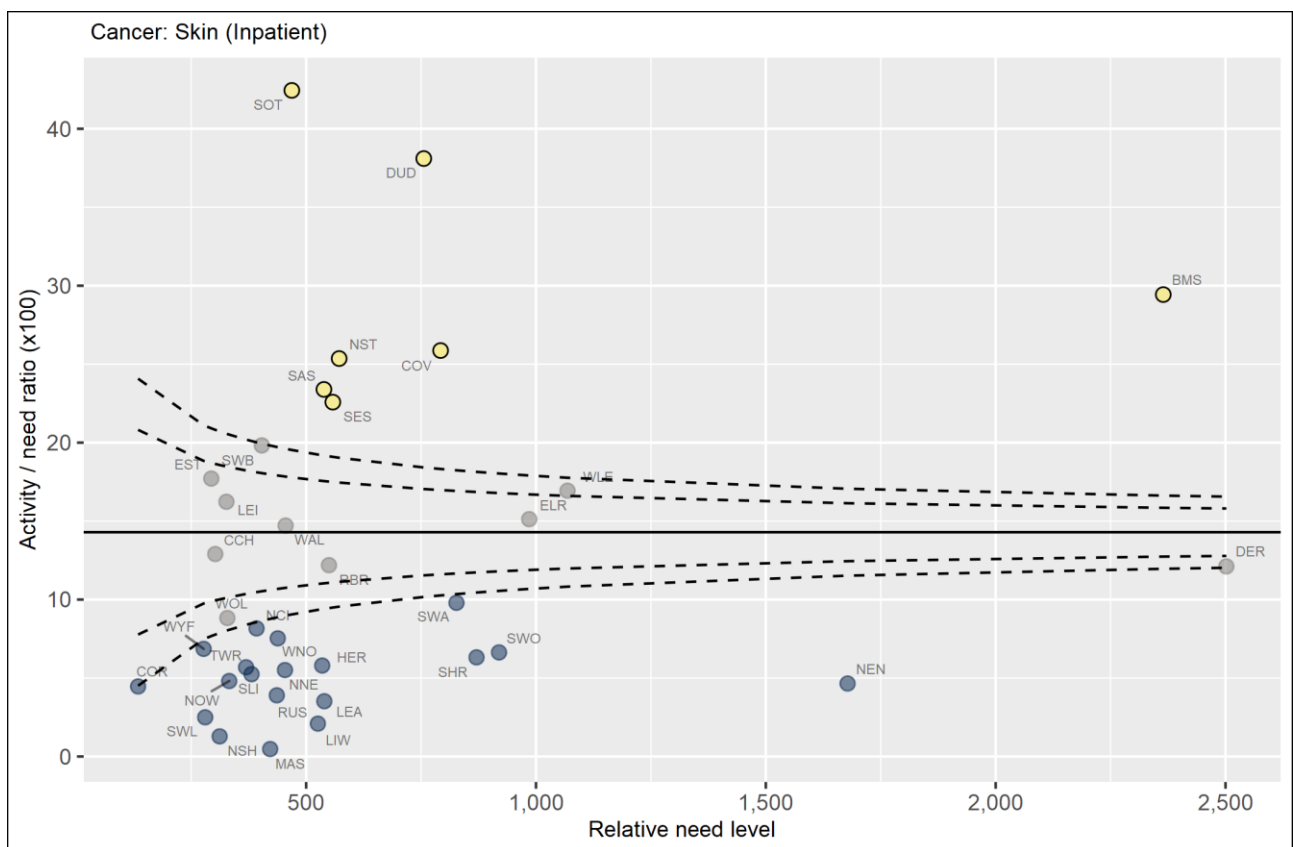
Activity and need data by CCG. Cancer: Skin (Inpatient).

Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Stoke on Trent CCG	SOT	469	199	42.4
NHS Dudley CCG	DUD	756	288	38.1
NHS Birmingham and Solihull CCG	BMS	2,365	696	29.4
NHS Coventry and Rugby CCG	COV	792	205	25.9
NHS North Staffordshire CCG	NST	572	145	25.4
NHS Stafford and Surrounds CCG	SAS	539	126	23.4
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	558	126	22.6
Not significantly different				
NHS Sandwell and West Birmingham CCG	SWB	404	80	19.8
NHS East Staffordshire CCG	EST	294	52	17.7
NHS West Leicestershire CCG	WLE	1,069	181	16.9
NHS Leicester City CCG	LEI	327	53	16.2
NHS East Leicestershire and Rutland CCG	ELR	985	149	15.1
NHS Walsall CCG	WAL	455	67	14.7
NHS Cannock Chase CCG	CCH	302	39	12.9
NHS Redditch and Bromsgrove CCG	RBR	550	67	12.2
NHS Derby and Derbyshire CCG	DER	2,502	303	12.1
NHS Wolverhampton CCG	WOL	329	29	8.8
Low				
NHS South Warwickshire CCG	SWA	827	81	9.8
NHS Nottingham City CCG	NCI	392	32	8.2
NHS Warwickshire North CCG	WNO	438	33	7.5
NHS Wyre Forest CCG	WYF	277	19	6.9
NHS South Worcestershire CCG	SWO	920	61	6.6
NHS Shropshire CCG	SHR	871	55	6.3
NHS Herefordshire CCG	HER	535	31	5.8
NHS Telford and Wrekin CCG	TWR	369	21	5.7
NHS Nottingham North and East CCG	NNE	454	25	5.5
NHS South Lincolnshire CCG	SLI	381	20	5.2
NHS Nottingham West CCG	NOW	333	16	4.8
NHS Nene CCG	NEN	1,678	78	4.6
NHS Corby CCG	COR	134	6	4.5
NHS Rushcliffe CCG	RUS	436	17	3.9
NHS Lincolnshire East CCG	LEA	539	19	3.5
NHS South West Lincolnshire CCG	SWL	280	7	2.5
NHS Lincolnshire West CCG	LIW	526	11	2.1
NHS Newark and Sherwood CCG	NSH	312	4	1.3
NHS Mansfield and Ashfield CCG	MAS	422	2	0.5

4.1.9 Specialised Rheumatology

There is just one service line within the Specialised rheumatology subcategory.

Rheumatology (Outpatient)

Activity data - Outpatient attendances with (IR flag 26Z) Specialised Rheumatology plus attendances with NPoC CRG code AO9 (Specialised Rheumatology) which did not have a prescribed service line code recorded.

Indicative level of need – QOF prevalence for rheumatoid arthritis (2018/19) [17]. Activity under this service line relates to a number of rheumatology procedures as such the prevalence of RA is considered to be a reasonable proxy for need in this case that is better than a general indicator of need such as the weighted population.

Limitations: QOF prevalence data may underestimate true population prevalence. Importantly this underestimation may vary by practice and by CCG such that a high utilisation rate for a CCG on this service line may reflect under recording of patients with the condition rather than a higher level of access.

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[17] NHS England (2019). Quality and Outcomes Framework 2018-19 Recorded disease prevalence, achievements and exceptions Clinical Commissioning Group (CCG) level.

Specialised Rheumatology (Outpatient)

Specialised Rheumatology (Outpatient)
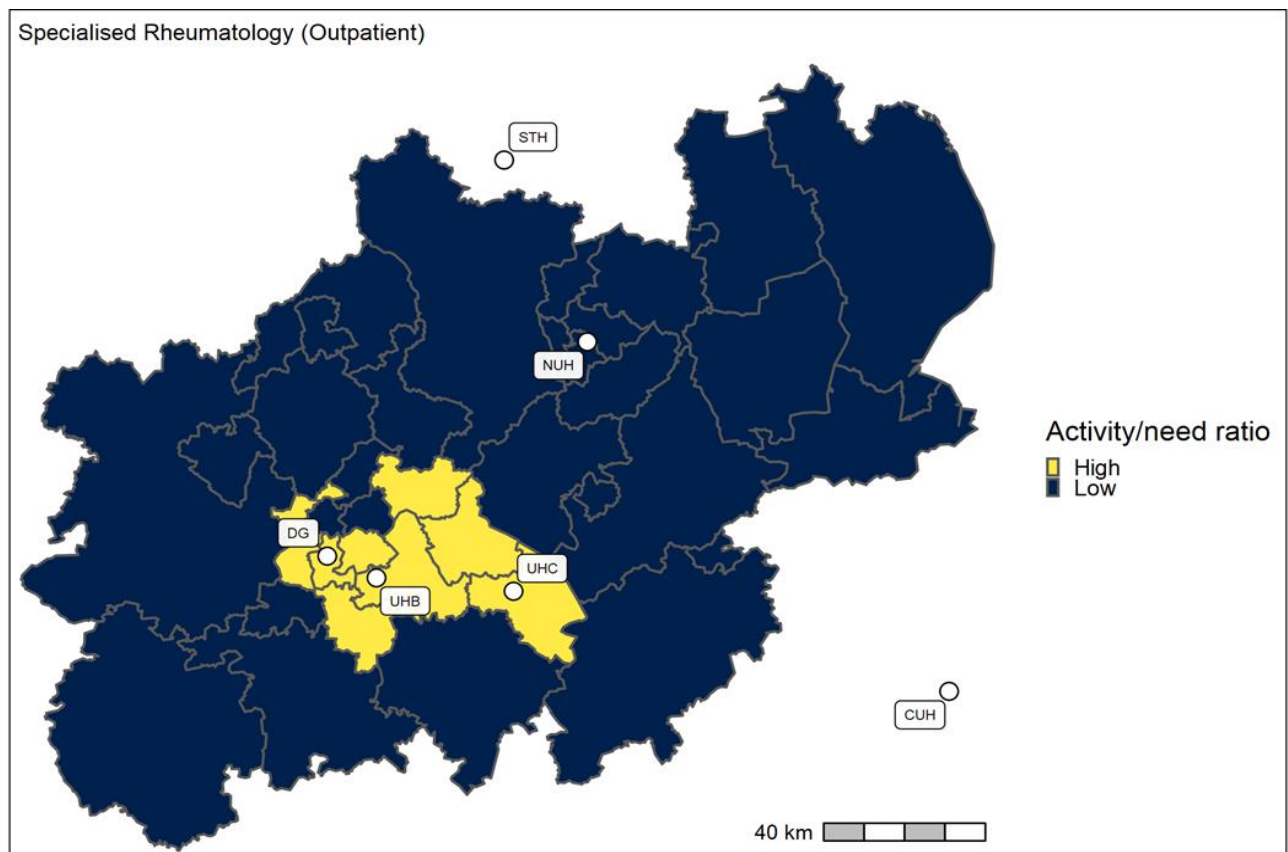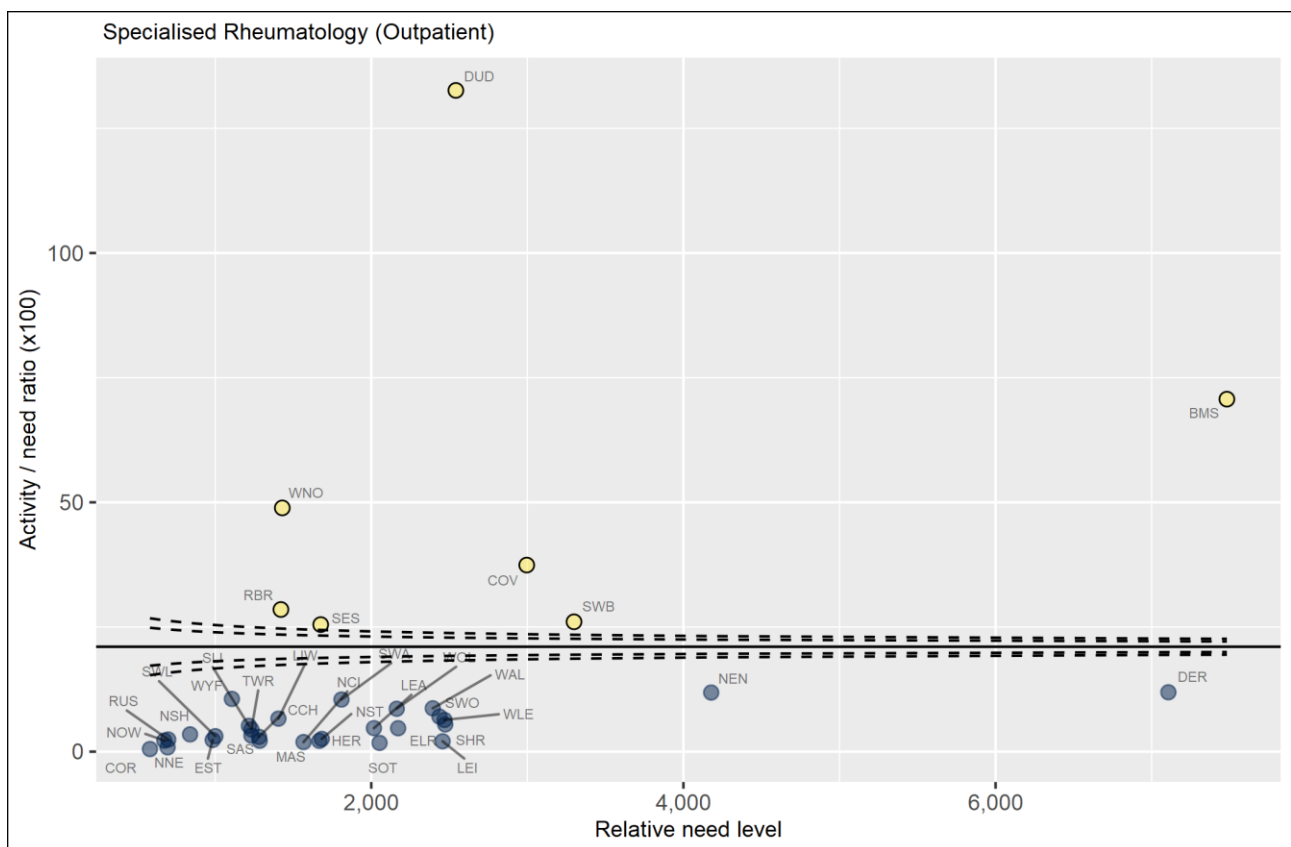
Activity and need data by CCG. Specialised Rheumatology (Outpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/need ratio
High				
NHS Dudley CCG	DUD	2,542	3,371	132.6
NHS Birmingham and Solihull CCG	BMS	7,482	5,289	70.7
NHS Warwickshire North CCG	WNO	1,430	699	48.9
NHS Coventry and Rugby CCG	COV	2,996	1,121	37.4
NHS Redditch and Bromsgrove CCG	RBR	1,421	405	28.5
NHS Sandwell and West Birmingham CCG	SWB	3,299	859	26.0
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	1,676	427	25.5
Low				
NHS Derby and Derbyshire CCG	DER	7,107	846	11.9
NHS Nene CCG	NEN	4,178	495	11.8
NHS Wyre Forest CCG	WYF	1,107	117	10.6
NHS South Warwickshire CCG	SWA	1,809	189	10.4
NHS Walsall CCG	WAL	2,394	208	8.7
NHS Wolverhampton CCG	WOL	2,163	186	8.6
NHS South Worcestershire CCG	SWO	2,437	171	7.0
NHS Lincolnshire West CCG	LIW	1,405	93	6.6
NHS West Leicestershire CCG	WLE	2,469	157	6.4
NHS Shropshire CCG	SHR	2,474	135	5.5
NHS South Lincolnshire CCG	SLI	1,216	63	5.2
NHS Lincolnshire East CCG	LEA	2,017	95	4.7
NHS East Leicestershire and Rutland CCG	ELR	2,172	102	4.7
NHS Telford and Wrekin CCG	TWR	1,232	55	4.5
NHS Newark and Sherwood CCG	NSH	839	29	3.5
NHS Stafford and Surrounds CCG	SAS	1,232	40	3.2
NHS South West Lincolnshire CCG	SWL	1,001	31	3.1
NHS Cannock Chase CCG	CCH	1,281	38	3.0
NHS North Staffordshire CCG	NST	1,683	43	2.6
NHS Rushcliffe CCG	RUS	699	17	2.4
NHS East Staffordshire CCG	EST	984	23	2.3
NHS Nottingham West CCG	NOW	674	15	2.2
NHS Mansfield and Ashfield CCG	MAS	1,285	28	2.2
NHS Herefordshire CCG	HER	1,667	36	2.2
NHS Leicester City CCG	LEI	2,457	51	2.1
NHS Nottingham City CCG	NCI	1,566	30	1.9
NHS Stoke on Trent CCG	SOT	2,053	36	1.8
NHS Nottingham North and East CCG	NNE	695	6	0.9
NHS Corby CCG	COR	582	3	0.5

4.2 Cancer

4.2.1 Specialised Cancer

There are nine services lines (or grouped service lines) within the Specialised Cancer category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. These were:

- Cancer: Brain and Central Nervous System (combined with Stereotactic radiosurgery),
- Cancer: Head and Neck (Inpatient),
- Cancer: Testicular (Inpatient),
- Complex Thoracic Surgery (Inpatient),
- Cancer: Urological - exc. testicular (Inpatient) (combination of Urology – Penile Prosthetics Surgery, Cancer: Urology - Surgical Sperm Removal, Urethral Reconstruction Surgery, Cancer: Specialised Kidney, Bladder and Prostate. Cancer: Penile),
- Cancer: Upper gastrointestinal tract (Inpatient) (combination of Cancer: Oesophageal and Gastric Cancer and Oesophageal Gastric (Electrostimulation)),
- Cancer: Gynaecological (Inpatient),
- Rare Cancers – Adults (inpatients), Thoracic Surgery (Outpatient)

Cancer: Central nervous system (Inpatient)

Activity data - Inpatient admissions with IR flag 01Q (Cancer: Brain and Central Nervous System) or 01S (Stereotactic radiosurgery) in 2018/19.

Indicative level of need - Cancer Prevalence of Brain, meningeal and other primary CNS tumours (Public Health England18).

Limitations: Prevalence in this instance counts the number of people alive at 31/1/2017 who had had a cancer diagnosis. Therefore, it is not a direct measure of current need for services but it should still provide a reasonable proxy for the overall level of need for an area.

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[18] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Cancer: Central nervous system (Inpatient)

Cancer: Central nervous system (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low

40 km
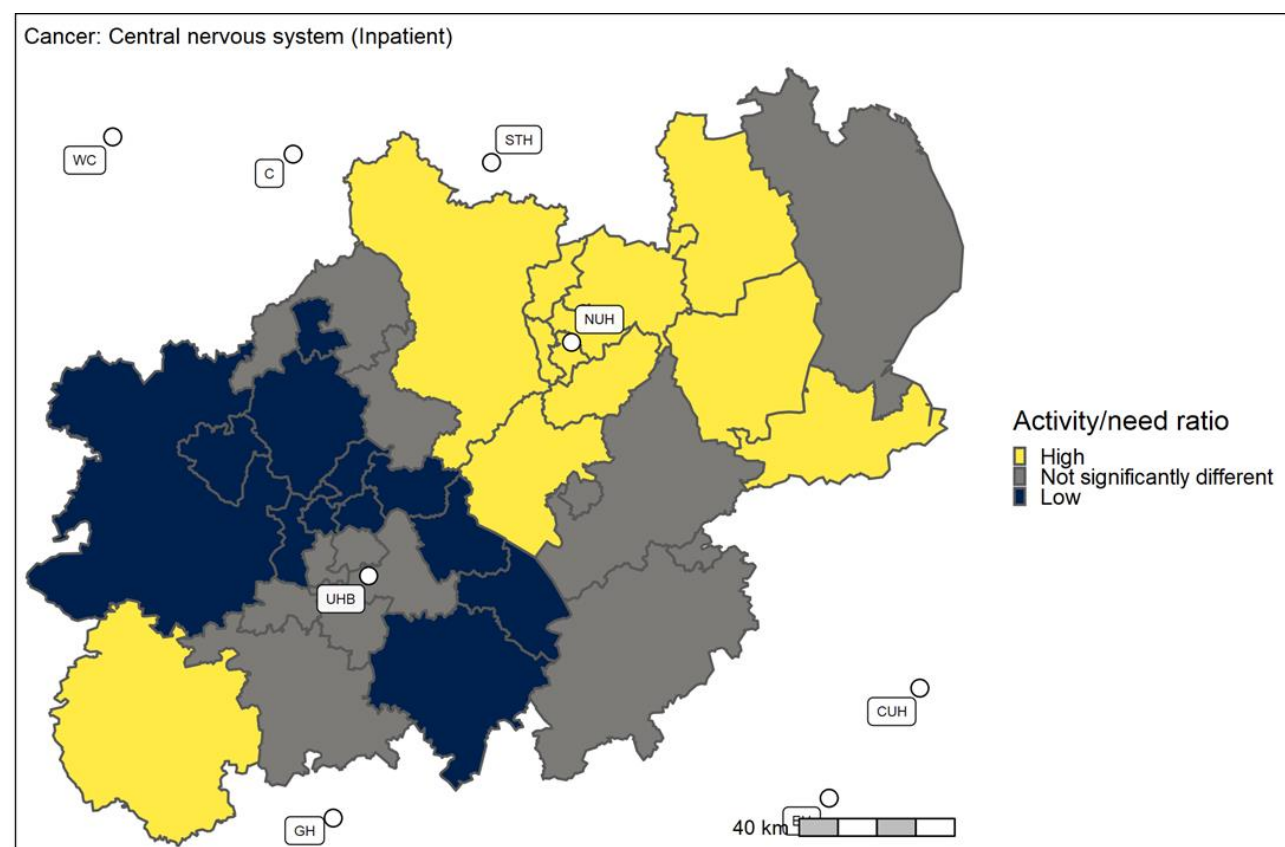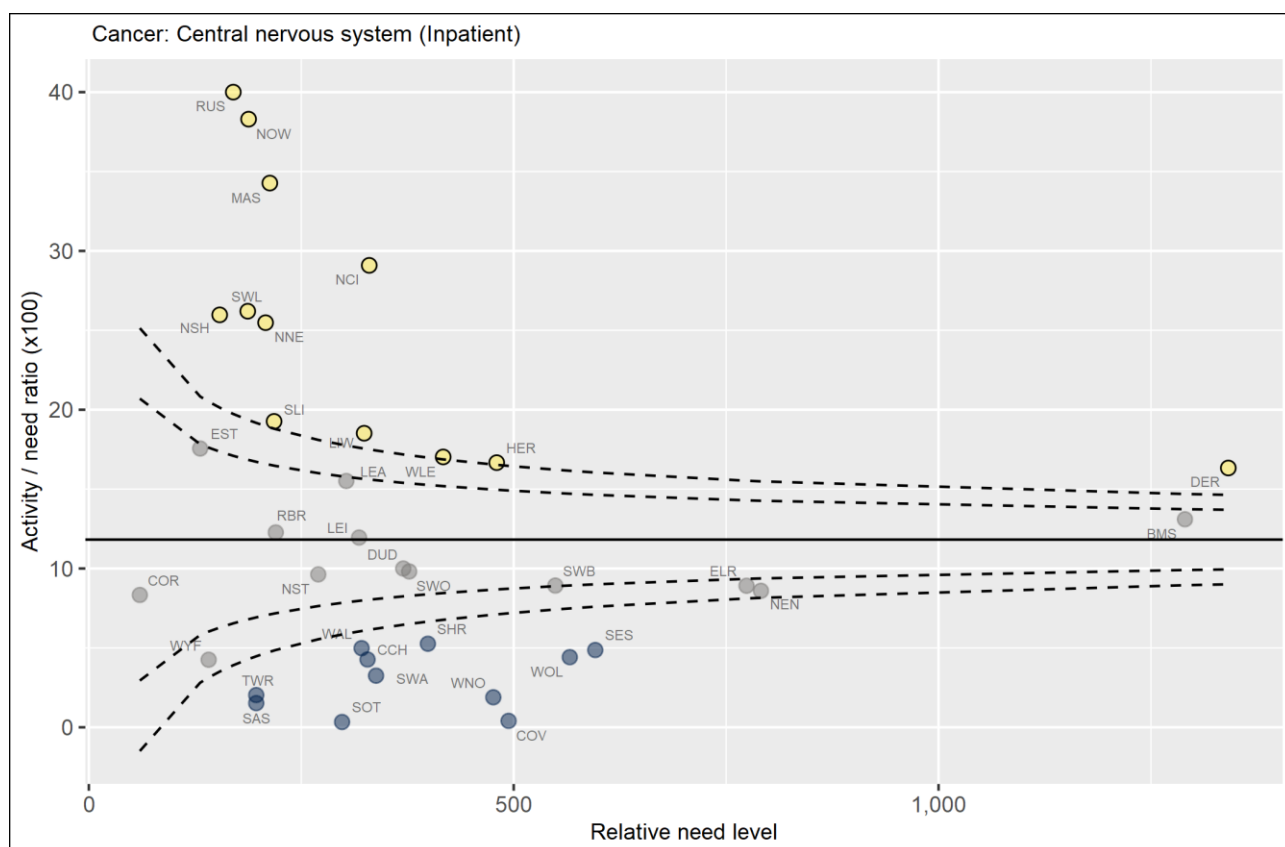
Activity and need data by CCG. Cancer: Central nervous system (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Rushcliffe CCG	RUS	170	68	40.0
NHS Nottingham West CCG	NOW	188	72	38.3
NHS Mansfield and Ashfield CCG	MAS	213	73	34.3
NHS Nottingham City CCG	NCI	330	96	29.1
NHS South West Lincolnshire CCG	SWL	187	49	26.2
NHS Newark and Sherwood CCG	NSH	154	40	26.0
NHS Nottingham North and East CCG	NNE	208	53	25.5
NHS South Lincolnshire CCG	SLI	218	42	19.3
NHS Lincolnshire West CCG	LIW	324	60	18.5
NHS West Leicestershire CCG	WLE	417	71	17.0
NHS Herefordshire CCG	HER	480	80	16.7
NHS Derby and Derbyshire CCG	DER	1,341	219	16.3
Not significantly different				
NHS East Staffordshire CCG	EST	131	23	17.6
NHS Lincolnshire East CCG	LEA	303	47	15.5
NHS Birmingham and Solihull CCG	BMS	1,290	169	13.1
NHS Redditch and Bromsgrove CCG	RBR	220	27	12.3
NHS Leicester City CCG	LEI	318	38	11.9
NHS Dudley CCG	DUD	370	37	10.0
NHS South Worcestershire CCG	SWO	377	37	9.8
NHS North Staffordshire CCG	NST	270	26	9.6
NHS Sandwell and West Birmingham CCG	SWB	549	49	8.9
NHS East Leicestershire and Rutland CCG	ELR	774	69	8.9
NHS Nene CCG	NEN	791	68	8.6
NHS Corby CCG	COR	60	5	8.3
NHS Wyre Forest CCG	WYF	141	6	4.3
Low				
NHS Shropshire CCG	SHR	399	21	5.3
NHS Walsall CCG	WAL	321	16	5.0
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	596	29	4.9
NHS Wolverhampton CCG	WOL	566	25	4.4
NHS Cannock Chase CCG	CCH	328	14	4.3
NHS South Warwickshire CCG	SWA	338	11	3.3
NHS Telford and Wrekin CCG	TWR	197	4	2.0
NHS Warwickshire North CCG	WNO	476	9	1.9
NHS Stafford and Surrounds CCG	SAS	197	3	1.5
NHS Coventry and Rugby CCG	COV	494	2	0.4
NHS Stoke on Trent CCG	SOT	298	1	0.3

Cancer: Head and Neck (Inpatient)

Activity data - Inpatient admissions with IR flag 01M (Cancer: Head and neck) in 2018/19.

Indicative level of need - Cancer Prevalence of Head and neck (Public Health England 2019).

Limitations: Prevalence in this instance counts the number of people alive at 31/1/2017 who had previously had a cancer diagnosis. Therefore, this is not a direct measure of current need for services, but it should still provide a reasonable proxy for the overall level of need for an area.

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[19] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Cancer: Head And Neck (Inpatient)

Cancer: Head And Neck (Inpatient)

Activity/need ratio
High
Not significantly different
Low
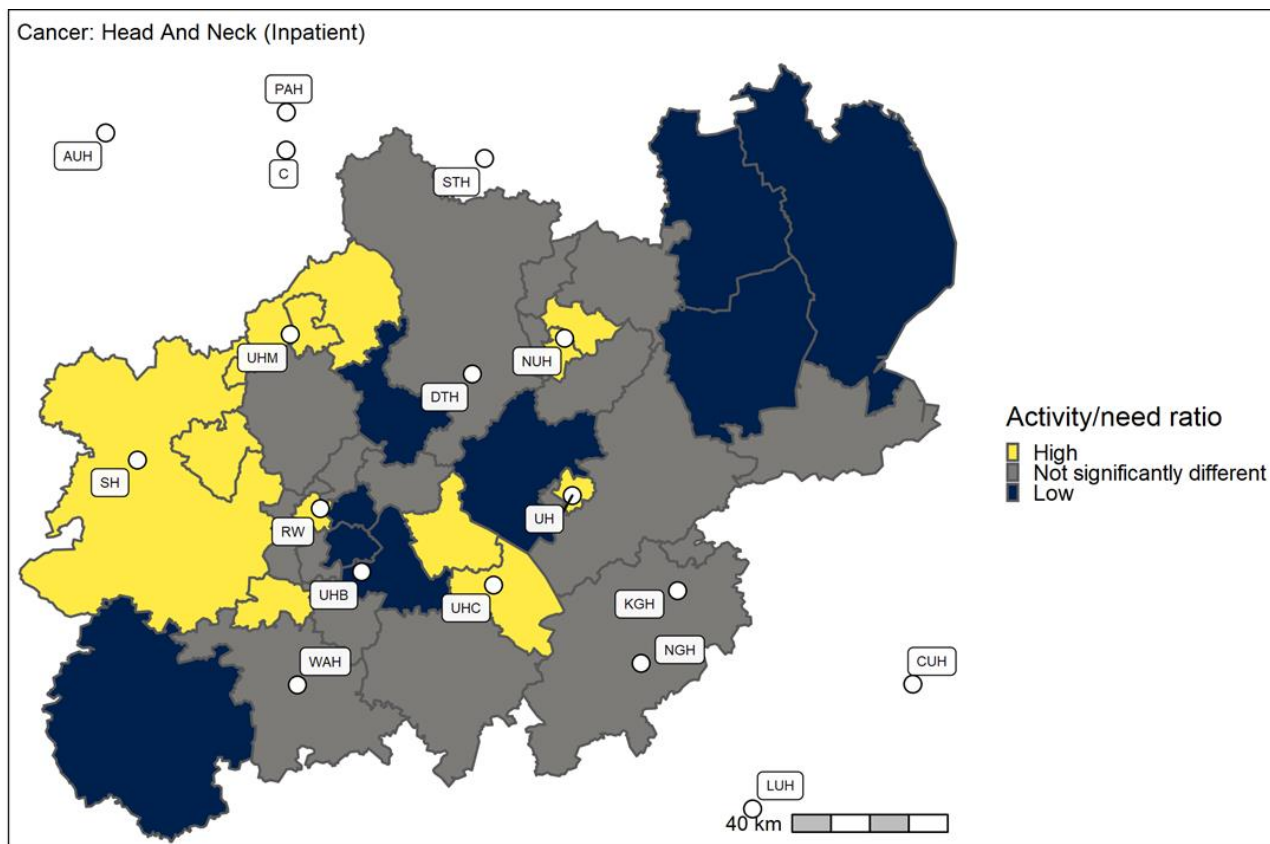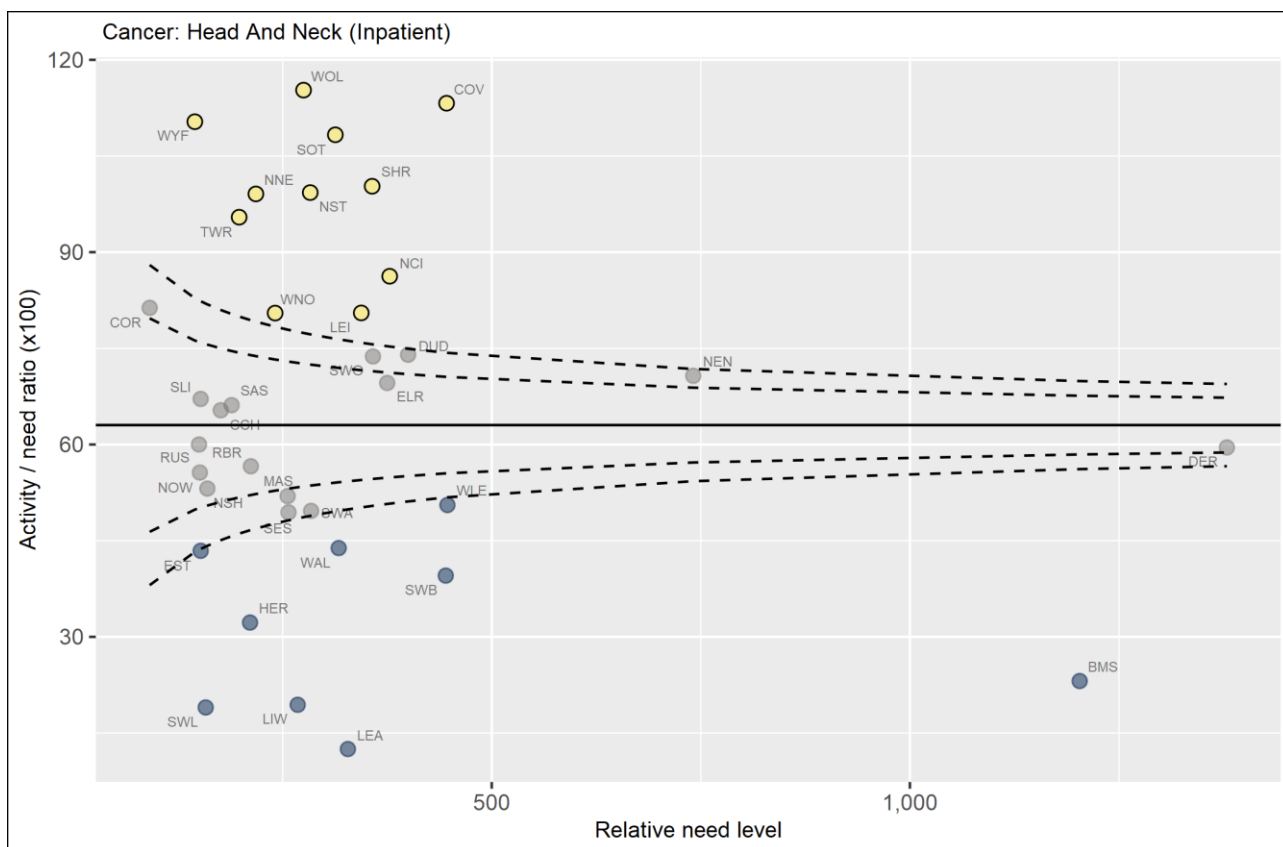
Activity and need data by CCG. Cancer: Head and Neck (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/need ratio
High				
NHS Wolverhampton CCG	WOL	275	317	115.3
NHS Coventry and Rugby CCG	COV	446	505	113.2
NHS Wyre Forest CCG	WYF	145	160	110.3
NHS Stoke on Trent CCG	SOT	313	339	108.3
NHS Shropshire CCG	SHR	357	358	100.3
NHS North Staffordshire CCG	NST	283	281	99.3
NHS Nottingham North and East CCG	NNE	218	216	99.1
NHS Telford and Wrekin CCG	TWR	198	189	95.5
NHS Nottingham City CCG	NCI	378	326	86.2
NHS Leicester City CCG	LEI	344	277	80.5
NHS Warwickshire North CCG	WNO	241	194	80.5
Not significantly different				
NHS Corby CCG	COR	91	74	81.3
NHS Dudley CCG	DUD	400	296	74.0
NHS South Worcestershire CCG	SWO	358	264	73.7
NHS Nene CCG	NEN	741	524	70.7
NHS East Leicestershire and Rutland CCG	ELR	375	261	69.6
NHS South Lincolnshire CCG	SLI	152	102	67.1
NHS Stafford and Surrounds CCG	SAS	189	125	66.1
NHS Cannock Chase CCG	CCH	176	115	65.3
NHS Rushcliffe CCG	RUS	150	90	60.0
NHS Derby and Derbyshire CCG	DER	1,379	821	59.5
NHS Redditch and Bromsgrove CCG	RBR	212	120	56.6
NHS Nottingham West CCG	NOW	151	84	55.6
NHS Newark and Sherwood CCG	NSH	160	85	53.1
NHS Mansfield and Ashfield CCG	MAS	256	133	52.0
NHS South Warwickshire CCG	SWA	284	141	49.6
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	257	127	49.4
Low				
NHS West Leicestershire CCG	WLE	447	226	50.6
NHS Walsall CCG	WAL	317	139	43.8
NHS East Staffordshire CCG	EST	152	66	43.4
NHS Sandwell and West Birmingham CCG	SWB	445	176	39.6
NHS Herefordshire CCG	HER	211	68	32.2
NHS Birmingham and Solihull CCG	BMS	1,203	278	23.1
NHS Lincolnshire West CCG	LIW	268	52	19.4
NHS South West Lincolnshire CCG	SWL	158	30	19.0
NHS Lincolnshire East CCG	LEA	328	41	12.5

Cancer: Testicular (Inpatient)

Activity data - Inpatient admissions with IR flag 01Z (Cancer: Testicular) in 2018/19.

Indicative level of need - Cancer Prevalence: Testicular tumors, including post-pubertal teratomas (Public Health England 2020).

Limitations: Prevalence in this instance counts the number of people alive at 31/1/2017 who had previously had a cancer diagnosis. Therefore, this is not a direct measure of current need for services, but it should still provide a reasonable proxy for the overall level of need for an area.

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[20] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Cancer: Testicular (Inpatient)

Cancer: Testicular (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low
- NA

40 km
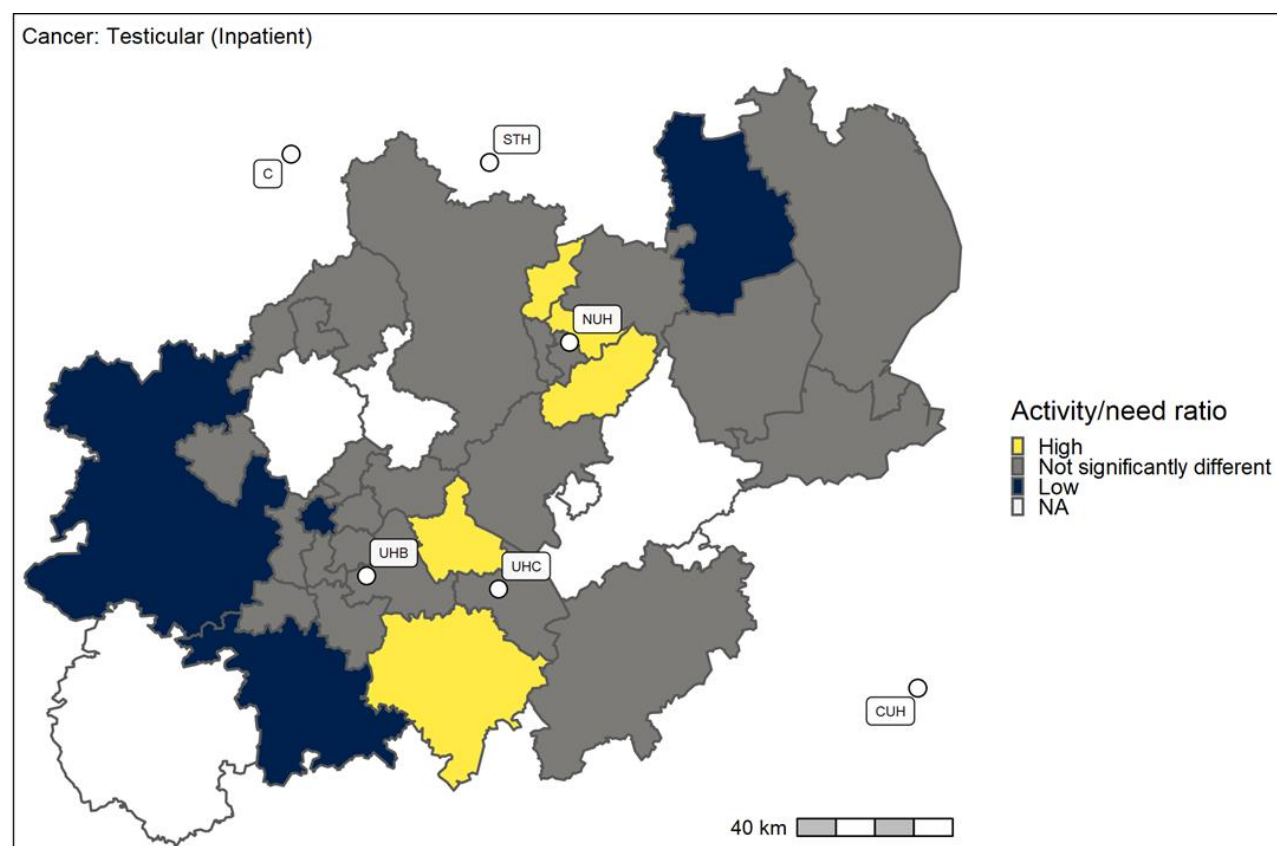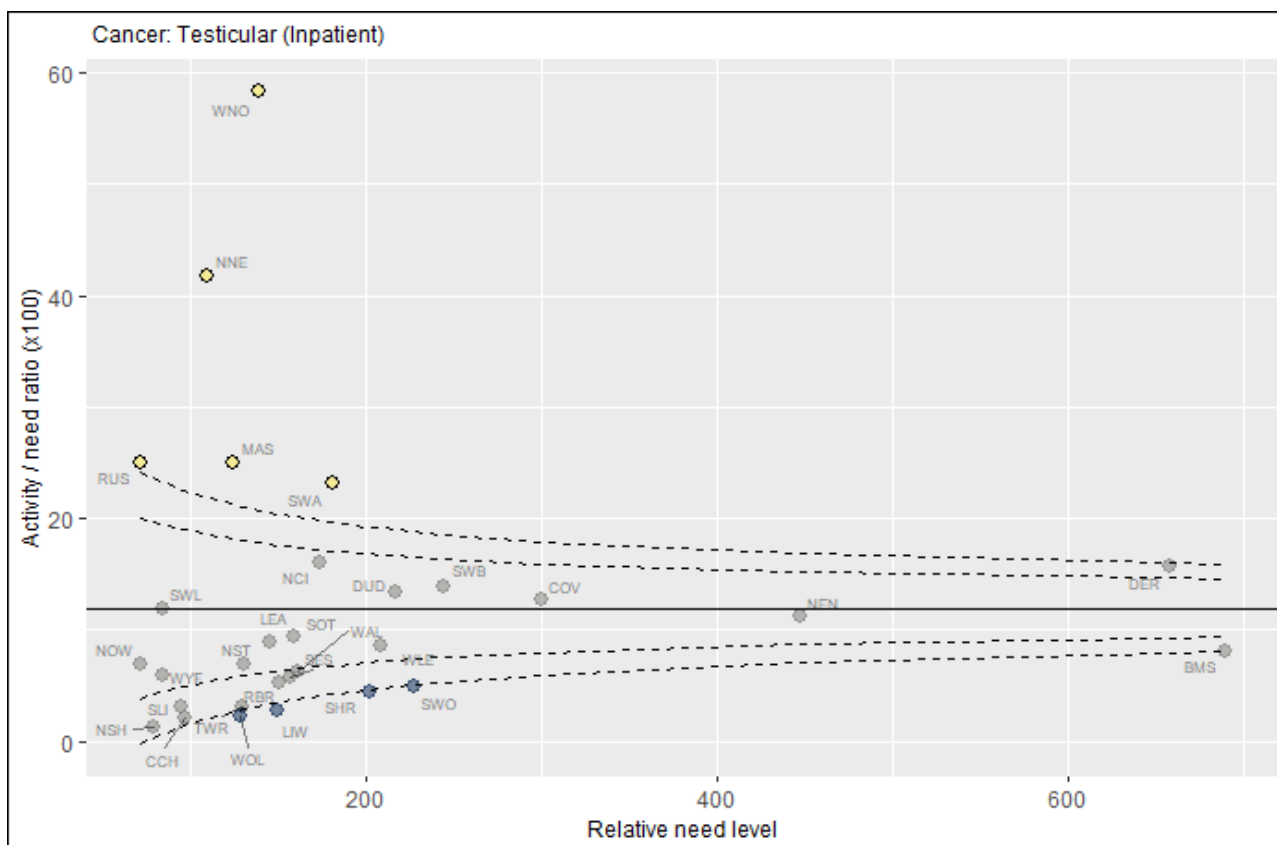
Activity and need data by CCG. Cancer: Testicular (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Warwickshire North CCG	WNO	139	81	58.3
NHS Nottingham North and East CCG	NNE	110	46	41.8
NHS Mansfield and Ashfield CCG	MAS	124	31	25.0
NHS Rushcliffe CCG	RUS	72	18	25.0
NHS South Warwickshire CCG	SWA	181	42	23.2
Not significantly different				
NHS Nottingham City CCG	NCI	174	28	16.1
NHS Derby and Derbyshire CCG	DER	658	103	15.7
NHS Sandwell and West Birmingham CCG	SWB	244	34	13.9
NHS Dudley CCG	DUD	217	29	13.4
NHS Coventry and Rugby CCG	COV	300	38	12.7
NHS South West Lincolnshire CCG	SWL	84	10	11.9
NHS Nene CCG	NEN	447	50	11.2
NHS Stoke on Trent CCG	SOT	159	15	9.4
NHS Lincolnshire East CCG	LEA	145	13	9.0
NHS West Leicestershire CCG	WLE	209	18	8.6
NHS Birmingham and Solihull CCG	BMS	690	56	8.1
NHS Nottingham West CCG	NOW	72	5	6.9
NHS North Staffordshire CCG	NST	131	9	6.9
NHS Walsall CCG	WAL	161	10	6.2
NHS Wyre Forest CCG	WYF	84	5	6.0
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	157	9	5.7
NHS Redditch and Bromsgrove CCG	RBR	151	8	5.3
NHS South Lincolnshire CCG	SLI	95	3	3.2
NHS Telford and Wrekin CCG	TWR	130	4	3.1
NHS Cannock Chase CCG	CCH	97	2	2.1
NHS Newark and Sherwood CCG	NSH	79	1	1.3
Low				
NHS South Worcestershire CCG	SWO	228	11	4.8
NHS Shropshire CCG	SHR	202	9	4.5
NHS Lincolnshire West CCG	LIW	150	4	2.7
NHS Wolverhampton CCG	WOL	129	3	2.3

Complex Thoracic Surgery (Inpatient)

Activity data - Inpatient admissions with IR flag 29B (Complex Thoracic Surgery) in 2018/19.

Indicative level of need - Cancer Prevalence: Lung, trachea and bronchus (Public Health England 2021).

Limitations: Prevalence in this instance counts the number of people alive at 31/1/2017 who had previously had a cancer diagnosis. Therefore, this is not a direct measure of current need for services, but it should still provide a reasonable proxy for the overall level of need for an area.

NOTE: Although this service line falls under the NPoC of Specialised Cancer the treatment functions used to identify episodes within this service line are Thoracic surgery and cardiothoracic surgery which in some (if not many) cases will not be directly related to cancer. Cancer prevalence may not therefore be the most appropriate indicator of need.

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[21] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Complex Thoracic Surgery (Inpatient)

Complex Thoracic Surgery (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low
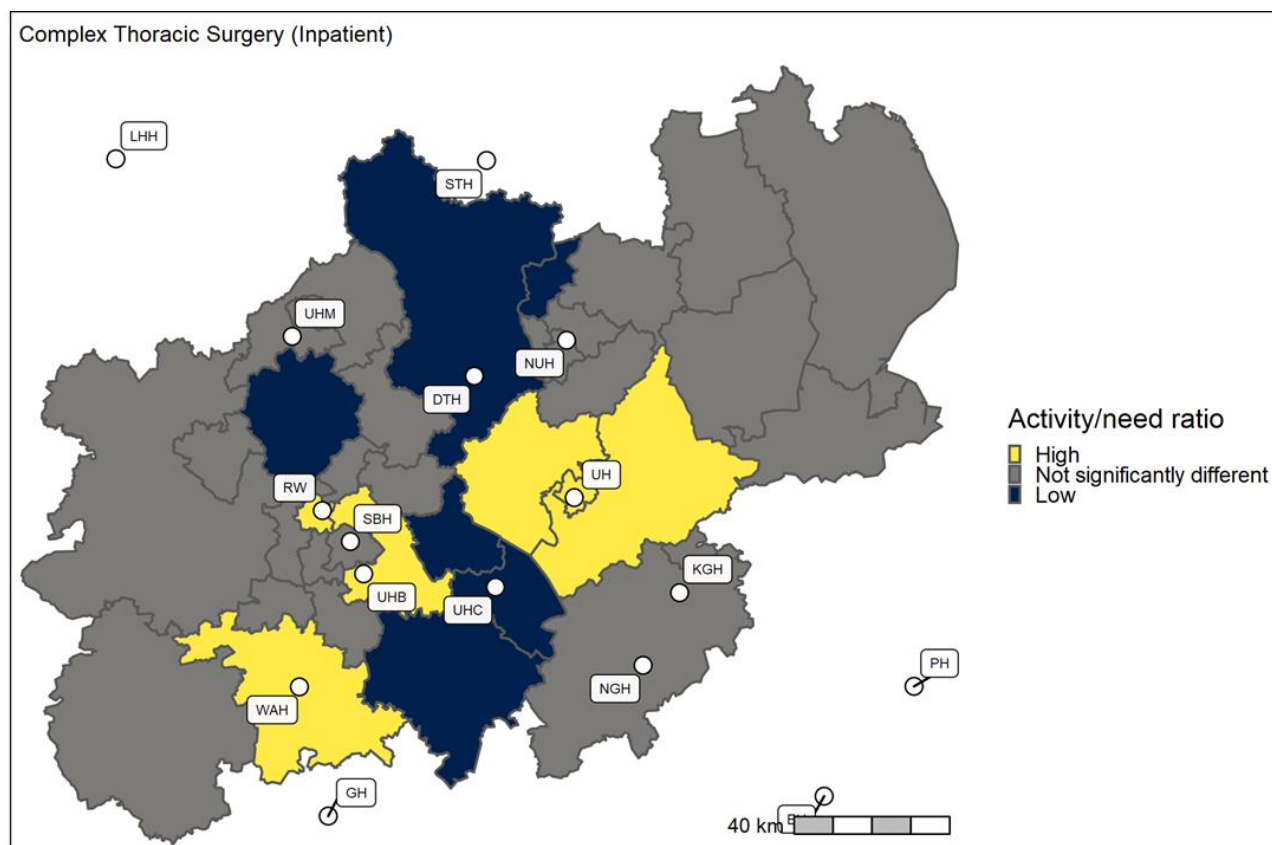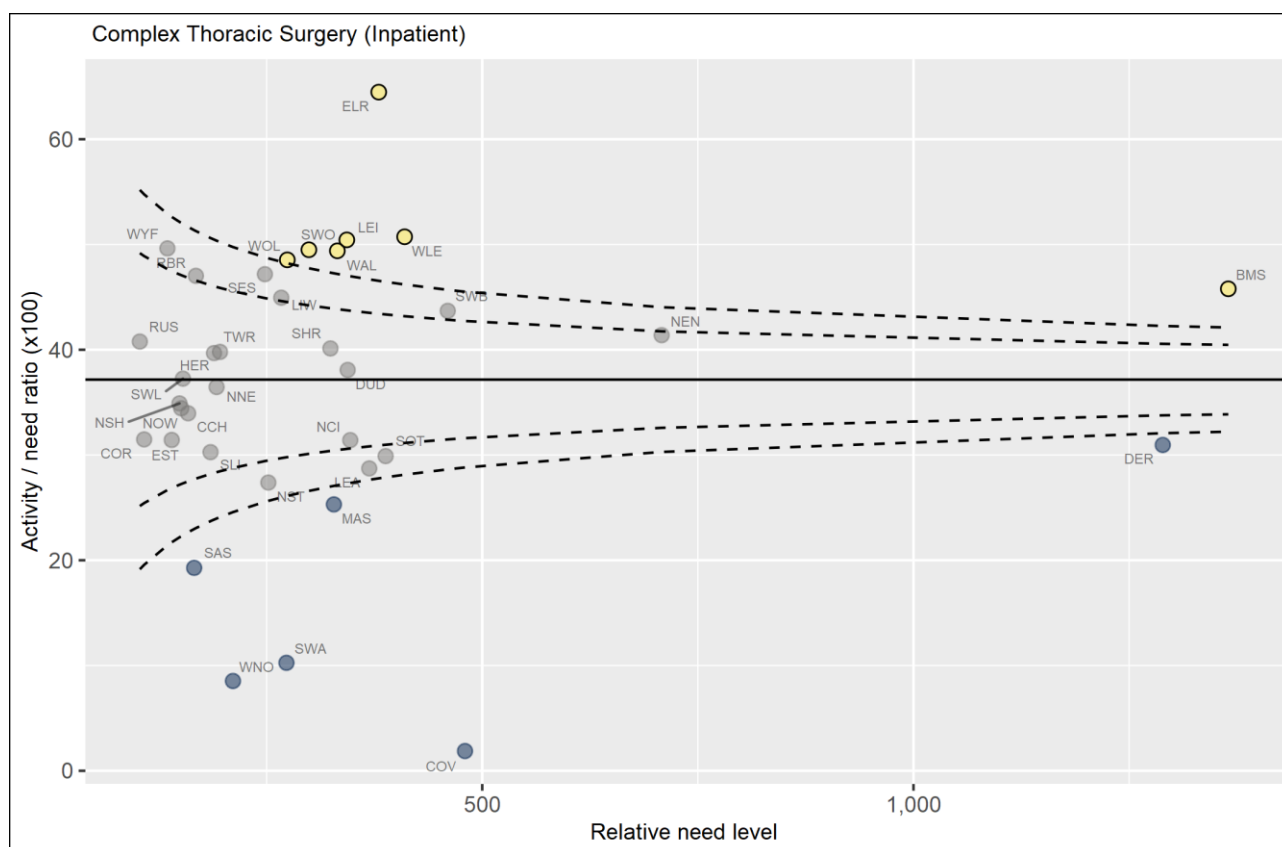
Activity and need data by CCG. Complex Thoracic Surgery (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS East Leicestershire and Rutland CCG	ELR	380	245	64.5
NHS West Leicestershire CCG	WLE	410	208	50.7
NHS Leicester City CCG	LEI	343	173	50.4
NHS South Worcestershire CCG	SWO	299	148	49.5
NHS Walsall CCG	WAL	332	164	49.4
NHS Wolverhampton CCG	WOL	274	133	48.5
NHS Birmingham and Solihull CCG	BMS	1,365	625	45.8
Not significantly different				
NHS Wyre Forest CCG	WYF	135	67	49.6
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	248	117	47.2
NHS Redditch and Bromsgrove CCG	RBR	168	79	47.0
NHS Lincolnshire West CCG	LIW	267	120	44.9
NHS Sandwell and West Birmingham CCG	SWB	460	201	43.7
NHS Nene CCG	NEN	708	293	41.4
NHS Rushcliffe CCG	RUS	103	42	40.8
NHS Shropshire CCG	SHR	324	130	40.1
NHS Telford and Wrekin CCG	TWR	196	78	39.8
NHS Herefordshire CCG	HER	189	75	39.7
NHS Dudley CCG	DUD	344	131	38.1
NHS South West Lincolnshire CCG	SWL	153	57	37.3
NHS Nottingham North and East CCG	NNE	192	70	36.5
NHS Newark and Sherwood CCG	NSH	149	52	34.9
NHS Nottingham West CCG	NOW	151	52	34.4
NHS Cannock Chase CCG	CCH	159	54	34.0
NHS Corby CCG	COR	108	34	31.5
NHS East Staffordshire CCG	EST	140	44	31.4
NHS Nottingham City CCG	NCI	347	109	31.4
NHS South Lincolnshire CCG	SLI	185	56	30.3
NHS Stoke on Trent CCG	SOT	388	116	29.9
NHS Lincolnshire East CCG	LEA	369	106	28.7
NHS North Staffordshire CCG	NST	252	69	27.4
Low				
NHS Derby and Derbyshire CCG	DER	1,289	399	31.0
NHS Mansfield and Ashfield CCG	MAS	328	83	25.3
NHS Stafford and Surrounds CCG	SAS	166	32	19.3
NHS South Warwickshire CCG	SWA	273	28	10.3
NHS Warwickshire North CCG	WNO	211	18	8.5
NHS Coventry and Rugby CCG	COV	480	9	1.9

Cancer: Urological - exc. testicular (Inpatient)

Activity data - Inpatient admissions with IR flags 41P (Cancer: Urology - Penile Prosthetics Surgery), 41S (Cancer: Urology - Surgical Sperm Removal), 41U (Urology - Urethral Reconstruction Surgery), 01N (Cancer: Specialised Kidney, Bladder and Prostate). And 01X (Cancer: Penile) in 2018/19.

Indicative level of need - Cancer Prevalence: Bladder, renal, pelvis and urinary tract and Prostate (Public Health England 2022).

Limitations: Prevalence in this instance counts the number of people alive at 31/1/2017 who had previously had a cancer diagnosis. Therefore, this is not a direct measure of current need for services, but it should still provide a reasonable proxy for the overall level of need for an area.

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[22] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Cancer: Urological (exc. testicular) (Inpatient)

Cancer: Urological (exc. testicular) (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low
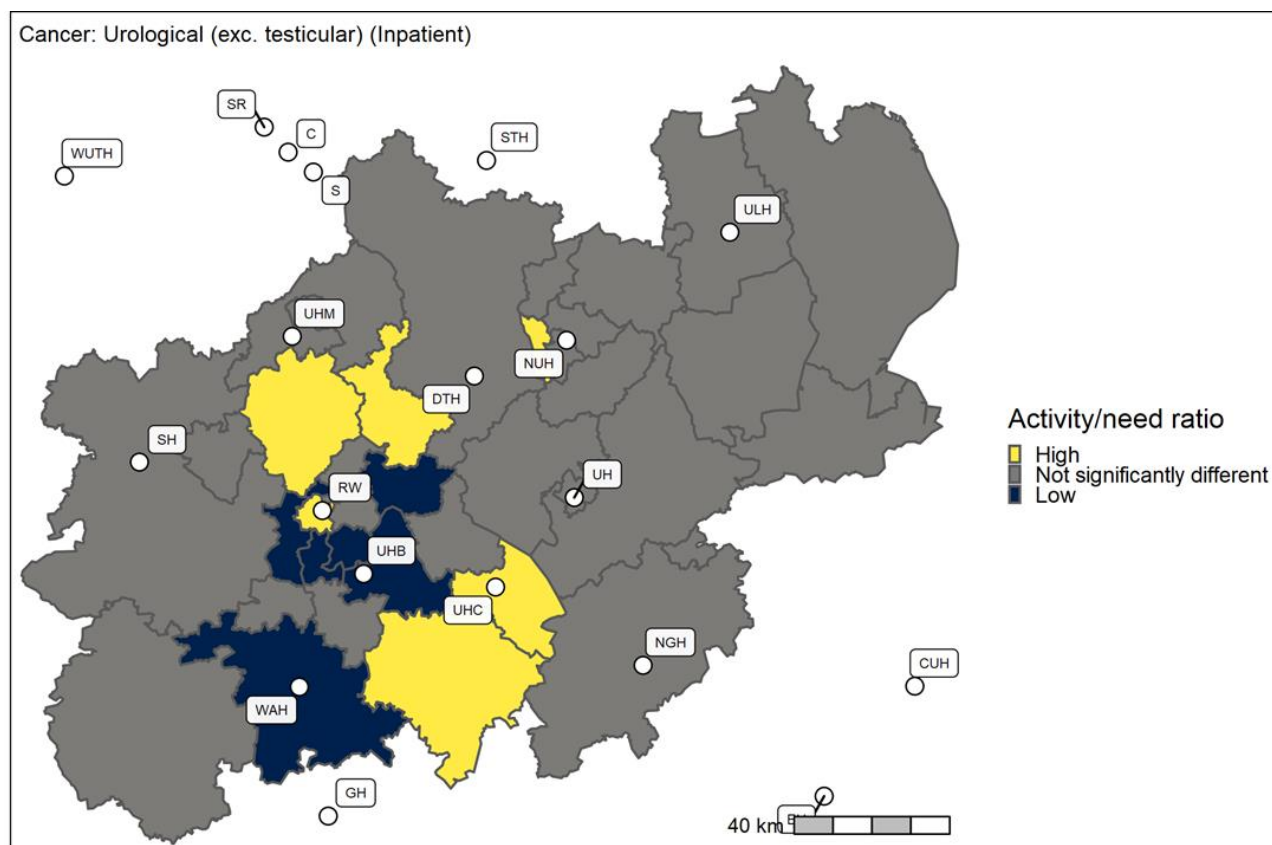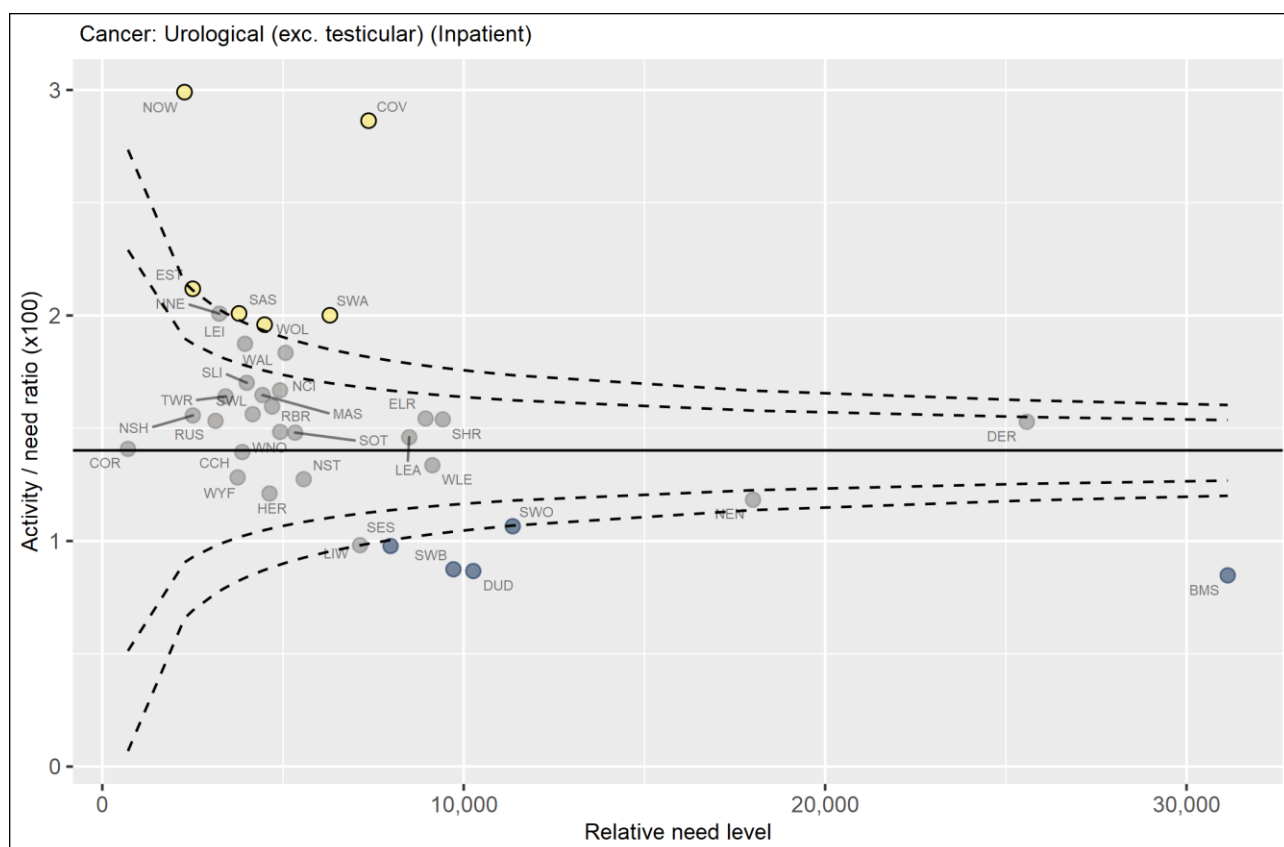
Activity and need data by CCG. Cancer: Urological - exc. testicular (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Nottingham West CCG	NOW	2,274	68	3.0
NHS Coventry and Rugby CCG	COV	7,368	211	2.9
NHS East Staffordshire CCG	EST	2,502	53	2.1
NHS Stafford and Surrounds CCG	SAS	3,783	76	2.0
NHS South Warwickshire CCG	SWA	6,297	126	2.0
NHS Wolverhampton CCG	WOL	4,491	88	2.0
Not significantly different				
NHS Nottingham North and East CCG	NNE	3,237	65	2.0
NHS Leicester City CCG	LEI	3,948	74	1.9
NHS Walsall CCG	WAL	5,070	93	1.8
NHS South Lincolnshire CCG	SLI	3,996	68	1.7
NHS Nottingham City CCG	NCI	4,916	82	1.7
NHS Mansfield and Ashfield CCG	MAS	4,432	73	1.6
NHS Telford and Wrekin CCG	TWR	3,412	56	1.6
NHS Redditch and Bromsgrove CCG	RBR	4,698	75	1.6
NHS South West Lincolnshire CCG	SWL	4,160	65	1.6
NHS Newark and Sherwood CCG	NSH	2,505	39	1.6
NHS East Leicestershire and Rutland CCG	ELR	8,944	138	1.5
NHS Shropshire CCG	SHR	9,420	145	1.5
NHS Rushcliffe CCG	RUS	3,132	48	1.5
NHS Derby and Derbyshire CCG	DER	25,580	391	1.5
NHS Warwickshire North CCG	WNO	4,920	73	1.5
NHS Stoke on Trent CCG	SOT	5,336	79	1.5
NHS Lincolnshire East CCG	LEA	8,492	124	1.5
NHS Corby CCG	COR	710	10	1.4
NHS Cannock Chase CCG	CCH	3,872	54	1.4
NHS West Leicestershire CCG	WLE	9,132	122	1.3
NHS Wyre Forest CCG	WYF	3,744	48	1.3
NHS North Staffordshire CCG	NST	5,572	71	1.3
NHS Herefordshire CCG	HER	4,626	56	1.2
NHS Nene CCG	NEN	18,004	213	1.2
NHS Lincolnshire West CCG	LIW	7,132	70	1.0
Low				
NHS South Worcestershire CCG	SWO	11,356	121	1.1
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	7,976	78	1.0
NHS Sandwell and West Birmingham CCG	SWB	9,716	85	0.9
NHS Dudley CCG	DUD	10,264	89	0.9
NHS Birmingham and Solihull CCG	BMS	31,140	264	0.8

Cancer: Upper gastrointestinal tract (Inpatient)

Activity data - Inpatient admissions with IR flags 01U (Cancer: Oesophageal And Gastric Cancer), 39A (Oesophageal Gastric (Electrostimulation) in 2018/19.

Indicative level of need - Cancer Prevalence: Oesophagus stomach (Public Health England 2023).

Limitations: Prevalence in this instance counts the number of people alive at 31/1/2017 who had previously had a cancer diagnosis. Therefore, this is not a direct measure of current need for services, but it should still provide a reasonable proxy for the overall level of need for an area.

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[23] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Cancer: Upper gastrointestinal tract (Inpatient)

Cancer: Upper gastrointestinal tract (Inpatient)

Activity/need ratio
High
Not significantly different
Low
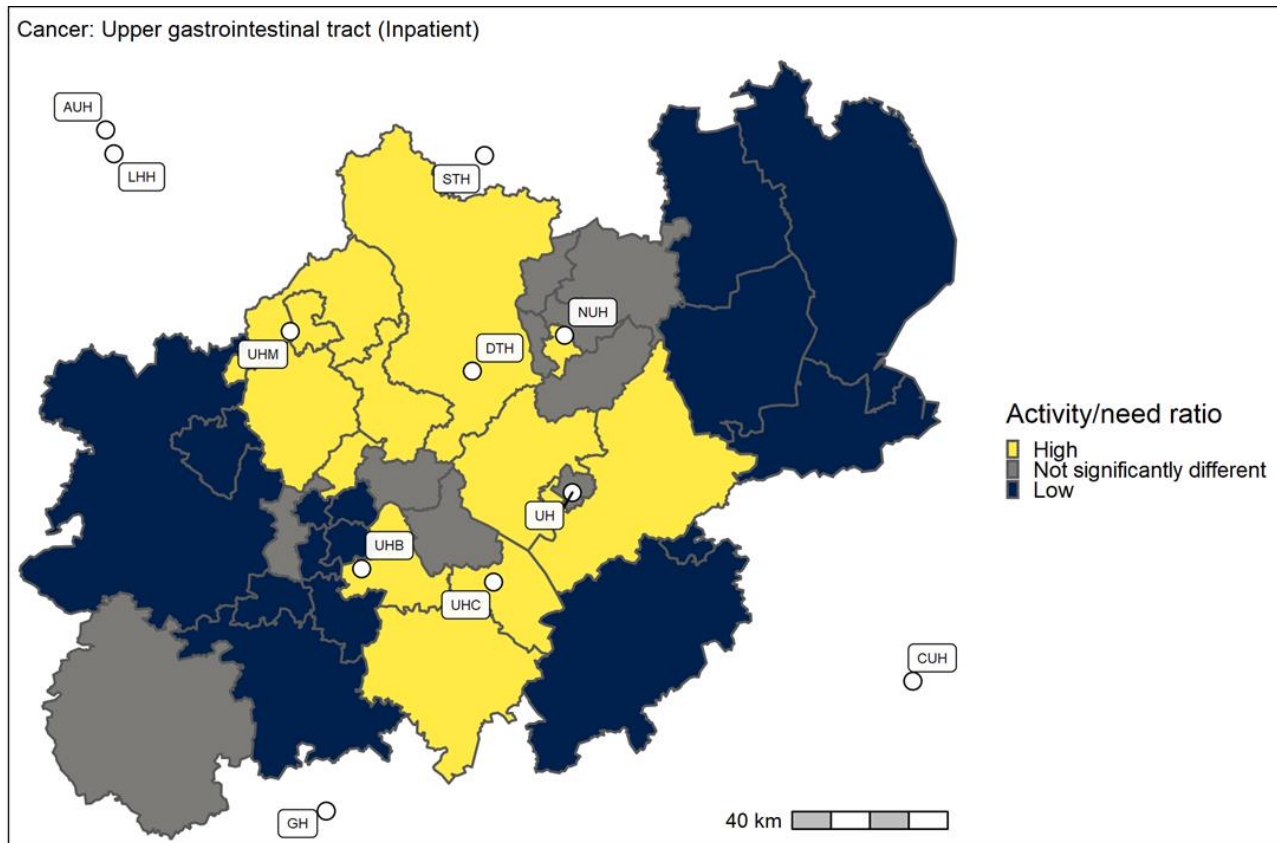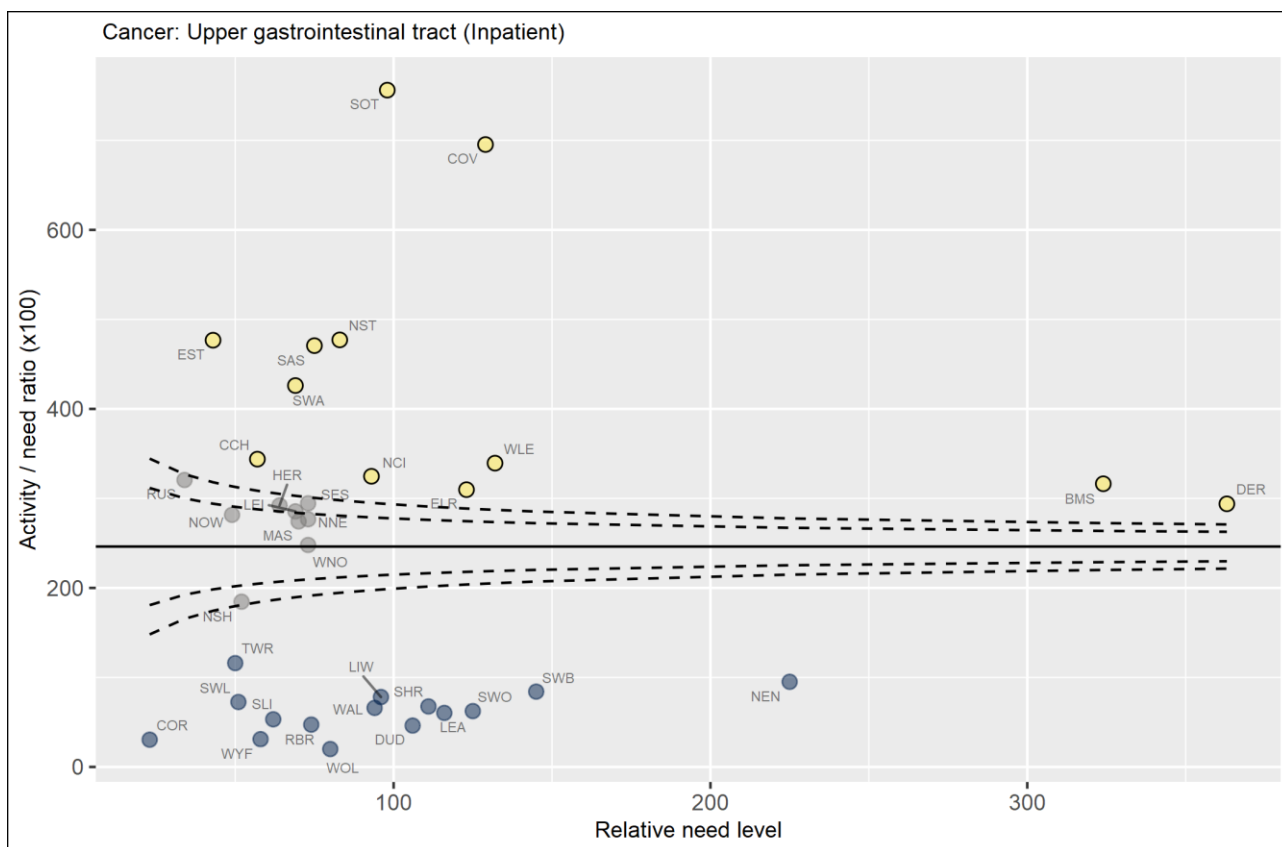
Activity and need data by CCG. Cancer: Upper gastrointestinal tract (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Stoke on Trent CCG	SOT	98	741	756.1
NHS Coventry and Rugby CCG	COV	129	897	695.3
NHS North Staffordshire CCG	NST	83	396	477.1
NHS East Staffordshire CCG	EST	43	205	476.7
NHS Stafford and Surrounds CCG	SAS	75	353	470.7
NHS South Warwickshire CCG	SWA	69	294	426.1
NHS Cannock Chase CCG	CCH	57	196	343.9
NHS West Leicestershire CCG	WLE	132	448	339.4
NHS Nottingham City CCG	NCI	93	302	324.7
NHS Birmingham and Solihull CCG	BMS	324	1,025	316.4
NHS East Leicestershire and Rutland CCG	ELR	123	381	309.8
NHS Derby and Derbyshire CCG	DER	363	1,067	293.9
Not significantly different				
NHS Rushcliffe CCG	RUS	34	109	320.6
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	73	215	294.5
NHS Herefordshire CCG	HER	64	187	292.2
NHS Leicester City CCG	LEI	69	197	285.5
NHS Nottingham West CCG	NOW	49	138	281.6
NHS Nottingham North and East CCG	NNE	73	202	276.7
NHS Mansfield and Ashfield CCG	MAS	70	192	274.3
NHS Warwickshire North CCG	WNO	73	181	247.9
NHS Newark and Sherwood CCG	NSH	52	96	184.6
Low				
NHS Telford and Wrekin CCG	TWR	50	58	116.0
NHS Nene CCG	NEN	225	214	95.1
NHS Sandwell and West Birmingham CCG	SWB	145	122	84.1
NHS Lincolnshire West CCG	LIW	96	75	78.1
NHS South West Lincolnshire CCG	SWL	51	37	72.5
NHS Shropshire CCG	SHR	111	75	67.6
NHS Walsall CCG	WAL	94	62	66.0
NHS South Worcestershire CCG	SWO	125	78	62.4
NHS Lincolnshire East CCG	LEA	116	70	60.3
NHS South Lincolnshire CCG	SLI	62	33	53.2
NHS Redditch and Bromsgrove CCG	RBR	74	35	47.3
NHS Dudley CCG	DUD	106	49	46.2
NHS Wyre Forest CCG	WYF	58	18	31.0
NHS Corby CCG	COR	23	7	30.4
NHS Wolverhampton CCG	WOL	80	16	20.0

Cancer: Gynaecological (Inpatient)

Activity data - Inpatient admissions with IR flags 39A (Cancer: Specialist Gynaecological Cancers) in 2018/19.

Indicative level of need - Cancer Prevalence: Ovary, fallopian tube and primary peritoneal carcinomas and Uterus (Public Health England 2024).

Limitations: Prevalence in this instance counts the number of people alive at 31/1/2017 who had previously had a cancer diagnosis. Therefore, this is not a direct measure of current need for services, but it should still provide a reasonable proxy for the overall level of need for an area.

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[24] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Cancer: Gynaecological (Inpatient)

Cancer: Gynaecological (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low
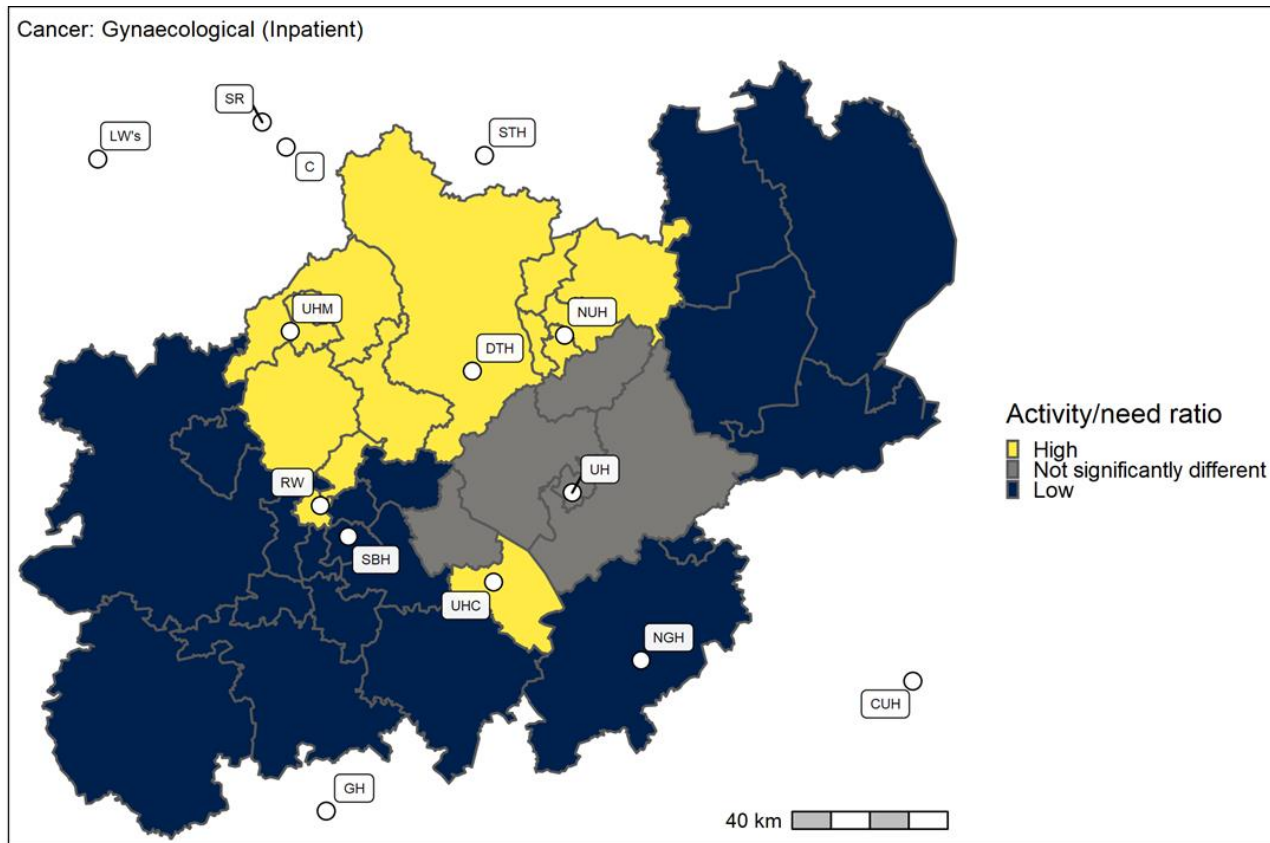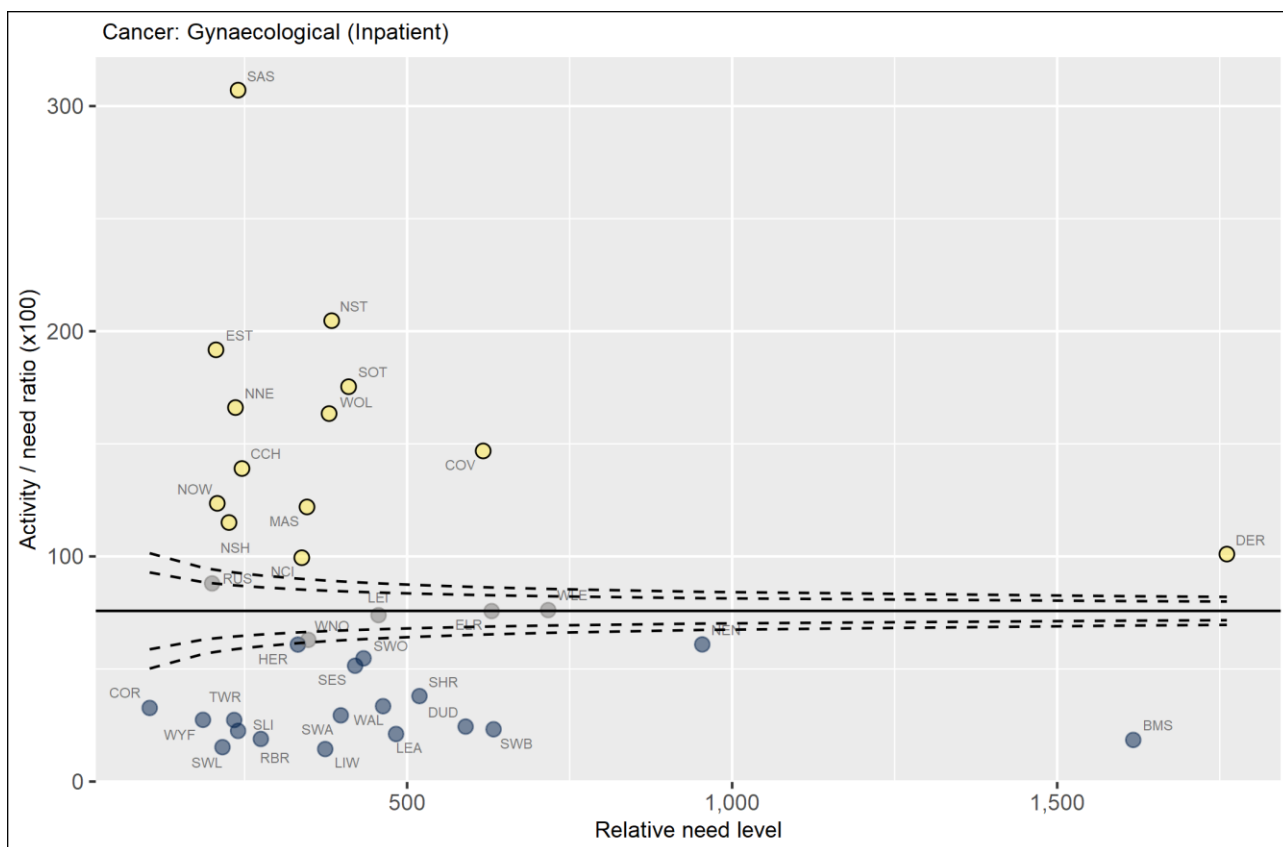
Activity and need data by CCG. Cancer: Gynaecological (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Stafford and Surrounds CCG	SAS	240	737	307.1
NHS North Staffordshire CCG	NST	384	786	204.7
NHS East Staffordshire CCG	EST	206	395	191.7
NHS Stoke on Trent CCG	SOT	410	719	175.4
NHS Nottingham North and East CCG	NNE	236	392	166.1
NHS Wolverhampton CCG	WOL	380	621	163.4
NHS Coventry and Rugby CCG	COV	617	906	146.8
NHS Cannock Chase CCG	CCH	246	342	139.0
NHS Nottingham West CCG	NOW	208	257	123.6
NHS Mansfield and Ashfield CCG	MAS	346	422	122.0
NHS Newark and Sherwood CCG	NSH	226	260	115.0
NHS Derby and Derbyshire CCG	DER	1,761	1,779	101.0
NHS Nottingham City CCG	NCI	338	336	99.4
Not significantly different				
NHS Rushcliffe CCG	RUS	200	176	88.0
NHS West Leicestershire CCG	WLE	717	546	76.2
NHS East Leicestershire and Rutland CCG	ELR	630	477	75.7
NHS Leicester City CCG	LEI	456	337	73.9
NHS Warwickshire North CCG	WNO	348	219	62.9
Low				
NHS Nene CCG	NEN	954	581	60.9
NHS Herefordshire CCG	HER	332	202	60.8
NHS South Worcestershire CCG	SWO	433	237	54.7
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	420	216	51.4
NHS Shropshire CCG	SHR	519	197	38.0
NHS Walsall CCG	WAL	463	155	33.5
NHS Corby CCG	COR	104	34	32.7
NHS South Warwickshire CCG	SWA	398	117	29.4
NHS Wyre Forest CCG	WYF	186	51	27.4
NHS Telford and Wrekin CCG	TWR	234	64	27.4
NHS Dudley CCG	DUD	590	144	24.4
NHS Sandwell and West Birmingham CCG	SWB	633	147	23.2
NHS South Lincolnshire CCG	SLI	240	54	22.5
NHS Lincolnshire East CCG	LEA	483	102	21.1
NHS Redditch and Bromsgrove CCG	RBR	275	52	18.9
NHS Birmingham and Solihull CCG	BMS	1,617	299	18.5
NHS South West Lincolnshire CCG	SWL	216	33	15.3
NHS Lincolnshire West CCG	LIW	374	54	14.4

Rare Cancers - Adults

The service line 01Y (Rare Cancers) appears to include attendances for chemotherapy and radiotherapy. According to the treatment function codes, the volumes of outpatient activity recorded were 248,192 in Medical Oncology and 490,461 in Clinical Oncology (previously Radiotherapy) and 250 in Paediatric Medical Oncology. It was decided that this service line would be split according to the treatment function.

Medical Oncology (outpatient)

Activity data- Outpatient attendances with (IR flag 01Y) Rare Cancers – Adults and treatment function code 370 (Medical oncology) (2018/19).

Indicative level of need – Given that this service line typically includes chemotherapy attendances for all types of cancer, the indicator of need applied in this case is the sum of all the cancer in the prevalence data produced by Public Health England and NHS in 2018[25].

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[25] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Medical Oncology (Outpatient)

Medical Oncology (Outpatient)

Activity/need ratio
- High
- Low

40 km
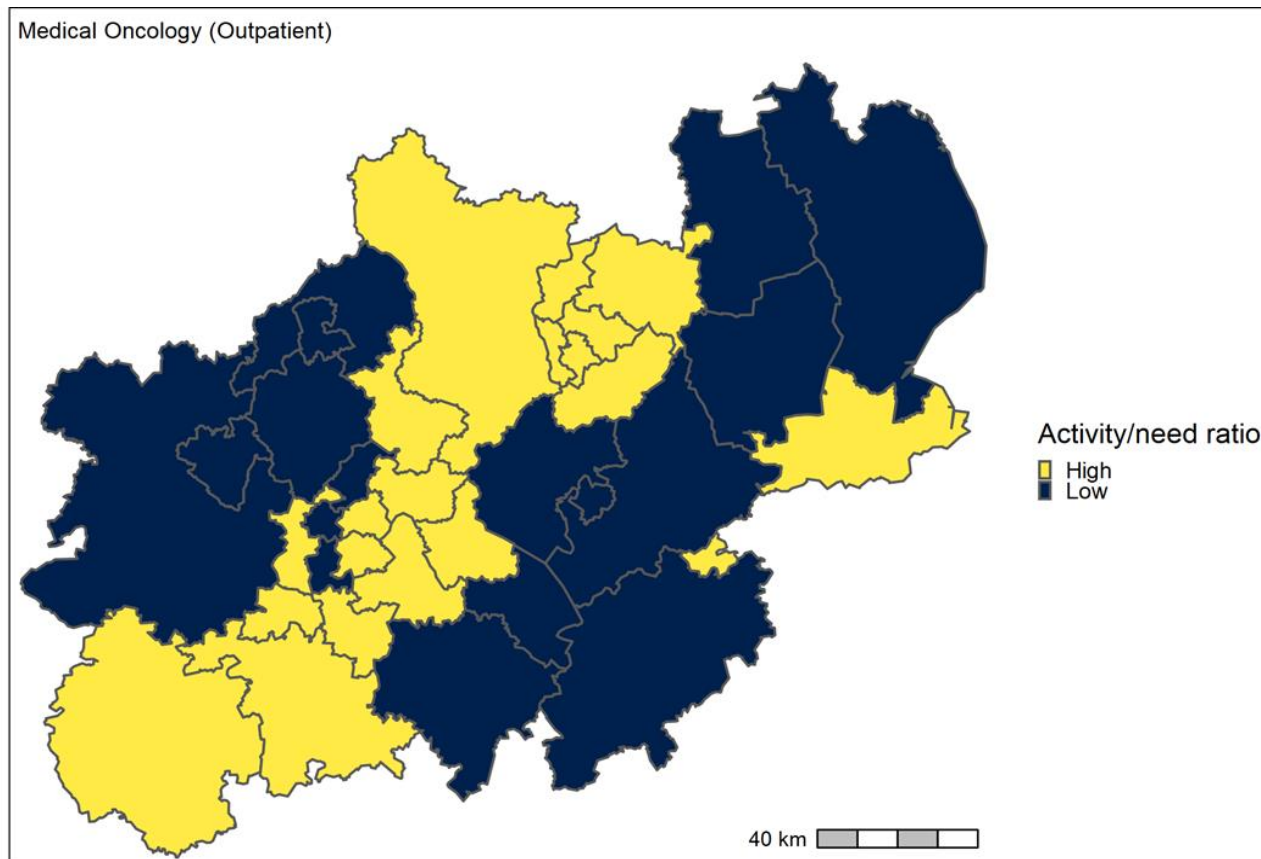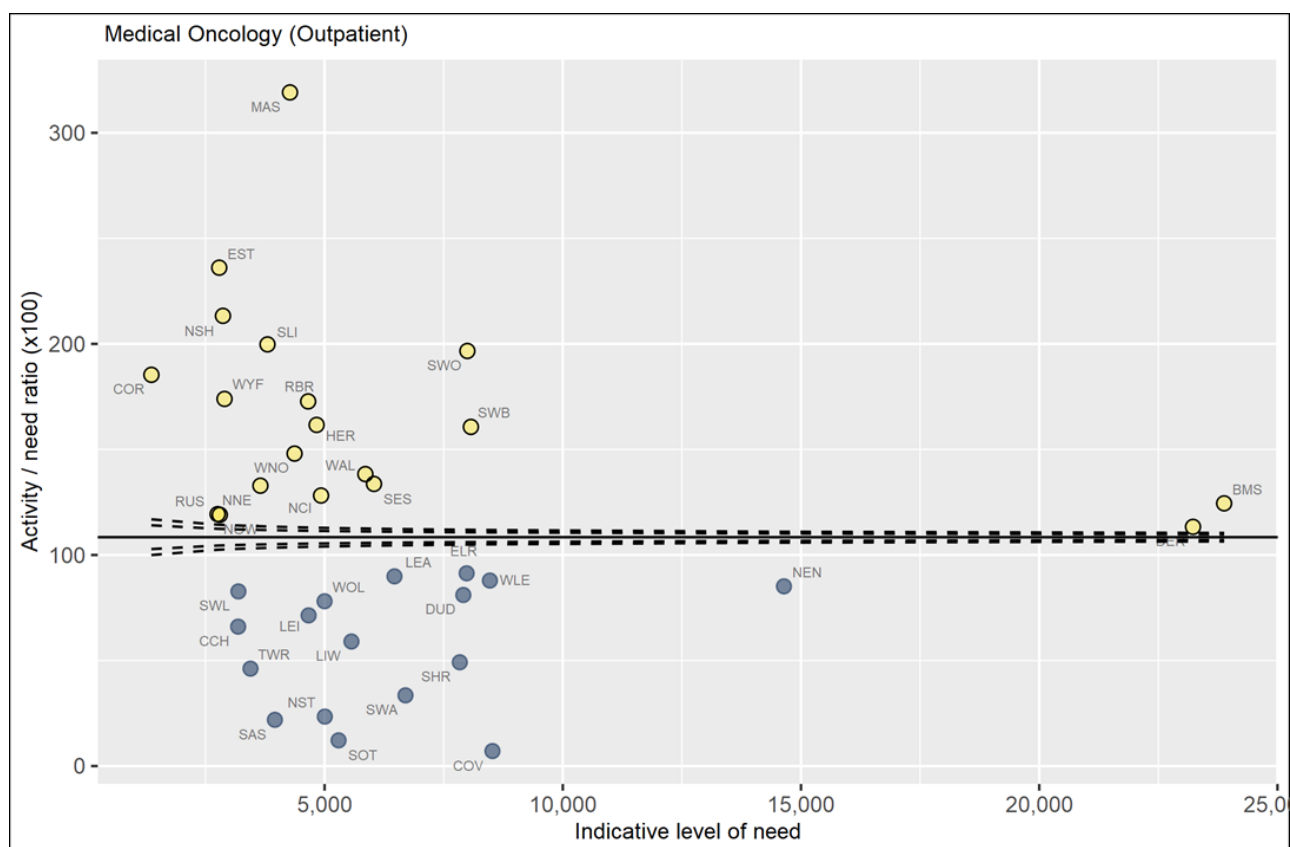
Activity and need data by CCG. Rare Cancers – Medical Oncology (Outpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Mansfield and Ashfield CCG	MAS	4,274	13,640	319.1
NHS East Staffordshire CCG	EST	2,789	6,585	236.1
NHS Newark and Sherwood CCG	NSH	2,867	6,115	213.3
NHS South Lincolnshire CCG	SLI	3,802	7,595	199.8
NHS South Worcestershire CCG	SWO	7,997	15,726	196.6
NHS Corby CCG	COR	1,365	2,530	185.3
NHS Wyre Forest CCG	WYF	2,900	5,044	173.9
NHS Redditch and Bromsgrove CCG	RBR	4,655	8,042	172.8
NHS Herefordshire CCG	HER	4,833	7,811	161.6
NHS Sandwell and West Birmingham CCG	SWB	8,071	12,968	160.7
NHS Warwickshire North CCG	WNO	4,370	6,469	148.0
NHS Walsall CCG	WAL	5,856	8,100	138.3
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	6,037	8,069	133.7
NHS Nottingham North and East CCG	NNE	3,653	4,852	132.8
NHS Nottingham City CCG	NCI	4,926	6,313	128.2
NHS Birmingham and Solihull CCG	BMS	23,881	29,721	124.5
NHS Rushcliffe CCG	RUS	2,755	3,288	119.3
NHS Nottingham West CCG	NOW	2,801	3,334	119.0
NHS Derby and Derbyshire CCG	DER	23,228	26,325	113.3
Low				
NHS East Leicestershire and Rutland CCG	ELR	7,982	7,289	91.3
NHS Lincolnshire East CCG	LEA	6,467	5,812	89.9
NHS West Leicestershire CCG	WLE	8,470	7,444	87.9
NHS Nene CCG	NEN	14,642	12,468	85.2
NHS South West Lincolnshire CCG	SWL	3,191	2,640	82.7
NHS Dudley CCG	DUD	7,912	6,412	81.0
NHS Wolverhampton CCG	WOL	5,000	3,904	78.1
NHS Leicester City CCG	LEI	4,665	3,330	71.4
NHS Cannock Chase CCG	CCH	3,186	2,104	66.0
NHS Lincolnshire West CCG	LIW	5,564	3,283	59.0
NHS Shropshire CCG	SHR	7,838	3,854	49.2
NHS Telford and Wrekin CCG	TWR	3,445	1,590	46.2
NHS South Warwickshire CCG	SWA	6,698	2,244	33.5
NHS North Staffordshire CCG	NST	5,005	1,173	23.4
NHS Stafford and Surrounds CCG	SAS	3,957	867	21.9
NHS Stoke on Trent CCG	SOT	5,294	645	12.2
NHS Coventry and Rugby CCG	COV	8,524	606	7.1

Clinical Oncology - previously Radiotherapy (Outpatient)

Activity data- Outpatient attendances with (IR flag 01Y) Rare Cancers – Adults and treatment function code 800 (Clinical oncology previously Radiotherapy) (2018/19).

Indicative level of need – Given that this service line includes radiotherapy attendances for all types of cancer, the indicator of need applied in this case is the sum of all the cancer in the prevalence data produced by Public Health England and NHS in 2018[26].

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[26] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Clinical Oncology (previously Radiotherapy) (Outpatient)

Clinical Oncology (previously Radiotherapy) (Outpatient)

Activity/need ratio
High
Low

40 km
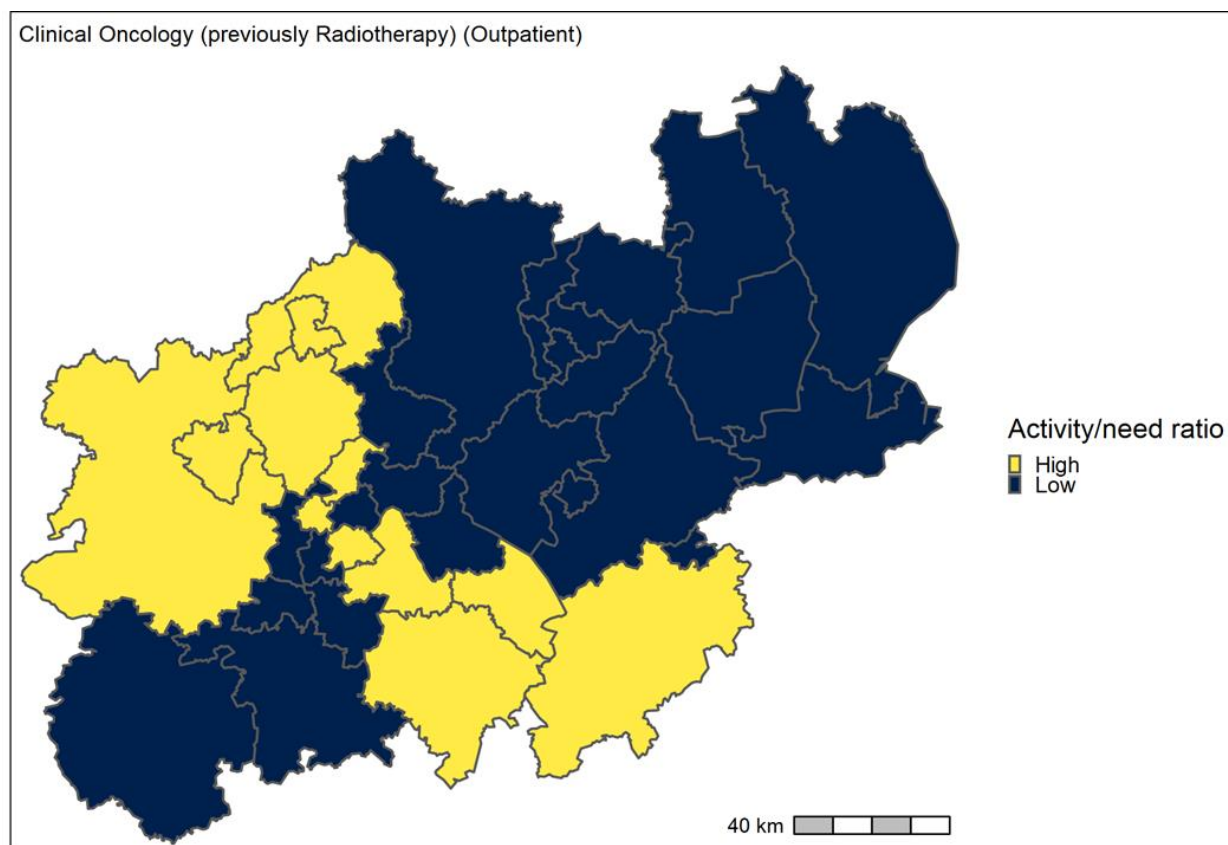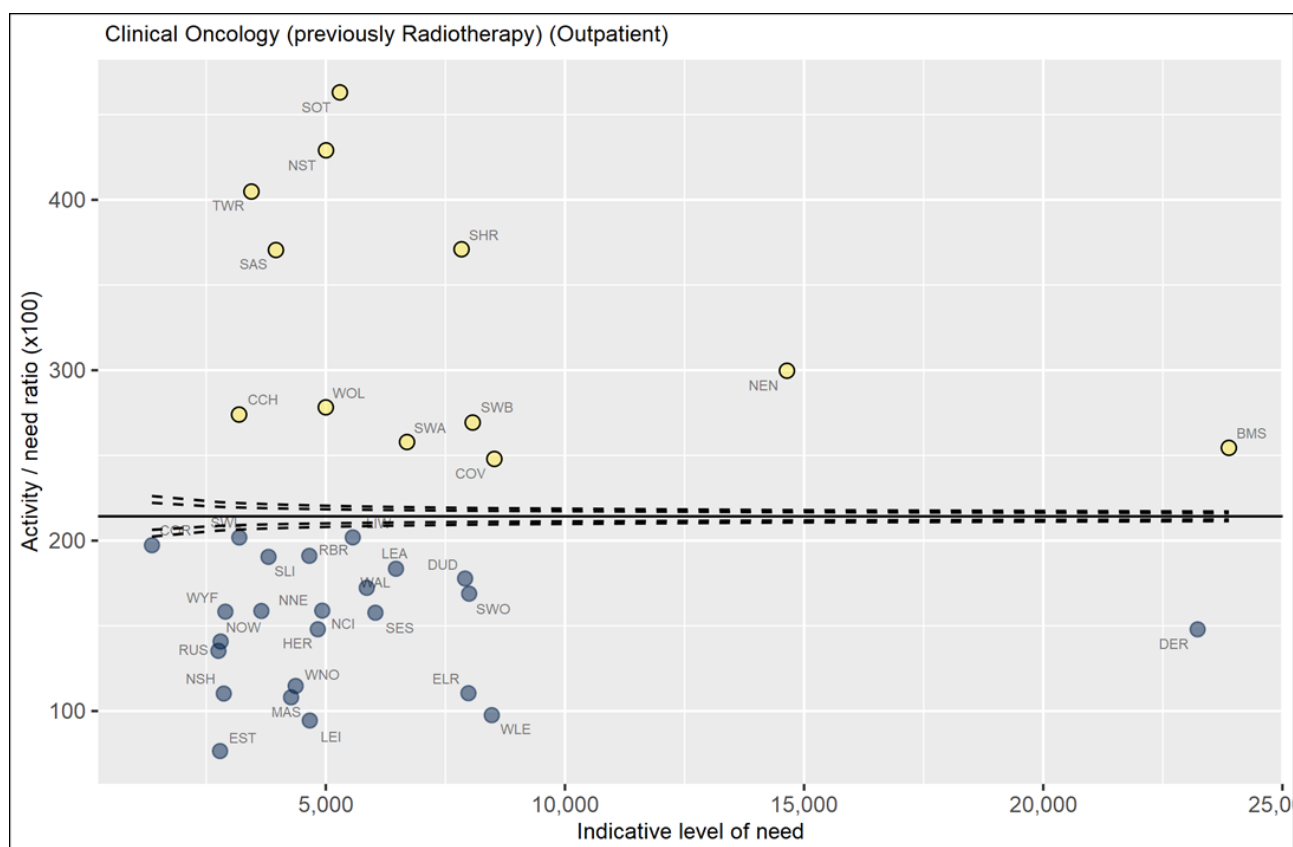
Activity and need data by CCG. Rare Cancers – Clinical Oncology, previously Radiotherapy (Outpatient).
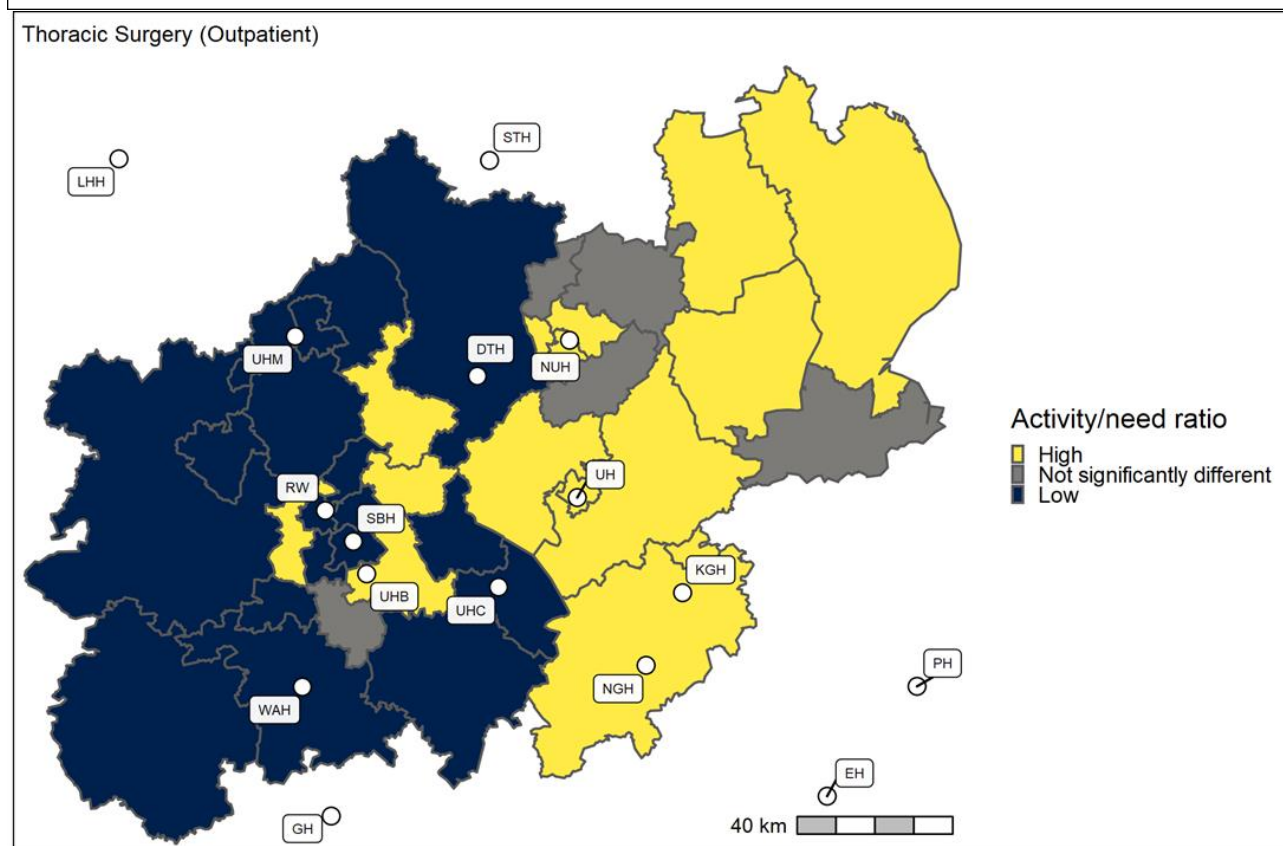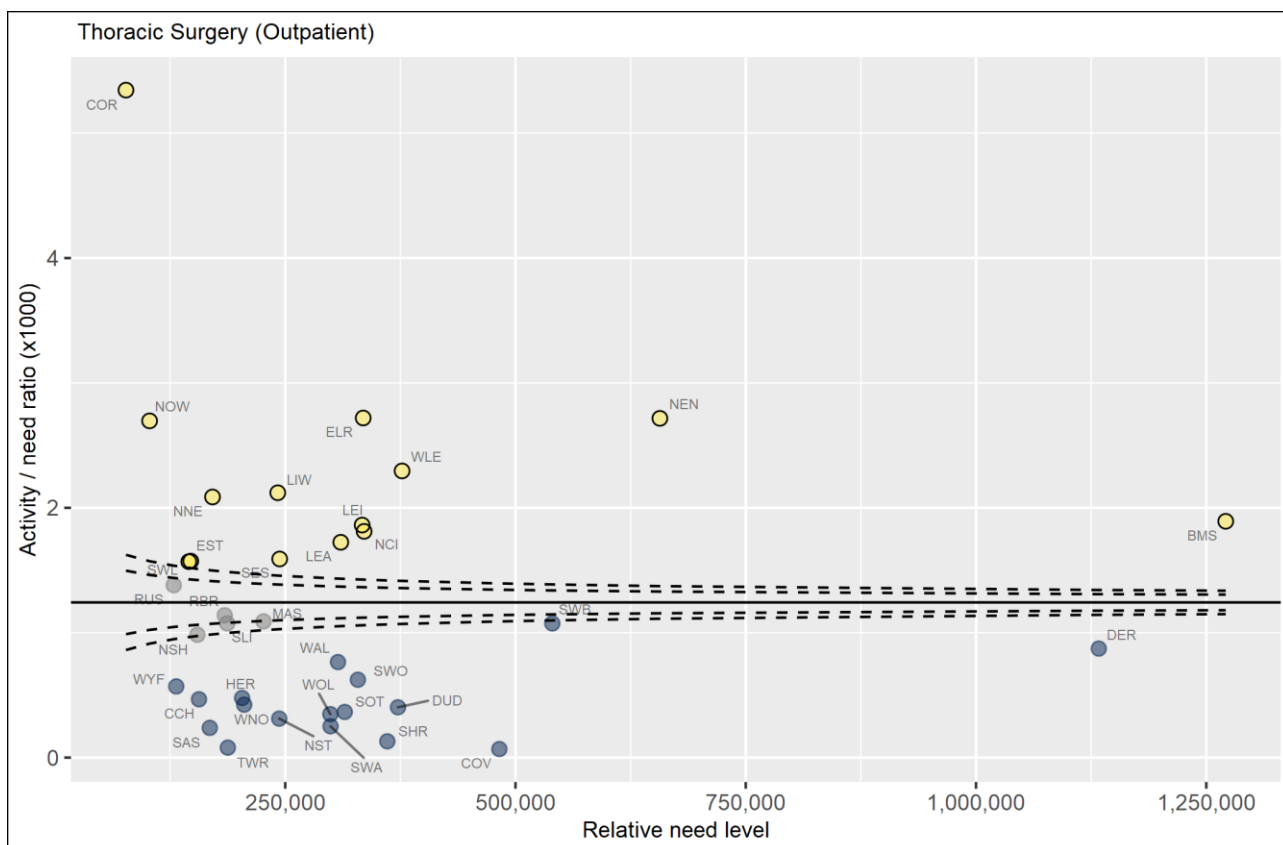Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Stoke on Trent CCG	SOT	5,294	24,513	463.0
NHS North Staffordshire CCG	NST	5,005	21,474	429.1
NHS Telford and Wrekin CCG	TWR	3,445	13,947	404.8
NHS Shropshire CCG	SHR	7,838	29,078	371.0
NHS Stafford and Surrounds CCG	SAS	3,957	14,662	370.5
NHS Nene CCG	NEN	14,642	43,882	299.7
NHS Wolverhampton CCG	WOL	5,000	13,911	278.2
NHS Cannock Chase CCG	CCH	3,186	8,729	274.0
NHS Sandwell and West Birmingham CCG	SWB	8,071	21,735	269.3
NHS South Warwickshire CCG	SWA	6,698	17,272	257.9
NHS Birmingham and Solihull CCG	BMS	23,881	60,767	254.5
NHS Coventry and Rugby CCG	COV	8,524	21,134	247.9
Low				
NHS Lincolnshire West CCG	LIW	5,564	11,234	201.9
NHS South West Lincolnshire CCG	SWL	3,191	6,440	201.8
NHS Corby CCG	COR	1,365	2,693	197.3
NHS Redditch and Bromsgrove CCG	RBR	4,655	8,894	191.1
NHS South Lincolnshire CCG	SLI	3,802	7,241	190.5
NHS Lincolnshire East CCG	LEA	6,467	11,866	183.5
NHS Dudley CCG	DUD	7,912	14,064	177.8
NHS Walsall CCG	WAL	5,856	10,089	172.3
NHS South Worcestershire CCG	SWO	7,997	13,504	168.9
NHS Nottingham City CCG	NCI	4,926	7,828	158.9
NHS Nottingham North and East CCG	NNE	3,653	5,798	158.7
NHS Wyre Forest CCG	WYF	2,900	4,591	158.3
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	6,037	9,520	157.7
NHS Herefordshire CCG	HER	4,833	7,151	148.0
NHS Derby and Derbyshire CCG	DER	23,228	34,361	147.9
NHS Nottingham West CCG	NOW	2,801	3,944	140.8
NHS Rushcliffe CCG	RUS	2,755	3,728	135.3
NHS Warwickshire North CCG	WNO	4,370	5,013	114.7
NHS East Leicestershire and Rutland CCG	ELR	7,982	8,817	110.5
NHS Newark and Sherwood CCG	NSH	2,867	3,161	110.3
NHS Mansfield and Ashfield CCG	MAS	4,274	4,617	108.0
NHS West Leicestershire CCG	WLE	8,470	8,264	97.6
NHS Leicester City CCG	LEI	4,665	4,405	94.4
NHS East Staffordshire CCG	EST	2,789	2,134	76.5

Thoracic Surgery (Outpatient)

Activity data - Outpatient attendances with (IR flag 29Z) Thoracic Surgery (2018/19). Even though this category is under the NPoC of Cancer, the activity recorded in this prescribed service line covers a range of different diagnoses which includes but not exclusively cancer; for example, the service line also covers pyothorax without fistula, other spontaneous pneumothorax and multiple fractures of ribs closed.

Indicative level of need – A directly related indicator or quantification of need could not be found for this prescribed service line as it covers a wide range of health problems. We have therefore used the General and acute weighted CCG population as a proxy for need in this instance.

Limitations: The general and acute weighted population is a general indicator of overall healthcare need within a CCG. It is based on the CCG population but is adjusted to take account of a number of factors related to healthcare need such as age and gender. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

Thoracic Surgery (Outpatient)

Thoracic Surgery (Outpatient)

Activity and need data by CCG. Thoracic Surgery (Outpatient).

Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Corby CCG	COR	77,088	412	0.5
NHS East Leicestershire and Rutland CCG	ELR	334,636	910	0.3
NHS Nene CCG	NEN	656,778	1,784	0.3
NHS Nottingham West CCG	NOW	102,736	277	0.3
NHS West Leicestershire CCG	WLE	376,852	865	0.2
NHS Lincolnshire West CCG	LIW	241,922	513	0.2
NHS Nottingham North and East CCG	NNE	171,057	357	0.2
NHS Birmingham and Solihull CCG	BMS	1,271,116	2,405	0.2
NHS Leicester City CCG	LEI	333,532	621	0.2
NHS Nottingham City CCG	NCI	335,645	608	0.2
NHS Lincolnshire East CCG	LEA	310,316	535	0.2
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	243,974	388	0.2
NHS East Staffordshire CCG	EST	147,461	232	0.2
NHS South West Lincolnshire CCG	SWL	145,295	228	0.2
Low				
NHS Sandwell and West Birmingham CCG	SWB	539,975	580	0.1
NHS Derby and Derbyshire CCG	DER	1,133,256	989	0.1
NHS Walsall CCG	WAL	307,277	235	0.1
NHS South Worcestershire CCG	SWO	328,858	205	0.1
NHS Wyre Forest CCG	WYF	131,646	75	0.1
NHS Herefordshire CCG	HER	203,157	97	0.0
NHS Cannock Chase CCG	CCH	156,366	73	0.0
NHS Warwickshire North CCG	WNO	205,431	87	0.0
NHS Dudley CCG	DUD	372,413	150	0.0
NHS Stoke on Trent CCG	SOT	314,622	115	0.0
NHS Wolverhampton CCG	WOL	298,979	104	0.0
NHS North Staffordshire CCG	NST	243,497	76	0.0
NHS South Warwickshire CCG	SWA	299,193	75	0.0
NHS Stafford and Surrounds CCG	SAS	168,092	40	0.0
NHS Shropshire CCG	SHR	360,838	47	0.0
NHS Telford and Wrekin CCG	TWR	187,682	15	0.0
NHS Coventry and Rugby CCG	COV	482,461	33	0.0
Not significantly different				
NHS Rushcliffe CCG	RUS	128,932	178	0.1
NHS Redditch and Bromsgrove CCG	RBR	184,267	210	0.1
NHS Mansfield and Ashfield CCG	MAS	226,464	247	0.1
NHS South Lincolnshire CCG	SLI	186,991	201	0.1
NHS Newark and Sherwood CCG	NSH	154,593	152	0.1

4.2.2   Children and Young Adult Cancer Services

There are four services lines within the Children and Young Adult Cancer category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. These were Cancer: Teenage and young adults (inpatient and outpatient) and Paediatric Oncology (Inpatients and outpatients)

Cancer: Teenager and Young Adults (inpatients)

Activity data – Inpatient admissions with (IR flag 01T) Cancer: Teenager and Young Adults (2018/19).

Indicative level of need – 10 year Prevalence of cancer age group 15-24 years old. Source: Cancer Prevalence data Public Health England 2018[27].

Limitations: Prevalence in this instance counts the number of people alive at 31/1/2017 who had had a cancer diagnosis. Therefore, it is not a direct measure of current need for services but it should still provide a reasonable proxy for the overall level of need for an area. In addition, the age groups are slightly different (15-24 need source and 17-24 inpatient admissions).

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[27] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Cancer: Teenager And Young Adults (Inpatient)

Cancer: Teenager And Young Adults (Inpatient)

Activity and need data by CCG. Cancer: Teenager and Young Adults (Inpatient).

Activity ratio is per 100 need

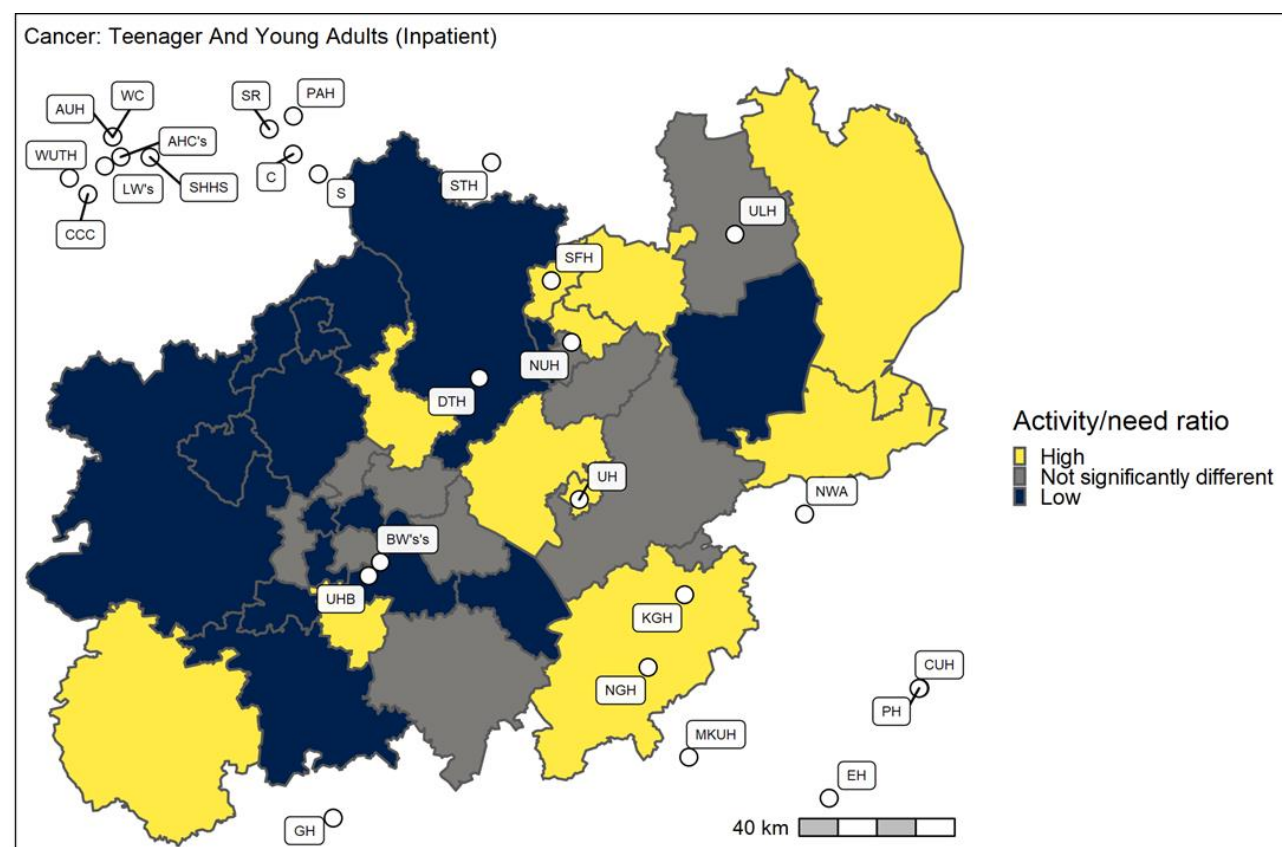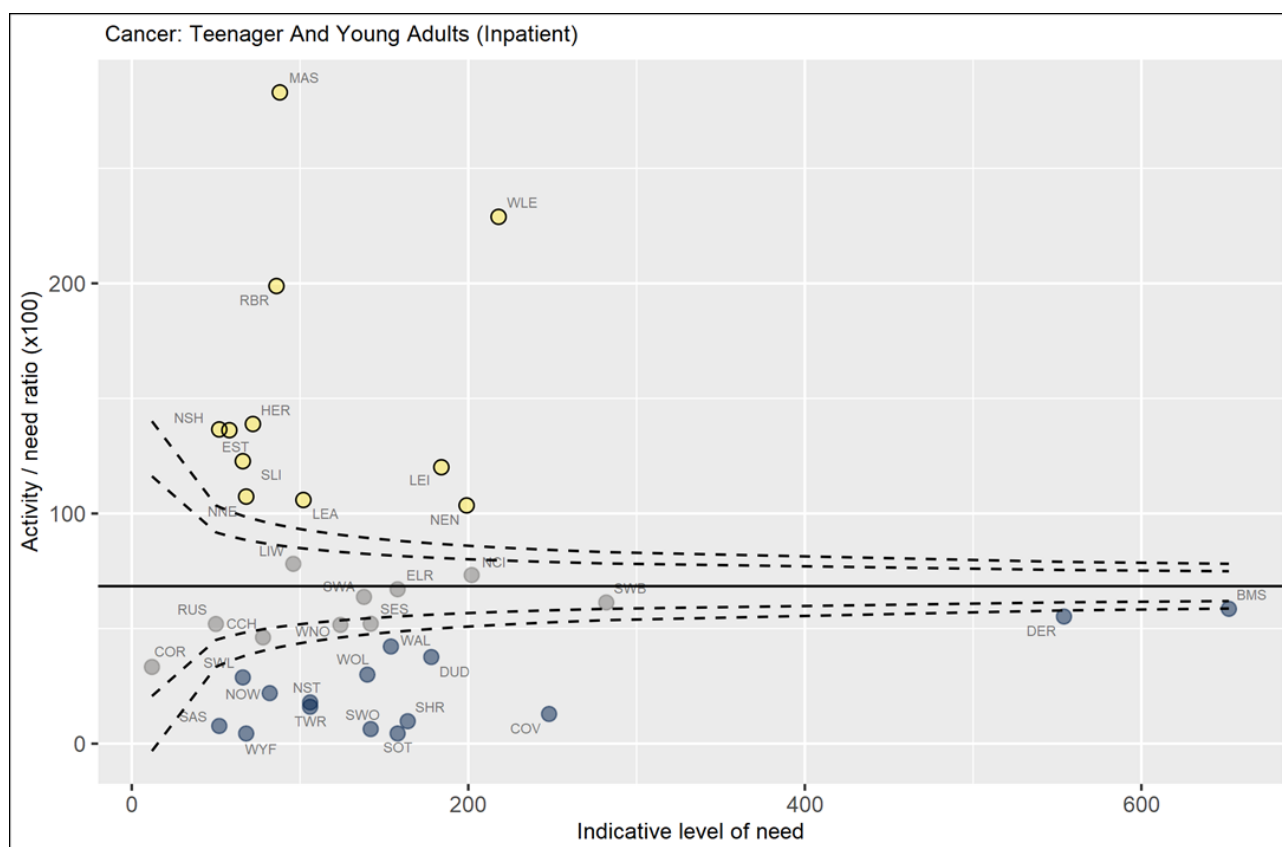| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Mansfield and Ashfield CCG	MAS	88	249	283.0
NHS West Leicestershire CCG	WLE	218	499	228.9
NHS Redditch and Bromsgrove CCG	RBR	86	171	198.8
NHS Herefordshire CCG	HER	72	100	138.9
NHS Newark and Sherwood CCG	NSH	52	71	136.5
NHS East Staffordshire CCG	EST	58	79	136.2
NHS South Lincolnshire CCG	SLI	66	81	122.7
NHS Leicester City CCG	LEI	184	221	120.1
NHS Nottingham North and East CCG	NNE	68	73	107.4
NHS Lincolnshire East CCG	LEA	102	108	105.9
NHS Nene CCG	NEN	199	206	103.5
Not significantly different				
NHS Lincolnshire West CCG	LIW	96	75	78.1
NHS Nottingham City CCG	NCI	202	148	73.3
NHS East Leicestershire and Rutland CCG	ELR	158	106	67.1
NHS South Warwickshire CCG	SWA	138	88	63.8
NHS Sandwell and West Birmingham CCG	SWB	282	173	61.3
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	142	74	52.1
NHS Rushcliffe CCG	RUS	50	26	52.0
NHS Warwickshire North CCG	WNO	124	64	51.6
NHS Cannock Chase CCG	CCH	78	36	46.2
NHS Corby CCG	COR	12	4	33.3
Low				
NHS Birmingham and Solihull CCG	BMS	652	382	58.6
NHS Derby and Derbyshire CCG	DER	554	306	55.2
NHS Walsall CCG	WAL	154	65	42.2
NHS Dudley CCG	DUD	178	67	37.6
NHS Wolverhampton CCG	WOL	140	42	30.0
NHS South West Lincolnshire CCG	SWL	66	19	28.8
NHS Nottingham West CCG	NOW	82	18	22.0
NHS North Staffordshire CCG	NST	106	19	17.9
NHS Telford and Wrekin CCG	TWR	106	17	16.0
NHS Coventry and Rugby CCG	COV	248	32	12.9
NHS Shropshire CCG	SHR	164	16	9.8
NHS Stafford and Surrounds CCG	SAS	52	4	7.7
NHS South Worcestershire CCG	SWO	142	9	6.3
NHS Stoke on Trent CCG	SOT	158	7	4.4
NHS Wyre Forest CCG	WYF	68	3	4.4

Cancer: Teenager and Young Adults (Outpatient)

Activity data – Outpatient attendances with (IR flag 01T) Cancer: Teenager and Young Adults (2018/19).

Indicative level of need – 10 year Prevalence of cancer age group 15-24 years old. Source: Cancer Prevalence data Public Health England 2018[28].

Limitations: Prevalence in this instance counts the number of people alive at 31/1/2017 who had had a cancer diagnosis. Therefore, it is not a direct measure of current need for services, but it should still provide a reasonable proxy for the overall level of need for an area. In addition, the age groups are slightly different (15-24 need source and 17-24 inpatient admissions).

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[28] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Cancer: Teenager And Young Adults (Outpatient)

Cancer: Teenager And Young Adults (Outpatient)

Activity and need data by CCG. Cancer: Teenager and Young Adults (Outpatient).

Activity ratio is per 100 need

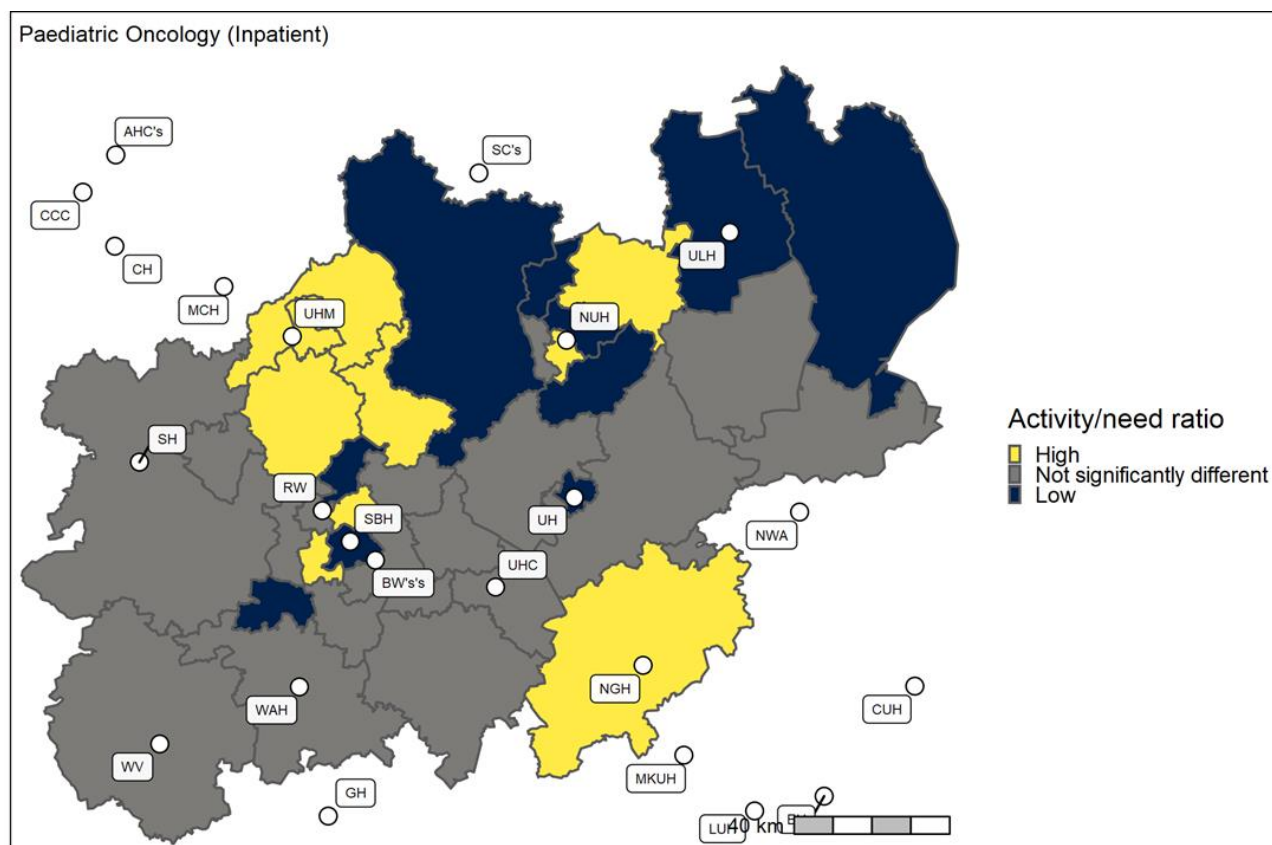| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS West Leicestershire CCG	WLE	218	406	186.2
NHS Newark and Sherwood CCG	NSH	52	76	146.2
NHS Leicester City CCG	LEI	184	261	141.8
NHS East Staffordshire CCG	EST	58	77	132.8
NHS South Lincolnshire CCG	SLI	66	83	125.8
NHS Nene CCG	NEN	199	236	118.6
NHS Redditch and Bromsgrove CCG	RBR	86	100	116.3
NHS Warwickshire North CCG	WNO	124	136	109.7
NHS Nottingham City CCG	NCI	202	217	107.4
Not significantly different				
NHS Corby CCG	COR	12	18	150.0
NHS Mansfield and Ashfield CCG	MAS	88	97	110.2
NHS East Leicestershire and Rutland CCG	ELR	158	160	101.3
NHS Nottingham North and East CCG	NNE	68	65	95.6
NHS Herefordshire CCG	HER	72	64	88.9
NHS Birmingham and Solihull CCG	BMS	652	549	84.2
NHS Dudley CCG	DUD	178	146	82.0
NHS Coventry and Rugby CCG	COV	248	194	78.2
NHS Rushcliffe CCG	RUS	50	39	78.0
NHS South Worcestershire CCG	SWO	142	109	76.8
NHS Lincolnshire East CCG	LEA	102	76	74.5
NHS Sandwell and West Birmingham CCG	SWB	282	199	70.6
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	142	99	69.7
NHS North Staffordshire CCG	NST	106	71	67.0
NHS Lincolnshire West CCG	LIW	96	62	64.6
Low				
NHS Derby and Derbyshire CCG	DER	554	341	61.6
NHS Shropshire CCG	SHR	164	100	61.0
NHS Stoke on Trent CCG	SOT	158	89	56.3
NHS Nottingham West CCG	NOW	82	40	48.8
NHS South Warwickshire CCG	SWA	138	65	47.1
NHS South West Lincolnshire CCG	SWL	66	29	43.9
NHS Walsall CCG	WAL	154	64	41.6
NHS Wolverhampton CCG	WOL	140	58	41.4
NHS Cannock Chase CCG	CCH	78	28	35.9
NHS Telford and Wrekin CCG	TWR	106	35	33.0
NHS Stafford and Surrounds CCG	SAS	52	10	19.2
NHS Wyre Forest CCG	WYF	68	8	11.8

Paediatric Oncology (Inpatient)

Activity data - Inpatient admissions with (IR flag 23A) Paediatric Oncology (2018/19).

Indicative level of need – 10 year Prevalence of cancer age group 0-14 years old. Source: Cancer Prevalence data Public Health England 2018[29].

Limitations: Prevalence in this instance counts the number of people alive at 31/1/2017 who had had a cancer diagnosis. Therefore, it is not a direct measure of current need for services, but it should still provide a reasonable proxy for the overall level of need for an area.

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[29] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Paediatric Oncology (Inpatient)

Paediatric Oncology (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low

Activity and need data by CCG. Paediatric Oncology (Inpatient).

Activity ratio is per 100 need

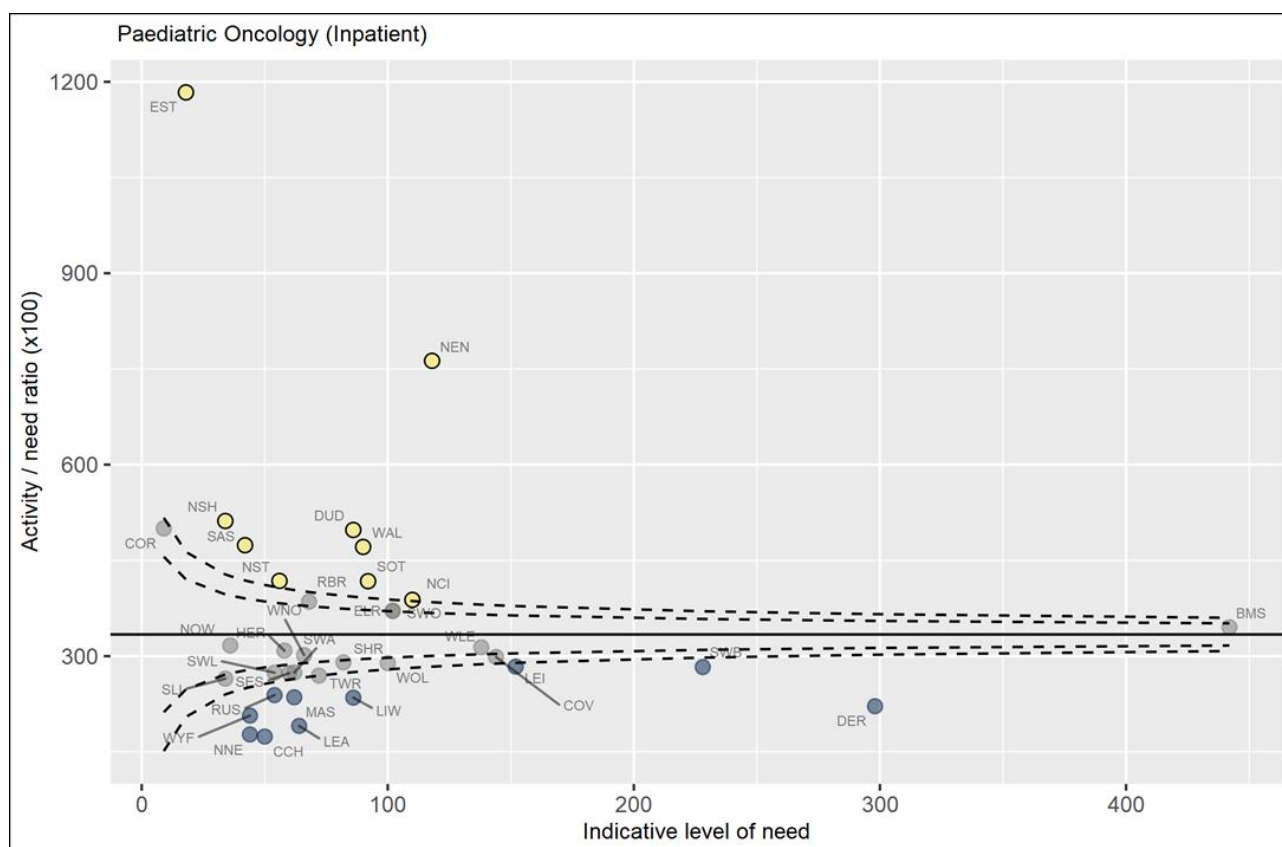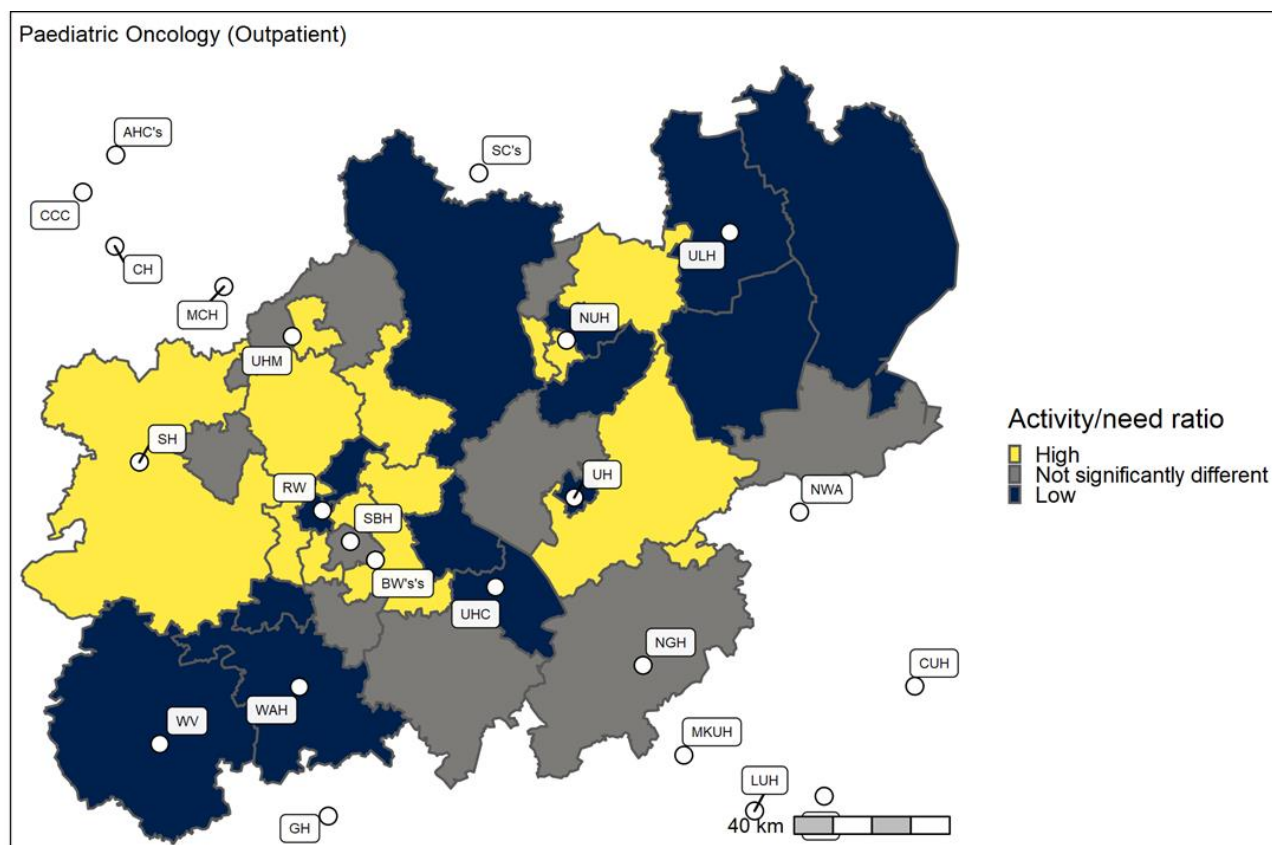| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS East Staffordshire CCG	EST	18	213	1,183.3
NHS Nene CCG	NEN	118	900	762.7
NHS Newark and Sherwood CCG	NSH	34	174	511.8
NHS Dudley CCG	DUD	86	428	497.7
NHS Stafford and Surrounds CCG	SAS	42	199	473.8
NHS Walsall CCG	WAL	90	424	471.1
NHS North Staffordshire CCG	NST	56	234	417.9
NHS Stoke on Trent CCG	SOT	92	384	417.4
NHS Nottingham City CCG	NCI	110	427	388.2
Not significantly different				
NHS Corby CCG	COR	9	45	500.0
NHS Redditch and Bromsgrove CCG	RBR	68	262	385.3
NHS South Worcestershire CCG	SWO	102	379	371.6
NHS East Leicestershire and Rutland CCG	ELR	102	378	370.6
NHS Birmingham and Solihull CCG	BMS	442	1,526	345.2
NHS Nottingham West CCG	NOW	36	114	316.7
NHS West Leicestershire CCG	WLE	138	433	313.8
NHS Herefordshire CCG	HER	58	179	308.6
NHS Warwickshire North CCG	WNO	66	199	301.5
NHS Coventry and Rugby CCG	COV	144	430	298.6
NHS Shropshire CCG	SHR	82	238	290.2
NHS Wolverhampton CCG	WOL	100	289	289.0
NHS South Warwickshire CCG	SWA	62	170	274.2
NHS South West Lincolnshire CCG	SWL	54	148	274.1
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	60	164	273.3
NHS Telford and Wrekin CCG	TWR	72	194	269.4
NHS South Lincolnshire CCG	SLI	34	90	264.7
Low				
NHS Leicester City CCG	LEI	152	431	283.6
NHS Sandwell and West Birmingham CCG	SWB	228	645	282.9
NHS Rushcliffe CCG	RUS	54	129	238.9
NHS Mansfield and Ashfield CCG	MAS	62	146	235.5
NHS Lincolnshire West CCG	LIW	86	202	234.9
NHS Derby and Derbyshire CCG	DER	298	660	221.5
NHS Wyre Forest CCG	WYF	44	91	206.8
NHS Lincolnshire East CCG	LEA	64	122	190.6
NHS Nottingham North and East CCG	NNE	44	78	177.3
NHS Cannock Chase CCG	CCH	50	87	174.0

Paediatric Oncology (Outpatient)

Activity data - Outpatient attendances with (IR flag 23A) Paediatric Oncology (2018/19).

Indicative level of need – 10 year Prevalence of cancer age group 0-14 years old. Source: Cancer Prevalence data Public Health England 2018[30].

Limitations: Prevalence in this instance counts the number of people alive at 31/1/2017 who had had a cancer diagnosis. Therefore, it is not a direct measure of current need for services, but it should still provide a reasonable proxy for the overall level of need for an area.

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[30] Public Health England and NHS (2018). Cancer Prevalence in England 23 year prevalence by demographic and geographic measures.

Paediatric Oncology (Outpatient)

Paediatric Oncology (Outpatient)
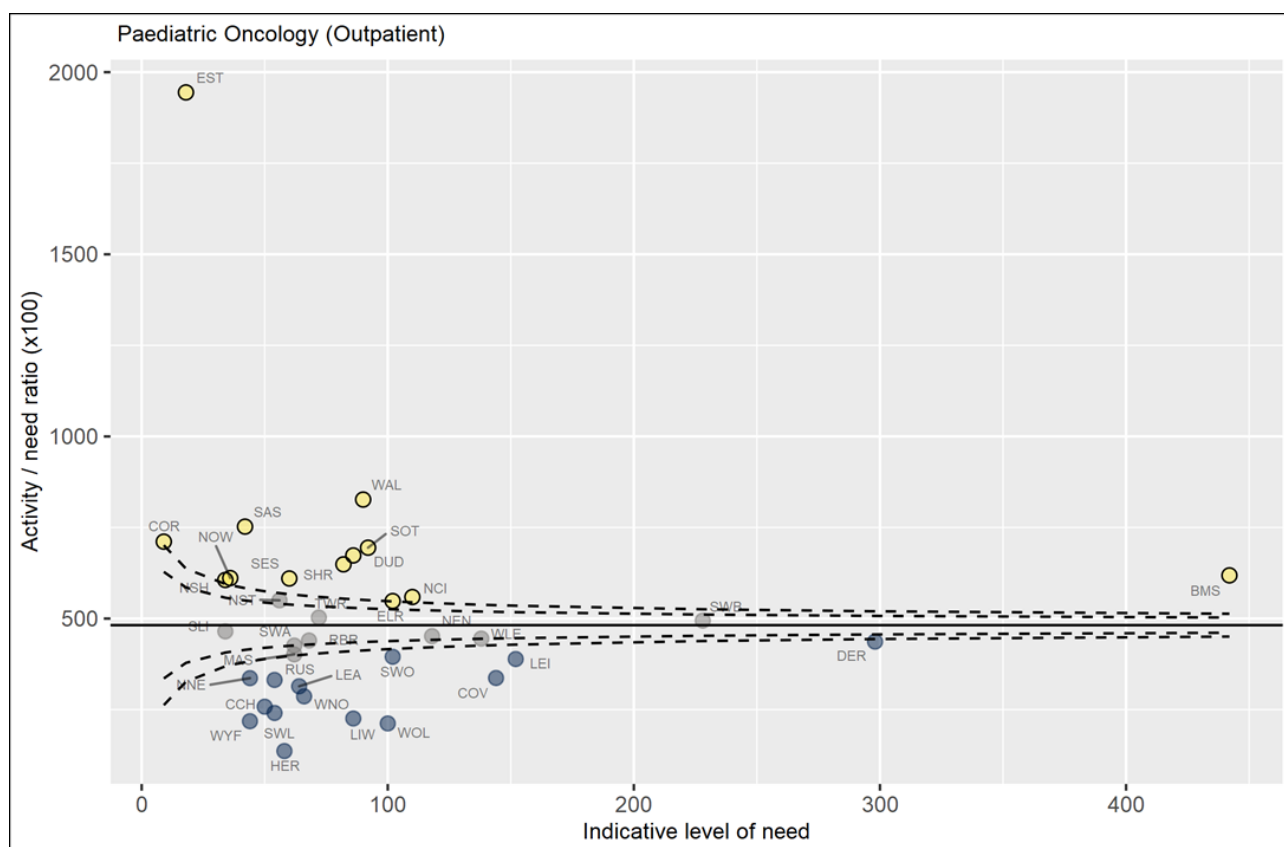
Activity and need data by CCG. Paediatric Oncology (Outpatient).

Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/need ratio
High				
NHS East Staffordshire CCG	EST	18	350	1,944.4
NHS Walsall CCG	WAL	90	744	826.7
NHS Stafford and Surrounds CCG	SAS	42	316	752.4
NHS Corby CCG	COR	9	64	711.1
NHS Stoke on Trent CCG	SOT	92	639	694.6
NHS Dudley CCG	DUD	86	579	673.3
NHS Shropshire CCG	SHR	82	532	648.8
NHS Birmingham and Solihull CCG	BMS	442	2,734	618.6
NHS Nottingham West CCG	NOW	36	220	611.1
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	60	366	610.0
NHS Newark and Sherwood CCG	NSH	34	206	605.9
NHS Nottingham City CCG	NCI	110	615	559.1
NHS East Leicestershire and Rutland CCG	ELR	102	559	548.0
Not significantly different				
NHS North Staffordshire CCG	NST	56	308	550.0
NHS Telford and Wrekin CCG	TWR	72	362	502.8
NHS Sandwell and West Birmingham CCG	SWB	228	1,127	494.3
NHS South Lincolnshire CCG	SLI	34	158	464.7
NHS Nene CCG	NEN	118	533	451.7
NHS West Leicestershire CCG	WLE	138	614	444.9
NHS Redditch and Bromsgrove CCG	RBR	68	299	439.7
NHS South Warwickshire CCG	SWA	62	264	425.8
NHS Mansfield and Ashfield CCG	MAS	62	249	401.6
Low				
NHS Derby and Derbyshire CCG	DER	298	1,301	436.6
NHS South Worcestershire CCG	SWO	102	403	395.1
NHS Leicester City CCG	LEI	152	591	388.8
NHS Coventry and Rugby CCG	COV	144	485	336.8
NHS Nottingham North and East CCG	NNE	44	148	336.4
NHS Rushcliffe CCG	RUS	54	179	331.5
NHS Lincolnshire East CCG	LEA	64	201	314.1
NHS Warwickshire North CCG	WNO	66	189	286.4
NHS Cannock Chase CCG	CCH	50	129	258.0
NHS South West Lincolnshire CCG	SWL	54	130	240.7
NHS Lincolnshire West CCG	LIW	86	194	225.6
NHS Wyre Forest CCG	WYF	44	96	218.2
NHS Wolverhampton CCG	WOL	100	212	212.0
NHS Herefordshire CCG	HER	58	79	136.2

4.3   Trauma

4.3.1   Major Trauma

There were 2 service lines within the Major Trauma category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. These were Specialised Burn Care (inpatient and outpatient)

Specialised Burn Care (Inpatient)

Activity data - Inpatient admissions with (IR flag 09Z) Specialised Burn Care (2018/19).

Indicative level of need – The indicator of need in this case is based on the number of patients with any ICD10 code of burn (ICD-10 T20 to T35).

Specialised Burn Care (Inpatient)

Specialised Burn Care (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low

40 km
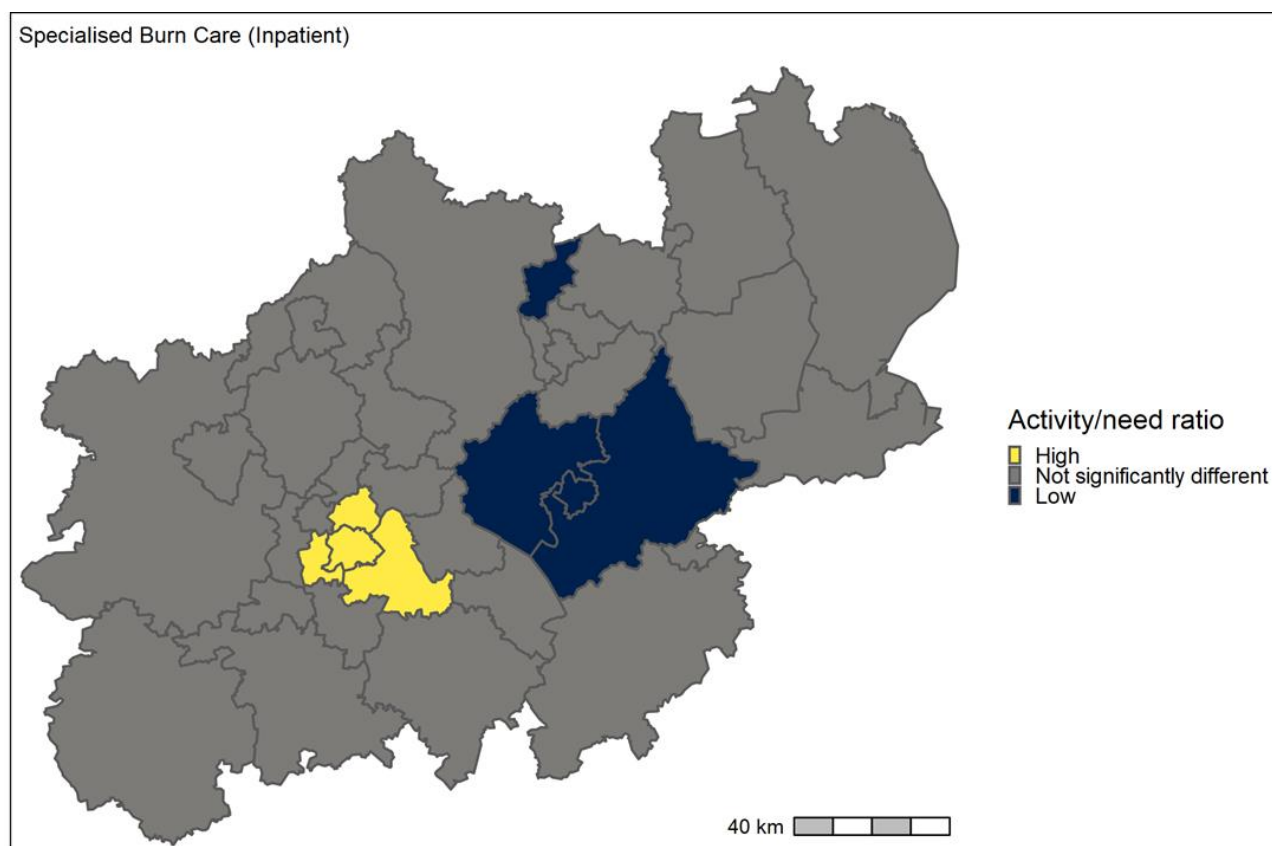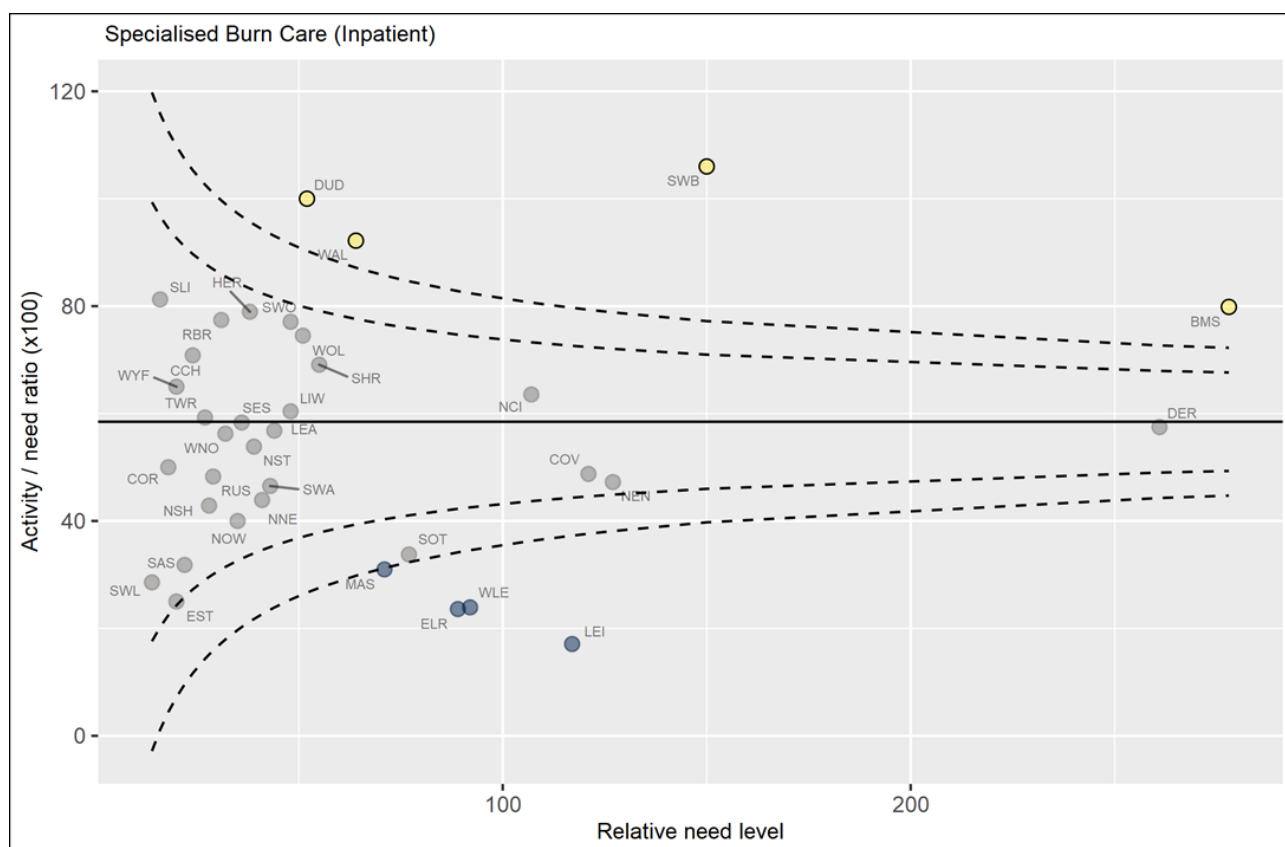
Activity and need data by CCG. Specialised Burn Care (Inpatient).
Activity ratio is per 100 need

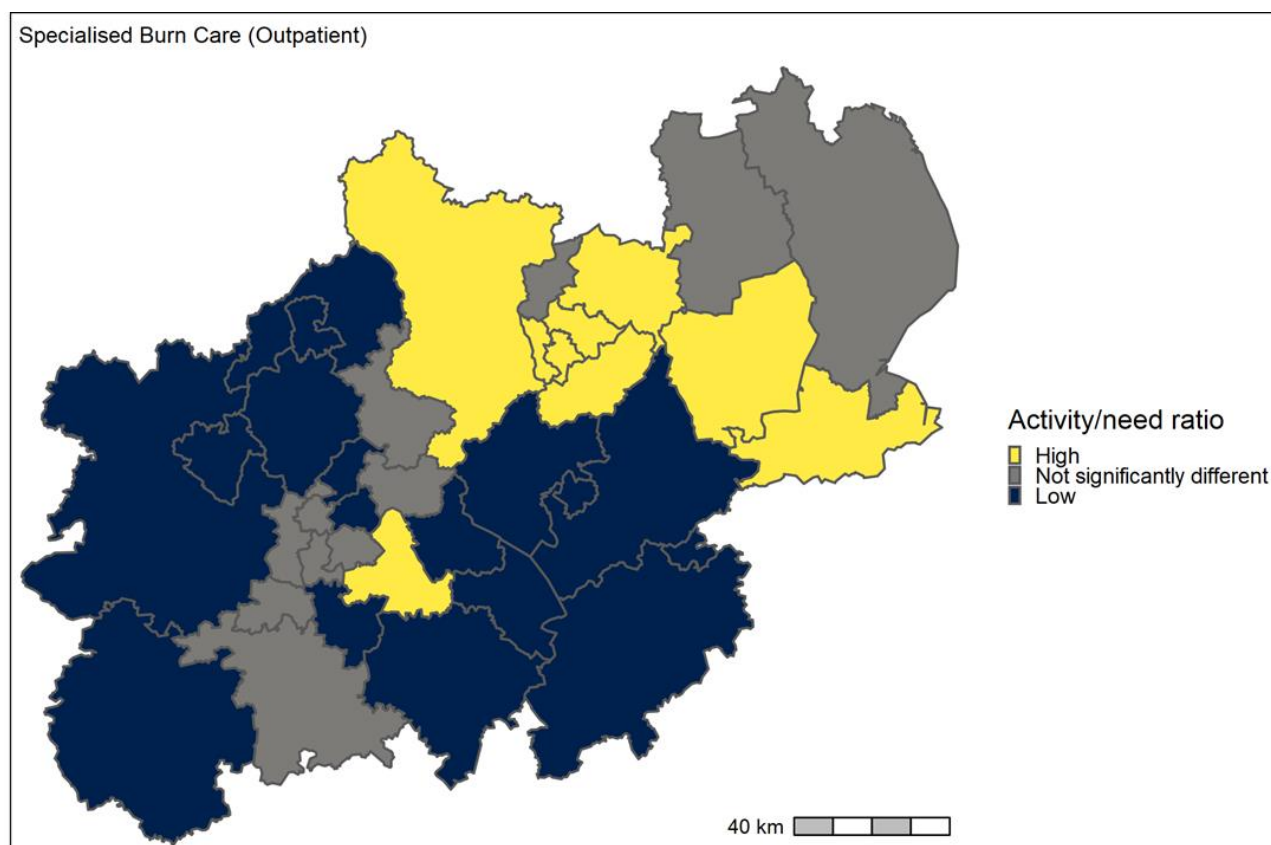| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Sandwell and West Birmingham CCG	SWB	150	159	106.0
NHS Dudley CCG	DUD	52	52	100.0
NHS Walsall CCG	WAL	64	59	92.2
NHS Birmingham and Solihull CCG	BMS	278	222	79.9
Not significantly different				
NHS South Lincolnshire CCG	SLI	16	13	81.2
NHS Herefordshire CCG	HER	38	30	78.9
NHS Redditch and Bromsgrove CCG	RBR	31	24	77.4
NHS South Worcestershire CCG	SWO	48	37	77.1
NHS Wolverhampton CCG	WOL	51	38	74.5
NHS Cannock Chase CCG	CCH	24	17	70.8
NHS Shropshire CCG	SHR	55	38	69.1
NHS Wyre Forest CCG	WYF	20	13	65.0
NHS Nottingham City CCG	NCI	107	68	63.6
NHS Lincolnshire West CCG	LIW	48	29	60.4
NHS Telford and Wrekin CCG	TWR	27	16	59.3
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	36	21	58.3
NHS Derby and Derbyshire CCG	DER	261	150	57.5
NHS Lincolnshire East CCG	LEA	44	25	56.8
NHS Warwickshire North CCG	WNO	32	18	56.2
NHS North Staffordshire CCG	NST	39	21	53.8
NHS Corby CCG	COR	18	9	50.0
NHS Coventry and Rugby CCG	COV	121	59	48.8
NHS Rushcliffe CCG	RUS	29	14	48.3
NHS Nene CCG	NEN	127	60	47.2
NHS South Warwickshire CCG	SWA	43	20	46.5
NHS Nottingham North and East CCG	NNE	41	18	43.9
NHS Newark and Sherwood CCG	NSH	28	12	42.9
NHS Nottingham West CCG	NOW	35	14	40.0
NHS Stoke on Trent CCG	SOT	77	26	33.8
NHS Stafford and Surrounds CCG	SAS	22	7	31.8
NHS South West Lincolnshire CCG	SWL	14	4	28.6
NHS East Staffordshire CCG	EST	20	5	25.0
Low				
NHS Mansfield and Ashfield CCG	MAS	71	22	31.0
NHS West Leicestershire CCG	WLE	92	22	23.9
NHS East Leicestershire and Rutland CCG	ELR	89	21	23.6
NHS Leicester City CCG	LEI	117	20	17.1

Specialised Burn Care (Outpatient)

Activity data - Outpatient attendances with (IR flag 09Z) Specialised Burn Care (2018/19).

Indicative level of need – The indicator of need in this case is based on the number of patients with any ICD10 code of burn (ICD-10 T20 to T35).
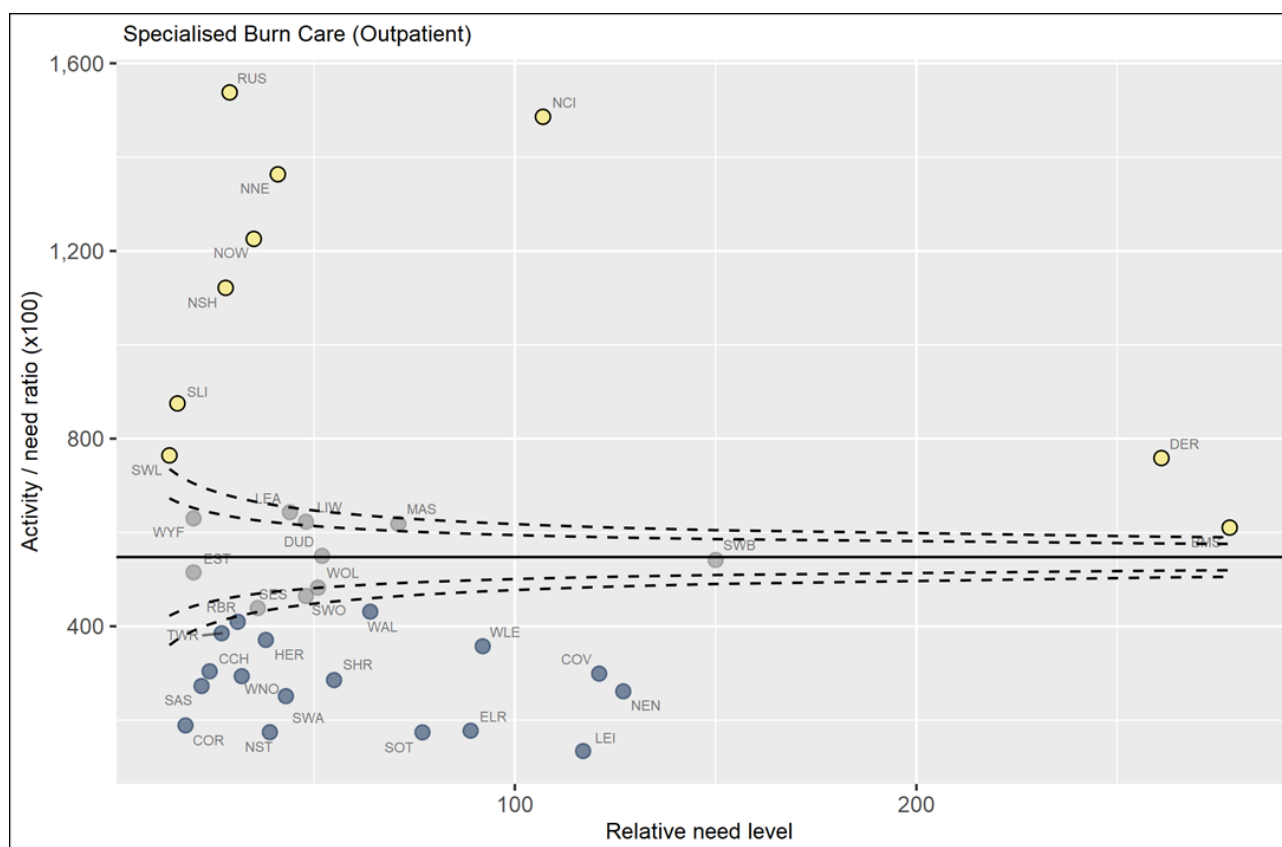
Specialised Burn Care (Outpatient)

Specialised Burn Care (Outpatient)

Activity/need ratio
High
Not significantly different
Low

40 km

Activity and need data by CCG. Specialised Burn Care (Outpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Rushcliffe CCG	RUS	29	446	1,537.9
NHS Nottingham City CCG	NCI	107	1,590	1,486.0
NHS Nottingham North and East CCG	NNE	41	559	1,363.4
NHS Nottingham West CCG	NOW	35	429	1,225.7
NHS Newark and Sherwood CCG	NSH	28	314	1,121.4
NHS South Lincolnshire CCG	SLI	16	140	875.0
NHS South West Lincolnshire CCG	SWL	14	107	764.3
NHS Derby and Derbyshire CCG	DER	261	1,980	758.6
NHS Birmingham and Solihull CCG	BMS	278	1,697	610.4
Not significantly different				
NHS Lincolnshire East CCG	LEA	44	283	643.2
NHS Wyre Forest CCG	WYF	20	126	630.0
NHS Lincolnshire West CCG	LIW	48	299	622.9
NHS Mansfield and Ashfield CCG	MAS	71	439	618.3
NHS Dudley CCG	DUD	52	286	550.0
NHS Sandwell and West Birmingham CCG	SWB	150	812	541.3
NHS East Staffordshire CCG	EST	20	103	515.0
NHS Wolverhampton CCG	WOL	51	246	482.4
NHS South Worcestershire CCG	SWO	48	223	464.6
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	36	158	438.9
Low				
NHS Walsall CCG	WAL	64	276	431.2
NHS Redditch and Bromsgrove CCG	RBR	31	127	409.7
NHS Telford and Wrekin CCG	TWR	27	104	385.2
NHS Herefordshire CCG	HER	38	141	371.1
NHS West Leicestershire CCG	WLE	92	329	357.6
NHS Cannock Chase CCG	CCH	24	73	304.2
NHS Coventry and Rugby CCG	COV	121	362	299.2
NHS Warwickshire North CCG	WNO	32	94	293.8
NHS Shropshire CCG	SHR	55	157	285.5
NHS Stafford and Surrounds CCG	SAS	22	60	272.7
NHS Nene CCG	NEN	127	332	261.4
NHS South Warwickshire CCG	SWA	43	108	251.2
NHS Corby CCG	COR	18	34	188.9
NHS East Leicestershire and Rutland CCG	ELR	89	158	177.5
NHS North Staffordshire CCG	NST	39	68	174.4
NHS Stoke on Trent CCG	SOT	77	134	174.0
NHS Leicester City CCG	LEI	117	157	134.2

4.3.2 Spinal Services

There was just one service lines within the Spinal services category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. This was Spinal Cord Injury (outpatient).
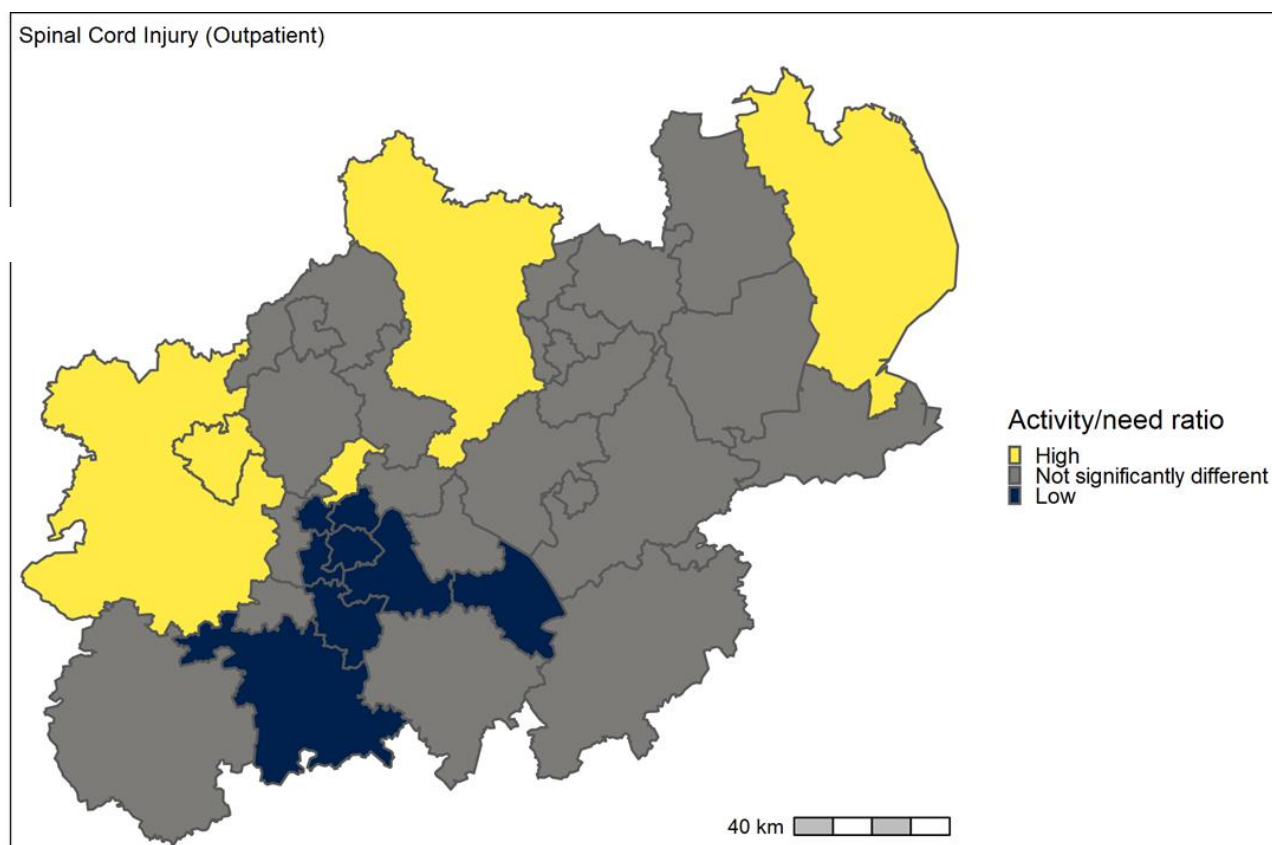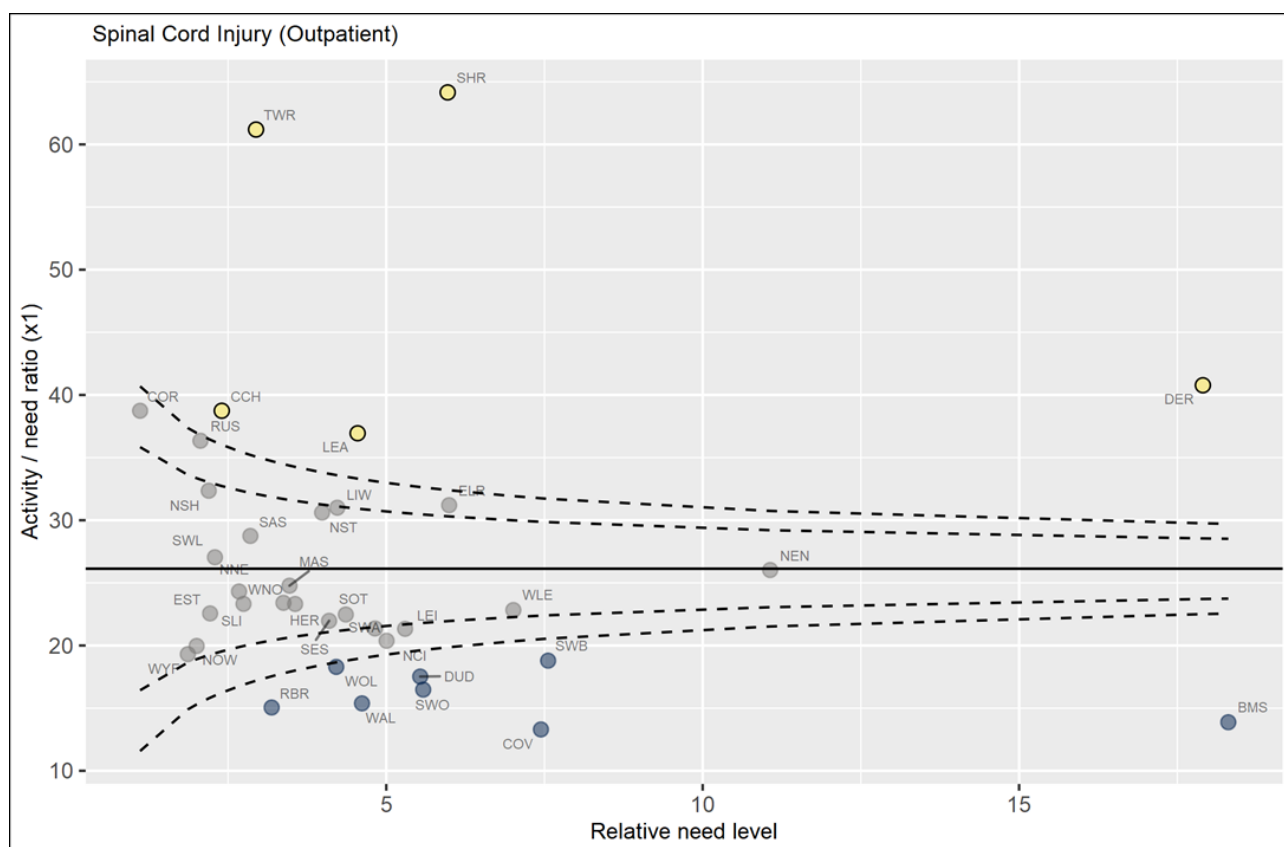
Spinal Cord Injury (Outpatient)

Activity data - Outpatient spells with (IR flag 06A) Spinal Cord Injury (2018/19).

Indicative level of need – Age specific Incidence rates of traumatic spinal cord injury in Scotland 2009-2013 were applied to CCG populations. Source: Changing demographics of spinal cord injury over a 20-year period[31].

Limitations: The incidence data used to derive the need indicator is now several years old and relates to Scotland but nevertheless should provide a reasonable proxy for need.

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[31] McCaughey, E., Purcell, M., McLean, A. et al. (2016). Changing demographics of spinal cord injury over a 20-year period: a longitudinal population-based study in Scotland. Spinal Cord. 54, 270–276.

Spinal Cord Injury (Outpatient)

Spinal Cord Injury (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

40 km

Activity and need data by CCG. Spinal Cord Injury (Outpatient).

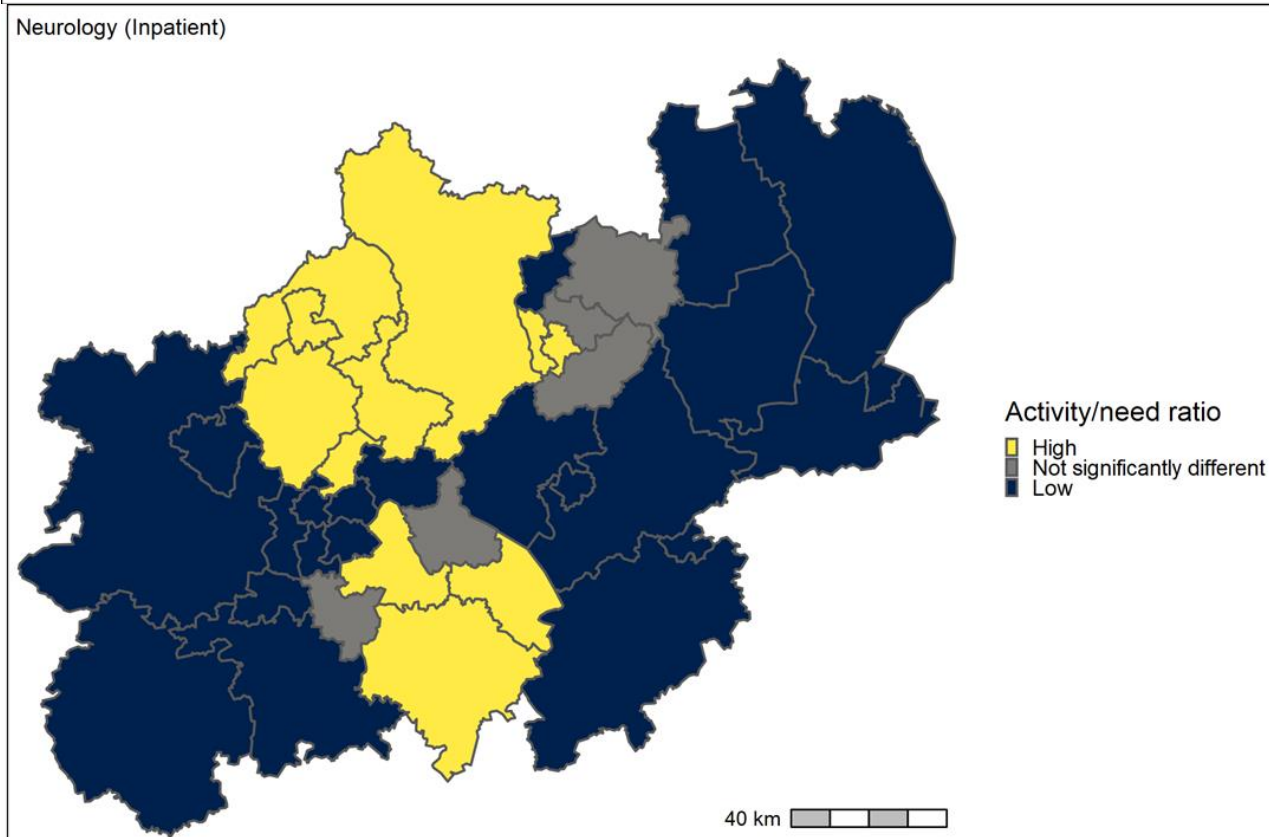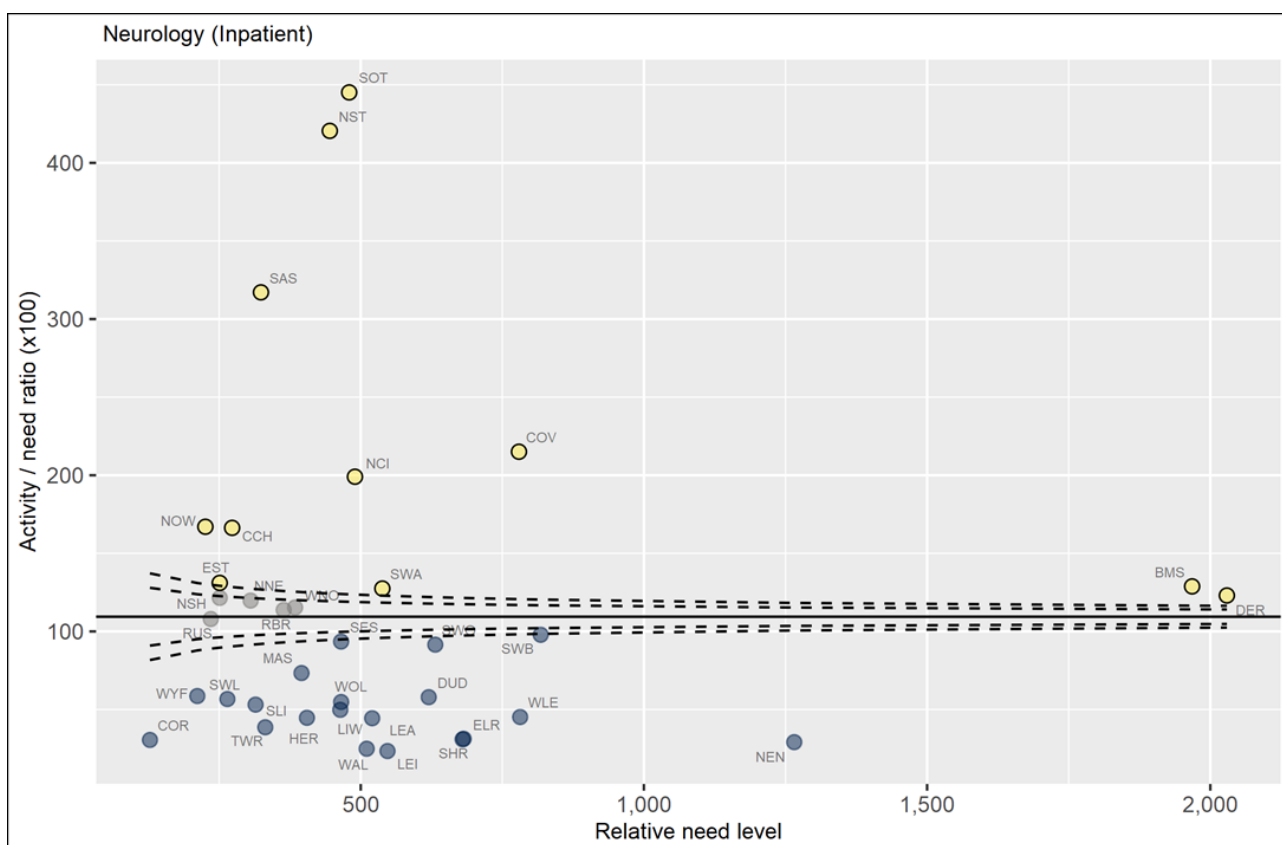| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Shropshire CCG	SHR	6	383	64
NHS Telford and Wrekin CCG	TWR	3	180	61
NHS Derby and Derbyshire CCG	DER	18	730	41
NHS Cannock Chase CCG	CCH	2	93	39
NHS Lincolnshire East CCG	LEA	5	168	37
Not significantly different				
NHS Corby CCG	COR	1	43	39
NHS Rushcliffe CCG	RUS	2	75	36
NHS Newark and Sherwood CCG	NSH	2	71	32
NHS East Leicestershire and Rutland CCG	ELR	6	187	31
NHS Lincolnshire West CCG	LIW	4	131	31
NHS North Staffordshire CCG	NST	4	122	31
NHS Stafford and Surrounds CCG	SAS	3	82	29
NHS South West Lincolnshire CCG	SWL	2	62	27
NHS Nene CCG	NEN	11	288	26
NHS Mansfield and Ashfield CCG	MAS	3	86	25
NHS Nottingham North and East CCG	NNE	3	65	24
NHS Warwickshire North CCG	WNO	3	79	23
NHS South Lincolnshire CCG	SLI	3	64	23
NHS Herefordshire CCG	HER	4	83	23
NHS West Leicestershire CCG	WLE	7	160	23
NHS East Staffordshire CCG	EST	2	50	23
NHS Stoke on Trent CCG	SOT	4	98	22
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	4	90	22
NHS South Warwickshire CCG	SWA	5	103	21
NHS Leicester City CCG	LEI	5	113	21
NHS Nottingham City CCG	NCI	5	102	20
NHS Nottingham West CCG	NOW	2	40	20
NHS Wyre Forest CCG	WYF	2	36	19
Low				
NHS Sandwell and West Birmingham CCG	SWB	8	142	19
NHS Wolverhampton CCG	WOL	4	77	18
NHS Dudley CCG	DUD	6	97	18
NHS South Worcestershire CCG	SWO	6	92	16
NHS Walsall CCG	WAL	5	71	15
NHS Redditch and Bromsgrove CCG	RBR	3	48	15
NHS Birmingham and Solihull CCG	BMS	18	254	14
NHS Coventry and Rugby CCG	COV	7	99	13

4.3.3   Neurosciences

There were five service lines within the Neurosciences category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. These were Neurology (inpatient and outpatient), Neurophysiology (outpatient) and Neurosurgery (inpatient and outpatient).

Neurology (Inpatient)

Activity data – Inpatient spells with (IR flag 08O) Neurology (2018/19).

Indicative level of need – Activity within the Neurology service line includes a range of conditions and procedures so there is no single comprehensive estimate of need for this service line. However, 44% of the activity within this service line is coded as Demyelinating diseases (incl. Multiple Sclerosis) of the CNS. Therefore, our view is that the prevalence of Multiple Sclerosis is a better proxy for need in this case than population based proxy. Age specific prevalence estimates of MS were applied to CCG populations

Neurology (Inpatient)

Activity and need data by CCG. Neurology (Inpatient).

Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Stoke on Trent CCG	SOT	480	2,135	445.1
NHS North Staffordshire CCG	NST	445	1,873	420.5
NHS Stafford and Surrounds CCG	SAS	324	1,027	317.1
NHS Coventry and Rugby CCG	COV	779	1,676	215.0
NHS Nottingham City CCG	NCI	490	975	199.0
NHS Nottingham West CCG	NOW	226	377	167.0
NHS Cannock Chase CCG	CCH	273	454	166.3
NHS East Staffordshire CCG	EST	251	329	131.1
NHS Birmingham and Solihull CCG	BMS	1,968	2,535	128.8
NHS South Warwickshire CCG	SWA	538	686	127.5
NHS Derby and Derbyshire CCG	DER	2,029	2,496	123.0
Not significantly different				
NHS Newark and Sherwood CCG	NSH	251	305	121.5
NHS Nottingham North and East CCG	NNE	306	366	119.7
NHS Warwickshire North CCG	WNO	384	443	115.3
NHS Redditch and Bromsgrove CCG	RBR	364	414	113.7
NHS Rushcliffe CCG	RUS	235	254	107.9
Low				
NHS Sandwell and West Birmingham CCG	SWB	818	800	97.8
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	465	435	93.5
NHS South Worcestershire CCG	SWO	632	578	91.5
NHS Mansfield and Ashfield CCG	MAS	395	290	73.3
NHS Wyre Forest CCG	WYF	212	124	58.6
NHS Dudley CCG	DUD	620	359	57.9
NHS South West Lincolnshire CCG	SWL	265	150	56.7
NHS Wolverhampton CCG	WOL	465	255	54.8
NHS South Lincolnshire CCG	SLI	314	167	53.1
NHS Lincolnshire West CCG	LIW	464	231	49.8
NHS West Leicestershire CCG	WLE	781	353	45.2
NHS Herefordshire CCG	HER	405	181	44.7
NHS Lincolnshire East CCG	LEA	520	231	44.4
NHS Telford and Wrekin CCG	TWR	332	128	38.6
NHS East Leicestershire and Rutland CCG	ELR	682	213	31.2
NHS Shropshire CCG	SHR	680	210	30.9
NHS Corby CCG	COR	128	39	30.5
NHS Nene CCG	NEN	1,265	368	29.1
NHS Walsall CCG	WAL	511	127	24.9
NHS Leicester City CCG	LEI	547	128	23.4

Neurology (Outpatient)

Activity data - Outpatient spells with (IR flag 08O) Neurology (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this prescribed service line as it covers a wide range of treatment conditions (and associated procedures). Diagnosis coding in outpatient dataset is poor and as such it was not possible to identify an proxy indicator of need based on prevalent conditions within this service line (as in the corresponding inpatient service line). We have therefore used the General and acute weighted CCG population as a proxy for need in this instance.

Limitations: The general and acute weighted population is a general indicator of overall healthcare need within a CCG. It is based on the CCG population but is adjusted to take account of a number of factors related to healthcare need such as age and gender. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

Neurology (Outpatient)

Neurology (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low
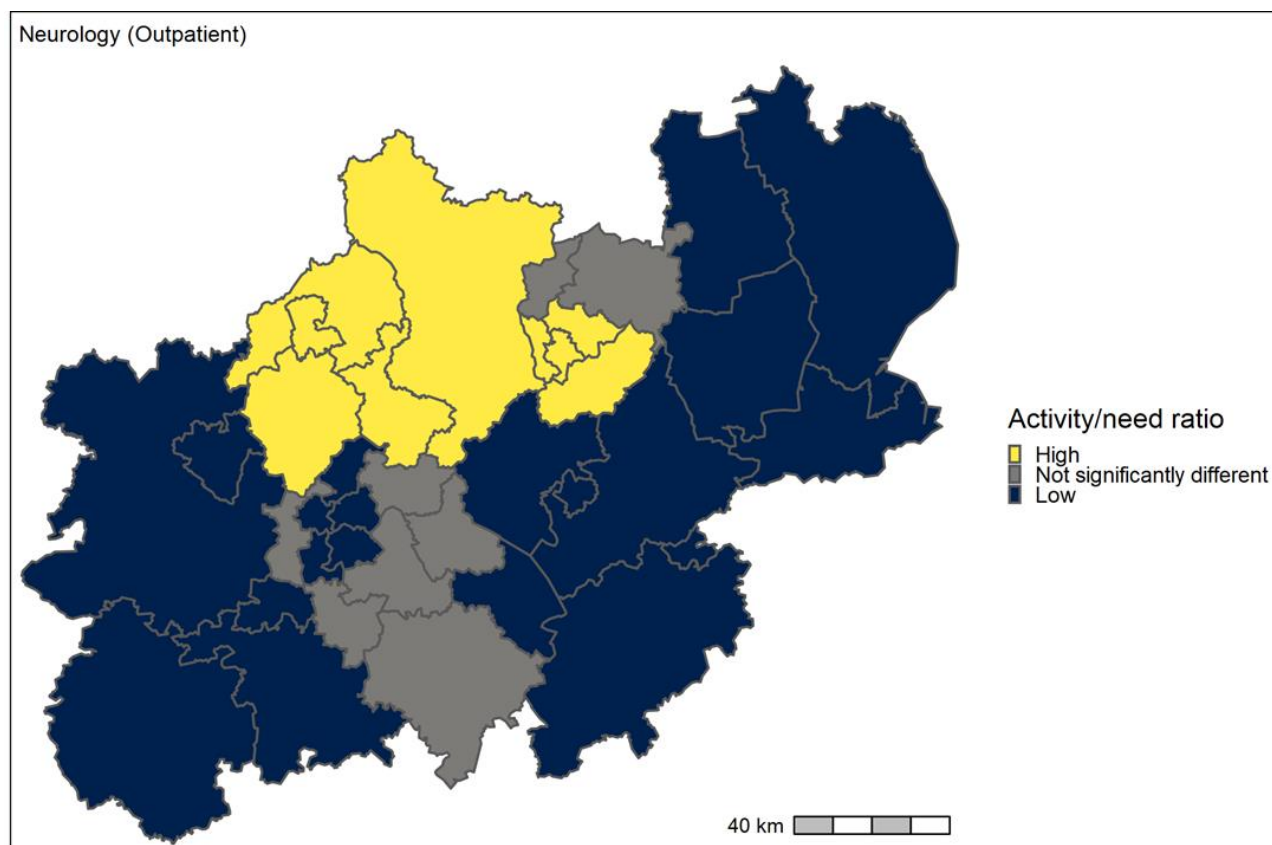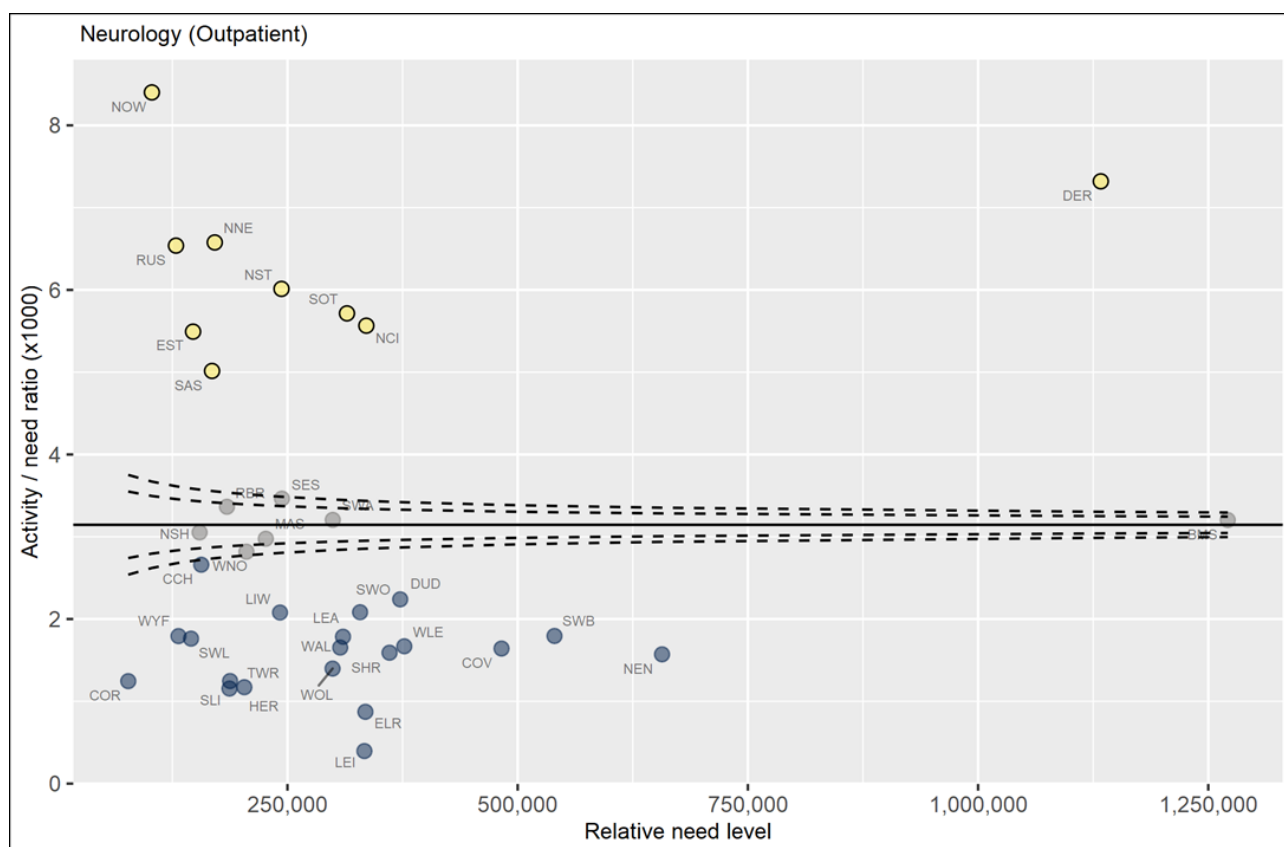
Activity and need data by CCG. Neurology (Outpatient).

Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Nottingham West CCG	NOW	102,736	863	8.400
NHS Derby and Derbyshire CCG	DER	1,133,256	8,295	7.320
NHS Nottingham North and East CCG	NNE	171,057	1,125	6.577
NHS Rushcliffe CCG	RUS	128,932	843	6.538
NHS North Staffordshire CCG	NST	243,497	1,464	6.012
NHS Stoke on Trent CCG	SOT	314,622	1,798	5.715
NHS Nottingham City CCG	NCI	335,645	1,868	5.565
NHS East Staffordshire CCG	EST	147,461	810	5.493
NHS Stafford and Surrounds CCG	SAS	168,092	843	5.015
Not significantly different				
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	243,974	845	3.463
NHS Redditch and Bromsgrove CCG	RBR	184,267	620	3.365
NHS South Warwickshire CCG	SWA	299,193	959	3.205
NHS Birmingham and Solihull CCG	BMS	1,271,116	4,072	3.203
NHS Newark and Sherwood CCG	NSH	154,593	472	3.053
NHS Mansfield and Ashfield CCG	MAS	226,464	674	2.976
NHS Warwickshire North CCG	WNO	205,431	579	2.818
Low				
NHS Cannock Chase CCG	CCH	156,366	416	2.660
NHS Dudley CCG	DUD	372,413	834	2.239
NHS South Worcestershire CCG	SWO	328,858	685	2.083
NHS Lincolnshire West CCG	LIW	241,922	503	2.079
NHS Sandwell and West Birmingham CCG	SWB	539,975	969	1.795
NHS Wyre Forest CCG	WYF	131,646	236	1.793
NHS Lincolnshire East CCG	LEA	310,316	554	1.785
NHS South West Lincolnshire CCG	SWL	145,295	256	1.762
NHS West Leicestershire CCG	WLE	376,852	629	1.669
NHS Walsall CCG	WAL	307,277	508	1.653
NHS Coventry and Rugby CCG	COV	482,461	792	1.642
NHS Shropshire CCG	SHR	360,838	574	1.591
NHS Nene CCG	NEN	656,778	1,032	1.571
NHS Wolverhampton CCG	WOL	298,979	418	1.398
NHS Telford and Wrekin CCG	TWR	187,682	234	1.247
NHS Corby CCG	COR	77,088	96	1.245
NHS Herefordshire CCG	HER	203,157	238	1.172
NHS South Lincolnshire CCG	SLI	186,991	216	1.155
NHS East Leicestershire and Rutland CCG	ELR	334,636	292	0.873
NHS Leicester City CCG	LEI	333,532	132	0.396

Neurophysiology (Outpatient)

Activity data - Outpatient spells with (IR flag 08P) Neurophysiology (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this prescribed service line as it covers a wide range of treatment conditions (and associated procedures). We have therefore used the General and acute weighted CCG population as a proxy for need in this instance.

Limitations: The general and acute weighted population is a general indicator of overall healthcare need within a CCG. It is based on the CCG population but is adjusted to take account of a number of factors related to healthcare need such as age and gender. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

Neurophysiology (Outpatient)

Neurophysiology (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

Activity and need data by CCG. Neurophysiology (Outpatient).

Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Warwickshire North CCG	WNO	205,431	531	2.585
NHS North Staffordshire CCG	NST	243,497	510	2.094
NHS Stoke on Trent CCG	SOT	314,622	587	1.866
NHS South Warwickshire CCG	SWA	299,193	516	1.725
NHS Stafford and Surrounds CCG	SAS	168,092	274	1.630
NHS Birmingham and Solihull CCG	BMS	1,271,116	1,634	1.285
NHS Dudley CCG	DUD	372,413	419	1.125
NHS Redditch and Bromsgrove CCG	RBR	184,267	187	1.015
NHS Coventry and Rugby CCG	COV	482,461	378	0.783
Not significantly different				
NHS Sandwell and West Birmingham CCG	SWB	539,975	385	0.713
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	243,974	134	0.549
NHS Wyre Forest CCG	WYF	131,646	60	0.456
NHS Cannock Chase CCG	CCH	156,366	68	0.435
Low				
NHS West Leicestershire CCG	WLE	376,852	180	0.478
NHS Nene CCG	NEN	656,778	304	0.463
NHS Walsall CCG	WAL	307,277	125	0.407
NHS South Worcestershire CCG	SWO	328,858	114	0.347
NHS South Lincolnshire CCG	SLI	186,991	63	0.337
NHS Herefordshire CCG	HER	203,157	65	0.320
NHS Shropshire CCG	SHR	360,838	103	0.285
NHS East Staffordshire CCG	EST	147,461	41	0.278
NHS Telford and Wrekin CCG	TWR	187,682	49	0.261
NHS Wolverhampton CCG	WOL	298,979	49	0.164
NHS East Leicestershire and Rutland CCG	ELR	334,636	41	0.123
NHS Corby CCG	COR	77,088	9	0.117
NHS Lincolnshire East CCG	LEA	310,316	22	0.071
NHS Leicester City CCG	LEI	333,532	23	0.069
NHS Lincolnshire West CCG	LIW	241,922	15	0.062
NHS South West Lincolnshire CCG	SWL	145,295	7	0.048
NHS Rushcliffe CCG	RUS	128,932	6	0.047
NHS Derby and Derbyshire CCG	DER	1,133,256	50	0.044
NHS Nottingham City CCG	NCI	335,645	10	0.030
NHS Nottingham West CCG	NOW	102,736	2	0.019
NHS Mansfield and Ashfield CCG	MAS	226,464	3	0.013
NHS Newark and Sherwood CCG	NSH	154,593	2	0.013
NHS Nottingham North and East CCG	NNE	171,057	1	0.006

Neurosurgery (Inpatient)

Activity data - Inpatient spells with (IR flag 08S) Neurosurgery (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this prescribed service line as it covers a wide range of treatment conditions (and associated procedures). We have therefore used the General and acute weighted CCG population as a proxy for need in this instance.

Limitations: The general and acute weighted population is a general indicator of overall healthcare need within a CCG. It is based on the CCG population but is adjusted to take account of a number of factors related to healthcare need such as age and gender. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

Neurosurgery (Inpatient)

Neurosurgery (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low

40 km

Activity and need data by CCG. Neurosurgery (Inpatient).

Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Warwickshire North CCG	WNO	205,431	413	2.010
NHS North Staffordshire CCG	NST	243,497	442	1.815
NHS Stoke on Trent CCG	SOT	314,622	495	1.573
NHS Coventry and Rugby CCG	COV	482,461	759	1.573
NHS Nottingham West CCG	NOW	102,736	130	1.265
NHS Stafford and Surrounds CCG	SAS	168,092	210	1.249
NHS South Warwickshire CCG	SWA	299,193	358	1.197
NHS Birmingham and Solihull CCG	BMS	1,271,116	1,343	1.057
Not significantly different				
NHS Redditch and Bromsgrove CCG	RBR	184,267	206	1.118
NHS Lincolnshire West CCG	LIW	241,922	249	1.029
NHS Sandwell and West Birmingham CCG	SWB	539,975	527	0.976
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	243,974	238	0.976
NHS Nottingham City CCG	NCI	335,645	320	0.953
NHS Rushcliffe CCG	RUS	128,932	120	0.931
NHS Cannock Chase CCG	CCH	156,366	145	0.927
NHS Dudley CCG	DUD	372,413	338	0.908
NHS Nottingham North and East CCG	NNE	171,057	153	0.894
NHS West Leicestershire CCG	WLE	376,852	334	0.886
NHS Herefordshire CCG	HER	203,157	174	0.856
NHS East Staffordshire CCG	EST	147,461	125	0.848
NHS Corby CCG	COR	77,088	64	0.830
NHS Shropshire CCG	SHR	360,838	297	0.823
NHS South Worcestershire CCG	SWO	328,858	269	0.818
NHS Mansfield and Ashfield CCG	MAS	226,464	178	0.786
NHS South West Lincolnshire CCG	SWL	145,295	113	0.778
Low				
NHS Nene CCG	NEN	656,778	560	0.853
NHS Derby and Derbyshire CCG	DER	1,133,256	930	0.821
NHS Lincolnshire East CCG	LEA	310,316	247	0.796
NHS Walsall CCG	WAL	307,277	242	0.788
NHS East Leicestershire and Rutland CCG	ELR	334,636	246	0.735
NHS Newark and Sherwood CCG	NSH	154,593	112	0.724
NHS Telford and Wrekin CCG	TWR	187,682	131	0.698
NHS South Lincolnshire CCG	SLI	186,991	122	0.652
NHS Wyre Forest CCG	WYF	131,646	83	0.630
NHS Leicester City CCG	LEI	333,532	203	0.609
NHS Wolverhampton CCG	WOL	298,979	180	0.602

Neurosurgery (Outpatient)

Activity data - Outpatient spells with (IR flag 08S) Neurosurgery (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this prescribed service line as it covers a wide range of treatment conditions (and associated procedures). We have therefore used the General and acute weighted CCG population as a proxy for need in this instance.

Limitations: The general and acute weighted population is a general indicator of overall healthcare need within a CCG. It is based on the CCG population but is adjusted to take account of a number of factors related to healthcare need such as age and gender. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

Neurosurgery (Outpatient)

Neurosurgery (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

40 km

Activity and need data by CCG. Neurosurgery (Outpatient).
Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS North Staffordshire CCG	NST	243,497	1,222	5.019
NHS Stoke on Trent CCG	SOT	314,622	1,496	4.755
NHS Stafford and Surrounds CCG	SAS	168,092	643	3.825
NHS Cannock Chase CCG	CCH	156,366	373	2.385
NHS Lincolnshire West CCG	LIW	241,922	514	2.125
NHS Warwickshire North CCG	WNO	205,431	433	2.108
NHS Dudley CCG	DUD	372,413	710	1.906
NHS Birmingham and Solihull CCG	BMS	1,271,116	2,277	1.791
Not significantly different				
NHS Redditch and Bromsgrove CCG	RBR	184,267	341	1.851
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	243,974	428	1.754
NHS Walsall CCG	WAL	307,277	513	1.670
NHS Lincolnshire East CCG	LEA	310,316	480	1.547
NHS South Warwickshire CCG	SWA	299,193	458	1.531
NHS Nene CCG	NEN	656,778	983	1.497
NHS South Lincolnshire CCG	SLI	186,991	277	1.481
NHS Sandwell and West Birmingham CCG	SWB	539,975	773	1.432
NHS South Worcestershire CCG	SWO	328,858	465	1.414
NHS Herefordshire CCG	HER	203,157	286	1.408
NHS Corby CCG	COR	77,088	92	1.193
Low				
NHS Derby and Derbyshire CCG	DER	1,133,256	1,620	1.430
NHS Shropshire CCG	SHR	360,838	484	1.341
NHS Wolverhampton CCG	WOL	298,979	398	1.331
NHS Telford and Wrekin CCG	TWR	187,682	244	1.300
NHS South West Lincolnshire CCG	SWL	145,295	176	1.211
NHS Nottingham West CCG	NOW	102,736	121	1.178
NHS Rushcliffe CCG	RUS	128,932	147	1.140
NHS Nottingham North and East CCG	NNE	171,057	179	1.046
NHS East Staffordshire CCG	EST	147,461	150	1.017
NHS Wyre Forest CCG	WYF	131,646	128	0.972
NHS Nottingham City CCG	NCI	335,645	315	0.938
NHS Newark and Sherwood CCG	NSH	154,593	124	0.802
NHS West Leicestershire CCG	WLE	376,852	288	0.764
NHS Mansfield and Ashfield CCG	MAS	226,464	163	0.720
NHS East Leicestershire and Rutland CCG	ELR	334,636	233	0.696
NHS Coventry and Rugby CCG	COV	482,461	277	0.574
NHS Leicester City CCG	LEI	333,532	143	0.429

4.3.4   Specialised Ear and Ophthalmology Services

There were three service lines within the Specialised ear and Ophthalmology category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. These were Ophthalmology Adults (inpatient) and Ophthalmology Children (inpatient and outpatient).
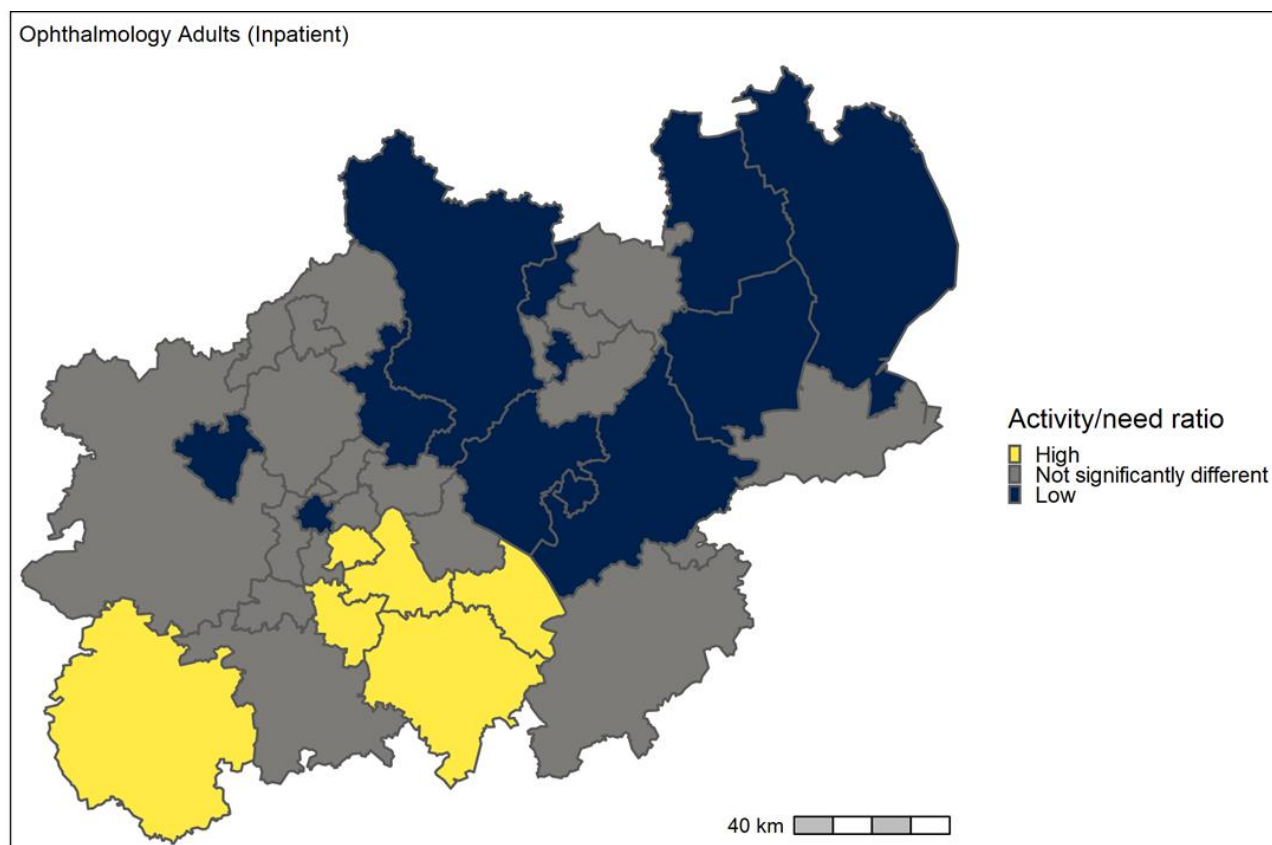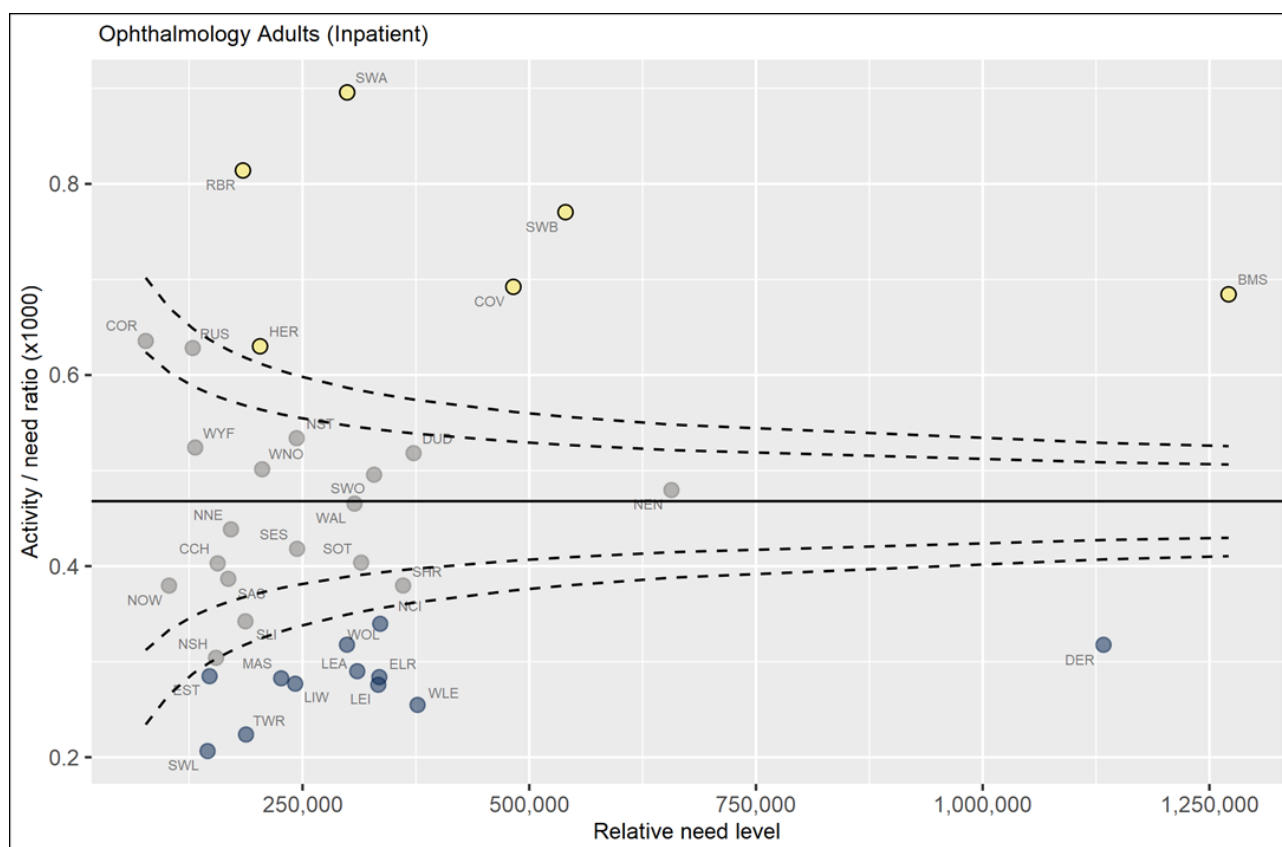
Ophthalmology Adults (Inpatient)

Activity data - Inpatient spells with (IR flag 37Z) Ophthalmology Adults (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this service line however as the prevalence of visual impairment increases significantly with age[32]. It was decided that the general and acute weighted population would be a good proxy for need.

Limitations: The general and acute weighted population is a general indicator of overall healthcare need within a CCG. It is based on the CCG population but is adjusted to take account of a number of factors related to healthcare need such as age and gender. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

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[32] https://www.england.nhs.uk/wp-content/uploads/2013/06/d12-spec-ophthalmo-ad.pdf

Ophthalmology Adults (Inpatient)

Ophthalmology Adults (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low

40 km

Activity and need data by CCG. Ophthalmology Adults (Inpatient).
Activity ratio is per 1,000 need

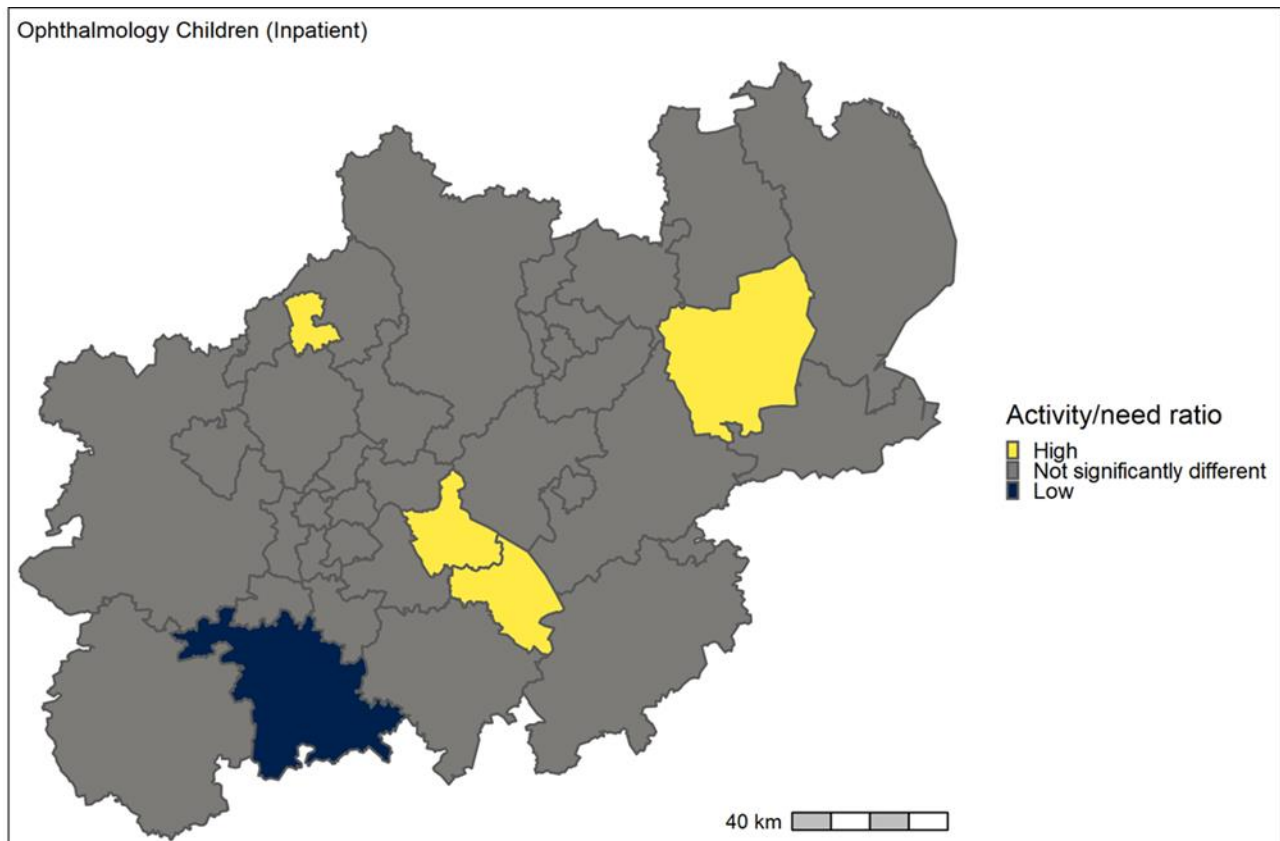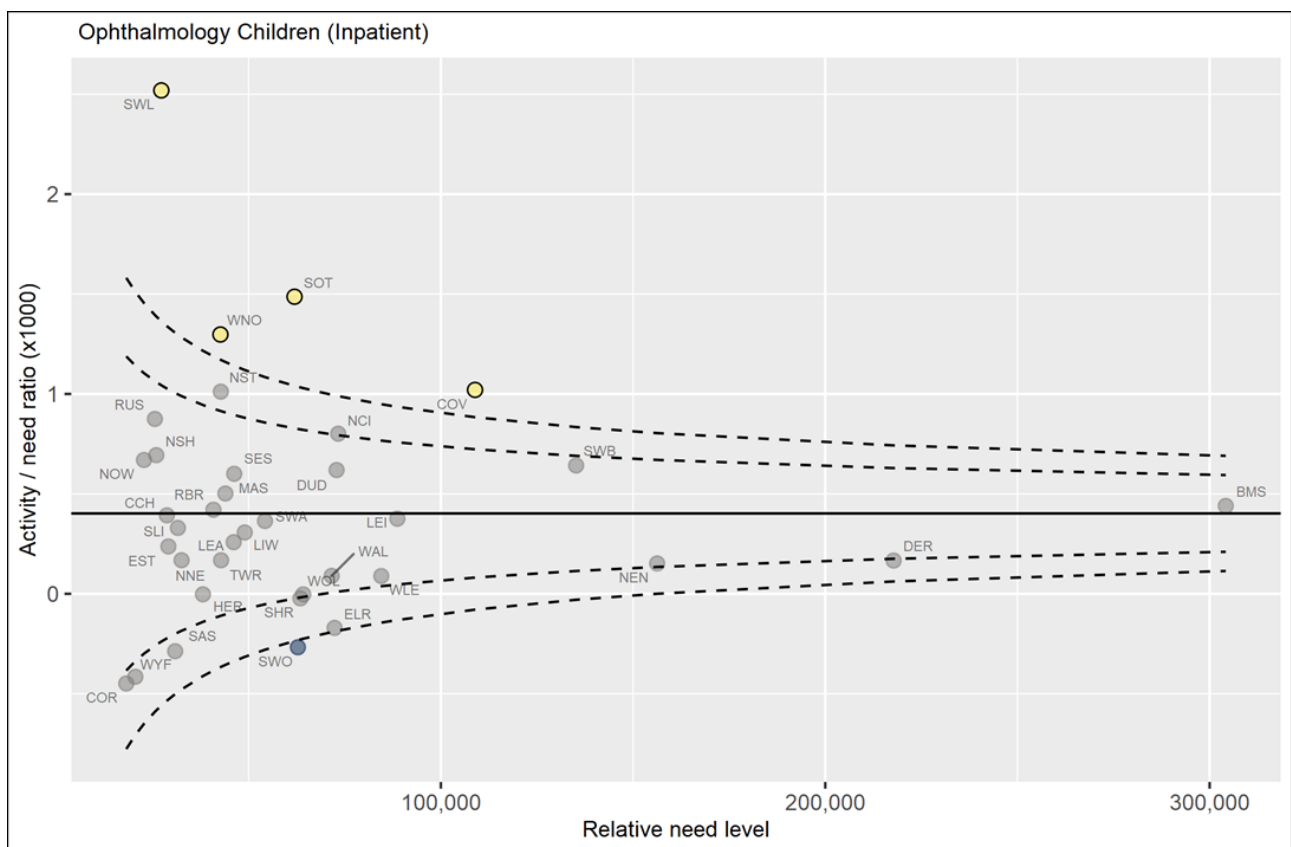| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS South Warwickshire CCG	SWA	299,193	268	0.896
NHS Redditch and Bromsgrove CCG	RBR	184,267	150	0.814
NHS Sandwell and West Birmingham CCG	SWB	539,975	416	0.770
NHS Coventry and Rugby CCG	COV	482,461	334	0.692
NHS Birmingham and Solihull CCG	BMS	1,271,116	870	0.684
NHS Herefordshire CCG	HER	203,157	128	0.630
Not significantly different				
NHS Corby CCG	COR	77,088	49	0.636
NHS Rushcliffe CCG	RUS	128,932	81	0.628
NHS North Staffordshire CCG	NST	243,497	130	0.534
NHS Wyre Forest CCG	WYF	131,646	69	0.524
NHS Dudley CCG	DUD	372,413	193	0.518
NHS Warwickshire North CCG	WNO	205,431	103	0.501
NHS South Worcestershire CCG	SWO	328,858	163	0.496
NHS Nene CCG	NEN	656,778	315	0.480
NHS Walsall CCG	WAL	307,277	143	0.465
NHS Nottingham North and East CCG	NNE	171,057	75	0.438
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	243,974	102	0.418
NHS Stoke on Trent CCG	SOT	314,622	127	0.404
NHS Cannock Chase CCG	CCH	156,366	63	0.403
NHS Stafford and Surrounds CCG	SAS	168,092	65	0.387
NHS Shropshire CCG	SHR	360,838	137	0.380
NHS Nottingham West CCG	NOW	102,736	39	0.380
NHS South Lincolnshire CCG	SLI	186,991	64	0.342
NHS Newark and Sherwood CCG	NSH	154,593	47	0.304
Low				
NHS Nottingham City CCG	NCI	335,645	114	0.340
NHS Wolverhampton CCG	WOL	298,979	95	0.318
NHS Derby and Derbyshire CCG	DER	1,133,256	360	0.318
NHS Lincolnshire East CCG	LEA	310,316	90	0.290
NHS East Staffordshire CCG	EST	147,461	42	0.285
NHS East Leicestershire and Rutland CCG	ELR	334,636	95	0.284
NHS Mansfield and Ashfield CCG	MAS	226,464	64	0.283
NHS Lincolnshire West CCG	LIW	241,922	67	0.277
NHS Leicester City CCG	LEI	333,532	92	0.276
NHS West Leicestershire CCG	WLE	376,852	96	0.255
NHS Telford and Wrekin CCG	TWR	187,682	42	0.224
NHS South West Lincolnshire CCG	SWL	145,295	30	0.206

Ophthalmology Children (Inpatient)

Activity data - Inpatient spells with (IR flag 23N) Ophthalmology (Children) (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this service line as it covers a wide range of conditions and procedures. The 0-18 population estimates at CCG level[33] was used instead as a proxy for need.

Limitations: Population estimates by age group accounts for only for age. It is therefore considered a better indicator of need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

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[33] Office for National Statistics (2019). Table SAPE21DT6a: Mid-2018 Population Estimates for Clinical Commissioning Groups (CCGs) in England by Single Year of Age and Sex - National Statistics.

Ophthalmology Children (Inpatient)

Ophthalmology Children (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low

Activity and need data by CCG. Ophthalmology Children (Inpatient).
Activity ratio is per 1,000 need

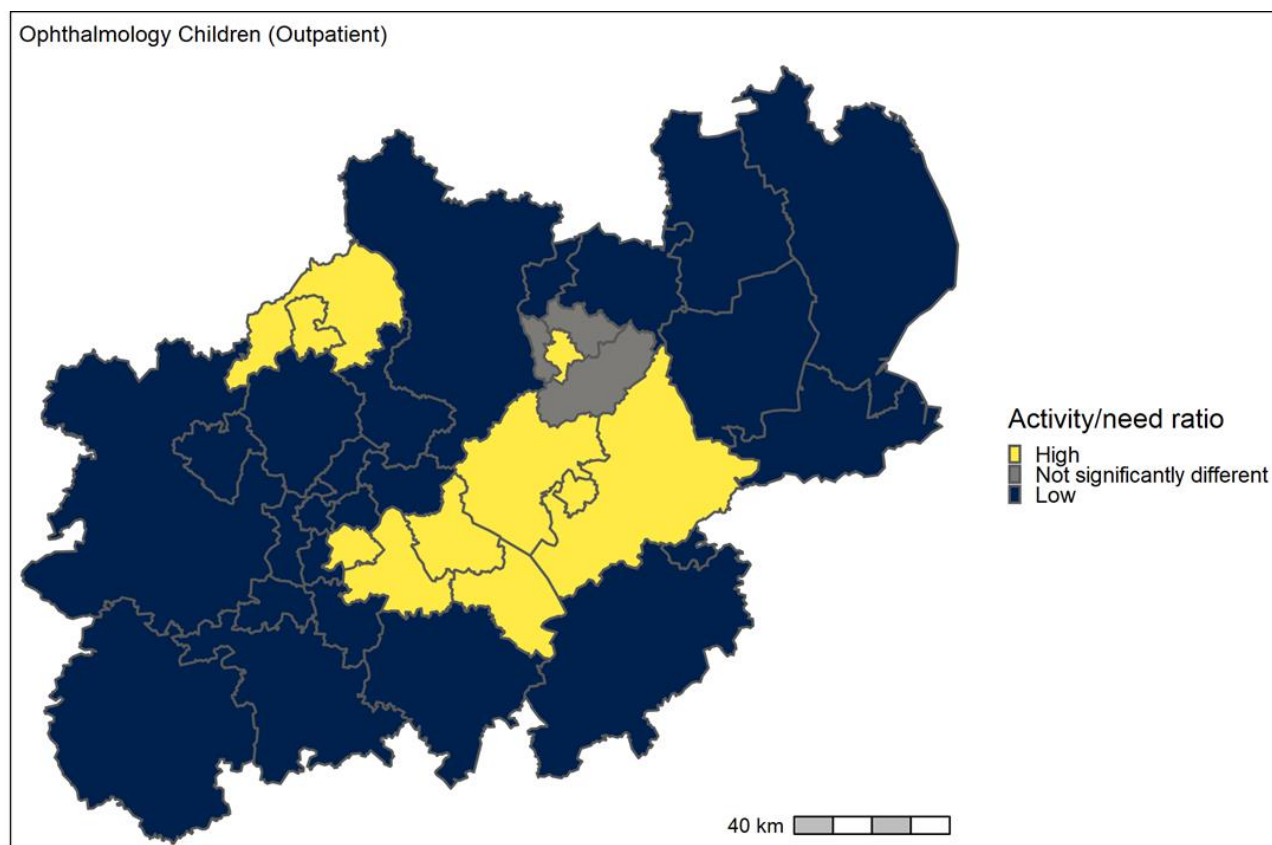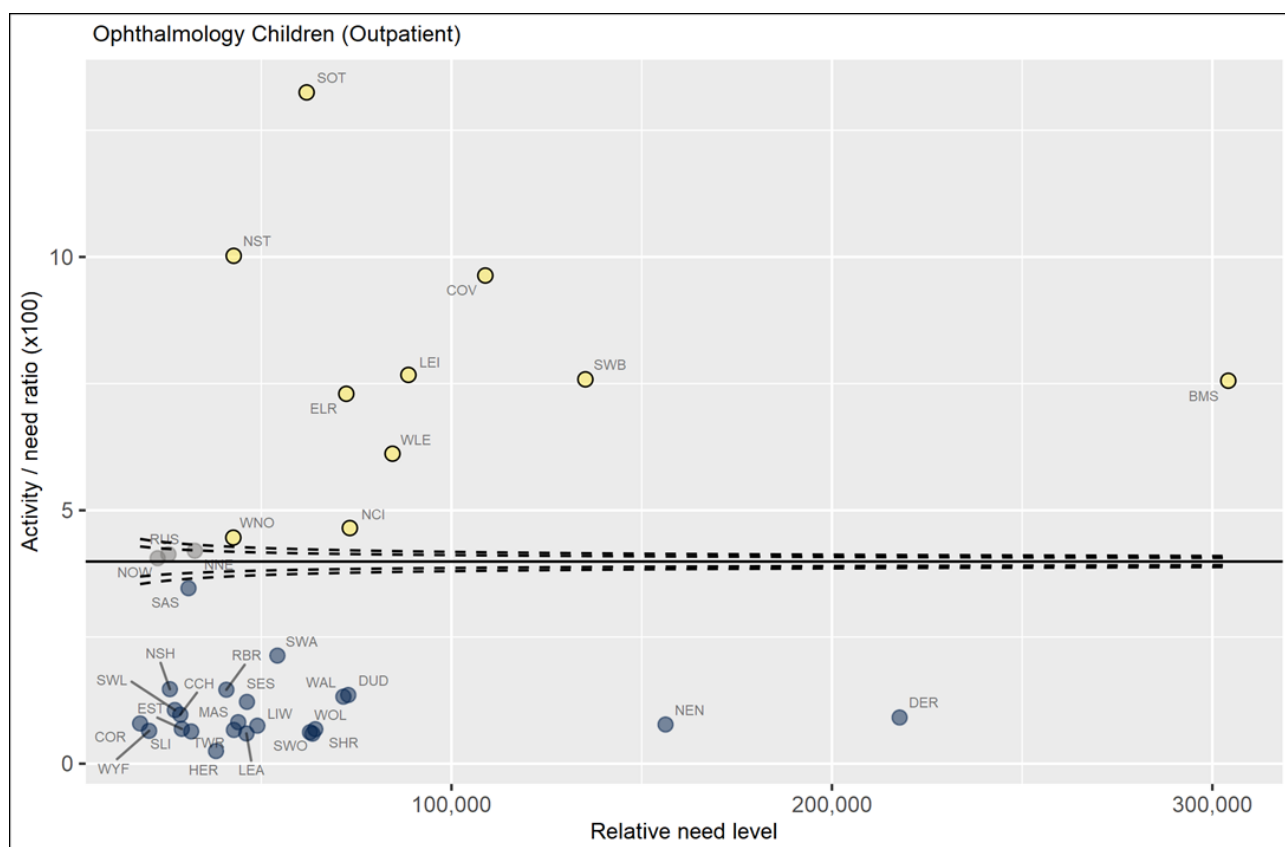| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS South West Lincolnshire CCG	SWL	27,280	48	1.760
NHS Stoke on Trent CCG	SOT	61,931	77	1.243
NHS Warwickshire North CCG	WNO	42,654	49	1.149
NHS Coventry and Rugby CCG	COV	108,892	110	1.010
Not significantly different				
NHS North Staffordshire CCG	NST	42,755	43	1.006
NHS Rushcliffe CCG	RUS	25,601	24	0.937
NHS Nottingham City CCG	NCI	73,286	66	0.901
NHS Newark and Sherwood CCG	NSH	25,977	22	0.847
NHS Nottingham West CCG	NOW	22,761	19	0.835
NHS Sandwell and West Birmingham CCG	SWB	135,196	111	0.821
NHS Dudley CCG	DUD	72,875	59	0.810
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	46,237	37	0.800
NHS Mansfield and Ashfield CCG	MAS	43,945	33	0.751
NHS Birmingham and Solihull CCG	BMS	304,193	219	0.720
NHS Redditch and Bromsgrove CCG	RBR	40,829	29	0.710
NHS Cannock Chase CCG	CCH	28,725	20	0.696
NHS Leicester City CCG	LEI	88,682	61	0.688
NHS South Warwickshire CCG	SWA	54,243	37	0.682
NHS South Lincolnshire CCG	SLI	31,588	21	0.665
NHS Lincolnshire West CCG	LIW	48,973	32	0.653
NHS Lincolnshire East CCG	LEA	46,097	29	0.629
NHS East Staffordshire CCG	EST	29,108	18	0.618
NHS Nottingham North and East CCG	NNE	32,536	19	0.584
NHS Telford and Wrekin CCG	TWR	42,819	25	0.584
NHS Derby and Derbyshire CCG	DER	217,797	127	0.583
NHS Nene CCG	NEN	156,268	90	0.576
NHS Walsall CCG	WAL	71,588	39	0.545
NHS West Leicestershire CCG	WLE	84,498	46	0.544
NHS Herefordshire CCG	HER	38,101	19	0.499
NHS Wolverhampton CCG	WOL	64,201	32	0.498
NHS Shropshire CCG	SHR	63,457	31	0.489
NHS East Leicestershire and Rutland CCG	ELR	72,348	30	0.415
NHS Stafford and Surrounds CCG	SAS	30,873	11	0.356
NHS Wyre Forest CCG	WYF	20,520	6	0.292
NHS Corby CCG	COR	18,151	5	0.275
Low				
NHS South Worcestershire CCG	SWO	62,806	23	0.366

Ophthalmology Children (Outpatient)

Activity data - Outpatient spells with (IR flag 23N) Ophthalmology (Children) (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this service line as it covers a wide range of conditions and procedures. The 0-18 population estimates at CCG level[34] was used instead as a proxy for need.

Limitations: Population estimates by age group accounts for only for age. It is therefore considered a better indicator of need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

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[34] Office for National Statistics (2019). Table SAPE21DT6a: Mid-2018 Population Estimates for Clinical Commissioning Groups (CCGs) in England by Single Year of Age and Sex - National Statistics.

Ophthalmology Children (Outpatient)

Ophthalmology Children (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

Activity and need data by CCG. Ophthalmology Children (Outpatient).

Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Stoke on Trent CCG	SOT	61,931	8,204	13.2
NHS North Staffordshire CCG	NST	42,755	4,285	10.0
NHS Coventry and Rugby CCG	COV	108,892	10,490	9.6
NHS Leicester City CCG	LEI	88,682	6,804	7.7
NHS Sandwell and West Birmingham CCG	SWB	135,196	10,254	7.6
NHS Birmingham and Solihull CCG	BMS	304,193	22,989	7.6
NHS East Leicestershire and Rutland CCG	ELR	72,348	5,281	7.3
NHS West Leicestershire CCG	WLE	84,498	5,169	6.1
NHS Nottingham City CCG	NCI	73,286	3,408	4.7
NHS Warwickshire North CCG	WNO	42,654	1,903	4.5
Not significantly different				
NHS Nottingham North and East CCG	NNE	32,536	1,367	4.2
NHS Rushcliffe CCG	RUS	25,601	1,058	4.1
NHS Nottingham West CCG	NOW	22,761	923	4.1
Low				
NHS Stafford and Surrounds CCG	SAS	30,873	1,069	3.5
NHS South Warwickshire CCG	SWA	54,243	1,157	2.1
NHS Newark and Sherwood CCG	NSH	25,977	382	1.5
NHS Redditch and Bromsgrove CCG	RBR	40,829	596	1.5
NHS Dudley CCG	DUD	72,875	988	1.4
NHS Walsall CCG	WAL	71,588	947	1.3
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	46,237	564	1.2
NHS South West Lincolnshire CCG	SWL	27,280	289	1.1
NHS Cannock Chase CCG	CCH	28,725	278	1.0
NHS Derby and Derbyshire CCG	DER	217,797	1,985	0.9
NHS Mansfield and Ashfield CCG	MAS	43,945	360	0.8
NHS Corby CCG	COR	18,151	144	0.8
NHS Nene CCG	NEN	156,268	1,208	0.8
NHS Lincolnshire West CCG	LIW	48,973	367	0.7
NHS East Staffordshire CCG	EST	29,108	200	0.7
NHS Wolverhampton CCG	WOL	64,201	437	0.7
NHS Telford and Wrekin CCG	TWR	42,819	285	0.7
NHS Wyre Forest CCG	WYF	20,520	133	0.6
NHS South Lincolnshire CCG	SLI	31,588	201	0.6
NHS South Worcestershire CCG	SWO	62,806	390	0.6
NHS Lincolnshire East CCG	LEA	46,097	275	0.6
NHS Shropshire CCG	SHR	63,457	376	0.6
NHS Herefordshire CCG	HER	38,101	95	0.2

4.4 Women and children

There were sixteen service lines within the Women and Children activity category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis.

These were: are: Medical Genetics (outpatient), Children's Services – Trauma and Orthopaedics (inpatient), Children's Services – Surgery (inpatient and outpatient), Paediatric Medicine: Gastroenterology, Hepatology and Nutrition (inpatient and outpatient), Paediatric Medicine: Haematology (outpatient) Paediatric Medicine: Respiratory (inpatient and outpatient), Paediatric Medicine: Endocrinology and Diabetes (outpatient), Paediatric Medicine: Renal (inpatient and outpatient), Paediatric Medicine: Rheumatology (outpatient), Paediatric Neurosciences (inpatient and outpatient), Paediatric Cardiac (outpatient) and Congenital Heart Disease Adults (outpatient).
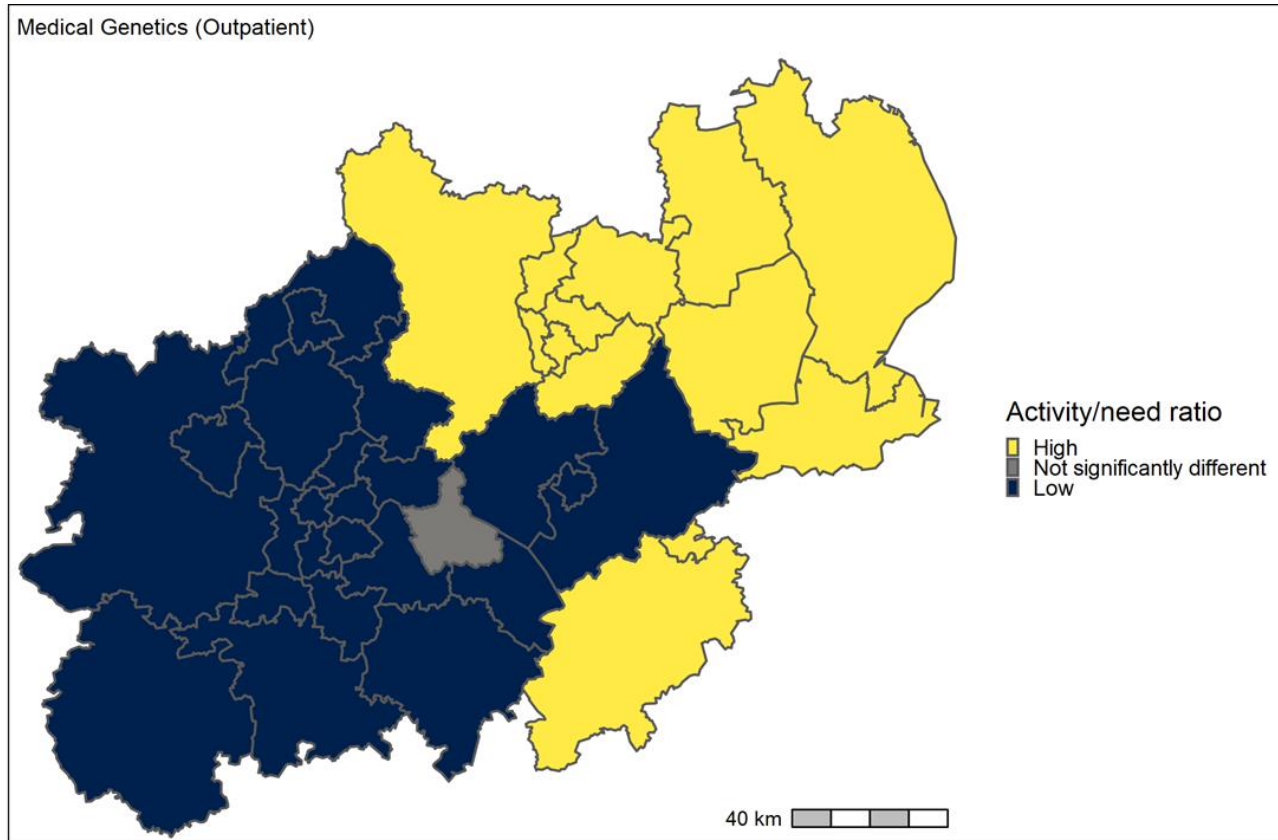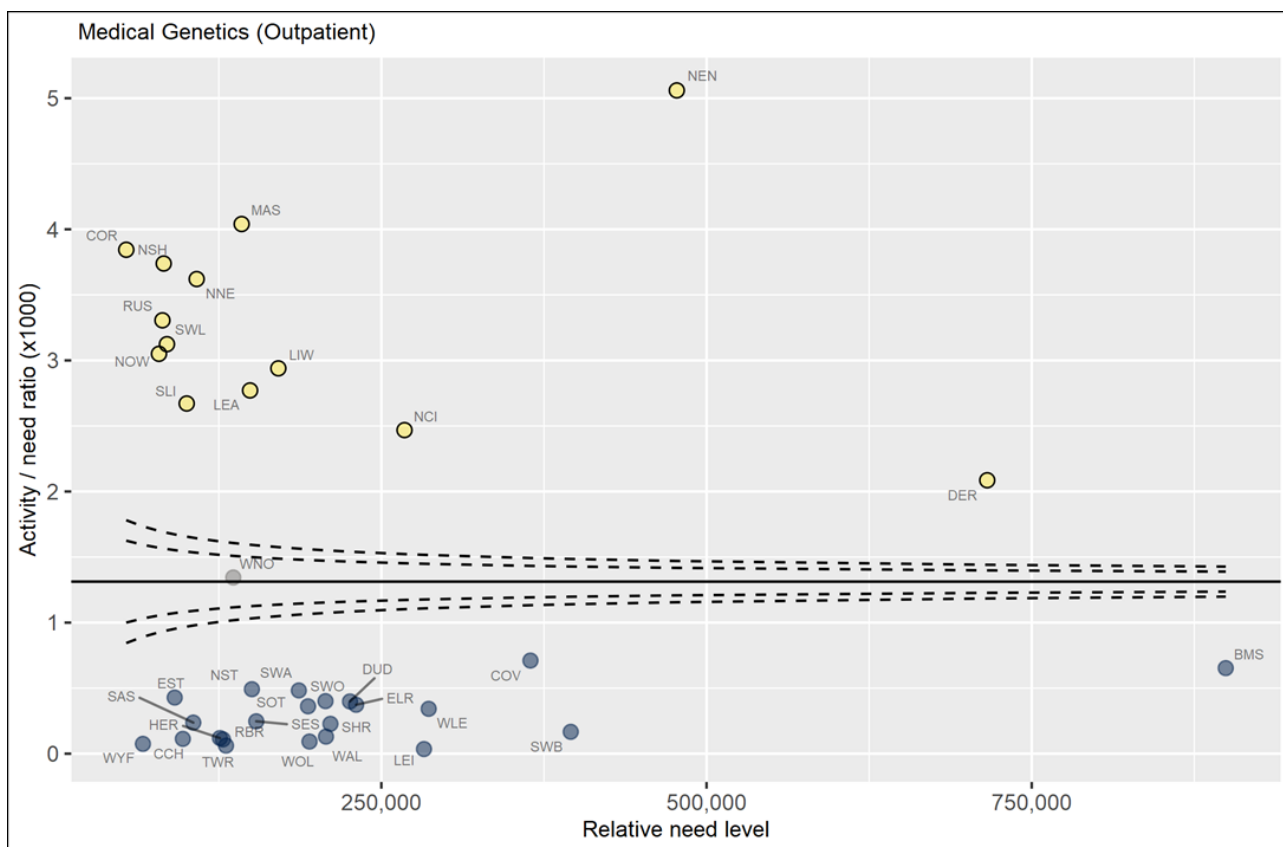
4.4.1 Medical Genetics

There is just one service line within the Medical Genetics category – Medical genetics (outpatients).

Medical Genetics (Outpatient)

Activity data - Outpatient attendances with (IR flag 20Z) Medical Genetics (2018/19).

Indicative level of need - A directly related indicator or quantification of need could not be found for this service line as it covers a wide range of conditions and procedures However, 90% of the outpatient attendances in the financial year 2018/19 under this service line are for people who are 60 years old or less; source: SUS+. As such we have used the under 60 population as the indicator of need for this service line.[35]

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[35] Office for National Statistics (2019). Table SAPE21DT6a: Mid-2018 Population Estimates for Clinical Commissioning Groups (CCGs) in England by Single Year of Age and Sex - National Statistics.

Medical Genetics (Outpatient)

Medical Genetics (Outpatient)

Activity/need ratio
High
Not significantly different
Low

40 km

Activity and need data by CCG. Medical Genetics (Outpatient).

Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Nene CCG	NEN	477,109	2,414	5.060
NHS Mansfield and Ashfield CCG	MAS	142,566	576	4.040
NHS Corby CCG	COR	53,848	207	3.844
NHS Newark and Sherwood CCG	NSH	82,639	309	3.739
NHS Nottingham North and East CCG	NNE	107,993	391	3.621
NHS Rushcliffe CCG	RUS	81,674	270	3.306
NHS South West Lincolnshire CCG	SWL	85,149	266	3.124
NHS Nottingham West CCG	NOW	79,010	241	3.050
NHS Lincolnshire West CCG	LIW	170,778	502	2.939
NHS Lincolnshire East CCG	LEA	149,041	413	2.771
NHS South Lincolnshire CCG	SLI	100,327	268	2.671
NHS Nottingham City CCG	NCI	267,782	661	2.468
NHS Derby and Derbyshire CCG	DER	715,774	1,493	2.086
Not significantly different				
NHS Warwickshire North CCG	WNO	136,136	183	1.344
Low				
NHS Coventry and Rugby CCG	COV	364,598	259	0.710
NHS Birmingham and Solihull CCG	BMS	899,141	587	0.653
NHS North Staffordshire CCG	NST	150,442	74	0.492
NHS South Warwickshire CCG	SWA	186,537	90	0.482
NHS East Staffordshire CCG	EST	91,107	39	0.428
NHS South Worcestershire CCG	SWO	207,038	83	0.401
NHS Dudley CCG	DUD	225,853	90	0.398
NHS East Leicestershire and Rutland CCG	ELR	230,573	86	0.373
NHS Stoke on Trent CCG	SOT	193,603	70	0.362
NHS West Leicestershire CCG	WLE	286,358	98	0.342
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	153,802	38	0.247
NHS Stafford and Surrounds CCG	SAS	105,390	25	0.237
NHS Shropshire CCG	SHR	210,836	48	0.228
NHS Sandwell and West Birmingham CCG	SWB	395,577	66	0.167
NHS Walsall CCG	WAL	207,401	27	0.130
NHS Herefordshire CCG	HER	125,857	15	0.119
NHS Cannock Chase CCG	CCH	97,350	11	0.113
NHS Redditch and Bromsgrove CCG	RBR	128,169	14	0.109
NHS Wolverhampton CCG	WOL	194,724	18	0.092
NHS Wyre Forest CCG	WYF	66,666	5	0.075
NHS Telford and Wrekin CCG	TWR	130,526	8	0.061
NHS Leicester City CCG	LEI	282,735	10	0.035

4.4.2 Specialised Surgery in Children

There were three service lines within this category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis: Children's Services – Trauma and Orthopaedics (Inpatient), Children's Services – Surgery (inpatient and outpatient),
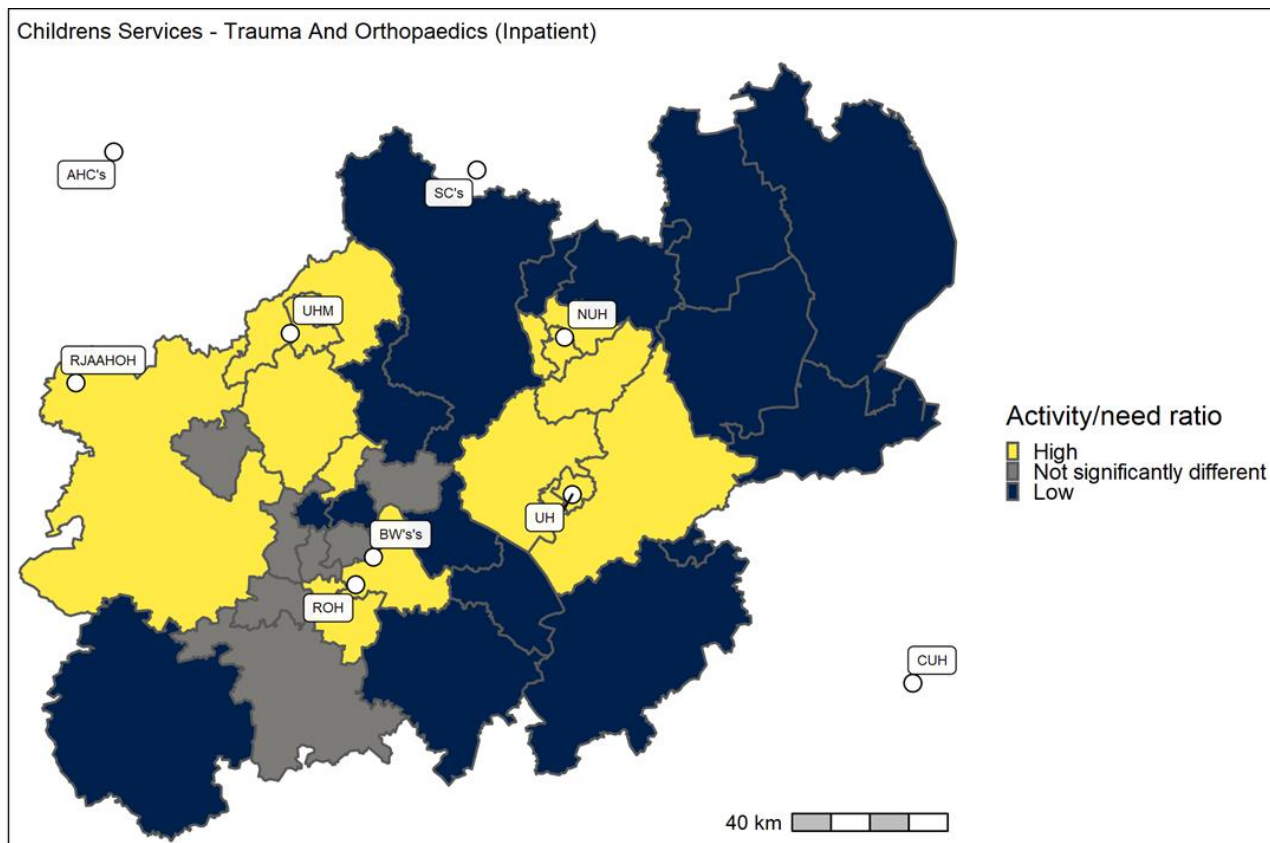
Children's Services – Trauma and Orthopaedics (Inpatient)

Activity data - Inpatient admissions with (IR flag 23Q) Children's Services – Trauma and Orthopaedics (2018/19).

Indicative level of need –Hospital admissions caused by unintentional and deliberate injuries in children (aged 0-14 years) in the financial year 2018/19. Source: Child Health Profiles published by Public Health England[36].

Limitations: Need indicator only provides data of a population age of 14 years or under and the activity data captures an age population of 18 years or under.

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[36] https://fingertips.phe.org.uk/profile/child-health-profiles/data#page/6/gid/1938133228/pat/6/par/E12000004/ati/202/are/E06000015/iid/90284/age/26/sex/4

Childrens Services - Trauma And Orthopaedics (Inpatient)

Childrens Services - Trauma And Orthopaedics (Inpatient)

Activity and need data by CCG. Children's Services - Trauma and Orthopaedics (Inpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Stafford and Surrounds CCG	SAS	365	244	66.8
NHS North Staffordshire CCG	NST	615	375	61.0
NHS Stoke on Trent CCG	SOT	1,180	586	49.7
NHS Nottingham West CCG	NOW	215	102	47.4
NHS Rushcliffe CCG	RUS	265	123	46.4
NHS Nottingham City CCG	NCI	825	369	44.7
NHS Nottingham North and East CCG	NNE	360	151	41.9
NHS Leicester City CCG	LEI	1,080	433	40.1
NHS Redditch and Bromsgrove CCG	RBR	500	163	32.6
NHS Shropshire CCG	SHR	905	293	32.4
NHS East Leicestershire and Rutland CCG	ELR	830	266	32.0
NHS West Leicestershire CCG	WLE	1,025	323	31.5
NHS Cannock Chase CCG	CCH	390	113	29.0
NHS Birmingham and Solihull CCG	BMS	5,690	1,226	21.5
Not significantly different				
NHS Wyre Forest CCG	WYF	305	66	21.6
NHS Dudley CCG	DUD	950	194	20.4
NHS Telford and Wrekin CCG	TWR	930	177	19.0
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	670	117	17.5
NHS Sandwell and West Birmingham CCG	SWB	2,430	416	17.1
NHS South Worcestershire CCG	SWO	890	141	15.8
Low				
NHS Walsall CCG	WAL	1,060	129	12.2
NHS Derby and Derbyshire CCG	DER	2,370	275	11.6
NHS Wolverhampton CCG	WOL	880	102	11.6
NHS Herefordshire CCG	HER	645	70	10.9
NHS Mansfield and Ashfield CCG	MAS	800	85	10.6
NHS South West Lincolnshire CCG	SWL	320	34	10.6
NHS Newark and Sherwood CCG	NSH	440	42	9.5
NHS Lincolnshire West CCG	LIW	740	59	8.0
NHS Lincolnshire East CCG	LEA	745	56	7.5
NHS Warwickshire North CCG	WNO	710	50	7.0
NHS East Staffordshire CCG	EST	560	39	7.0
NHS Nene CCG	NEN	2,180	143	6.6
NHS Corby CCG	COR	250	16	6.4
NHS South Warwickshire CCG	SWA	1,010	53	5.2
NHS South Lincolnshire CCG	SLI	450	17	3.8
NHS Coventry and Rugby CCG	COV	3,250	67	2.1

Children's Services – Surgery (Inpatient)

Activity data - Inpatient admissions and outpatient attendances with (IR flag 23X) Children's Services – Surgery (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this service line as it covers a range of conditions. Since the age group of the service line is 18 or under, we have used the population estimates at CCG level of those inhabitants who are 18 or under at mid-2018[37].

Limitations: Population estimates by age group accounts for only for age. It is therefore considered a better indicator of need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

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[37] Office for National Statistics (2019). Table SAPE21DT6a: Mid-2018 Population Estimates for Clinical Commissioning Groups (CCGs) in England by Single Year of Age and Sex - National Statistics.

Childrens Services - Surgery (Inpatient)

Childrens Services - Surgery (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low

40 km

Activity and need data by CCG. Children's Services - Surgery (Inpatient).
Activity ratio is per 1,000 need

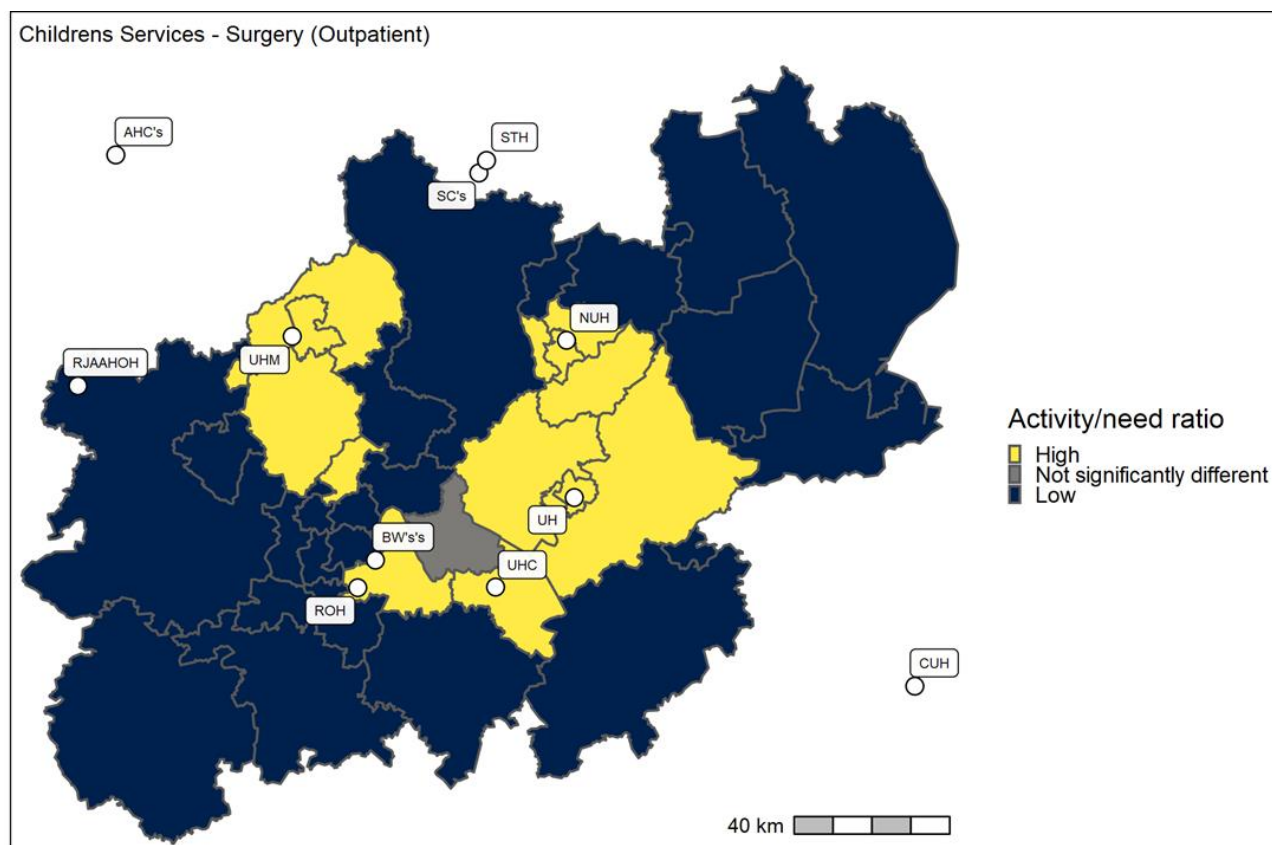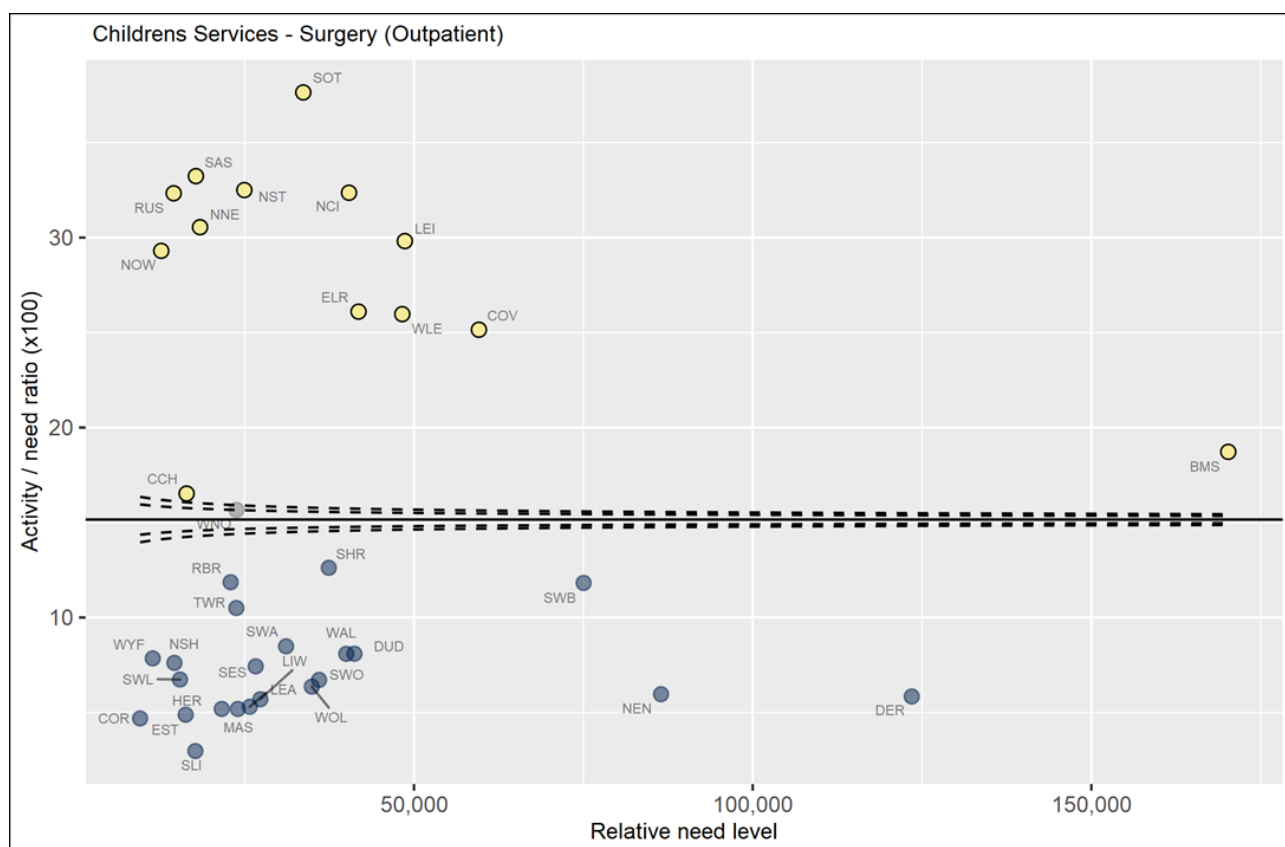| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Stoke on Trent CCG	SOT	33,651	368	10.936
NHS Coventry and Rugby CCG	COV	59,579	485	8.140
NHS Nottingham City CCG	NCI	40,402	315	7.797
NHS Stafford and Surrounds CCG	SAS	17,802	134	7.527
NHS Birmingham and Solihull CCG	BMS	170,210	1,261	7.408
NHS Leicester City CCG	LEI	48,649	355	7.297
NHS Nottingham North and East CCG	NNE	18,413	131	7.115
NHS West Leicestershire CCG	WLE	48,269	338	7.002
NHS North Staffordshire CCG	NST	24,954	174	6.973
Not significantly different				
NHS Nottingham West CCG	NOW	12,685	78	6.149
NHS Warwickshire North CCG	WNO	23,792	144	6.052
NHS Sandwell and West Birmingham CCG	SWB	75,040	451	6.010
NHS East Leicestershire and Rutland CCG	ELR	41,811	222	5.310
NHS Lincolnshire East CCG	LEA	25,752	123	4.776
NHS Rushcliffe CCG	RUS	14,520	67	4.614
NHS South Warwickshire CCG	SWA	31,112	137	4.403
NHS Cannock Chase CCG	CCH	16,430	69	4.200
NHS South West Lincolnshire CCG	SWL	15,447	63	4.078
NHS South Lincolnshire CCG	SLI	17,726	72	4.062
NHS Newark and Sherwood CCG	NSH	14,626	59	4.034
Low				
NHS Derby and Derbyshire CCG	DER	123,479	475	3.847
NHS Nene CCG	NEN	86,466	323	3.736
NHS Redditch and Bromsgrove CCG	RBR	22,930	85	3.707
NHS Lincolnshire West CCG	LIW	27,312	100	3.661
NHS Wolverhampton CCG	WOL	34,911	126	3.609
NHS Dudley CCG	DUD	41,209	146	3.543
NHS Telford and Wrekin CCG	TWR	23,776	84	3.533
NHS Walsall CCG	WAL	39,999	134	3.350
NHS Mansfield and Ashfield CCG	MAS	23,993	80	3.334
NHS South Worcestershire CCG	SWO	35,989	111	3.084
NHS Corby CCG	COR	9,564	27	2.823
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	26,628	75	2.817
NHS Shropshire CCG	SHR	37,420	98	2.619
NHS Herefordshire CCG	HER	21,620	55	2.544
NHS Wyre Forest CCG	WYF	11,432	29	2.537
NHS East Staffordshire CCG	EST	16,292	38	2.332

Children's Services – Surgery (Outpatients)

Activity data - Outpatient attendances with (IR flag 23X) Children's Services – Surgery (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this service line as it covers a range of conditions. Since the age group of the service line is 18 or under, we have used the population estimates at CCG level of those inhabitants who are 18 or under at mid-2018[38].

Limitations: Population estimates by age group accounts for only for age. It is therefore considered a better indicator of need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

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[38] Office for National Statistics (2019). Table SAPE21DT6a: Mid-2018 Population Estimates for Clinical Commissioning Groups (CCGs) in England by Single Year of Age and Sex - National Statistics.

Childrens Services - Surgery (Outpatient)

Childrens Services - Surgery (Outpatient)

Activity and need data by CCG. Children's Services - Surgery (Outpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Stoke on Trent CCG	SOT	33,651	12,668	37.6
NHS Stafford and Surrounds CCG	SAS	17,802	5,917	33.2
NHS North Staffordshire CCG	NST	24,954	8,111	32.5
NHS Nottingham City CCG	NCI	40,402	13,075	32.4
NHS Rushcliffe CCG	RUS	14,520	4,695	32.3
NHS Nottingham North and East CCG	NNE	18,413	5,625	30.5
NHS Leicester City CCG	LEI	48,649	14,506	29.8
NHS Nottingham West CCG	NOW	12,685	3,717	29.3
NHS East Leicestershire and Rutland CCG	ELR	41,811	10,914	26.1
NHS West Leicestershire CCG	WLE	48,269	12,537	26.0
NHS Coventry and Rugby CCG	COV	59,579	14,984	25.1
NHS Birmingham and Solihull CCG	BMS	170,210	31,864	18.7
NHS Cannock Chase CCG	CCH	16,430	2,715	16.5
Not significantly different				
NHS Warwickshire North CCG	WNO	23,792	3,726	15.7
Low				
NHS Shropshire CCG	SHR	37,420	4,721	12.6
NHS Redditch and Bromsgrove CCG	RBR	22,930	2,719	11.9
NHS Sandwell and West Birmingham CCG	SWB	75,040	8,869	11.8
NHS Telford and Wrekin CCG	TWR	23,776	2,496	10.5
NHS South Warwickshire CCG	SWA	31,112	2,639	8.5
NHS Dudley CCG	DUD	41,209	3,334	8.1
NHS Walsall CCG	WAL	39,999	3,235	8.1
NHS Wyre Forest CCG	WYF	11,432	897	7.8
NHS Newark and Sherwood CCG	NSH	14,626	1,113	7.6
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	26,628	1,978	7.4
NHS South West Lincolnshire CCG	SWL	15,447	1,040	6.7
NHS South Worcestershire CCG	SWO	35,989	2,416	6.7
NHS Wolverhampton CCG	WOL	34,911	2,220	6.4
NHS Nene CCG	NEN	86,466	5,155	6.0
NHS Derby and Derbyshire CCG	DER	123,479	7,212	5.8
NHS Lincolnshire West CCG	LIW	27,312	1,555	5.7
NHS Lincolnshire East CCG	LEA	25,752	1,365	5.3
NHS Herefordshire CCG	HER	21,620	1,121	5.2
NHS Mansfield and Ashfield CCG	MAS	23,993	1,244	5.2
NHS East Staffordshire CCG	EST	16,292	795	4.9
NHS Corby CCG	COR	9,564	448	4.7
NHS South Lincolnshire CCG	SLI	17,726	526	3.0

4.4.3 Paediatric Medicine

There were ten services line within the Paediatric Medicine category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. These were Paediatric Medicine: Gastroenterology Hepatology and Nutrition (inpatient and outpatient), Paediatric Medicine: Haematology (outpatient), Paediatric Medicine: Respiratory (inpatient and outpatient), Paediatric Medicine: Endocrinology and Diabetes (outpatient), Paediatric Medicine: Renal (inpatient and outpatient), Paediatric Medicine: Rheumatology (outpatient), Paediatric Medicine: Gastroenterology (inpatients).

Activity data - Inpatient admissions with (IR flag 23F) Gastroenterology Hepatology and Nutrition (2018/19).
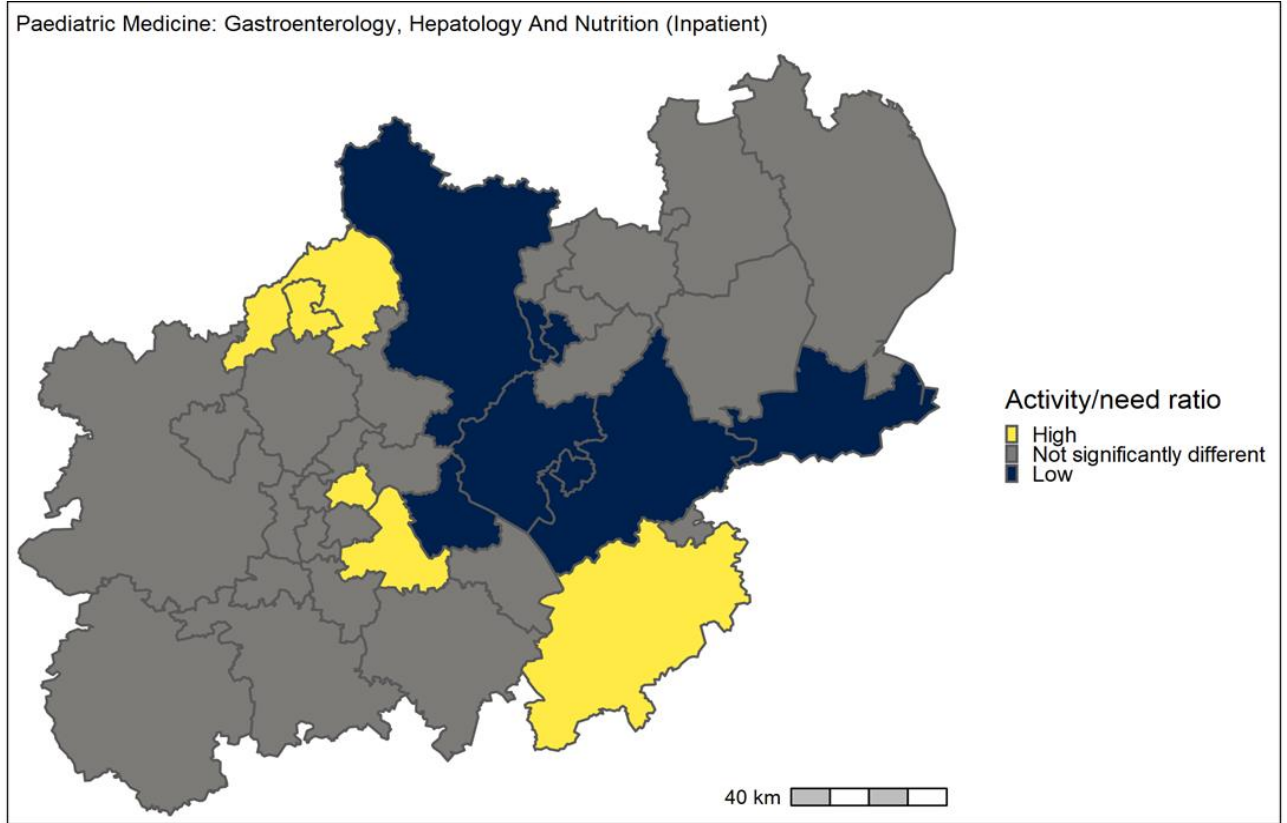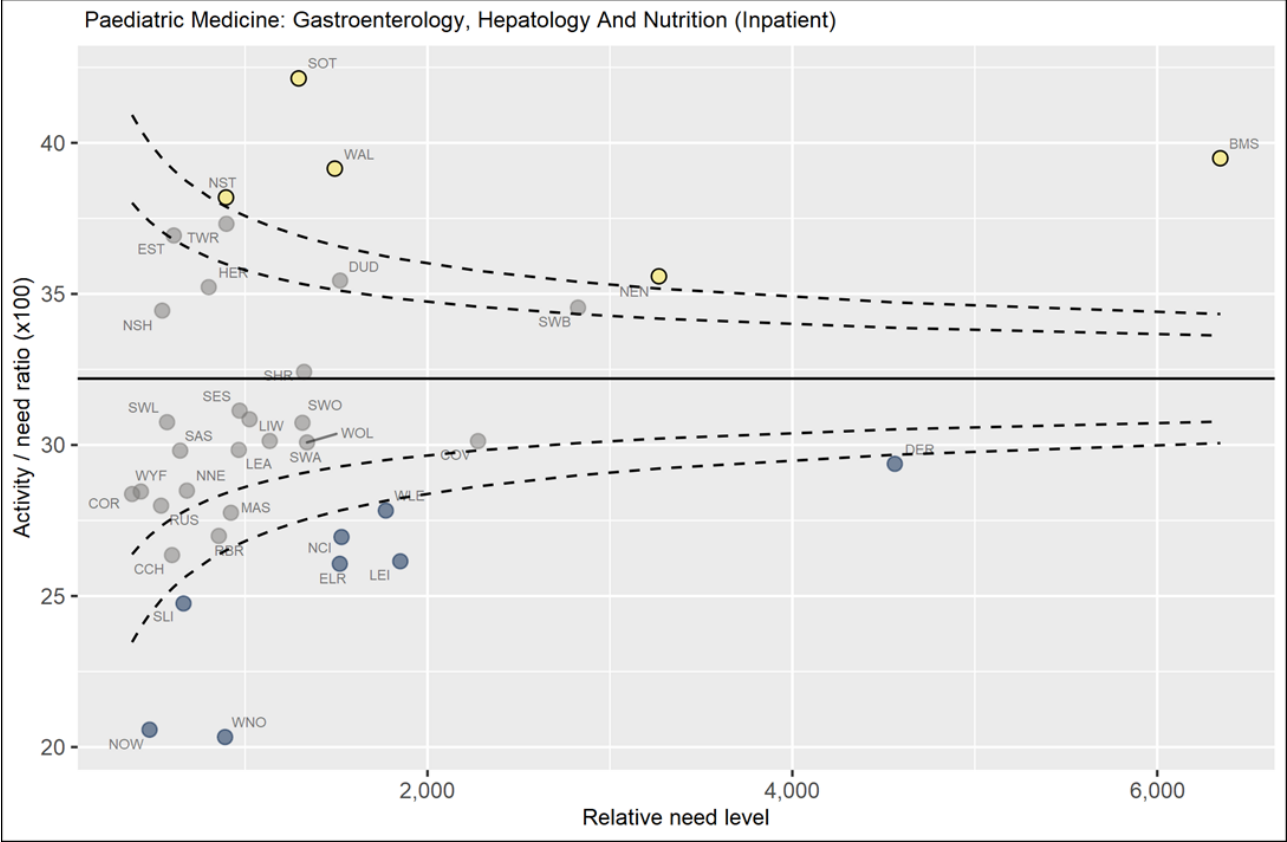
Indicative level of need – Prevalence of Digestive condition longstanding condition among children, by age and sex. Source: Health Survey for England (2018)[39]. Age and sex specific prevalence figures are applied to CCG population estimates.

Prescribed service line	Longstanding condition
Gastroenterology, Hepatology and Nutrition	Digestive system
Haematology	Blood and related organs
Respiratory	Respiratory system
Endocrinology and Diabetes	Diabetes, other endocrine and metabolic
Renal	Genito-urinary system
Paediatric Medicine: Rheumatology	Musculoskeletal system

Limitations: The activity data is from patients who are 18 or under. The health survey only provides prevalence data up to 15 years. To account for this the prevalence of those aged between 10-15 was applied to the 16-18 population.

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[39] NHS Digital (2019). Health Survey for England 2018: Longstanding conditions. Table 9: Prevalence of longstanding conditions among children, by age and sex.

Paediatric Medicine: Gastroenterology, Hepatology and Nutrition (Inpatient)

Paediatric Medicine: Gastroenterology, Hepatology And Nutrition (Inpatient)

Paediatric Medicine: Gastroenterology, Hepatology And Nutrition (Inpatient)

Activity and need data by CCG. Paediatric Medicine: Gastroenterology, Hepatology and Nutrition (Inpatient).
Activity ratio is per 100 need

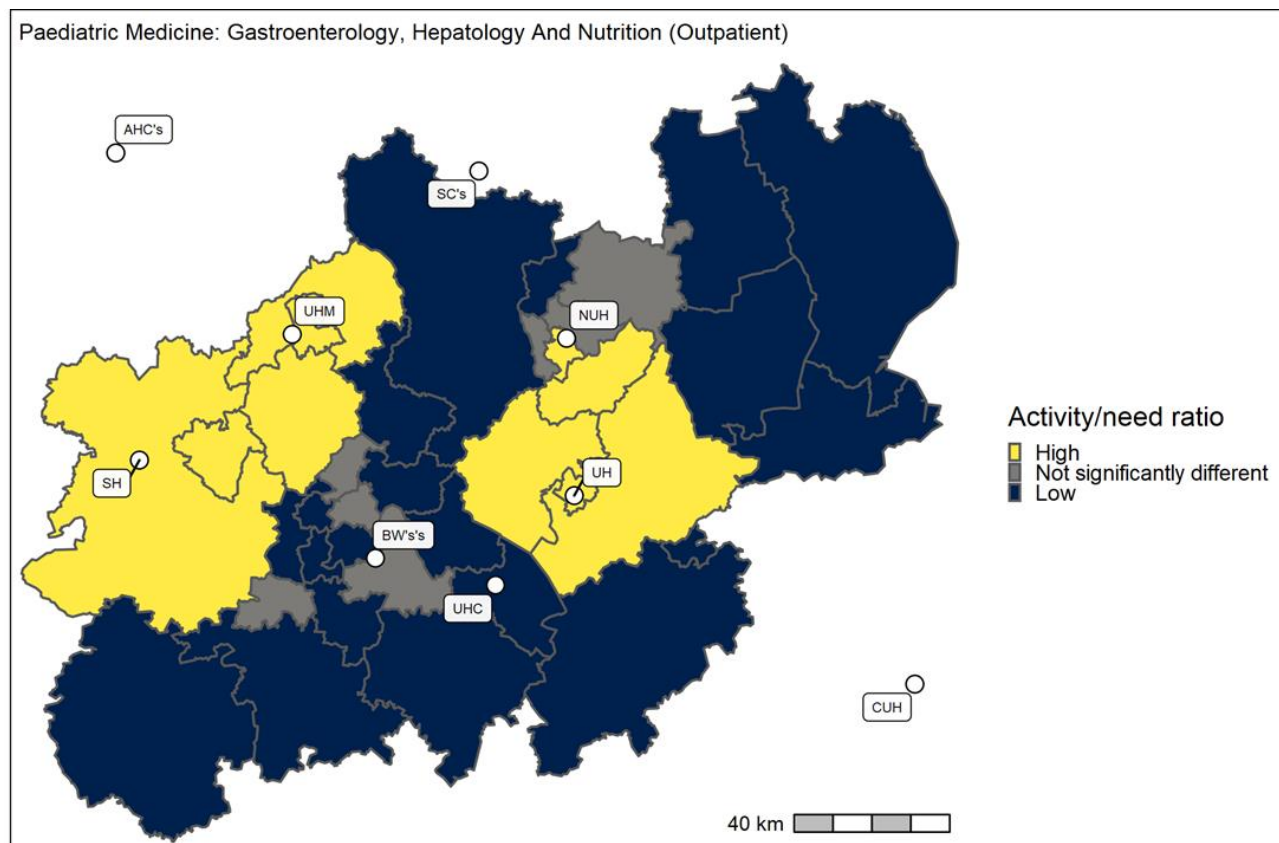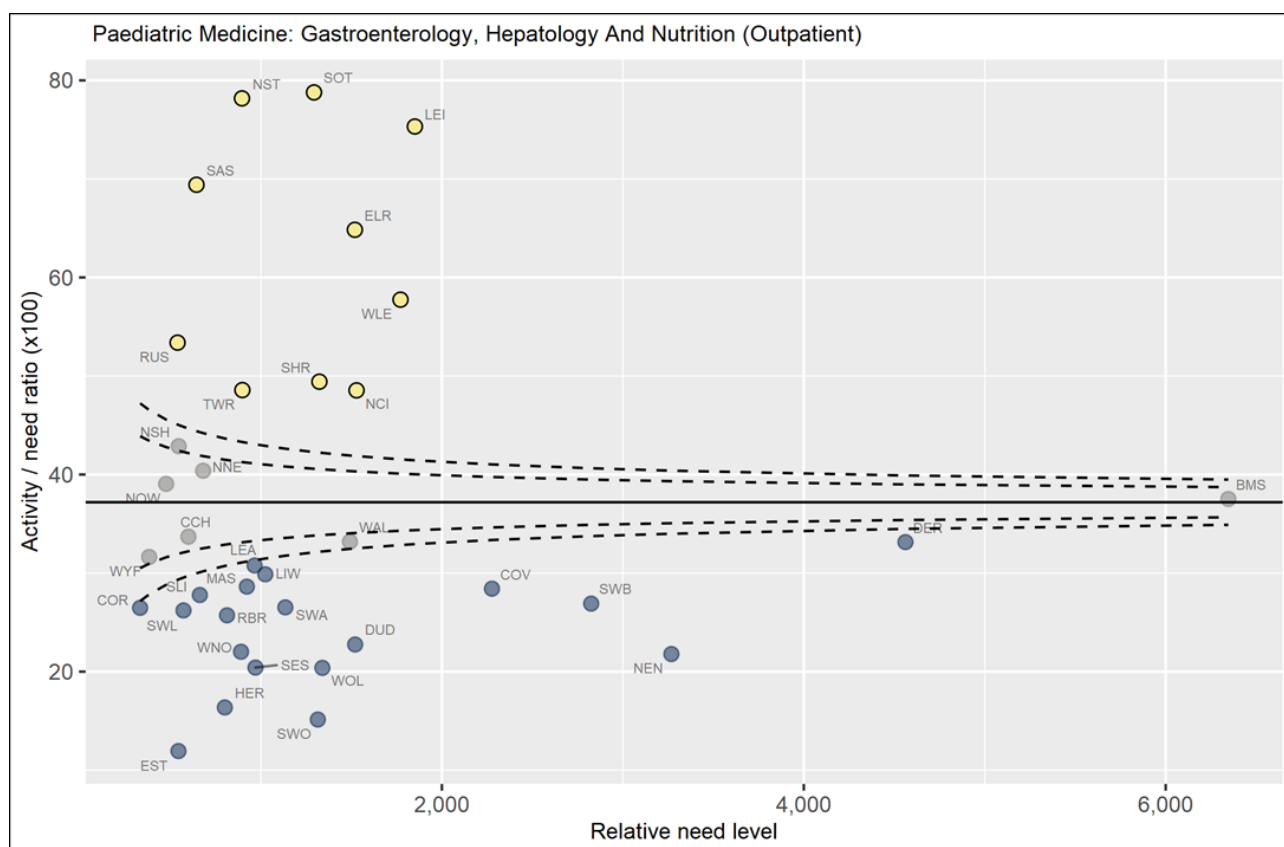| CCG name	CCG code	Need	Activity	Activity/need ratio
High				
NHS Stoke on Trent CCG	SOT	1,294	545	42.1
NHS Birmingham and Solihull CCG	BMS	6,346	2,506	39.5
NHS Walsall CCG	WAL	1,492	584	39.1
NHS North Staffordshire CCG	NST	895	342	38.2
NHS Nene CCG	NEN	3,268	1,163	35.6
Not significantly different				
NHS Telford and Wrekin CCG	TWR	898	335	37.3
NHS East Staffordshire CCG	EST	609	225	36.9
NHS Dudley CCG	DUD	1,521	539	35.4
NHS Herefordshire CCG	HER	801	282	35.2
NHS Sandwell and West Birmingham CCG	SWB	2,825	976	34.5
NHS Newark and Sherwood CCG	NSH	546	188	34.4
NHS Shropshire CCG	SHR	1,323	429	32.4
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	970	302	31.1
NHS Lincolnshire West CCG	LIW	1,024	316	30.9
NHS South West Lincolnshire CCG	SWL	572	176	30.8
NHS South Worcestershire CCG	SWO	1,314	404	30.7
NHS South Warwickshire CCG	SWA	1,135	342	30.1
NHS Coventry and Rugby CCG	COV	2,277	686	30.1
NHS Wolverhampton CCG	WOL	1,340	403	30.1
NHS Lincolnshire East CCG	LEA	965	288	29.8
NHS Stafford and Surrounds CCG	SAS	644	192	29.8
NHS Nottingham North and East CCG	NNE	681	194	28.5
NHS Wyre Forest CCG	WYF	429	122	28.5
NHS Corby CCG	COR	381	108	28.4
NHS Rushcliffe CCG	RUS	539	151	28.0
NHS Mansfield and Ashfield CCG	MAS	922	256	27.8
NHS Redditch and Bromsgrove CCG	RBR	856	231	27.0
NHS Cannock Chase CCG	CCH	600	158	26.4
Low				
NHS Derby and Derbyshire CCG	DER	4,562	1,340	29.4
NHS West Leicestershire CCG	WLE	1,772	493	27.8
NHS Nottingham City CCG	NCI	1,529	412	27.0
NHS Leicester City CCG	LEI	1,851	484	26.1
NHS East Leicestershire and Rutland CCG	ELR	1,519	396	26.1
NHS South Lincolnshire CCG	SLI	663	164	24.8
NHS Nottingham West CCG	NOW	476	98	20.6
NHS Warwickshire North CCG	WNO	890	181	20.3

Paediatric Medicine: Gastroenterology, Hepatology and Nutrition (Outpatient)

Activity data – Outpatient attendances with (IR flag 23F) Gastroenterology Hepatology and Nutrition (2018/19).

Indicative level of need – Prevalence of Digestive condition longstanding condition among children, by age and sex. Source: Health Survey for England (2018)[40]. Age and sex specific prevalence figures are applied to CCG population estimates.

Limitations: The activity data is for patients who are 18 or under. The health survey only provides prevalence data up to 15 years. To account for this the prevalence of those aged between 10-15 was applied to the 16-18 population.

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[40] NHS Digital (2019). Health Survey for England 2018: Longstanding conditions. Table 9: Prevalence of longstanding conditions among children, by age and sex.

Paediatric Medicine: Gastroenterology, Hepatology And Nutrition (Outpatient)

Paediatric Medicine: Gastroenterology, Hepatology And Nutrition (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

Activity and need data by CCG. Paediatric Medicine: Gastroenterology, Hepatology and Nutrition (Outpatient).
Activity ratio is per 100 need

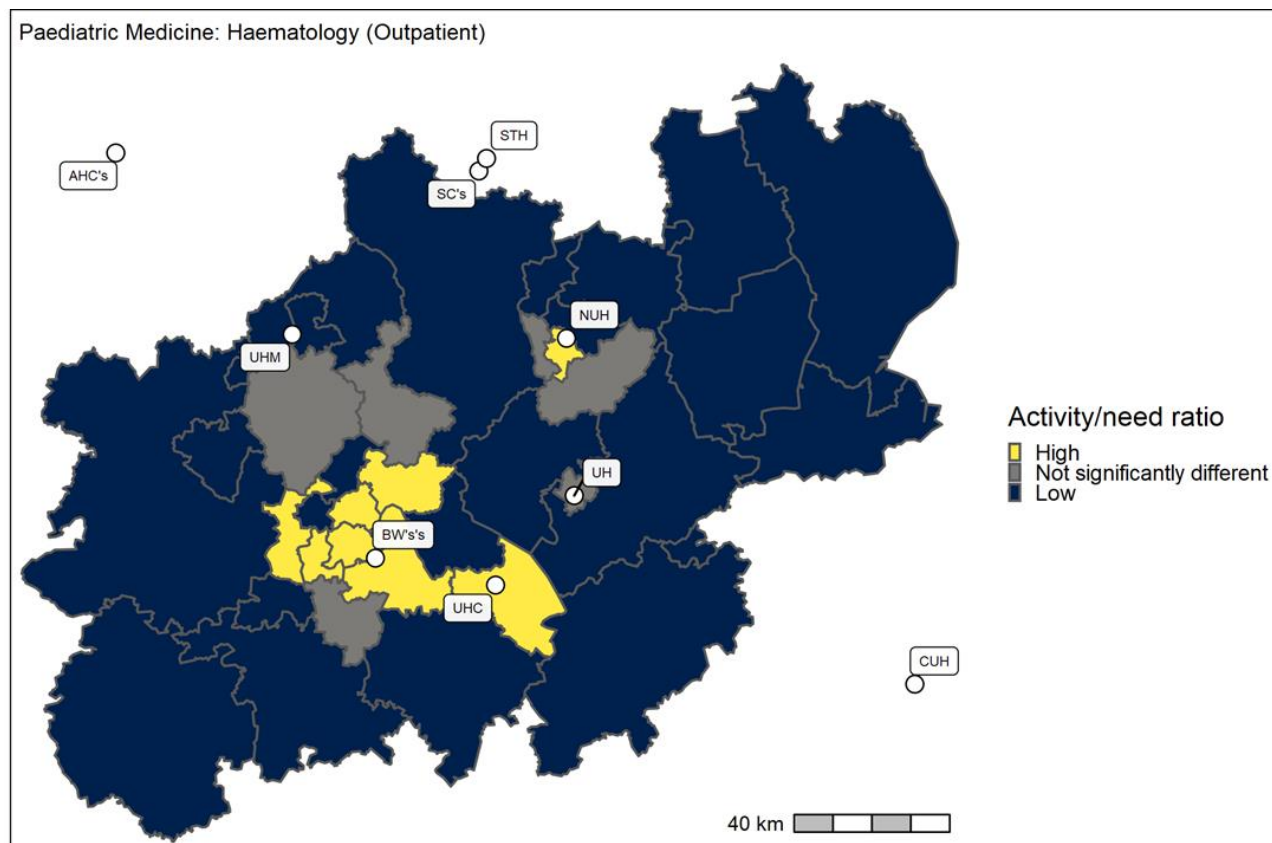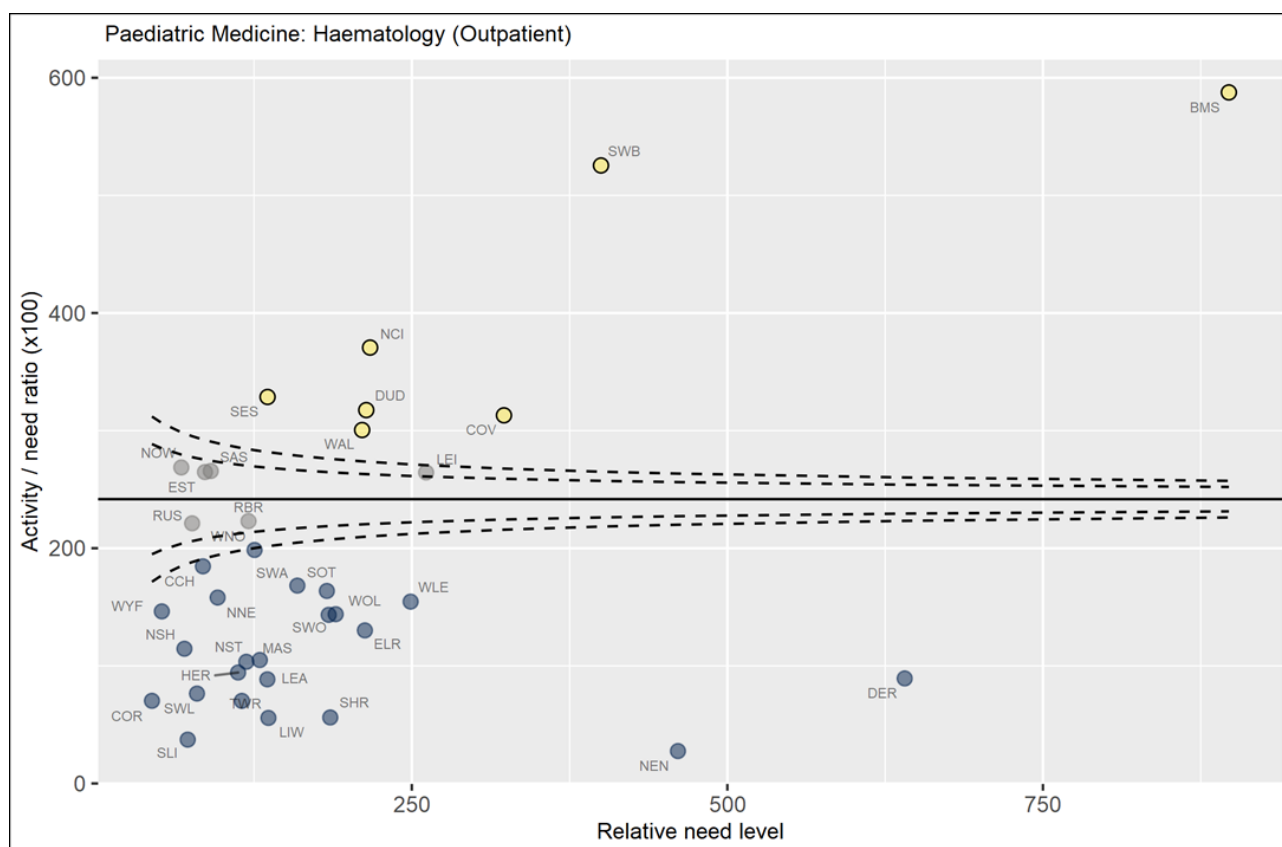| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Stoke on Trent CCG	SOT	1,294	1,019	78.8
NHS North Staffordshire CCG	NST	895	700	78.2
NHS Leicester City CCG	LEI	1,851	1,394	75.3
NHS Stafford and Surrounds CCG	SAS	644	447	69.4
NHS East Leicestershire and Rutland CCG	ELR	1,519	985	64.8
NHS West Leicestershire CCG	WLE	1,772	1,023	57.7
NHS Rushcliffe CCG	RUS	539	288	53.4
NHS Shropshire CCG	SHR	1,323	654	49.4
NHS Telford and Wrekin CCG	TWR	898	436	48.6
NHS Nottingham City CCG	NCI	1,529	742	48.5
Not significantly different				
NHS Newark and Sherwood CCG	NSH	546	234	42.9
NHS Nottingham North and East CCG	NNE	681	275	40.4
NHS Nottingham West CCG	NOW	476	186	39.1
NHS Birmingham and Solihull CCG	BMS	6,346	2,381	37.5
NHS Cannock Chase CCG	CCH	600	202	33.7
NHS Walsall CCG	WAL	1,492	495	33.2
NHS Wyre Forest CCG	WYF	382	121	31.6
Low				
NHS Derby and Derbyshire CCG	DER	4,562	1,512	33.1
NHS Lincolnshire East CCG	LEA	965	297	30.8
NHS Lincolnshire West CCG	LIW	1,024	306	29.9
NHS Mansfield and Ashfield CCG	MAS	922	264	28.6
NHS Coventry and Rugby CCG	COV	2,277	647	28.4
NHS South Lincolnshire CCG	SLI	663	184	27.8
NHS Sandwell and West Birmingham CCG	SWB	2,825	760	26.9
NHS South Warwickshire CCG	SWA	1,135	301	26.5
NHS Corby CCG	COR	332	88	26.5
NHS South West Lincolnshire CCG	SWL	572	150	26.2
NHS Redditch and Bromsgrove CCG	RBR	813	209	25.7
NHS Dudley CCG	DUD	1,521	346	22.8
NHS Warwickshire North CCG	WNO	890	196	22.0
NHS Nene CCG	NEN	3,268	712	21.8
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	970	198	20.4
NHS Wolverhampton CCG	WOL	1,340	273	20.4
NHS Herefordshire CCG	HER	801	131	16.4
NHS South Worcestershire CCG	SWO	1,314	199	15.1
NHS East Staffordshire CCG	EST	544	65	11.9

Paediatric Medicine: Haematology (Outpatient)

Activity data - Inpatient admissions with (IR flag 23H) Haematology (2018/19).

Indicative level of need – Prevalence of longstanding Blood and related organ conditions among children. Source: Health Survey for England (2018)[41]. Age and sex specific prevalence figures are applied to CCG population estimates.

Limitations: The activity data is from patients who are 18 or under. The health survey only provides prevalence data up to 15 years. To account for this the prevalence of those aged between 10-15 was applied to the 16-18 population.

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[41] NHS Digital (2019). Health Survey for England 2018: Longstanding conditions. Table 9: Prevalence of longstanding conditions among children, by age and sex.

Paediatric Medicine: Haematology (Outpatient)

Paediatric Medicine: Haematology (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

Activity and need data by CCG. Paediatric Medicine: Haematology (Outpatient).
Activity ratio is per 100 need

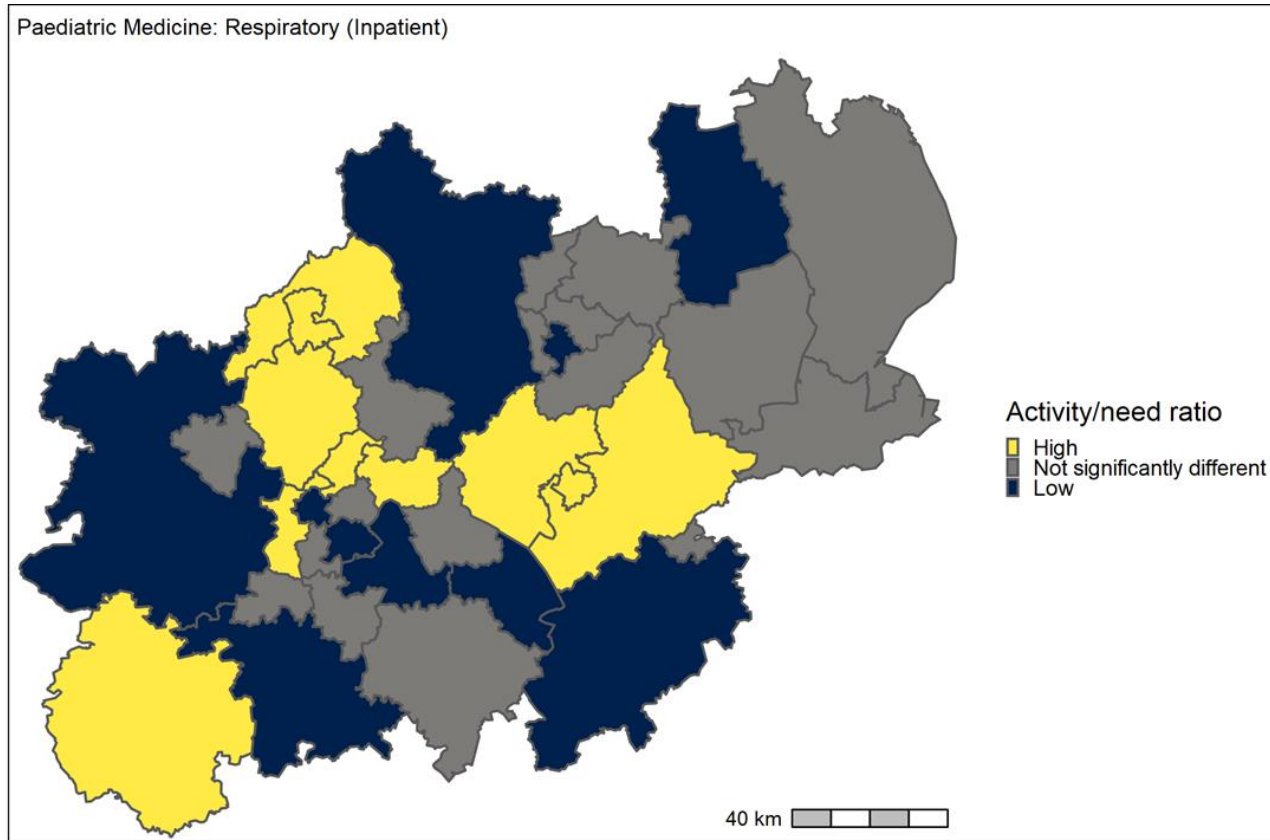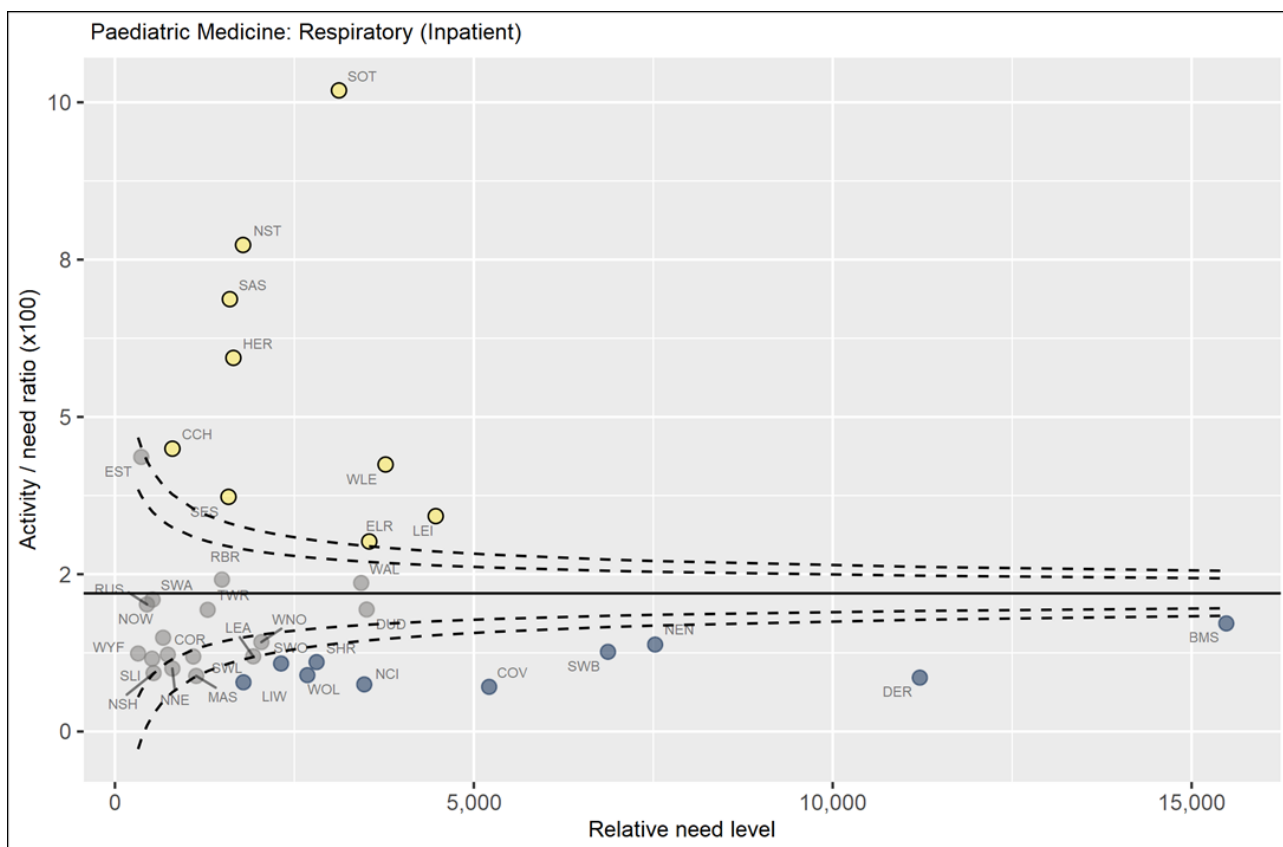| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Birmingham and Solihull CCG	BMS	897	5,272	587.6
NHS Sandwell and West Birmingham CCG	SWB	400	2,101	525.4
NHS Nottingham City CCG	NCI	217	804	370.6
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	136	446	328.6
NHS Dudley CCG	DUD	214	679	317.5
NHS Coventry and Rugby CCG	COV	323	1,011	313.0
NHS Walsall CCG	WAL	211	633	300.5
Not significantly different				
NHS Nottingham West CCG	NOW	67	181	268.7
NHS Stafford and Surrounds CCG	SAS	91	241	265.7
NHS East Staffordshire CCG	EST	86	228	264.8
NHS Leicester City CCG	LEI	261	691	264.4
NHS Redditch and Bromsgrove CCG	RBR	121	269	223.0
NHS Rushcliffe CCG	RUS	76	168	221.2
Low				
NHS Warwickshire North CCG	WNO	125	249	198.5
NHS Cannock Chase CCG	CCH	84	156	184.6
NHS South Warwickshire CCG	SWA	159	268	168.2
NHS Stoke on Trent CCG	SOT	183	299	163.7
NHS Nottingham North and East CCG	NNE	96	152	158.1
NHS West Leicestershire CCG	WLE	249	385	154.6
NHS Wyre Forest CCG	WYF	52	76	146.3
NHS Wolverhampton CCG	WOL	190	273	143.9
NHS South Worcestershire CCG	SWO	184	264	143.4
NHS East Leicestershire and Rutland CCG	ELR	213	277	130.2
NHS Newark and Sherwood CCG	NSH	70	80	114.5
NHS Mansfield and Ashfield CCG	MAS	130	136	105.0
NHS North Staffordshire CCG	NST	119	123	103.5
NHS Herefordshire CCG	HER	112	106	94.3
NHS Derby and Derbyshire CCG	DER	640	572	89.3
NHS Lincolnshire East CCG	LEA	136	120	88.5
NHS South West Lincolnshire CCG	SWL	80	61	76.4
NHS Corby CCG	COR	44	31	70.3
NHS Telford and Wrekin CCG	TWR	115	81	70.2
NHS Shropshire CCG	SHR	185	104	56.1
NHS Lincolnshire West CCG	LIW	136	76	55.7
NHS South Lincolnshire CCG	SLI	72	27	37.3
NHS Nene CCG	NEN	461	127	27.6

Paediatric Medicine: Respiratory (Inpatient)

Activity data - Inpatient admissions with (IR flag 23T) Respiratory (2018/19).

Indicative level of need – Prevalence of longstanding Respiratory system conditions among children. Source: Health Survey for England (2018)[42]. Age and sex specific prevalence figures are applied to CCG population estimates.

Limitations: The activity data is from patients who are 18 or under. The health survey only provides prevalence data up to 15 years. To account for this the prevalence of those aged between 10-15 was applied to the 16-18 population.

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[42] NHS Digital (2019). Health Survey for England 2018: Longstanding conditions. Table 9: Prevalence of longstanding conditions among children, by age and sex.

Paediatric Medicine: Respiratory (Inpatient)

Paediatric Medicine: Respiratory (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low

40 km

Activity and need data by CCG. Paediatric Medicine: Respiratory (Inpatient).
Activity ratio is per 100 need

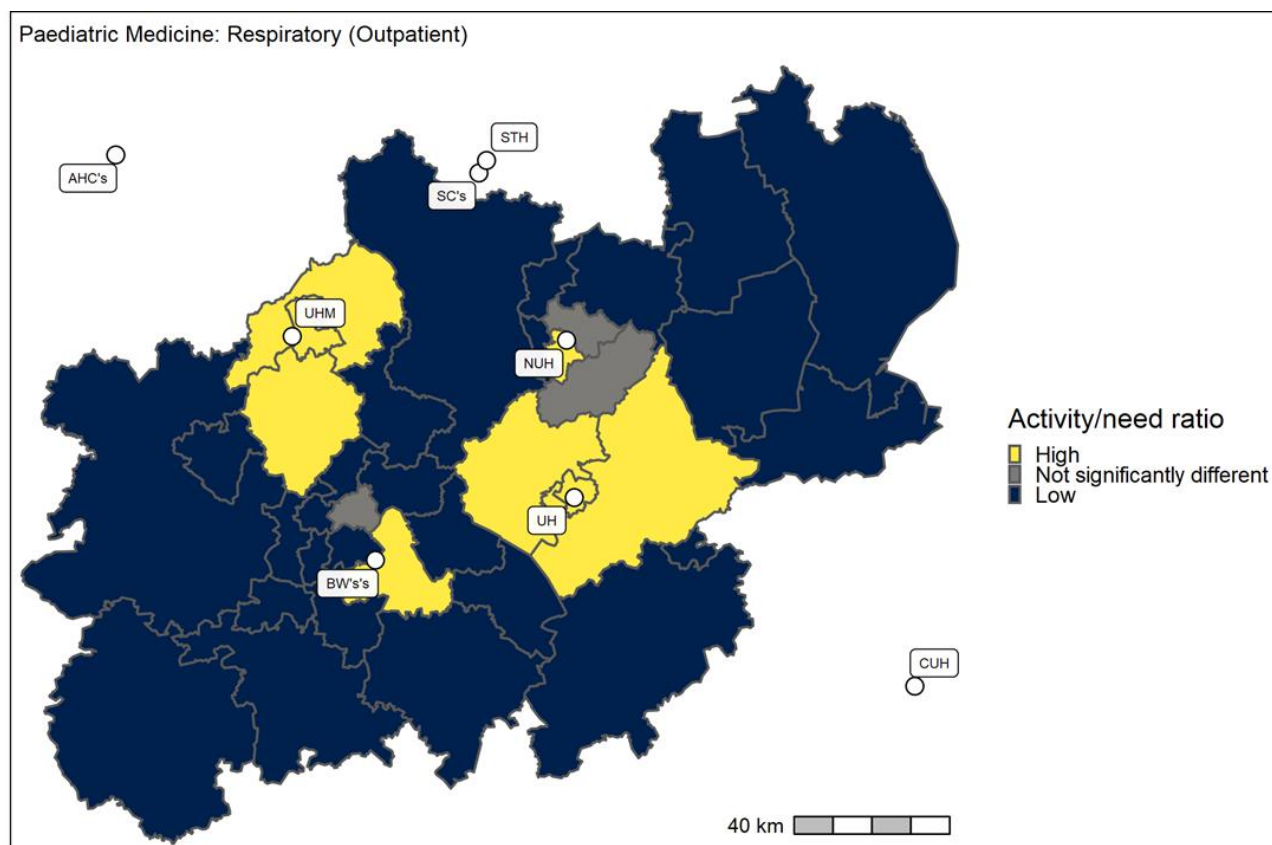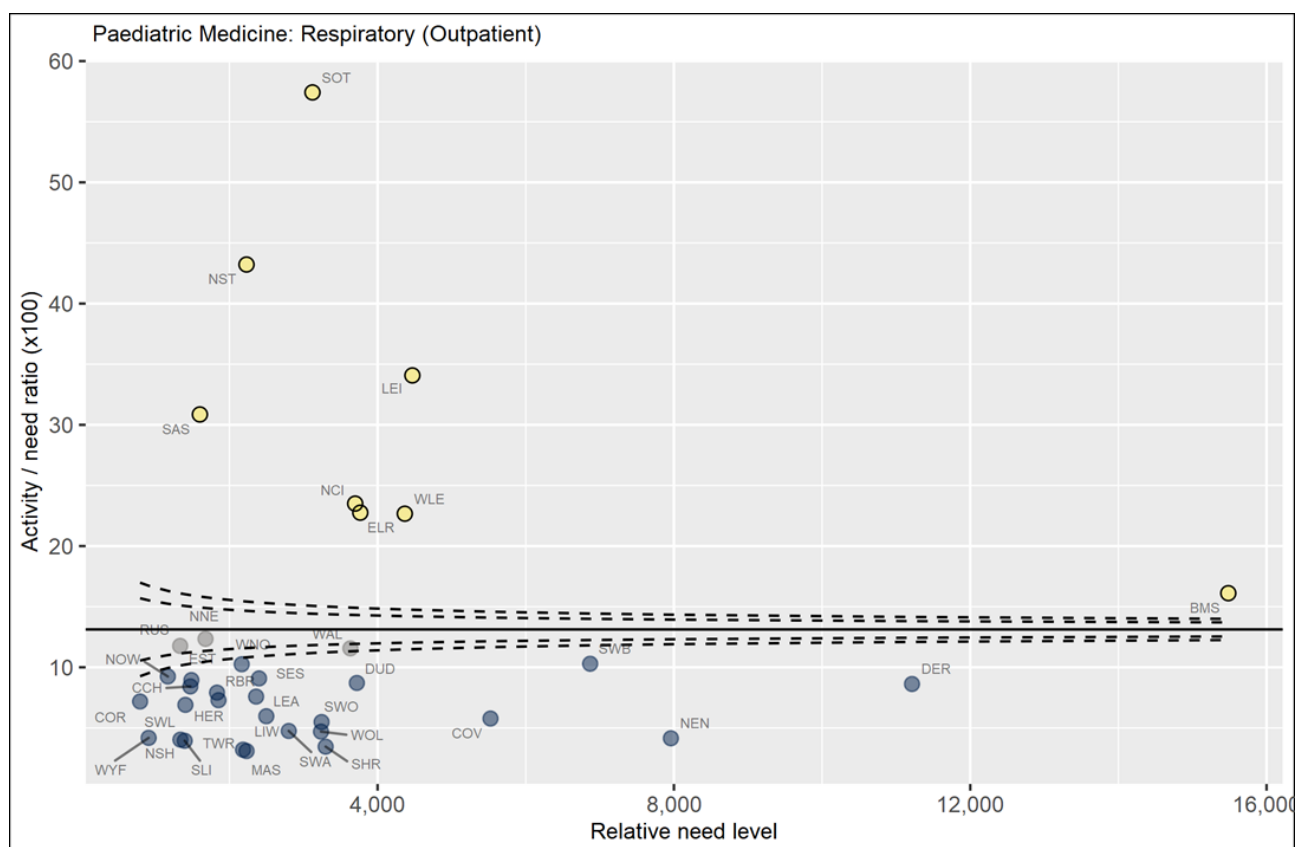| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Stoke on Trent CCG	SOT	3,121	318	10.2
NHS North Staffordshire CCG	NST	1,785	138	7.7
NHS Stafford and Surrounds CCG	SAS	1,601	110	6.9
NHS Herefordshire CCG	HER	1,650	98	5.9
NHS Cannock Chase CCG	CCH	801	36	4.5
NHS West Leicestershire CCG	WLE	3,771	160	4.2
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	1,582	59	3.7
NHS Leicester City CCG	LEI	4,469	153	3.4
NHS East Leicestershire and Rutland CCG	ELR	3,543	107	3.0
Not significantly different				
NHS East Staffordshire CCG	EST	367	16	4.4
NHS Redditch and Bromsgrove CCG	RBR	1,491	36	2.4
NHS Walsall CCG	WAL	3,431	81	2.4
NHS South Warwickshire CCG	SWA	525	11	2.1
NHS Rushcliffe CCG	RUS	446	9	2.0
NHS Dudley CCG	DUD	3,507	68	1.9
NHS Telford and Wrekin CCG	TWR	1,292	25	1.9
NHS Nottingham West CCG	NOW	671	10	1.5
NHS Warwickshire North CCG	WNO	2,040	29	1.4
NHS Wyre Forest CCG	WYF	323	4	1.2
NHS Corby CCG	COR	737	9	1.2
NHS Lincolnshire East CCG	LEA	1,926	23	1.2
NHS South West Lincolnshire CCG	SWL	1,091	13	1.2
NHS South Lincolnshire CCG	SLI	518	6	1.2
NHS Nottingham North and East CCG	NNE	800	8	1.0
NHS Newark and Sherwood CCG	NSH	538	5	0.9
NHS Mansfield and Ashfield CCG	MAS	1,132	10	0.9
Low				
NHS Birmingham and Solihull CCG	BMS	15,483	266	1.7
NHS Nene CCG	NEN	7,526	104	1.4
NHS Sandwell and West Birmingham CCG	SWB	6,869	87	1.3
NHS Shropshire CCG	SHR	2,810	31	1.1
NHS South Worcestershire CCG	SWO	2,314	25	1.1
NHS Wolverhampton CCG	WOL	2,681	24	0.9
NHS Derby and Derbyshire CCG	DER	11,214	96	0.9
NHS Lincolnshire West CCG	LIW	1,790	14	0.8
NHS Nottingham City CCG	NCI	3,473	26	0.7
NHS Coventry and Rugby CCG	COV	5,213	37	0.7

Paediatric Medicine: Respiratory (Outpatient)

Activity data – Outpatient attendances with (IR flag 23T) Respiratory (2018/19).

Indicative level of need – Prevalence of longstanding Respiratory system conditions among children. Source: Health Survey for England (2018)[43]. Age and sex specific prevalence figures are applied to CCG population estimates.

Limitations: The activity data is from patients who are 18 or under. The health survey only provides prevalence data up to 15 years. To account for this the prevalence of those aged between 10-15 was applied to the 16-18 population.

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[43] NHS Digital (2019). Health Survey for England 2018: Longstanding conditions. Table 9: Prevalence of longstanding conditions among children, by age and sex.

Paediatric Medicine: Respiratory (Outpatient)

Paediatric Medicine: Respiratory (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

Activity and need data by CCG. Paediatric Medicine: Respiratory (Outpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Stoke on Trent CCG	SOT	3,121	1,792	57.4
NHS North Staffordshire CCG	NST	2,230	964	43.2
NHS Leicester City CCG	LEI	4,469	1,523	34.1
NHS Stafford and Surrounds CCG	SAS	1,601	494	30.9
NHS Nottingham City CCG	NCI	3,697	869	23.5
NHS East Leicestershire and Rutland CCG	ELR	3,766	857	22.8
NHS West Leicestershire CCG	WLE	4,367	990	22.7
NHS Birmingham and Solihull CCG	BMS	15,483	2,495	16.1
Not significantly different				
NHS Nottingham North and East CCG	NNE	1,677	207	12.3
NHS Rushcliffe CCG	RUS	1,334	157	11.8
NHS Walsall CCG	WAL	3,633	420	11.6
Low				
NHS Sandwell and West Birmingham CCG	SWB	6,869	707	10.3
NHS Warwickshire North CCG	WNO	2,166	222	10.3
NHS Nottingham West CCG	NOW	1,168	108	9.2
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	2,400	218	9.1
NHS East Staffordshire CCG	EST	1,487	133	8.9
NHS Dudley CCG	DUD	3,720	324	8.7
NHS Derby and Derbyshire CCG	DER	11,214	967	8.6
NHS Cannock Chase CCG	CCH	1,472	124	8.4
NHS Redditch and Bromsgrove CCG	RBR	1,833	145	7.9
NHS Lincolnshire East CCG	LEA	2,360	179	7.6
NHS Herefordshire CCG	HER	1,852	135	7.3
NHS Corby CCG	COR	794	57	7.2
NHS South West Lincolnshire CCG	SWL	1,405	97	6.9
NHS Lincolnshire West CCG	LIW	2,498	149	6.0
NHS Coventry and Rugby CCG	COV	5,524	319	5.8
NHS South Worcestershire CCG	SWO	3,244	178	5.5
NHS South Warwickshire CCG	SWA	2,801	133	4.7
NHS Wolverhampton CCG	WOL	3,236	152	4.7
NHS Wyre Forest CCG	WYF	909	38	4.2
NHS Nene CCG	NEN	7,959	330	4.1
NHS Newark and Sherwood CCG	NSH	1,338	54	4.0
NHS South Lincolnshire CCG	SLI	1,396	55	3.9
NHS Shropshire CCG	SHR	3,299	114	3.5
NHS Telford and Wrekin CCG	TWR	2,183	70	3.2
NHS Mansfield and Ashfield CCG	MAS	2,231	69	3.1

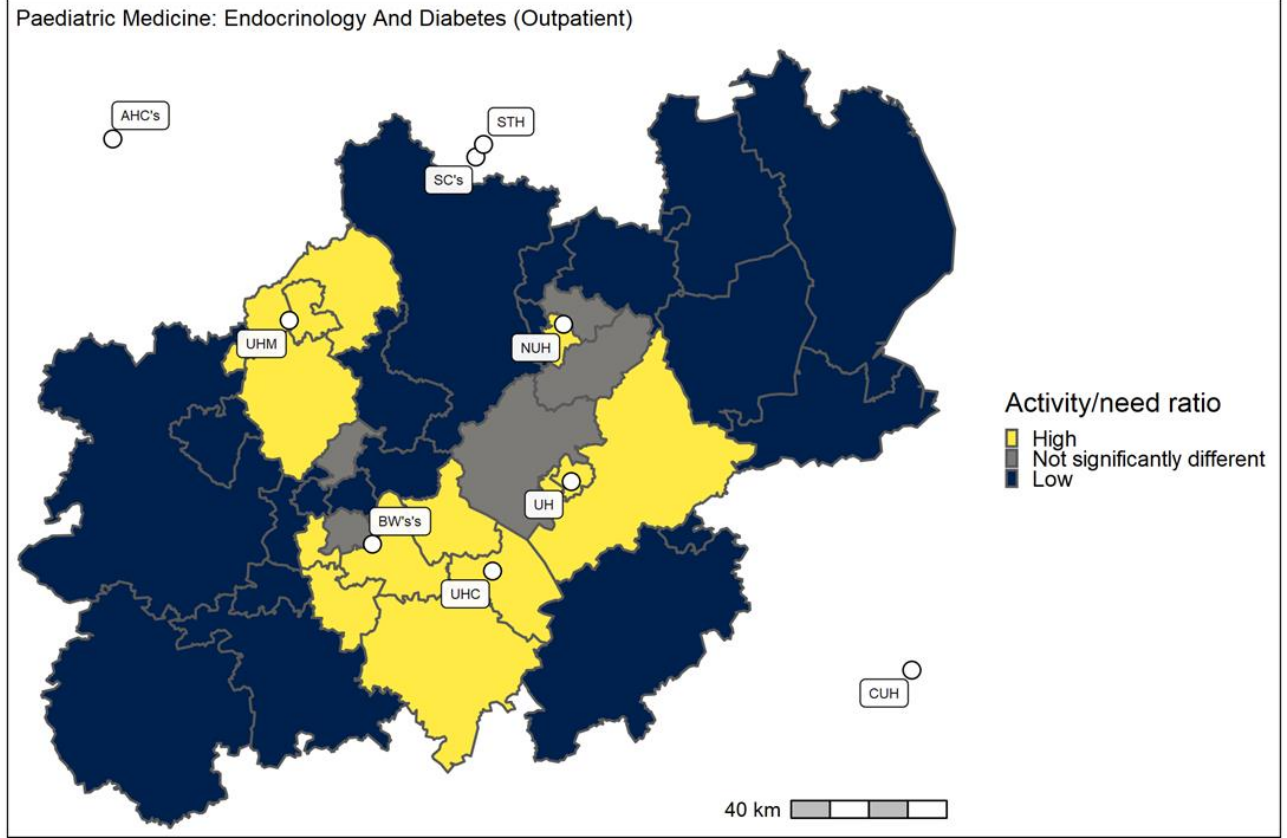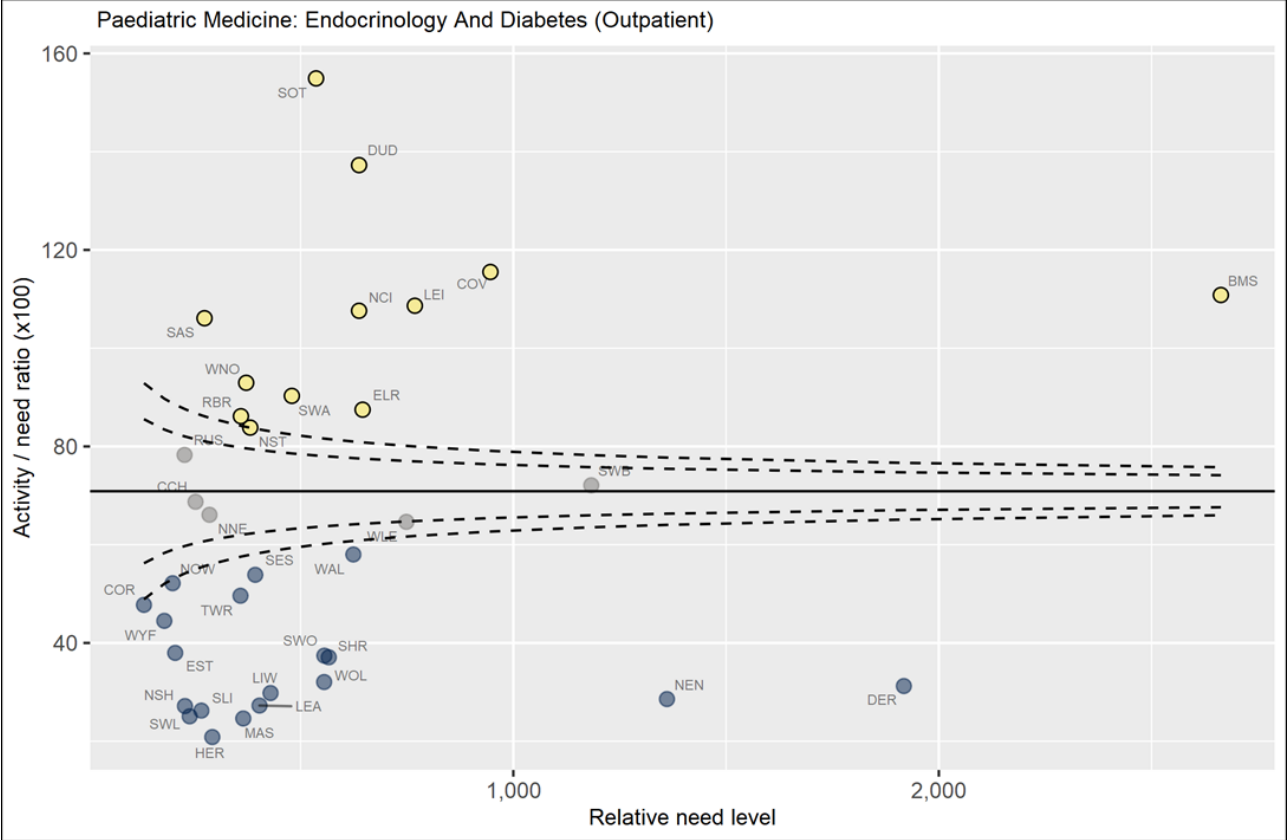**Paediatric Medicine: Endocrinology and Diabetes (Outpatient)**

Activity data – Outpatient attendances with (IR flag 23E) Endocrinology and Diabetes (2018/19).

Indicative level of need – Prevalence of longstanding Diabetes, other endocrine and metabolic conditions among children. Source: Health Survey for England (2018)[44]. Age and sex specific prevalence figures are applied to CCG population estimates.

Limitations: The activity data is from patients who are 18 or under. The health survey only provides prevalence data up to 15 years. To account for this the prevalence of those aged between 10-15 was applied to the 16-18 population.

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[44] NHS Digital (2019). Health Survey for England 2018: Longstanding conditions. Table 9: Prevalence of longstanding conditions among children, by age and sex.

Paediatric Medicine: Endocrinology and Diabetes (Outpatient)

Paediatric Medicine: Endocrinology And Diabetes (Outpatient)

Paediatric Medicine: Endocrinology And Diabetes (Outpatient)

Activity and need data by CCG. Paediatric Medicine: Endocrinology and Diabetes (Outpatient).
Activity ratio is per 100 need

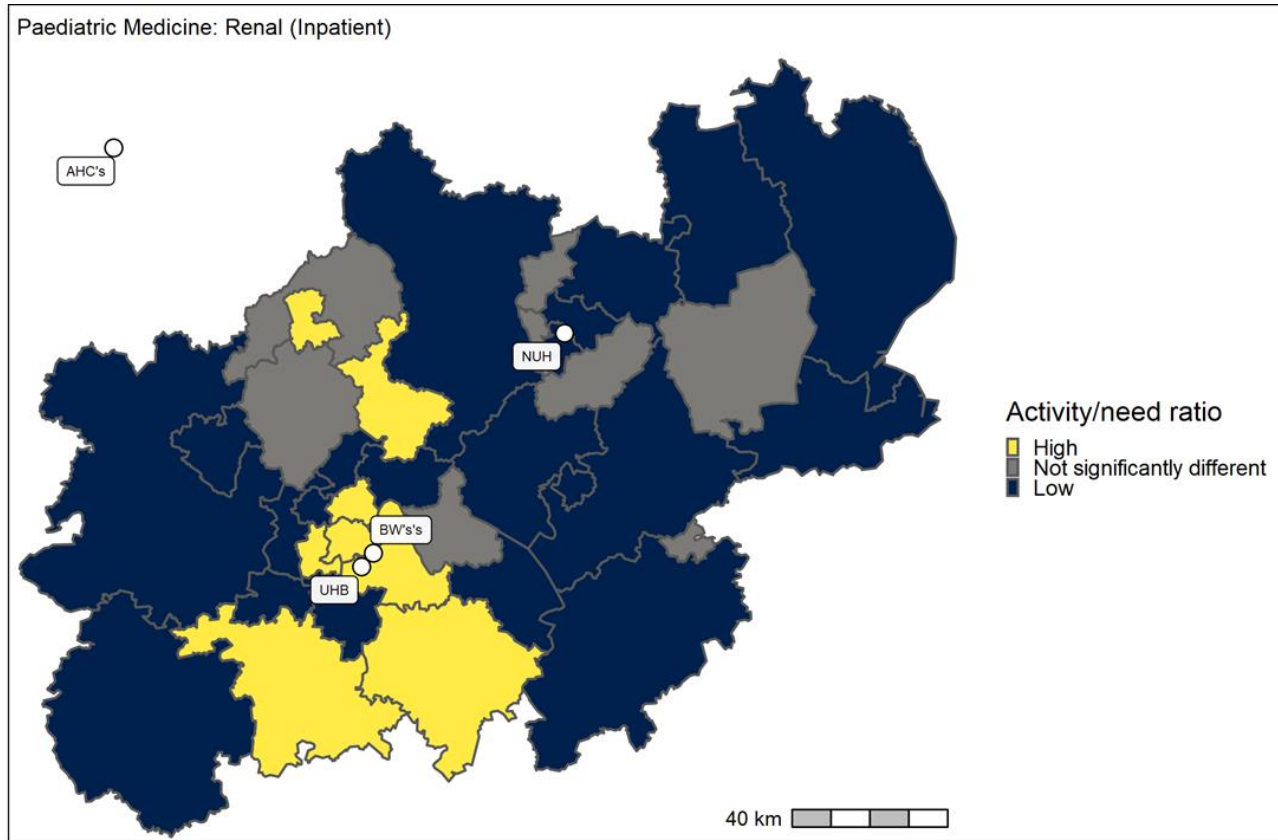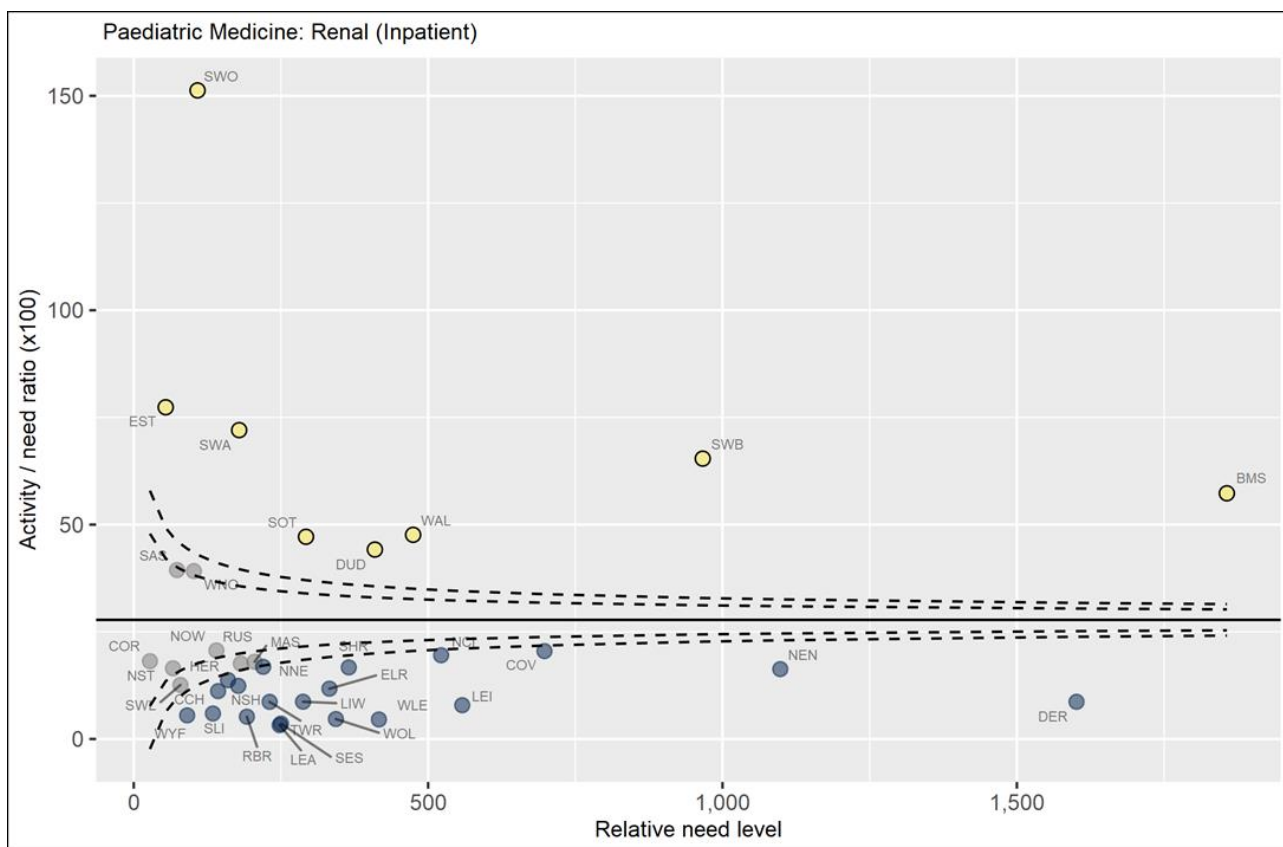| CCG name	CCG code	Need	Activity	Activity/need ratio
High				
NHS Stoke on Trent CCG	SOT	536	831	154.9
NHS Dudley CCG	DUD	637	875	137.3
NHS Coventry and Rugby CCG	COV	946	1,093	115.5
NHS Birmingham and Solihull CCG	BMS	2,663	2,951	110.8
NHS Leicester City CCG	LEI	769	835	108.6
NHS Nottingham City CCG	NCI	637	686	107.6
NHS Stafford and Surrounds CCG	SAS	274	291	106.1
NHS Warwickshire North CCG	WNO	372	346	93.0
NHS South Warwickshire CCG	SWA	480	433	90.3
NHS East Leicestershire and Rutland CCG	ELR	646	565	87.5
NHS Redditch and Bromsgrove CCG	RBR	360	310	86.2
NHS North Staffordshire CCG	NST	382	320	83.8
Not significantly different				
NHS Rushcliffe CCG	RUS	227	178	78.3
NHS Sandwell and West Birmingham CCG	SWB	1,183	853	72.1
NHS Cannock Chase CCG	CCH	253	174	68.7
NHS Nottingham North and East CCG	NNE	286	189	66.1
NHS West Leicestershire CCG	WLE	749	484	64.6
Low				
NHS Walsall CCG	WAL	624	362	58.0
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	394	212	53.9
NHS Nottingham West CCG	NOW	199	104	52.2
NHS Telford and Wrekin CCG	TWR	359	178	49.6
NHS Corby CCG	COR	132	63	47.7
NHS Wyre Forest CCG	WYF	180	80	44.5
NHS East Staffordshire CCG	EST	205	78	38.0
NHS South Worcestershire CCG	SWO	556	208	37.4
NHS Shropshire CCG	SHR	566	210	37.1
NHS Wolverhampton CCG	WOL	555	178	32.0
NHS Derby and Derbyshire CCG	DER	1,918	599	31.2
NHS Lincolnshire West CCG	LIW	429	128	29.8
NHS Nene CCG	NEN	1,361	389	28.6
NHS Lincolnshire East CCG	LEA	404	110	27.3
NHS Newark and Sherwood CCG	NSH	228	62	27.2
NHS South Lincolnshire CCG	SLI	267	70	26.2
NHS South West Lincolnshire CCG	SWL	239	60	25.1
NHS Mansfield and Ashfield CCG	MAS	365	90	24.6
NHS Herefordshire CCG	HER	293	61	20.8

Paediatric Medicine: Renal (Inpatient)

Activity data - Inpatient admissions with (IR flag 23S) Paediatric medicine Renal (2018/19).

Indicative level of need – Prevalence of longstanding Genito-urinary system conditions among children. Source: Health Survey for England (2018)[45]. Age and sex specific prevalence figures are applied to CCG population estimates.

Limitations: The activity data is from patients who are 18 or under. The health survey only provides prevalence data up to 15 years. To account for this the prevalence of those aged between 10-15 was applied to the 16-18 population.

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[45] NHS Digital (2019). Health Survey for England 2018: Longstanding conditions. Table 9: Prevalence of longstanding conditions among children, by age and sex.

Paediatric Medicine: Renal (Inpatient)

Paediatric Medicine: Renal (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low

Activity and need data by CCG. Paediatric Medicine: Renal (Inpatient).
Activity ratio is per 100 need

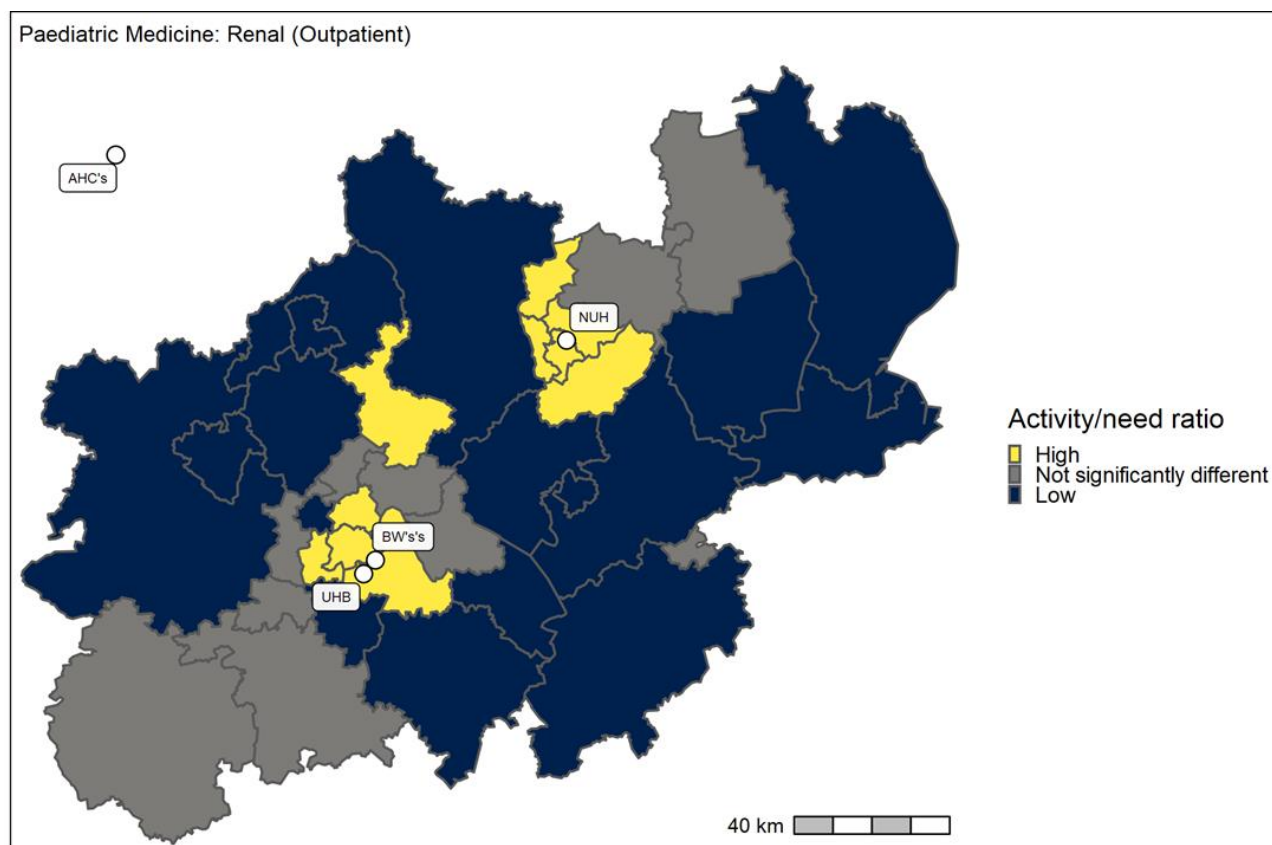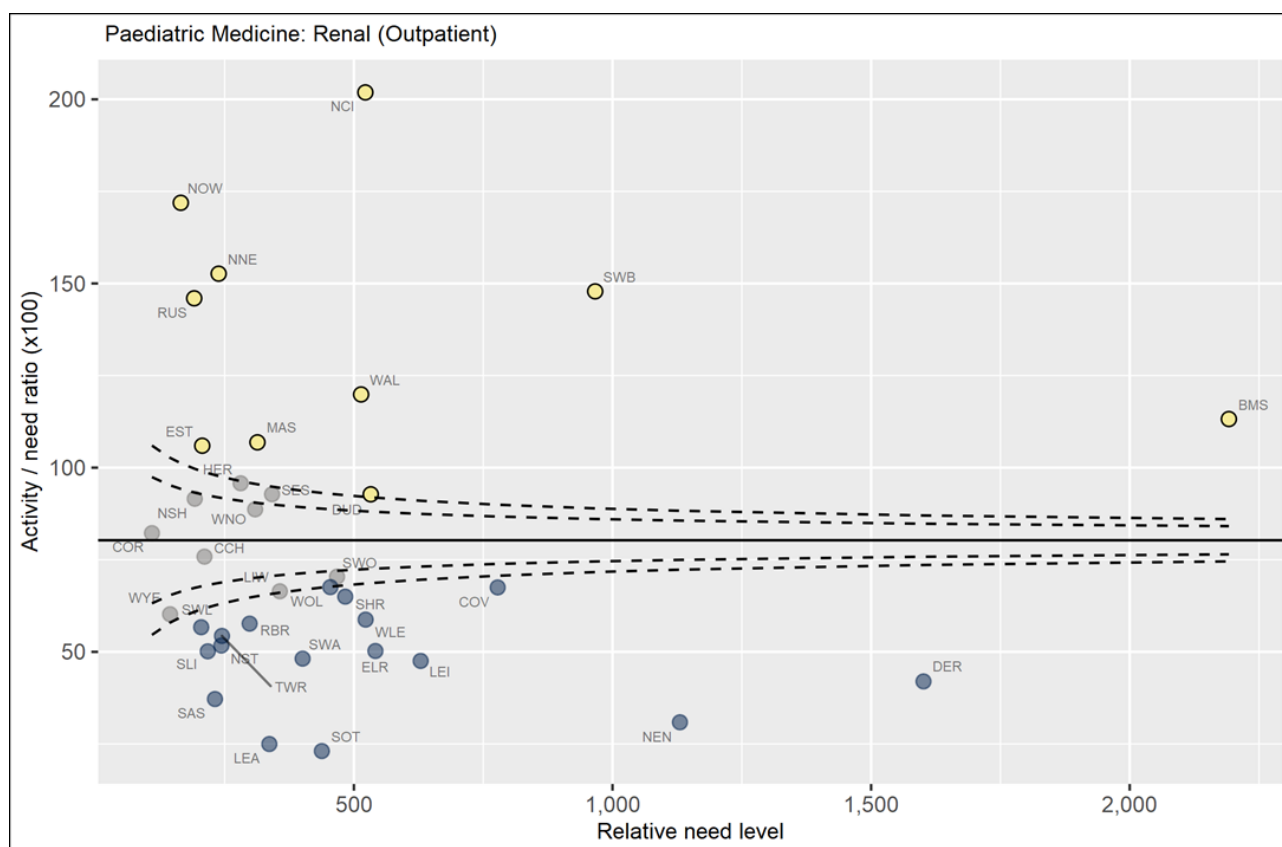| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS South Worcestershire CCG	SWO	108	164	151.3
NHS East Staffordshire CCG	EST	54	42	77.4
NHS South Warwickshire CCG	SWA	179	129	72.0
NHS Sandwell and West Birmingham CCG	SWB	966	632	65.4
NHS Birmingham and Solihull CCG	BMS	1,857	1,064	57.3
NHS Walsall CCG	WAL	475	226	47.6
NHS Stoke on Trent CCG	SOT	293	138	47.2
NHS Dudley CCG	DUD	410	181	44.2
Not significantly different				
NHS Stafford and Surrounds CCG	SAS	74	29	39.4
NHS Warwickshire North CCG	WNO	102	40	39.2
NHS Nottingham West CCG	NOW	140	29	20.7
NHS Corby CCG	COR	28	5	18.2
NHS Mansfield and Ashfield CCG	MAS	205	37	18.0
NHS Rushcliffe CCG	RUS	182	32	17.6
NHS North Staffordshire CCG	NST	67	11	16.5
NHS South West Lincolnshire CCG	SWL	79	10	12.6
Low				
NHS Coventry and Rugby CCG	COV	698	143	20.5
NHS Nottingham City CCG	NCI	522	102	19.5
NHS Nottingham North and East CCG	NNE	220	37	16.8
NHS Shropshire CCG	SHR	365	61	16.7
NHS Nene CCG	NEN	1,098	179	16.3
NHS Herefordshire CCG	HER	160	22	13.7
NHS Newark and Sherwood CCG	NSH	178	22	12.4
NHS East Leicestershire and Rutland CCG	ELR	332	39	11.7
NHS Cannock Chase CCG	CCH	143	16	11.2
NHS Lincolnshire West CCG	LIW	288	25	8.7
NHS Derby and Derbyshire CCG	DER	1,601	139	8.7
NHS Telford and Wrekin CCG	TWR	231	20	8.7
NHS Leicester City CCG	LEI	558	44	7.9
NHS South Lincolnshire CCG	SLI	135	8	5.9
NHS Wyre Forest CCG	WYF	91	5	5.5
NHS Redditch and Bromsgrove CCG	RBR	192	10	5.2
NHS Wolverhampton CCG	WOL	343	16	4.7
NHS West Leicestershire CCG	WLE	416	19	4.6
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	250	9	3.6
NHS Lincolnshire East CCG	LEA	248	8	3.2

Paediatric Medicine: Renal (Outpatient)

Activity data - Outpatient attendances with (IR flag 23S) Paediatric medicine Renal (2018/19).

Indicative level of need – Prevalence of longstanding Genito-urinary system conditions among children. Source: Health Survey for England (2018)[46]. Age and sex specific prevalence figures are applied to CCG population estimates.

Limitations: The activity data is from patients who are 18 or under. The health survey only provides prevalence data up to 15 years. To account for this the prevalence of those aged between 10-15 was applied to the 16-18 population.

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[46] NHS Digital (2019). Health Survey for England 2018: Longstanding conditions. Table 9: Prevalence of longstanding conditions among children, by age and sex.

Paediatric Medicine: Renal (Outpatient)

Paediatric Medicine: Renal (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

40 km

Activity and need data by CCG. Paediatric Medicine: Renal (Outpatient).

Activity ratio is per 100 need

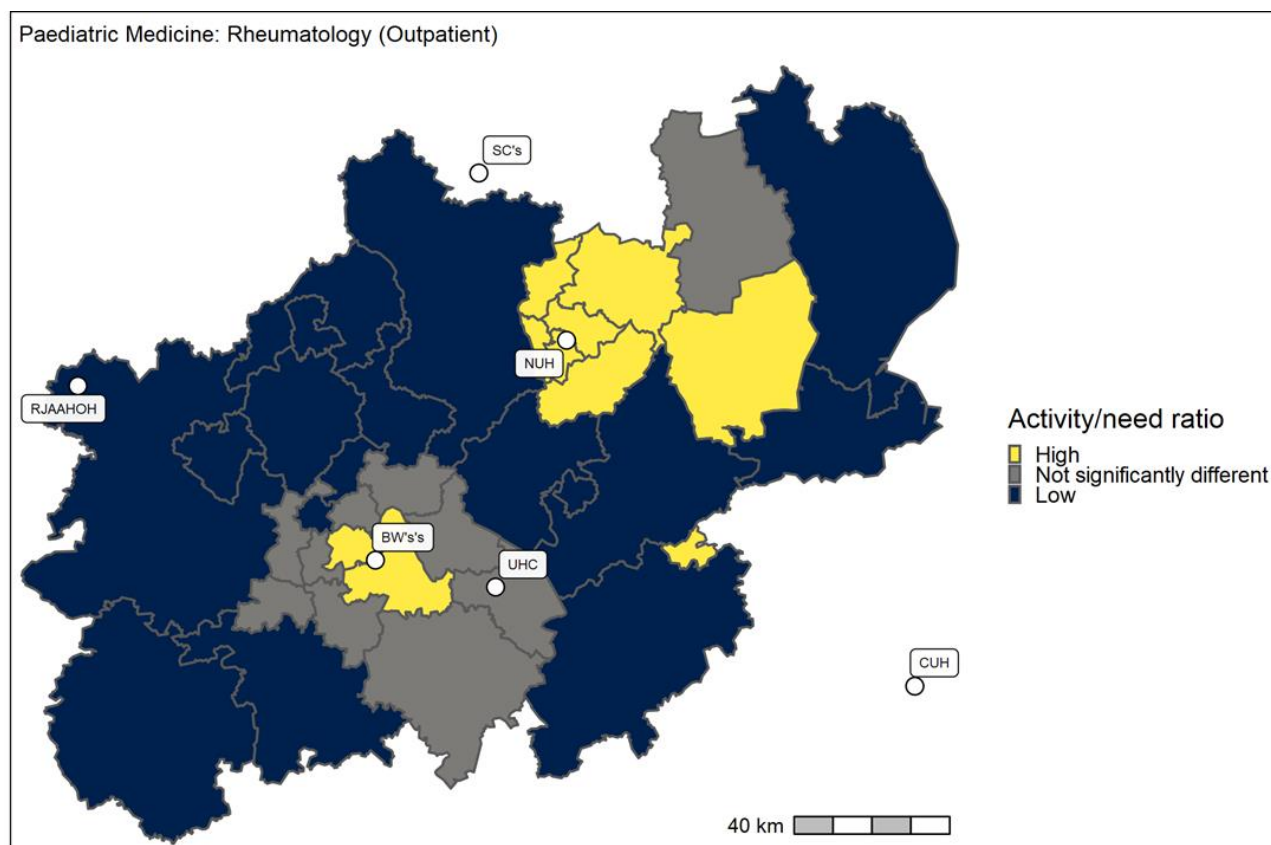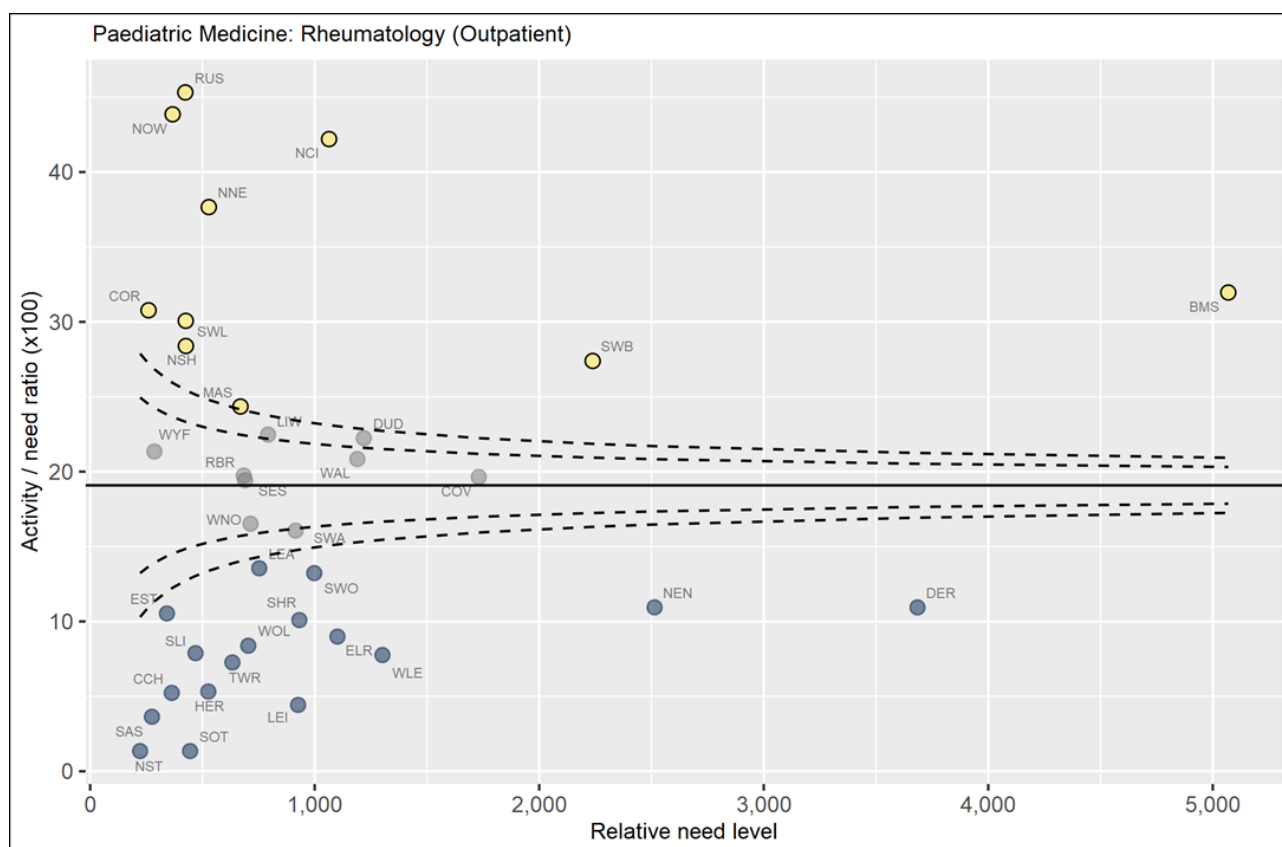| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Nottingham City CCG	NCI	522	1,054	201.9
NHS Nottingham West CCG	NOW	165	284	171.9
NHS Nottingham North and East CCG	NNE	238	364	152.7
NHS Sandwell and West Birmingham CCG	SWB	966	1,429	147.9
NHS Rushcliffe CCG	RUS	191	279	146.0
NHS Walsall CCG	WAL	514	616	119.9
NHS Birmingham and Solihull CCG	BMS	2,192	2,481	113.2
NHS Mansfield and Ashfield CCG	MAS	313	335	106.9
NHS East Staffordshire CCG	EST	207	219	106.0
NHS Dudley CCG	DUD	533	494	92.8
Not significantly different				
NHS Herefordshire CCG	HER	281	269	95.8
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	342	317	92.8
NHS Newark and Sherwood CCG	NSH	192	176	91.6
NHS Warwickshire North CCG	WNO	309	274	88.7
NHS Corby CCG	COR	109	90	82.2
NHS Cannock Chase CCG	CCH	211	160	75.8
NHS South Worcestershire CCG	SWO	467	329	70.4
NHS Lincolnshire West CCG	LIW	357	237	66.4
NHS Wyre Forest CCG	WYF	144	87	60.2
Low				
NHS Wolverhampton CCG	WOL	454	307	67.6
NHS Coventry and Rugby CCG	COV	778	525	67.5
NHS Shropshire CCG	SHR	483	314	65.0
NHS West Leicestershire CCG	WLE	523	307	58.7
NHS Redditch and Bromsgrove CCG	RBR	298	172	57.7
NHS South West Lincolnshire CCG	SWL	205	116	56.7
NHS Telford and Wrekin CCG	TWR	245	133	54.3
NHS North Staffordshire CCG	NST	244	126	51.7
NHS East Leicestershire and Rutland CCG	ELR	542	272	50.2
NHS South Lincolnshire CCG	SLI	217	109	50.1
NHS South Warwickshire CCG	SWA	401	193	48.2
NHS Leicester City CCG	LEI	629	299	47.5
NHS Derby and Derbyshire CCG	DER	1,601	672	42.0
NHS Stafford and Surrounds CCG	SAS	231	86	37.2
NHS Nene CCG	NEN	1,130	349	30.9
NHS Lincolnshire East CCG	LEA	336	84	25.0
NHS Stoke on Trent CCG	SOT	438	101	23.1

Paediatric Medicine: Rheumatology (Outpatient)

Activity data – Outpatient attendances with (IR flag 23W) Paediatric Medicine: Rheumatology (2018/19).

Indicative level of need – Prevalence of longstanding Musculoskeletal system conditions among children. Source: Health Survey for England (2018)[47]. Age and sex specific prevalence figures are applied to CCG population estimates.

Limitations: The activity data is from patients who are 18 or under. The health survey only provides prevalence data up to 15 years. To account for this the prevalence of those aged between 10-15 was applied to the 16-18 population.

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[47] NHS Digital (2019). Health Survey for England 2018: Longstanding conditions. Table 9: Prevalence of longstanding conditions among children, by age and sex.

Paediatric Medicine: Rheumatology (Outpatient)

Paediatric Medicine: Rheumatology (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

Activity and need data by CCG. Paediatric Medicine: Rheumatology (Outpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Rushcliffe CCG	RUS	424	192	45.3
NHS Nottingham West CCG	NOW	367	161	43.9
NHS Nottingham City CCG	NCI	1,064	449	42.2
NHS Nottingham North and East CCG	NNE	528	199	37.7
NHS Birmingham and Solihull CCG	BMS	5,069	1,620	32.0
NHS Corby CCG	COR	260	80	30.8
NHS South West Lincolnshire CCG	SWL	426	128	30.1
NHS Newark and Sherwood CCG	NSH	426	121	28.4
NHS Sandwell and West Birmingham CCG	SWB	2,238	613	27.4
NHS Mansfield and Ashfield CCG	MAS	669	163	24.3
Not significantly different				
NHS Lincolnshire West CCG	LIW	792	178	22.5
NHS Dudley CCG	DUD	1,219	271	22.2
NHS Wyre Forest CCG	WYF	286	61	21.3
NHS Walsall CCG	WAL	1,190	248	20.8
NHS Redditch and Bromsgrove CCG	RBR	684	135	19.7
NHS Coventry and Rugby CCG	COV	1,731	340	19.6
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	690	134	19.4
NHS Warwickshire North CCG	WNO	714	118	16.5
NHS South Warwickshire CCG	SWA	915	147	16.1
Low				
NHS Lincolnshire East CCG	LEA	753	102	13.5
NHS South Worcestershire CCG	SWO	998	132	13.2
NHS Nene CCG	NEN	2,514	275	10.9
NHS Derby and Derbyshire CCG	DER	3,685	403	10.9
NHS East Staffordshire CCG	EST	342	36	10.5
NHS Shropshire CCG	SHR	932	94	10.1
NHS East Leicestershire and Rutland CCG	ELR	1,101	99	9.0
NHS Wolverhampton CCG	WOL	704	59	8.4
NHS South Lincolnshire CCG	SLI	469	37	7.9
NHS West Leicestershire CCG	WLE	1,302	101	7.8
NHS Telford and Wrekin CCG	TWR	633	46	7.3
NHS Herefordshire CCG	HER	526	28	5.3
NHS Cannock Chase CCG	CCH	363	19	5.2
NHS Leicester City CCG	LEI	926	41	4.4
NHS Stafford and Surrounds CCG	SAS	275	10	3.6
NHS North Staffordshire CCG	NST	222	3	1.3
NHS Stoke on Trent CCG	SOT	445	6	1.3

4.4.4 Paediatric Neurosciences

There was one service line within this subcategory with at least 1500 cases necessary for inclusion.
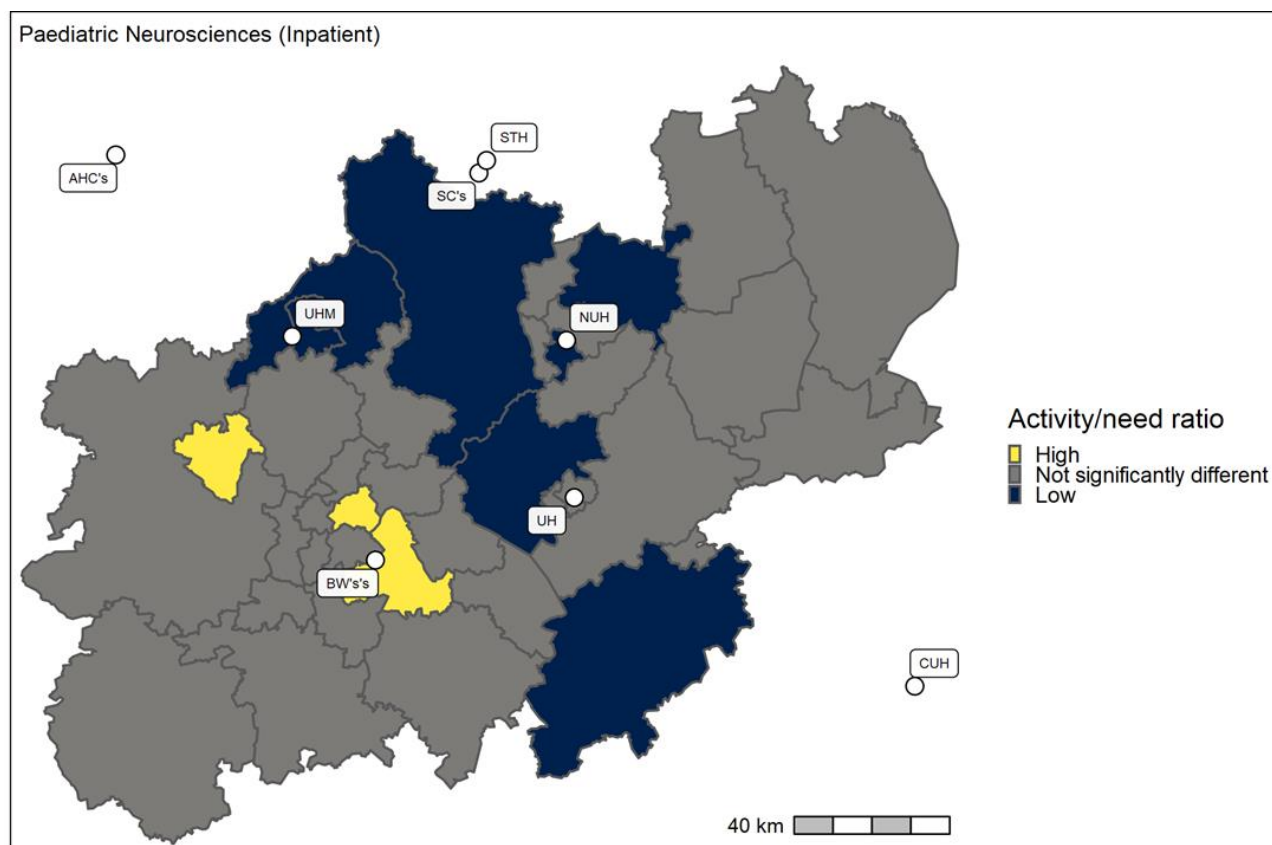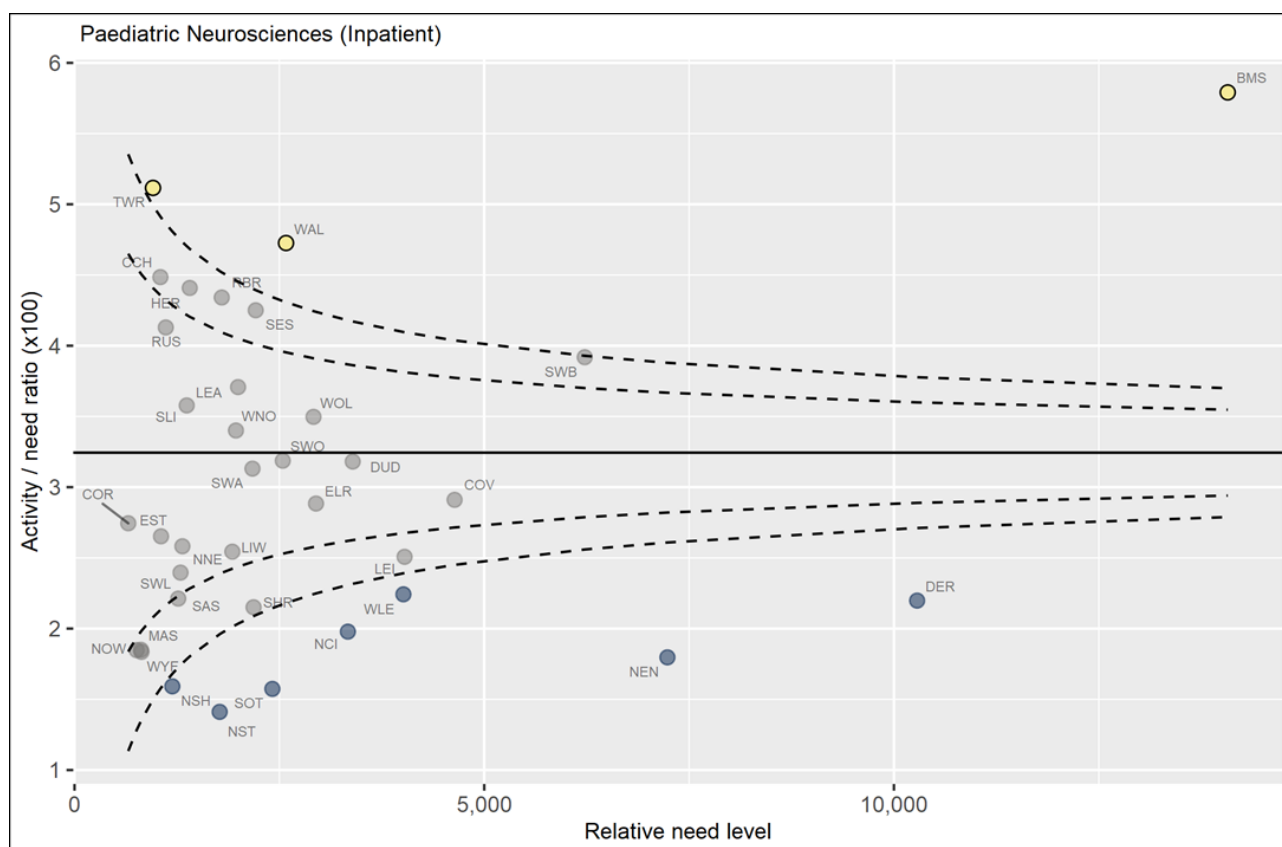
Paediatric Neurosciences (Inpatient)

Activity data - Inpatient admissions with (IR flag 23M) Paediatric Neurosciences (2018/19).

Indicative level of need - Prevalence of longstanding mental, behavioural and neurodevelopmental conditions among children (Health Survey for England, 2018)[48]. Age and sex specific prevalence figures are applied to CCG population estimates.

Limitations: The activity data is from patients who are 18 or under. The health survey only provides prevalence data up to 15 years. To account for this the prevalence of those aged between 10-15 was applied to the 16-18 population.

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[48] NHS Digital (2019). Health Survey for England 2018: Longstanding conditions. Table 9: Prevalence of longstanding conditions among children, by age and sex.

Paediatric Neurosciences (Inpatient)

Paediatric Neurosciences (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low

40 km

Activity and need data by CCG. Paediatric Neurosciences (Inpatient).
Activity ratio is per 100 need

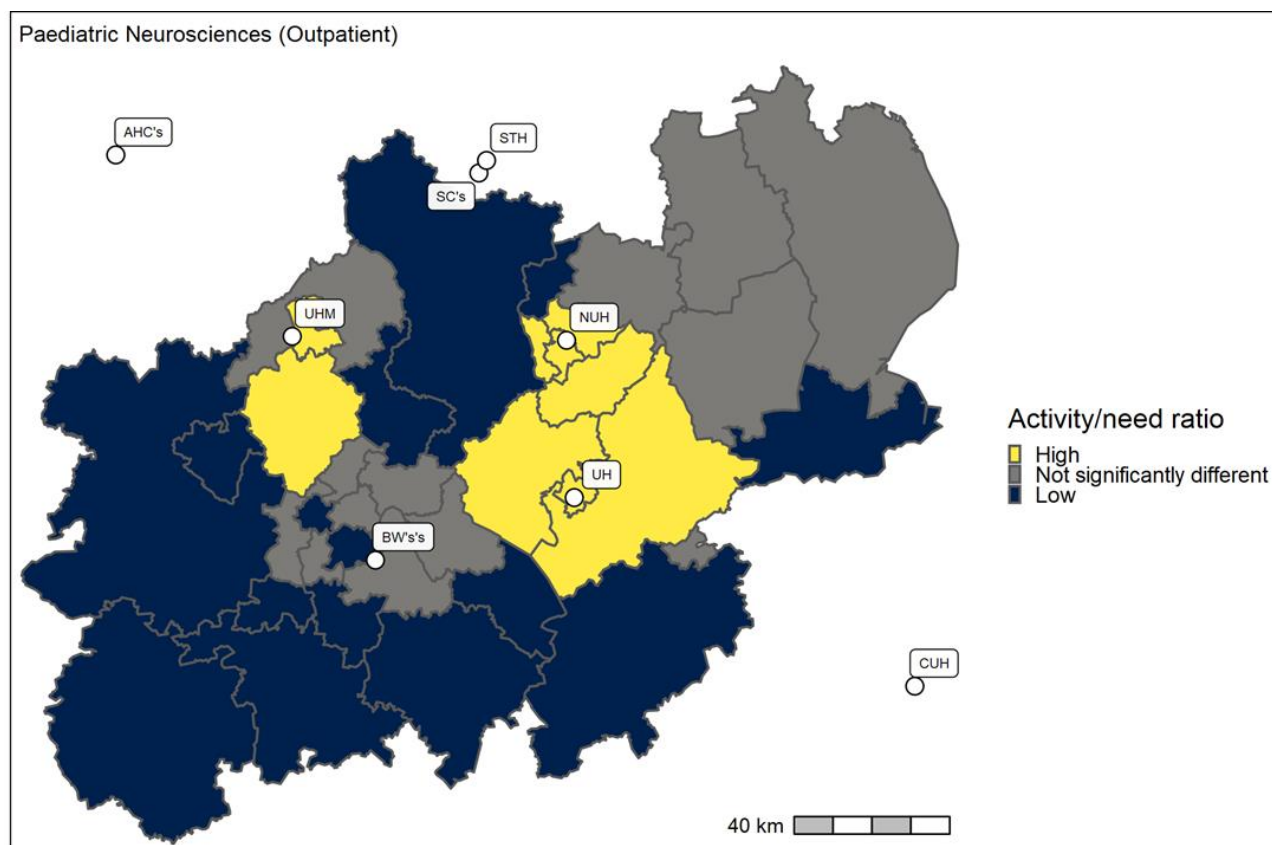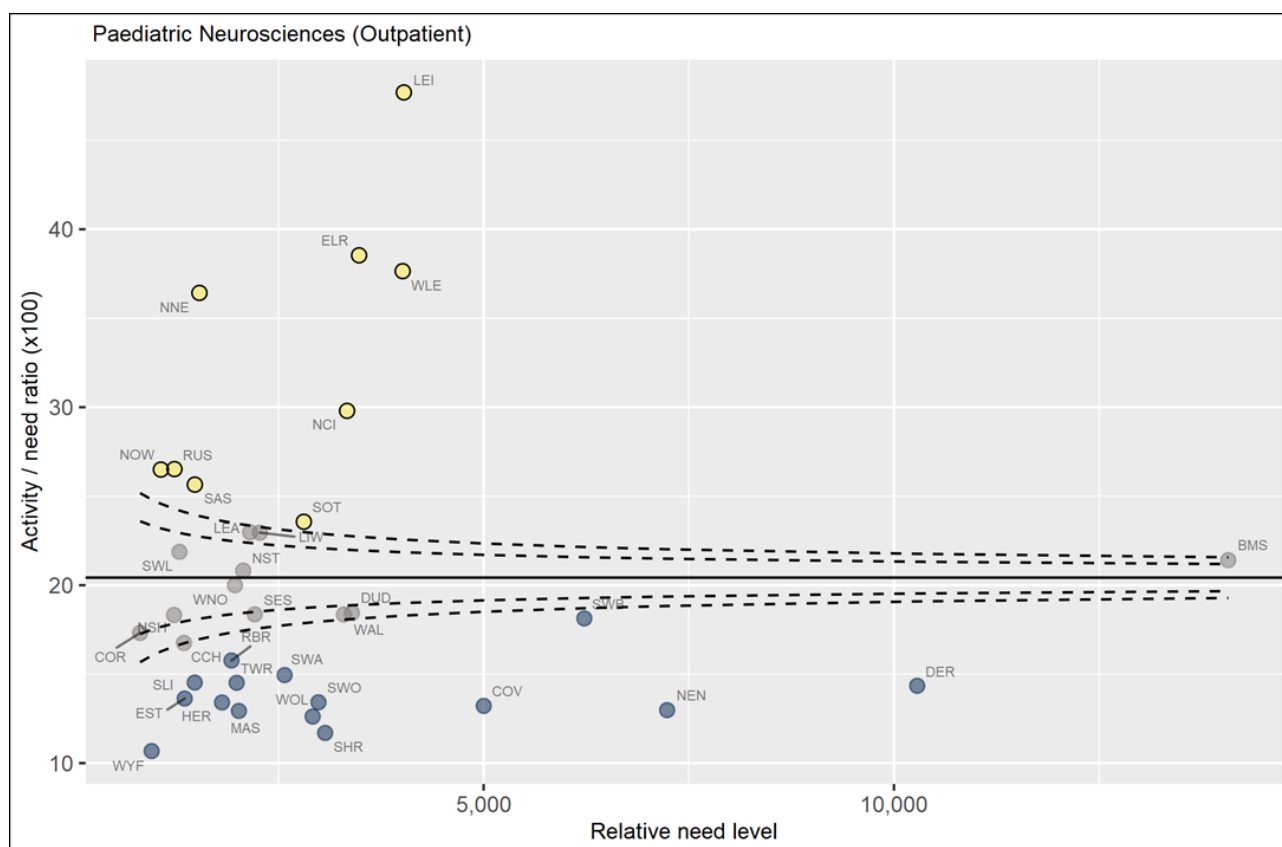| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Birmingham and Solihull CCG	BMS	14,073	815	5.8
NHS Telford and Wrekin CCG	TWR	958	49	5.1
NHS Walsall CCG	WAL	2,581	122	4.7
Not significantly different				
NHS Cannock Chase CCG	CCH	1,048	47	4.5
NHS Herefordshire CCG	HER	1,406	62	4.4
NHS Redditch and Bromsgrove CCG	RBR	1,797	78	4.3
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	2,211	94	4.3
NHS Rushcliffe CCG	RUS	1,114	46	4.1
NHS Sandwell and West Birmingham CCG	SWB	6,227	244	3.9
NHS Lincolnshire East CCG	LEA	1,996	74	3.7
NHS South Lincolnshire CCG	SLI	1,369	49	3.6
NHS Wolverhampton CCG	WOL	2,917	102	3.5
NHS Warwickshire North CCG	WNO	1,970	67	3.4
NHS South Worcestershire CCG	SWO	2,542	81	3.2
NHS Dudley CCG	DUD	3,395	108	3.2
NHS South Warwickshire CCG	SWA	2,172	68	3.1
NHS Coventry and Rugby CCG	COV	4,639	135	2.9
NHS East Leicestershire and Rutland CCG	ELR	2,947	85	2.9
NHS Corby CCG	COR	656	18	2.7
NHS East Staffordshire CCG	EST	1,056	28	2.7
NHS Nottingham North and East CCG	NNE	1,317	34	2.6
NHS Lincolnshire West CCG	LIW	1,926	49	2.5
NHS Leicester City CCG	LEI	4,028	101	2.5
NHS South West Lincolnshire CCG	SWL	1,294	31	2.4
NHS Stafford and Surrounds CCG	SAS	1,266	28	2.2
NHS Shropshire CCG	SHR	2,185	47	2.2
NHS Mansfield and Ashfield CCG	MAS	811	15	1.9
NHS Nottingham West CCG	NOW	758	14	1.8
NHS Wyre Forest CCG	WYF	817	15	1.8
Low				
NHS West Leicestershire CCG	WLE	4,014	90	2.2
NHS Derby and Derbyshire CCG	DER	10,283	226	2.2
NHS Nottingham City CCG	NCI	3,336	66	2.0
NHS Nene CCG	NEN	7,235	130	1.8
NHS Newark and Sherwood CCG	NSH	1,194	19	1.6
NHS Stoke on Trent CCG	SOT	2,415	38	1.6
NHS North Staffordshire CCG	NST	1,772	25	1.4

Paediatric Neurosciences (Outpatient)

Activity data – Outpatient attendances with (IR flag 23M) Paediatric Neurosciences (2018/19).

Indicative level of need - Prevalence of longstanding mental, behavioural and neurodevelopmental conditions among children (Health Survey for England, 2018)[49]. Age and sex specific prevalence figures are applied to CCG population estimates.

Limitations: The activity data is from patients who are 18 or under. The health survey only provides prevalence data up to 15 years. To account for this the prevalence of those aged between 10-15 was applied to the 16-18 population.

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[49] NHS Digital (2019). Health Survey for England 2018: Longstanding conditions. Table 9: Prevalence of longstanding conditions among children, by age and sex.

Paediatric Neurosciences (Outpatient)

Paediatric Neurosciences (Outpatient)

Activity and need data by CCG. Paediatric Neurosciences (Outpatient).

Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/need ratio
High				
NHS Leicester City CCG	LEI	4,028	1,921	47.7
NHS East Leicestershire and Rutland CCG	ELR	3,482	1,342	38.5
NHS West Leicestershire CCG	WLE	4,014	1,511	37.6
NHS Nottingham North and East CCG	NNE	1,537	560	36.4
NHS Nottingham City CCG	NCI	3,336	994	29.8
NHS Rushcliffe CCG	RUS	1,233	327	26.5
NHS Nottingham West CCG	NOW	1,068	283	26.5
NHS Stafford and Surrounds CCG	SAS	1,481	380	25.7
NHS Stoke on Trent CCG	SOT	2,809	662	23.6
Not significantly different				
NHS Lincolnshire East CCG	LEA	2,155	495	23.0
NHS Lincolnshire West CCG	LIW	2,274	522	23.0
NHS South West Lincolnshire CCG	SWL	1,294	283	21.9
NHS Birmingham and Solihull CCG	BMS	14,073	3,013	21.4
NHS North Staffordshire CCG	NST	2,070	431	20.8
NHS Warwickshire North CCG	WNO	1,970	394	20.0
NHS Dudley CCG	DUD	3,395	626	18.4
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	2,211	406	18.4
NHS Walsall CCG	WAL	3,297	605	18.3
NHS Newark and Sherwood CCG	NSH	1,228	225	18.3
NHS Corby CCG	COR	814	141	17.3
NHS Cannock Chase CCG	CCH	1,349	226	16.8
Low				
NHS Sandwell and West Birmingham CCG	SWB	6,227	1,129	18.1
NHS Redditch and Bromsgrove CCG	RBR	1,928	304	15.8
NHS South Warwickshire CCG	SWA	2,575	385	14.9
NHS South Lincolnshire CCG	SLI	1,480	215	14.5
NHS Telford and Wrekin CCG	TWR	1,991	289	14.5
NHS Derby and Derbyshire CCG	DER	10,283	1,475	14.3
NHS East Staffordshire CCG	EST	1,357	185	13.6
NHS South Worcestershire CCG	SWO	2,988	401	13.4
NHS Herefordshire CCG	HER	1,812	243	13.4
NHS Coventry and Rugby CCG	COV	5,001	661	13.2
NHS Nene CCG	NEN	7,235	939	13.0
NHS Mansfield and Ashfield CCG	MAS	2,018	261	12.9
NHS Wolverhampton CCG	WOL	2,917	368	12.6
NHS Shropshire CCG	SHR	3,069	359	11.7
NHS Wyre Forest CCG	WYF	955	102	10.7

4.4.5 Congenital Heart Services

There were ten services line within the congenital heart services category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. These were Paediatric Cardiac (Outpatient) and Congenital Heart Disease (Adults)
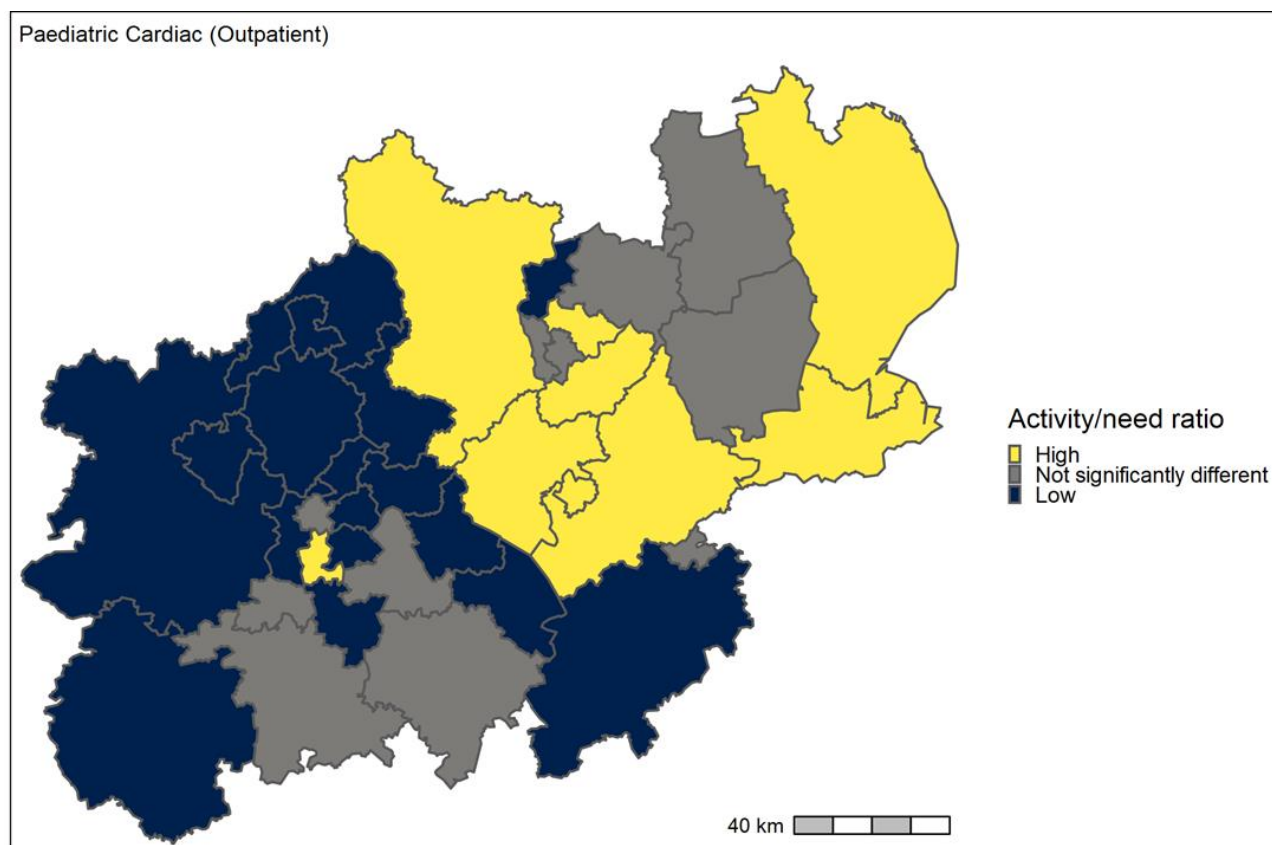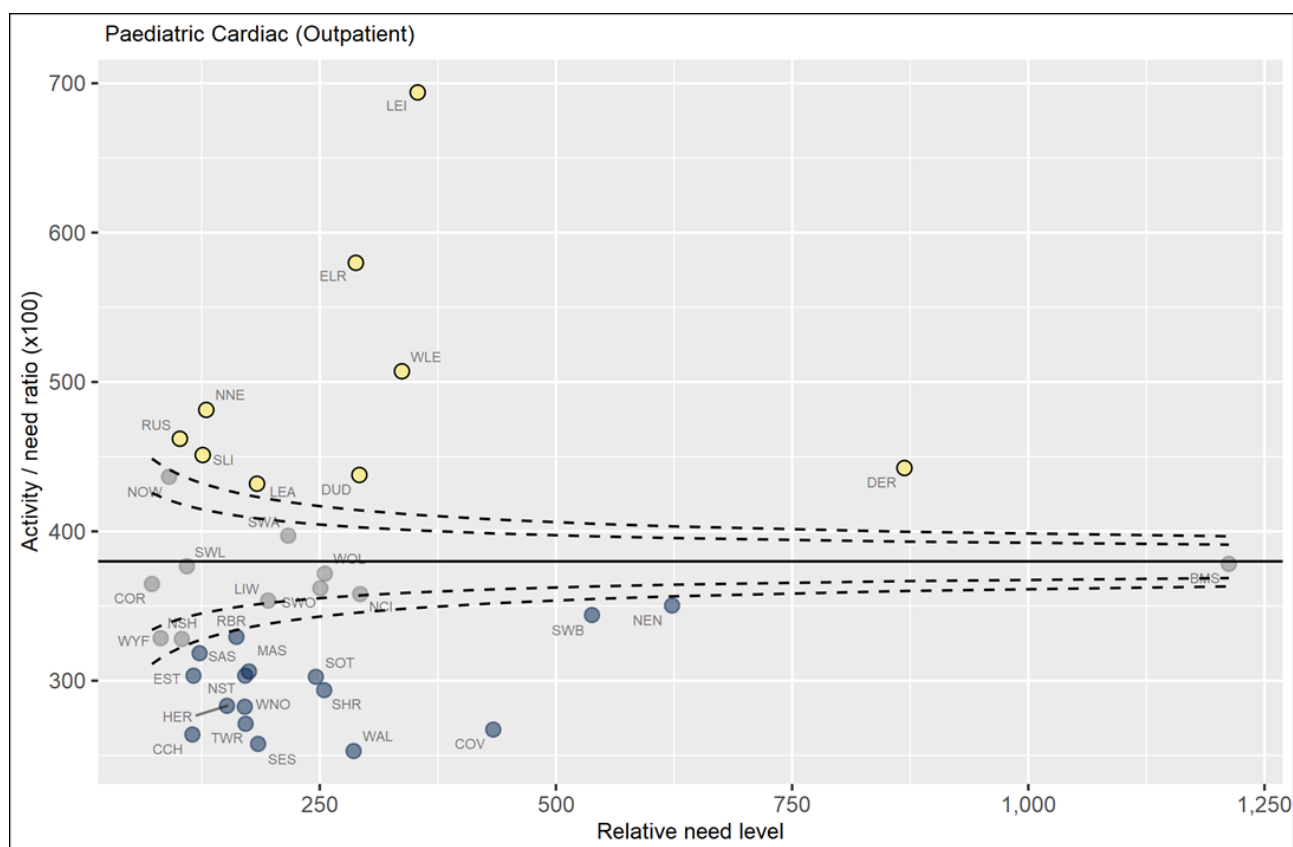
Paediatric Cardiac (Outpatient)

Activity data - Outpatient attendances with (IR flag 23B) Paediatric Cardiac (2018/19).

Indicative level of need – Prevalence of longstanding heart and circulatory system conditions among children (Health Survey for England, 2018)[50].Age and sex specific prevalence figures are applied to CCG population estimates.

Limitations: The activity data is from patients who are 18 or under. The health survey only provides prevalence data up to 15 years. To account for this the prevalence of those aged between 10-15 was applied to the 16-18 population.

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[50] NHS Digital (2019). Health Survey for England 2018: Longstanding conditions. Table 9: Prevalence of longstanding conditions among children, by age and sex.

Paediatric Cardiac (Outpatient)

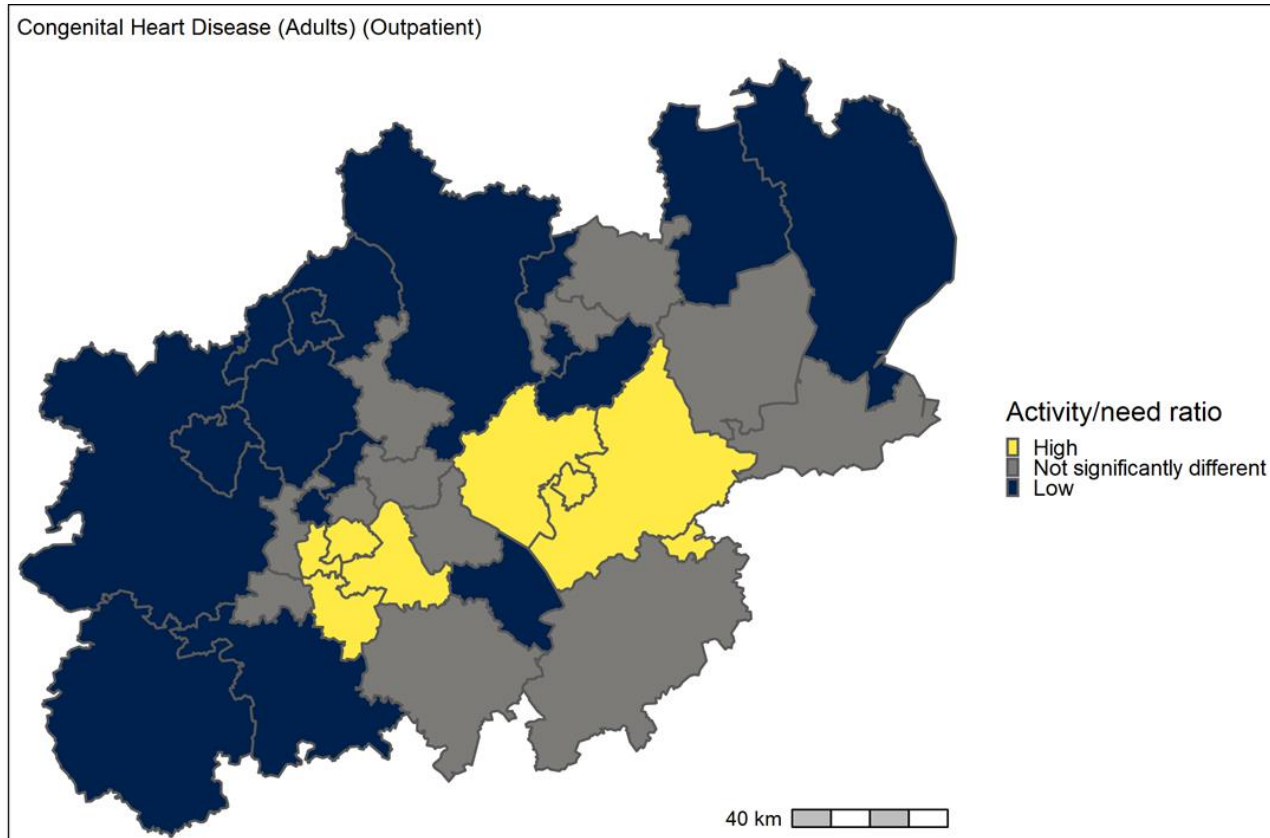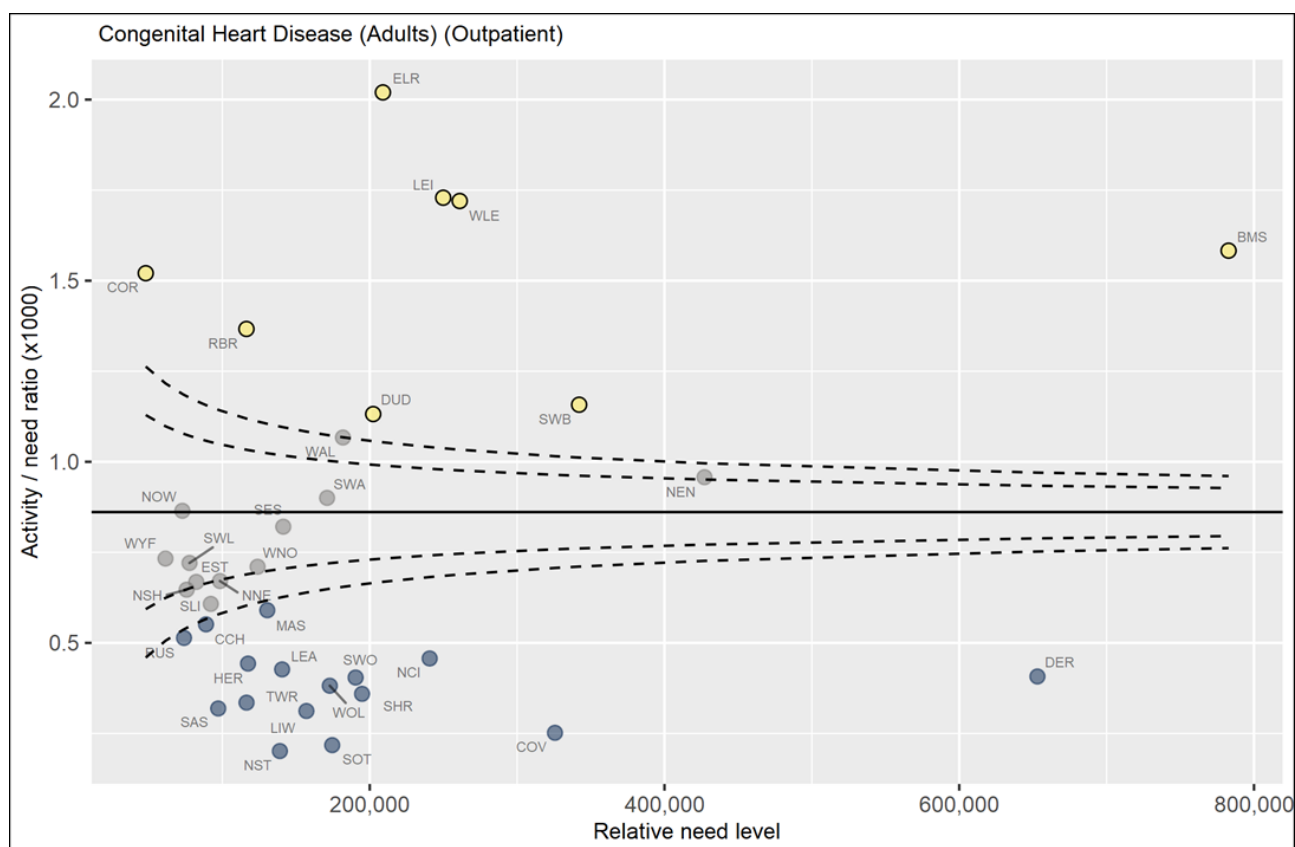**Activity and need data by CCG. Paediatric Cardiac (Outpatient).**
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Leicester City CCG	LEI	354	2,454	693.9
NHS East Leicestershire and Rutland CCG	ELR	288	1,671	579.8
NHS West Leicestershire CCG	WLE	337	1,709	507.2
NHS Nottingham North and East CCG	NNE	130	625	481.3
NHS Rushcliffe CCG	RUS	102	471	462.0
NHS South Lincolnshire CCG	SLI	126	569	451.1
NHS Derby and Derbyshire CCG	DER	869	3,844	442.4
NHS Dudley CCG	DUD	292	1,278	437.7
NHS Lincolnshire East CCG	LEA	184	793	431.9
Not significantly different				
NHS Nottingham West CCG	NOW	90	395	436.5
NHS South Warwickshire CCG	SWA	217	860	397.0
NHS Birmingham and Solihull CCG	BMS	1,212	4,585	378.2
NHS South West Lincolnshire CCG	SWL	109	412	376.7
NHS Wolverhampton CCG	WOL	255	949	371.7
NHS Corby CCG	COR	72	264	364.8
NHS South Worcestershire CCG	SWO	251	907	361.9
NHS Nottingham City CCG	NCI	293	1,048	358.0
NHS Lincolnshire West CCG	LIW	195	691	353.7
NHS Wyre Forest CCG	WYF	82	268	328.5
NHS Newark and Sherwood CCG	NSH	104	341	328.0
Low				
NHS Nene CCG	NEN	623	2,182	350.3
NHS Sandwell and West Birmingham CCG	SWB	538	1,851	344.0
NHS Redditch and Bromsgrove CCG	RBR	162	533	329.4
NHS Stafford and Surrounds CCG	SAS	123	391	318.4
NHS Mansfield and Ashfield CCG	MAS	175	536	306.2
NHS North Staffordshire CCG	NST	171	519	303.4
NHS East Staffordshire CCG	EST	116	353	303.4
NHS Stoke on Trent CCG	SOT	246	744	302.6
NHS Shropshire CCG	SHR	255	748	293.7
NHS Herefordshire CCG	HER	152	430	283.2
NHS Warwickshire North CCG	WNO	171	482	282.5
NHS Telford and Wrekin CCG	TWR	171	465	271.1
NHS Coventry and Rugby CCG	COV	434	1,159	267.3
NHS Cannock Chase CCG	CCH	115	304	264.0
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	185	476	257.7
NHS Walsall CCG	WAL	286	723	252.9

Congenital Heart Disease (Adults)

Activity data - Outpatient attendances with (IR flag 13X) Congenital Heart Disease - Adults (2018/19).

Indicative level of need – No source of need data has been found for Congenital Heart Disease (Adults). Approximately 90% of the Outpatient attendances in the financial year 2018/19 under this prescribed service line were under 65 years old; source: SUS+. Due to this and the fact that this service line targets patients who are 19 or above, we have used the CCG population between 19 and 65 years old as the proxy indicator of need in this case.

Congenital Heart Disease (Adults) (Outpatient)

Congenital Heart Disease (Adults) (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

Activity and need data by CCG. Congenital Heart Disease - Adults (Outpatient).

Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS East Leicestershire and Rutland CCG	ELR	208,936	422	2.020
NHS Leicester City CCG	LEI	249,851	432	1.729
NHS West Leicestershire CCG	WLE	261,050	449	1.720
NHS Birmingham and Solihull CCG	BMS	782,763	1,239	1.583
NHS Corby CCG	COR	48,007	73	1.521
NHS Redditch and Bromsgrove CCG	RBR	116,338	159	1.367
NHS Sandwell and West Birmingham CCG	SWB	342,093	396	1.158
NHS Dudley CCG	DUD	202,340	229	1.132
Not significantly different				
NHS Walsall CCG	WAL	181,816	194	1.067
NHS Nene CCG	NEN	427,167	409	0.957
NHS South Warwickshire CCG	SWA	171,052	154	0.900
NHS Nottingham West CCG	NOW	72,864	63	0.865
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	141,319	116	0.821
NHS Wyre Forest CCG	WYF	61,406	45	0.733
NHS South West Lincolnshire CCG	SWL	77,706	56	0.721
NHS Warwickshire North CCG	WNO	123,900	88	0.710
NHS Nottingham North and East CCG	NNE	98,392	66	0.671
NHS East Staffordshire CCG	EST	82,299	55	0.668
NHS Newark and Sherwood CCG	NSH	75,742	49	0.647
NHS South Lincolnshire CCG	SLI	92,154	56	0.608
Low				
NHS Mansfield and Ashfield CCG	MAS	130,482	77	0.590
NHS Cannock Chase CCG	CCH	88,895	49	0.551
NHS Rushcliffe CCG	RUS	73,973	38	0.514
NHS Nottingham City CCG	NCI	240,670	110	0.457
NHS Herefordshire CCG	HER	117,404	52	0.443
NHS Lincolnshire East CCG	LEA	140,550	60	0.427
NHS Derby and Derbyshire CCG	DER	653,063	266	0.407
NHS South Worcestershire CCG	SWO	190,423	77	0.404
NHS Wolverhampton CCG	WOL	172,892	66	0.382
NHS Shropshire CCG	SHR	194,803	70	0.359
NHS Telford and Wrekin CCG	TWR	116,398	39	0.335
NHS Stafford and Surrounds CCG	SAS	97,187	31	0.319
NHS Lincolnshire West CCG	LIW	157,030	49	0.312
NHS Coventry and Rugby CCG	COV	325,679	82	0.252
NHS Stoke on Trent CCG	SOT	174,533	38	0.218
NHS North Staffordshire CCG	NST	139,017	28	0.201

4.5 Blood and Infection

There were seven service lines within the blood and infection activity category that had more than 1,500 inpatient admissions or outpatient attendances necessary for inclusion in this analysis. These were: Blood and Marrow Transplantation (outpatient), Haemophilia (outpatient), Sickle Cell (inpatient), Thalassaemia (inpatient), Allergy (outpatient), Immunology (inpatient and outpatient).
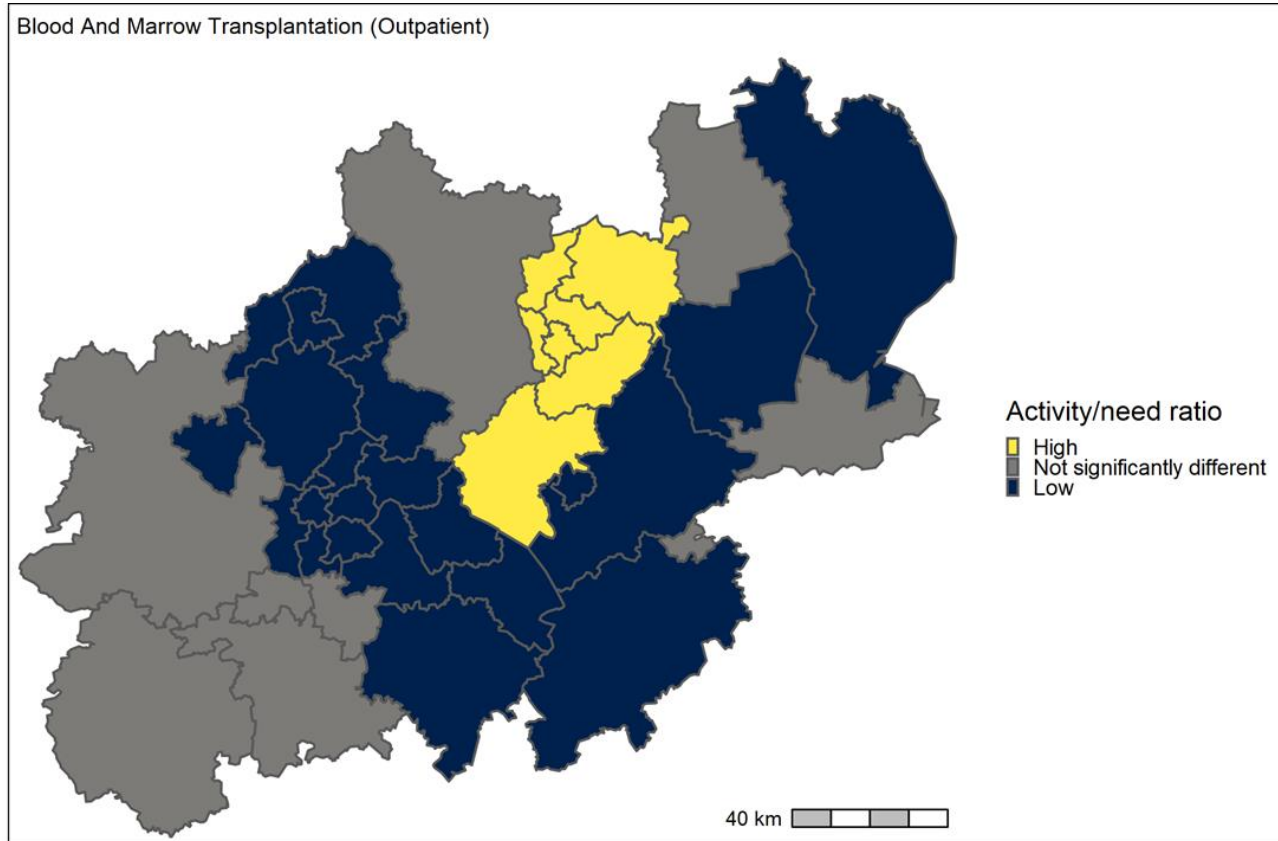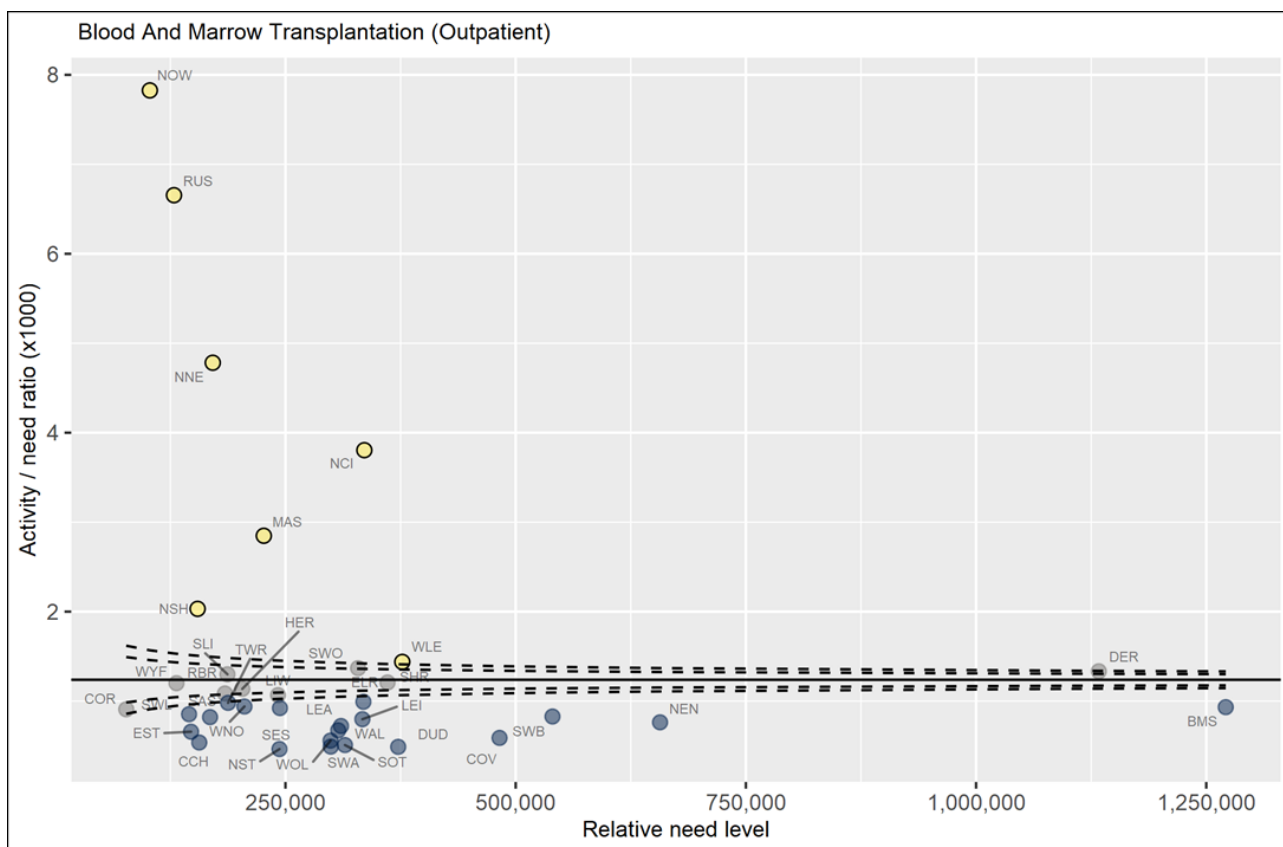
4.5.1 Blood and Marrow Transplantation
Blood and Marrow Transplantation (Outpatient)

Activity data - Outpatient spells with (IR flag 02Z) Blood and Marrow Transplantation (2018/19).

Indicative level of need – A directly related indicator or quantification of need data was not found for Blood and Marrow transplantation as the treatment is provided for a range of conditions. As the activity data for this service line in the financial year 2018/19 increases significantly with age[51], the weighted population was used as a proxy for need.

Limitations: The general and acute weighted population is a general indicator of overall healthcare need within a CCG. It is based on the CCG population but is adjusted to take account of a number of factors related to healthcare need such as age and gender. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

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[51] SUS+

Blood And Marrow Transplantation (Outpatient)

Blood And Marrow Transplantation (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low

Activity and need data by CCG. Blood and Marrow Transplantation (Outpatient).
Activity ratio is per 1,000 need

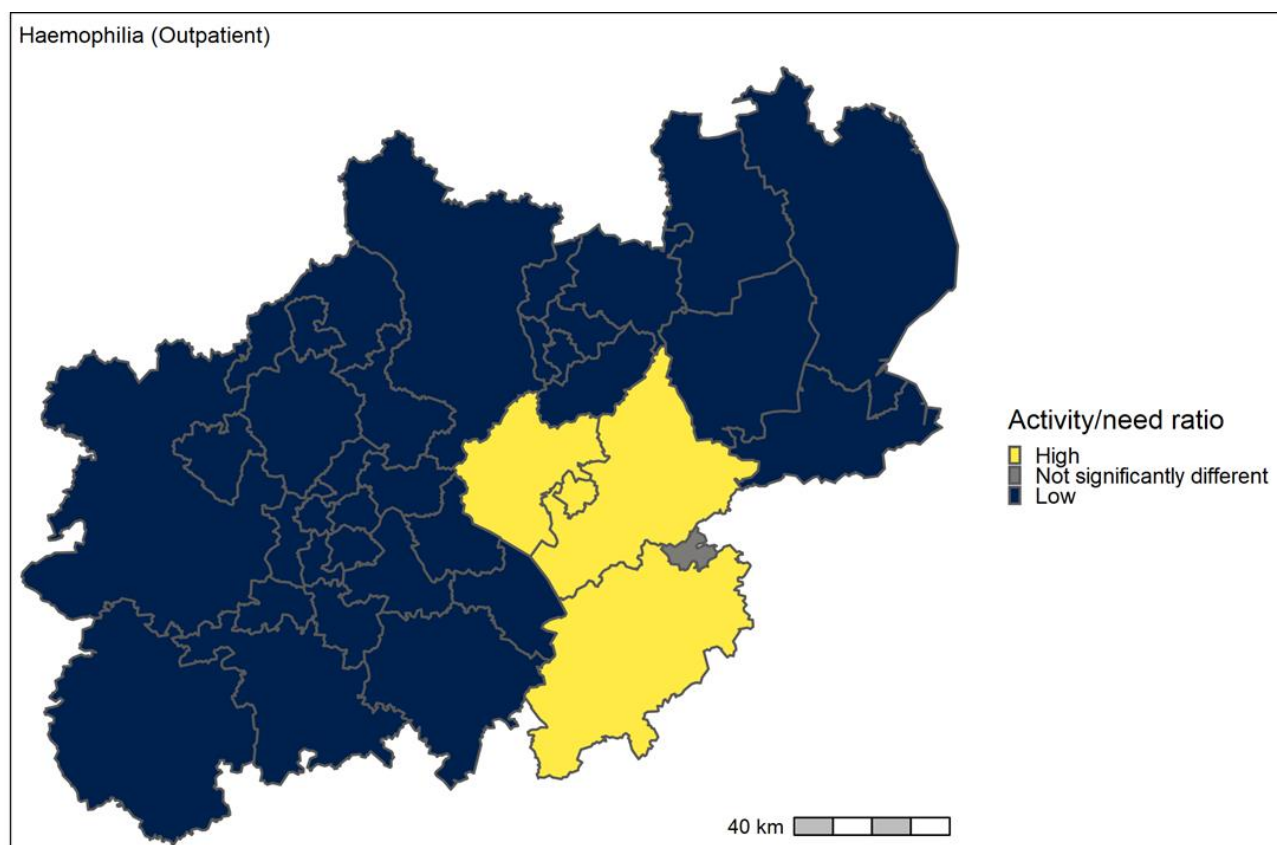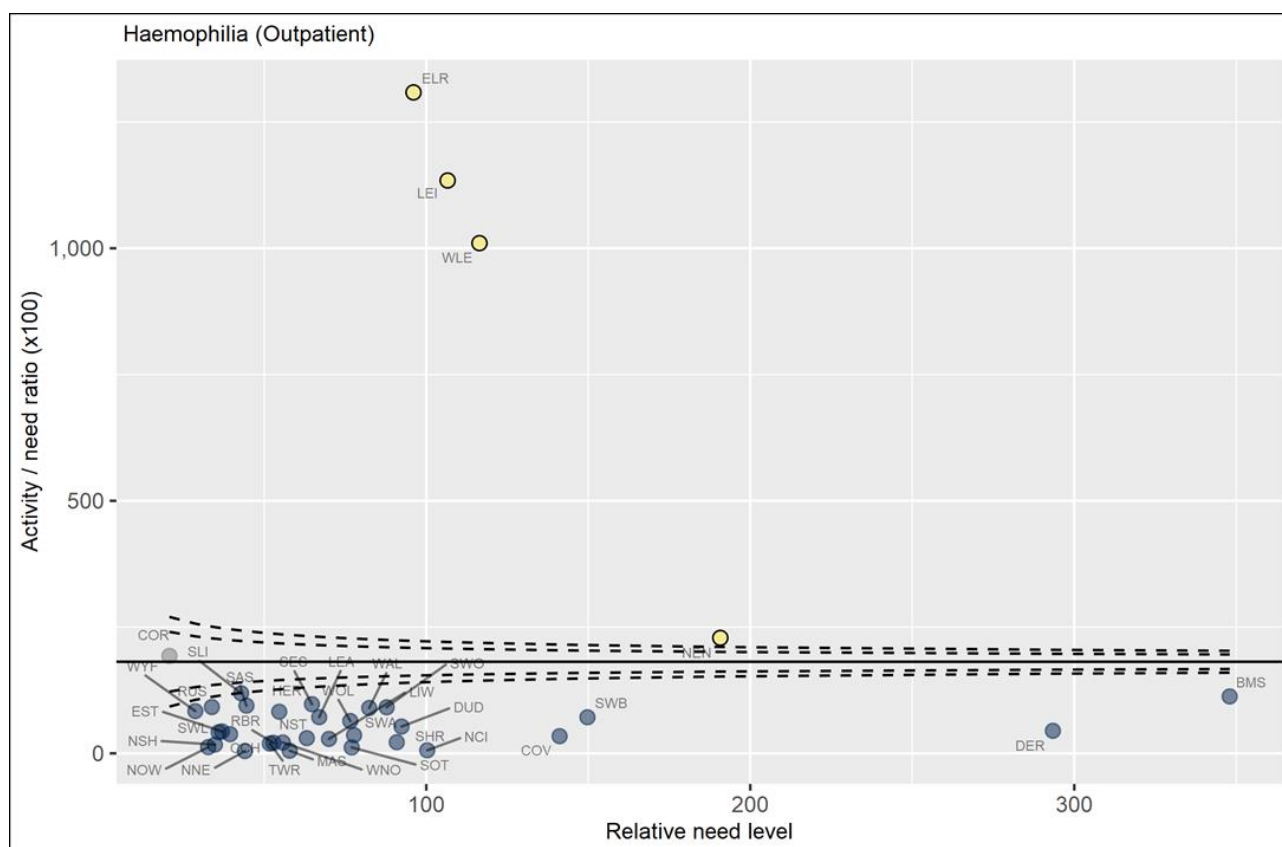| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Nottingham West CCG	NOW	102,736	804	7.826
NHS Rushcliffe CCG	RUS	128,932	858	6.655
NHS Nottingham North and East CCG	NNE	171,057	818	4.782
NHS Nottingham City CCG	NCI	335,645	1,277	3.805
NHS Mansfield and Ashfield CCG	MAS	226,464	645	2.848
NHS Newark and Sherwood CCG	NSH	154,593	314	2.031
NHS West Leicestershire CCG	WLE	376,852	542	1.438
Not significantly different				
NHS South Worcestershire CCG	SWO	328,858	450	1.368
NHS Derby and Derbyshire CCG	DER	1,133,256	1,511	1.333
NHS South Lincolnshire CCG	SLI	186,991	243	1.300
NHS Shropshire CCG	SHR	360,838	436	1.208
NHS Wyre Forest CCG	WYF	131,646	158	1.200
NHS Herefordshire CCG	HER	203,157	231	1.137
NHS Redditch and Bromsgrove CCG	RBR	184,267	200	1.085
NHS Lincolnshire West CCG	LIW	241,922	258	1.066
NHS Corby CCG	COR	77,088	70	0.908
Low				
NHS East Leicestershire and Rutland CCG	ELR	334,636	332	0.992
NHS Telford and Wrekin CCG	TWR	187,682	184	0.980
NHS Warwickshire North CCG	WNO	205,431	193	0.939
NHS Birmingham and Solihull CCG	BMS	1,271,116	1,185	0.932
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	243,974	225	0.922
NHS South West Lincolnshire CCG	SWL	145,295	124	0.853
NHS Sandwell and West Birmingham CCG	SWB	539,975	447	0.828
NHS Stafford and Surrounds CCG	SAS	168,092	138	0.821
NHS Leicester City CCG	LEI	333,532	266	0.798
NHS Nene CCG	NEN	656,778	501	0.763
NHS Lincolnshire East CCG	LEA	310,316	224	0.722
NHS Walsall CCG	WAL	307,277	207	0.674
NHS East Staffordshire CCG	EST	147,461	97	0.658
NHS Coventry and Rugby CCG	COV	482,461	284	0.589
NHS Wolverhampton CCG	WOL	298,979	167	0.559
NHS Cannock Chase CCG	CCH	156,366	84	0.537
NHS Stoke on Trent CCG	SOT	314,622	160	0.509
NHS South Warwickshire CCG	SWA	299,193	147	0.491
NHS Dudley CCG	DUD	372,413	182	0.489
NHS North Staffordshire CCG	NST	243,497	113	0.464

4.5.2   Specialised Blood Disorders

Haemophilia (Outpatient)

Activity data - Outpatient spells with (IR flag 03Z) Haemophilia (2018/19).

Indicative level of need – UK Age specific prevalence rates for Haemophilia (A and B) and Von Willebrand disease in the UK were calculated using data from an annual survey carried out by the World Federation of Haemophilia[52]. These were then applied to age specific populations within each CCG.

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[52] World Federation of Hemophilia. (2019). *Report on the Annual Global Survery 2018*. http://www1.wfh.org/publications/files/pdf-1731.pdf

Haemophilia (Outpatient)

Haemophilia (Outpatient)

Activity/need ratio
High
Not significantly different
Low

40 km

Activity and need data by CCG. Haemophilia (Outpatient).
Activity ratio is per 100 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS East Leicestershire and Rutland CCG	ELR	96	1,257	1,308.6
NHS Leicester City CCG	LEI	107	1,209	1,134.2
NHS West Leicestershire CCG	WLE	116	1,176	1,010.1
NHS Nene CCG	NEN	191	436	228.6
Not significantly different				
NHS Corby CCG	COR	21	40	192.9
Low				
NHS South Lincolnshire CCG	SLI	43	51	119.0
NHS Birmingham and Solihull CCG	BMS	348	392	112.7
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	65	63	97.3
NHS Stafford and Surrounds CCG	SAS	44	42	94.4
NHS Rushcliffe CCG	RUS	34	31	91.7
NHS South Worcestershire CCG	SWO	88	80	91.1
NHS Walsall CCG	WAL	82	74	89.8
NHS Wyre Forest CCG	WYF	29	24	83.6
NHS Herefordshire CCG	HER	55	45	82.4
NHS Lincolnshire East CCG	LEA	67	48	71.7
NHS Sandwell and West Birmingham CCG	SWB	150	107	71.5
NHS Wolverhampton CCG	WOL	77	49	64.0
NHS Dudley CCG	DUD	92	49	53.0
NHS Derby and Derbyshire CCG	DER	293	131	44.6
NHS East Staffordshire CCG	EST	37	16	43.3
NHS South West Lincolnshire CCG	SWL	36	15	41.8
NHS Cannock Chase CCG	CCH	39	15	38.0
NHS South Warwickshire CCG	SWA	78	28	36.0
NHS Coventry and Rugby CCG	COV	141	48	34.0
NHS North Staffordshire CCG	NST	63	19	30.1
NHS Lincolnshire West CCG	LIW	70	20	28.6
NHS Shropshire CCG	SHR	91	20	22.0
NHS Warwickshire North CCG	WNO	56	12	21.5
NHS Redditch and Bromsgrove CCG	RBR	53	11	20.8
NHS Telford and Wrekin CCG	TWR	52	10	19.3
NHS Newark and Sherwood CCG	NSH	35	6	17.3
NHS Nottingham West CCG	NOW	33	4	12.2
NHS Stoke on Trent CCG	SOT	77	9	11.7
NHS Nottingham City CCG	NCI	100	6	6.0
NHS Mansfield and Ashfield CCG	MAS	58	3	5.2
NHS Nottingham North and East CCG	NNE	44	2	4.5

4.5.3　Haemoglobinopathies
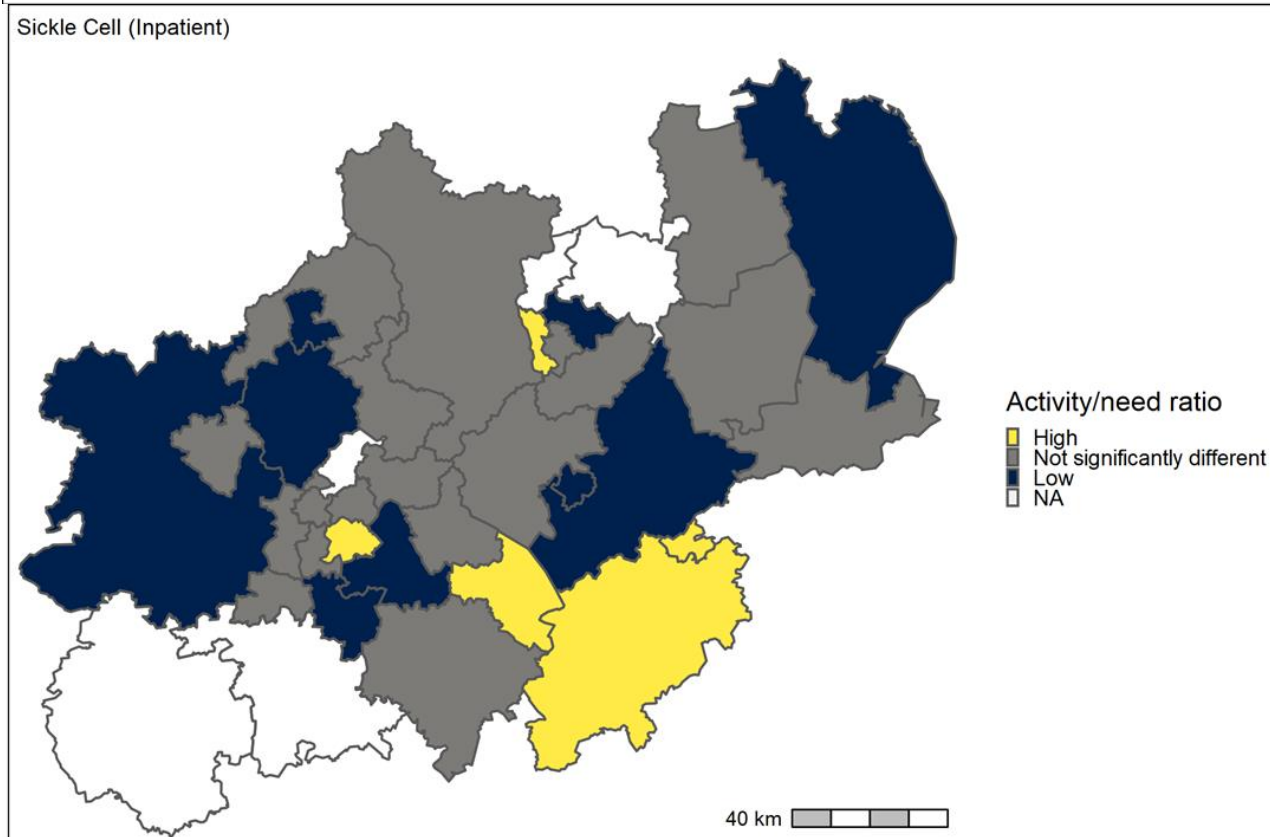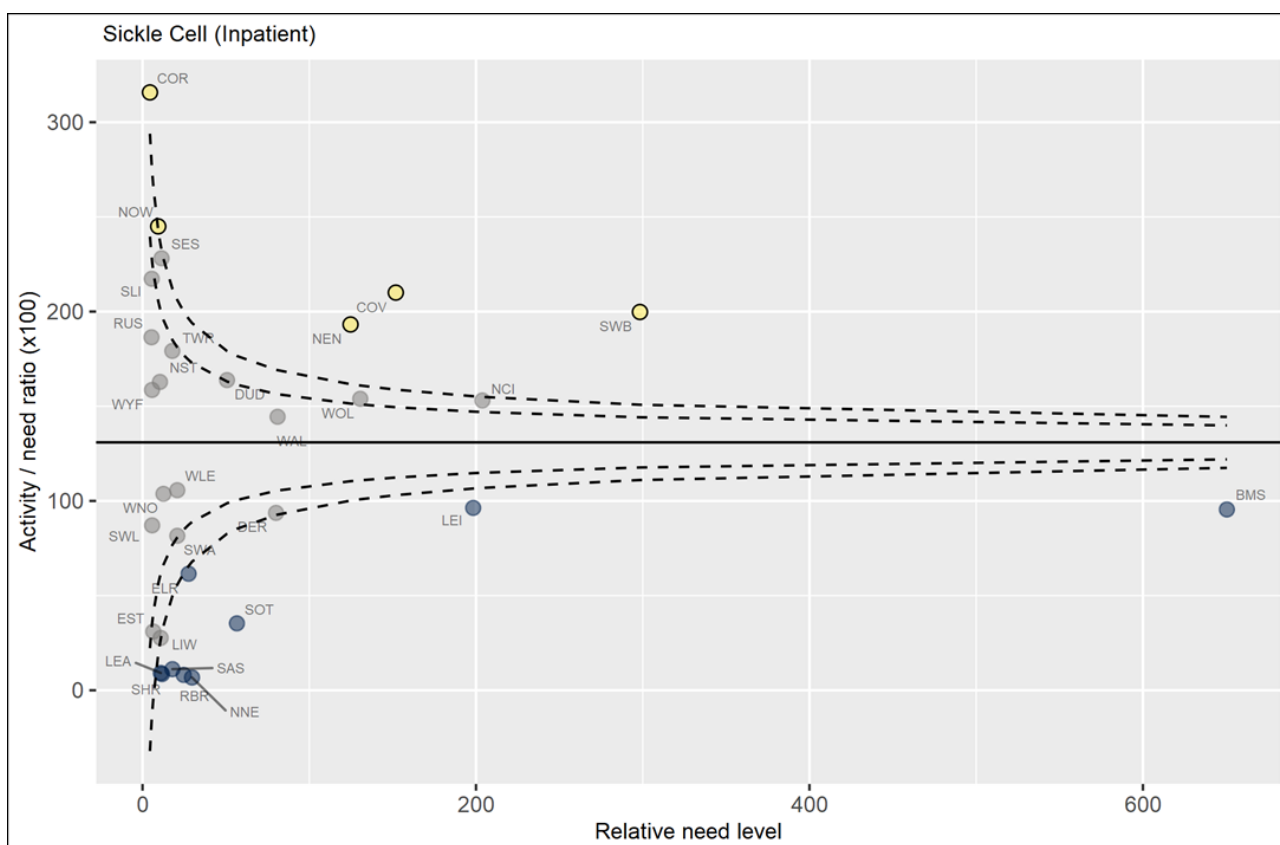
Sickle Cell (Inpatient)

Activity data - Inpatient spells with (IR flag 38S) Sickle Cell (2018/19).

Indicative level of need – Sickle cell's prevalence is highly correlated with ethnicity; Black Africans are more likely to have the condition than other ethnicities[53]. The ethnicity specific prevalence rates of this condition have been applied to each CCG's population by ethnicity.

Limitations: The population by ethnic group was obtained from 2016 and its geography was by local authorities[54]. A mapping from local authorities to CCG was carried.

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[53]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/713120/SCT_data_report_2016_to_2017.pdf
[54] ONS (2019) Population Estimates by ethnic group and religion Research Report. Table A: Population in England and Wales by ethnic group: 2016.

Sickle Cell (Inpatient)

Activity and need data by CCG. Sickle Cell (Inpatient).

Activity ratio is per 100 need

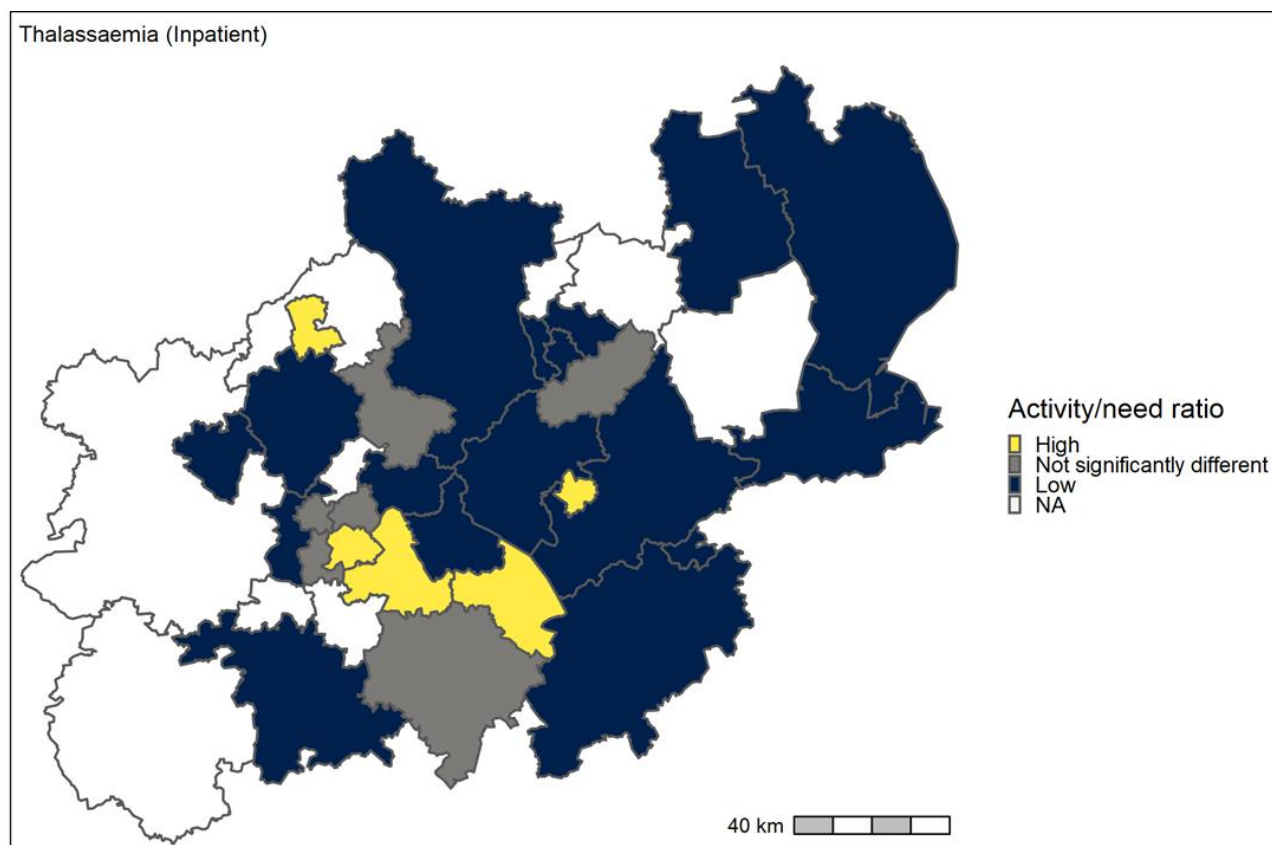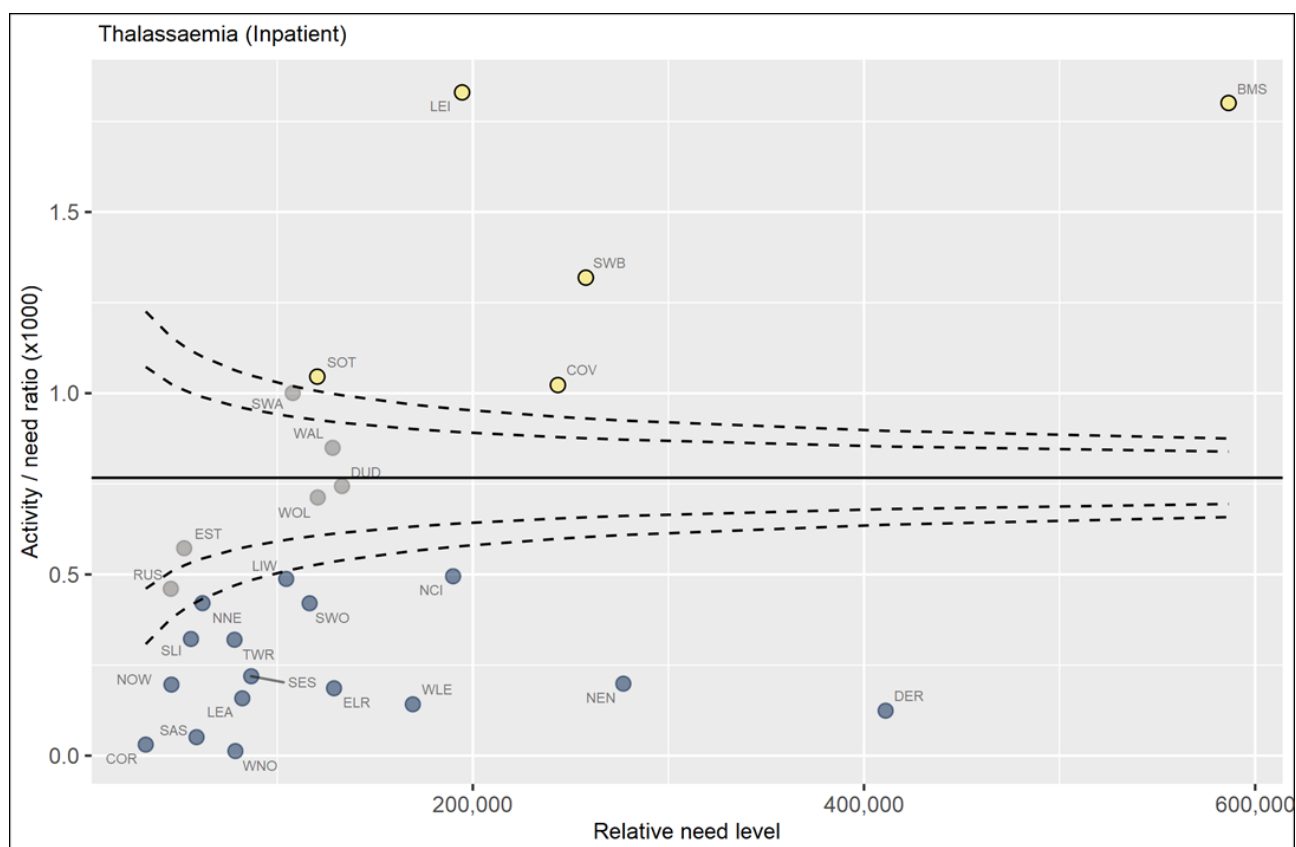| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Corby CCG	COR	4	14	315.7
NHS Nottingham West CCG	NOW	9	23	245.0
NHS Coventry and Rugby CCG	COV	152	319	210.0
NHS Sandwell and West Birmingham CCG	SWB	298	596	199.8
NHS Nene CCG	NEN	125	241	193.2
Not significantly different				
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	11	26	228.2
NHS South Lincolnshire CCG	SLI	6	12	217.3
NHS Rushcliffe CCG	RUS	5	10	186.4
NHS Telford and Wrekin CCG	TWR	18	32	179.2
NHS Dudley CCG	DUD	51	83	163.8
NHS North Staffordshire CCG	NST	10	17	162.8
NHS Wyre Forest CCG	WYF	6	9	158.6
NHS Wolverhampton CCG	WOL	131	201	153.9
NHS Nottingham City CCG	NCI	204	312	153.1
NHS Walsall CCG	WAL	81	117	144.4
NHS West Leicestershire CCG	WLE	21	22	105.7
NHS Warwickshire North CCG	WNO	13	13	103.7
NHS Derby and Derbyshire CCG	DER	80	75	93.7
NHS South West Lincolnshire CCG	SWL	6	5	87.1
NHS South Warwickshire CCG	SWA	21	17	81.6
NHS East Staffordshire CCG	EST	6	2	31.0
NHS Lincolnshire West CCG	LIW	11	3	27.7
Low				
NHS Leicester City CCG	LEI	198	191	96.3
NHS Birmingham and Solihull CCG	BMS	650	621	95.5
NHS East Leicestershire and Rutland CCG	ELR	28	17	61.5
NHS Stoke on Trent CCG	SOT	57	20	35.3
NHS Stafford and Surrounds CCG	SAS	18	2	11.2
NHS Lincolnshire East CCG	LEA	11	1	9.2
NHS Shropshire CCG	SHR	12	1	8.5
NHS Redditch and Bromsgrove CCG	RBR	25	2	8.1
NHS Nottingham North and East CCG	NNE	30	2	6.7

Thalassaemia (Inpatient)

Activity data - Inpatient spells with (IR flag 38T) Thalassaemia (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this service line. As approximately 90% of the spells were for patients aged between 0-40 years old (source: SUS+). The population at CCG-level aged below 40 years[55] was used as a proxy for need.

Limitations: Population estimates by age group accounts for only for age. It is therefore considered a better indicator of likely need than just the total population size but may not necessarily be an accurate indicator of need for this particular service line.

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[55] Office for National Statistics (2019). Table SAPE21DT6a: Mid-2018 Population Estimates for Clinical Commissioning Groups (CCGs) in England by Single Year of Age and Sex - National Statistics.

Thalassaemia (Inpatient)

Thalassaemia (Inpatient)

Activity/need ratio
High
Not significantly different
Low
NA

40 km

Activity and need data by CCG. Thalassaemia (Inpatient).
Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Leicester City CCG	LEI	194,534	356	1.830
NHS Birmingham and Solihull CCG	BMS	586,407	1,056	1.801
NHS Sandwell and West Birmingham CCG	SWB	257,792	340	1.319
NHS Stoke on Trent CCG	SOT	120,482	126	1.046
NHS Coventry and Rugby CCG	COV	243,499	249	1.023
Not significantly different				
NHS South Warwickshire CCG	SWA	107,942	108	1.001
NHS Walsall CCG	WAL	128,334	109	0.849
NHS Dudley CCG	DUD	133,102	99	0.744
NHS Wolverhampton CCG	WOL	120,727	86	0.712
NHS East Staffordshire CCG	EST	52,414	30	0.572
NHS Rushcliffe CCG	RUS	45,609	21	0.460
Low				
NHS Nottingham City CCG	NCI	189,913	94	0.495
NHS Lincolnshire West CCG	LIW	104,593	51	0.488
NHS Nottingham North and East CCG	NNE	61,795	26	0.421
NHS South Worcestershire CCG	SWO	116,553	49	0.420
NHS South Lincolnshire CCG	SLI	55,904	18	0.322
NHS Telford and Wrekin CCG	TWR	78,155	25	0.320
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	86,704	19	0.219
NHS Nene CCG	NEN	276,966	55	0.199
NHS Nottingham West CCG	NOW	45,909	9	0.196
NHS East Leicestershire and Rutland CCG	ELR	129,037	24	0.186
NHS Lincolnshire East CCG	LEA	82,151	13	0.158
NHS West Leicestershire CCG	WLE	169,319	24	0.142
NHS Derby and Derbyshire CCG	DER	411,066	51	0.124
NHS Stafford and Surrounds CCG	SAS	58,756	3	0.051
NHS Corby CCG	COR	32,776	1	0.031
NHS Warwickshire North CCG	WNO	78,610	1	0.013

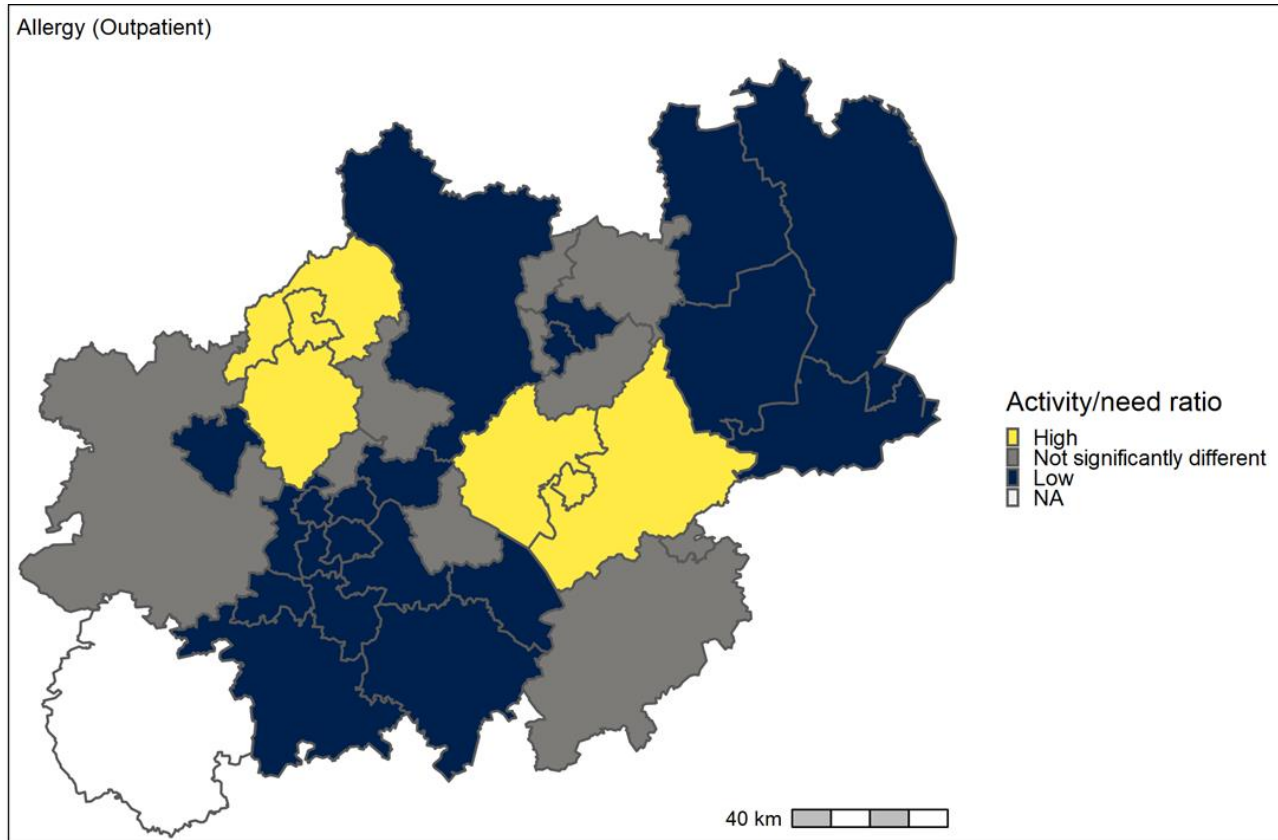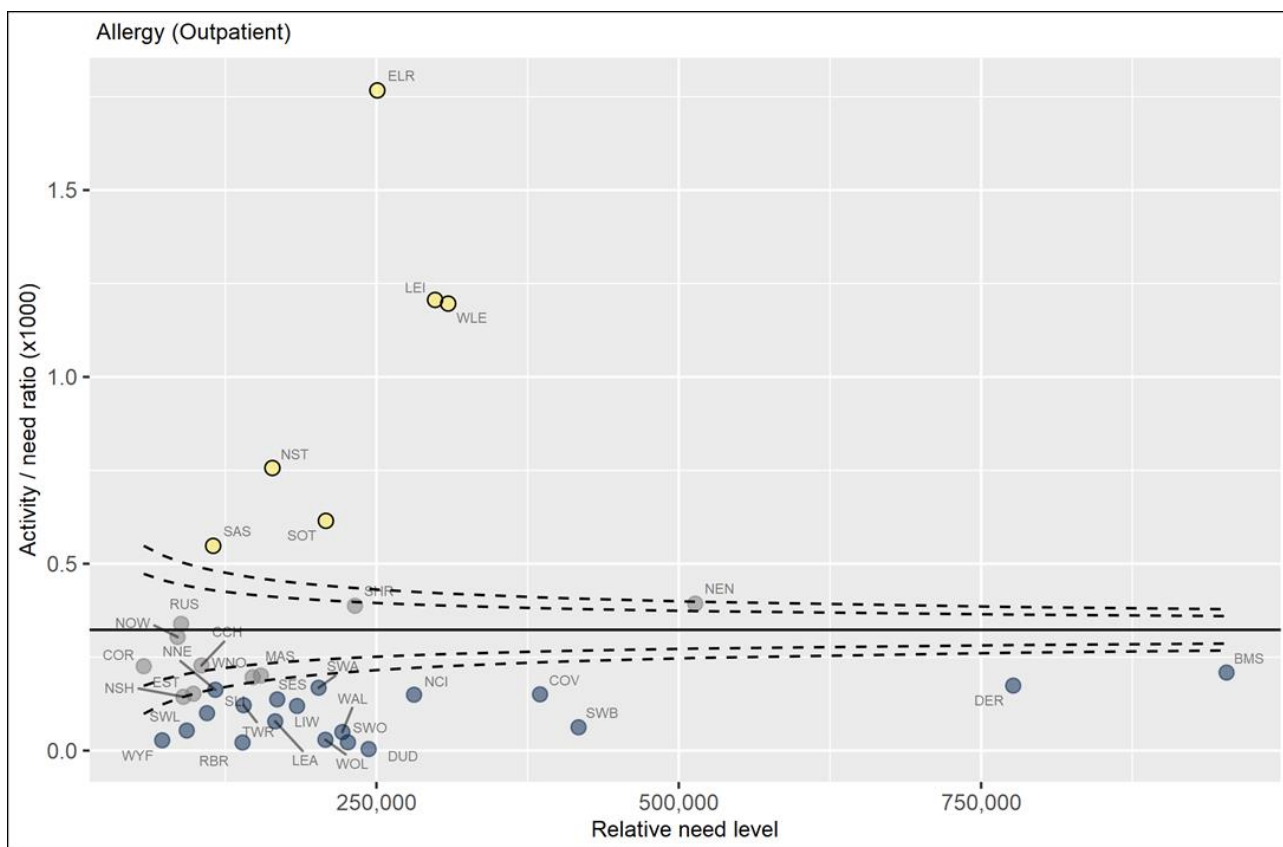### 4.5.4 Specialised Immunology and Allergy Services

Allergy (Outpatient)

Activity data - Outpatient spells with (IR flag 17Z) Allergy (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this service line. As most spells (around 90%) were for patients aged between 0-65 years old (source: SUS+) the CCG population aged below 65 years[56] was used as a proxy indicator of need.

Limitations: Population estimates by age group accounts for only for age. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

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[56] Office for National Statistics (2019). Table SAPE21DT6a: Mid-2018 Population Estimates for Clinical Commissioning Groups (CCGs) in England by Single Year of Age and Sex - National Statistics.

Allergy (Outpatient)

Allergy (Outpatient)

Activity/need ratio
- High
- Not significantly different
- Low
- NA

40 km

Activity and need data by CCG. Allergy (Outpatient).

Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS East Leicestershire and Rutland CCG	ELR	250,747	443	1.767
NHS Leicester City CCG	LEI	298,500	360	1.206
NHS West Leicestershire CCG	WLE	309,319	370	1.196
NHS North Staffordshire CCG	NST	163,971	124	0.756
NHS Stoke on Trent CCG	SOT	208,184	128	0.615
NHS Stafford and Surrounds CCG	SAS	114,989	63	0.548
Not significantly different				
NHS Nene CCG	NEN	513,633	202	0.393
NHS Shropshire CCG	SHR	232,223	90	0.388
NHS Rushcliffe CCG	RUS	88,493	30	0.339
NHS Nottingham West CCG	NOW	85,549	26	0.304
NHS Cannock Chase CCG	CCH	105,325	24	0.228
NHS Corby CCG	COR	57,571	13	0.226
NHS Mansfield and Ashfield CCG	MAS	154,475	31	0.201
NHS Warwickshire North CCG	WNO	147,692	29	0.196
NHS East Staffordshire CCG	EST	98,591	15	0.152
NHS Newark and Sherwood CCG	NSH	90,368	13	0.144
Low				
NHS Birmingham and Solihull CCG	BMS	952,973	199	0.209
NHS Derby and Derbyshire CCG	DER	776,542	135	0.174
NHS South Warwickshire CCG	SWA	202,164	34	0.168
NHS Nottingham North and East CCG	NNE	116,805	19	0.163
NHS Coventry and Rugby CCG	COV	385,258	58	0.151
NHS Nottingham City CCG	NCI	281,072	42	0.149
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	167,947	23	0.137
NHS Telford and Wrekin CCG	TWR	140,174	17	0.121
NHS Lincolnshire West CCG	LIW	184,342	22	0.119
NHS South Lincolnshire CCG	SLI	109,880	11	0.100
NHS Lincolnshire East CCG	LEA	166,302	13	0.078
NHS Sandwell and West Birmingham CCG	SWB	417,133	26	0.062
NHS South West Lincolnshire CCG	SWL	93,153	5	0.054
NHS Walsall CCG	WAL	221,815	11	0.050
NHS Wolverhampton CCG	WOL	207,803	6	0.029
NHS Wyre Forest CCG	WYF	72,838	2	0.027
NHS South Worcestershire CCG	SWO	226,412	5	0.022
NHS Redditch and Bromsgrove CCG	RBR	139,268	3	0.022
NHS Dudley CCG	DUD	243,549	1	0.004

Immunology (Inpatient)

Activity data - Inpatient spells with (IR flag 16Z) Immunology (2018/19).

Indicative level of need – The activity for this service line increases with age. As such the weighted population was considered to be a reasonable proxy for need.

Limitations: The general and acute weighted population is a general indicator of overall healthcare need within a CCG. It is based on the CCG population but is adjusted to take account of a number of factors related to healthcare need such as age and gender. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

Immunology (Inpatient)

Immunology (Inpatient)

Activity/need ratio
- High
- Not significantly different
- Low
- NA

40 km
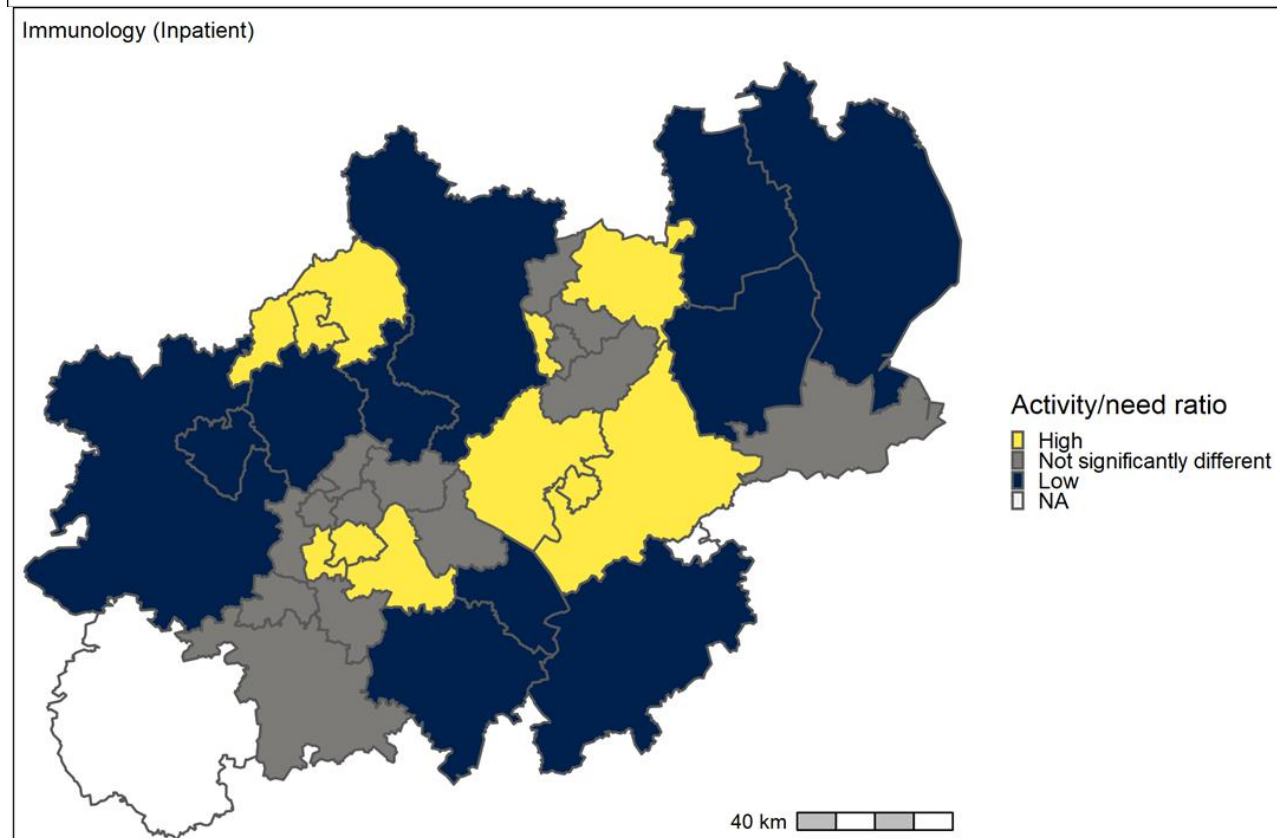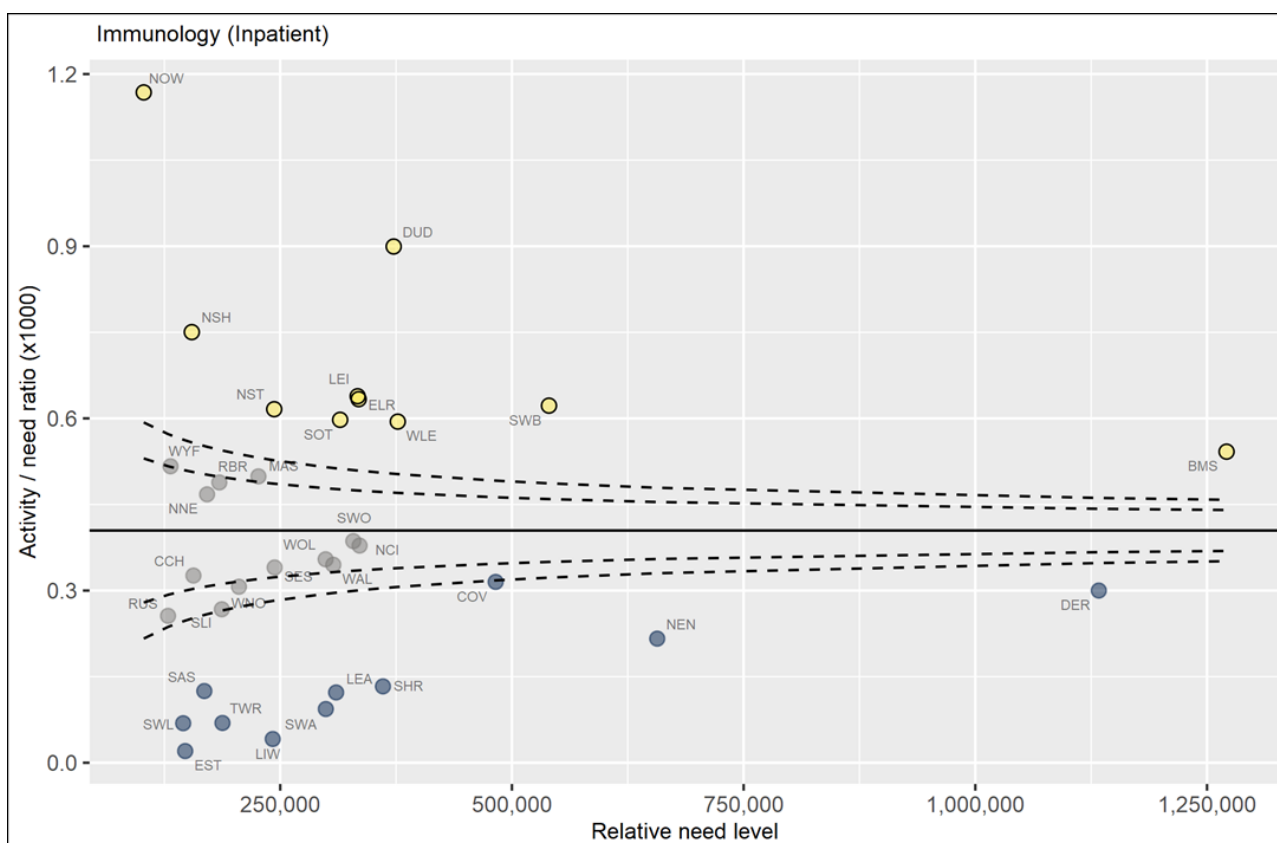
Activity and need data by CCG. Immunology (Inpatient).

Activity ratio is per 1,000 need

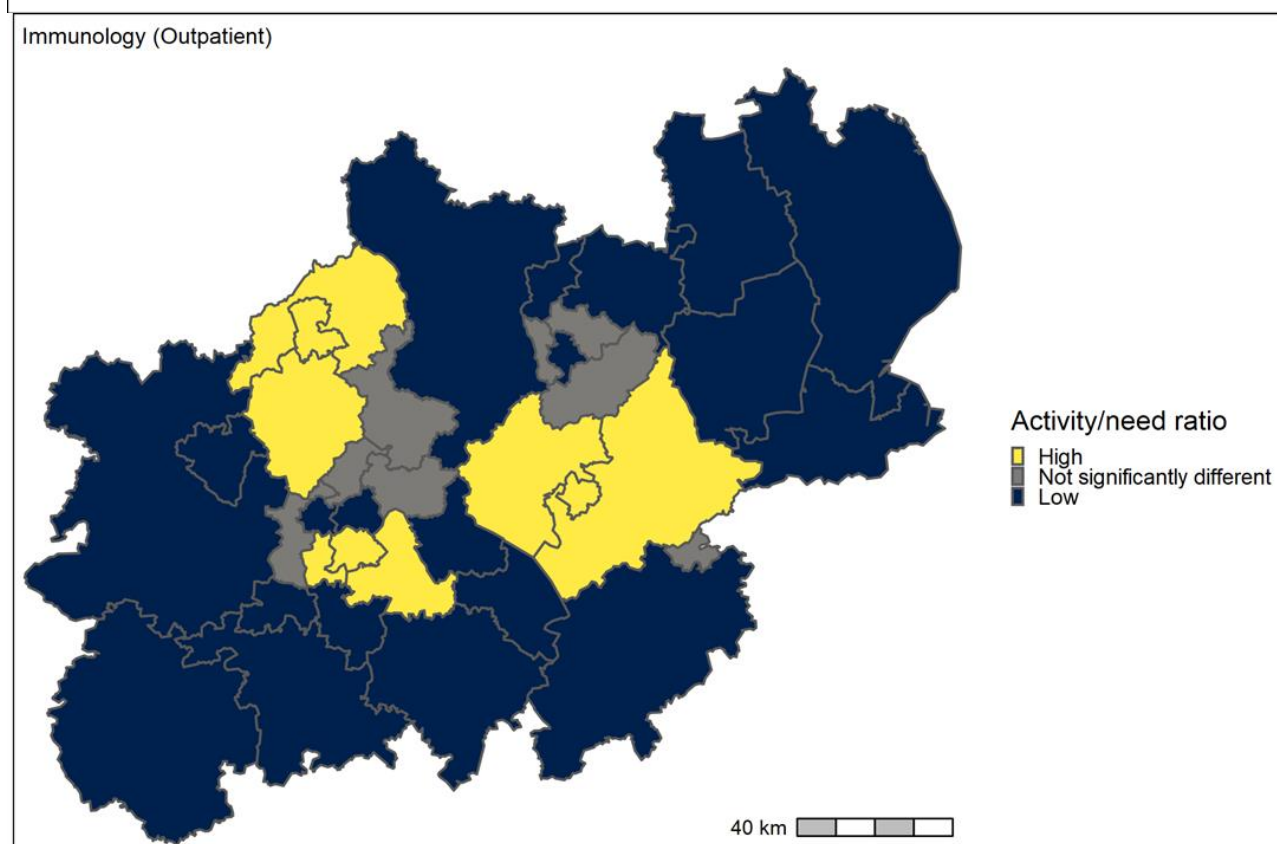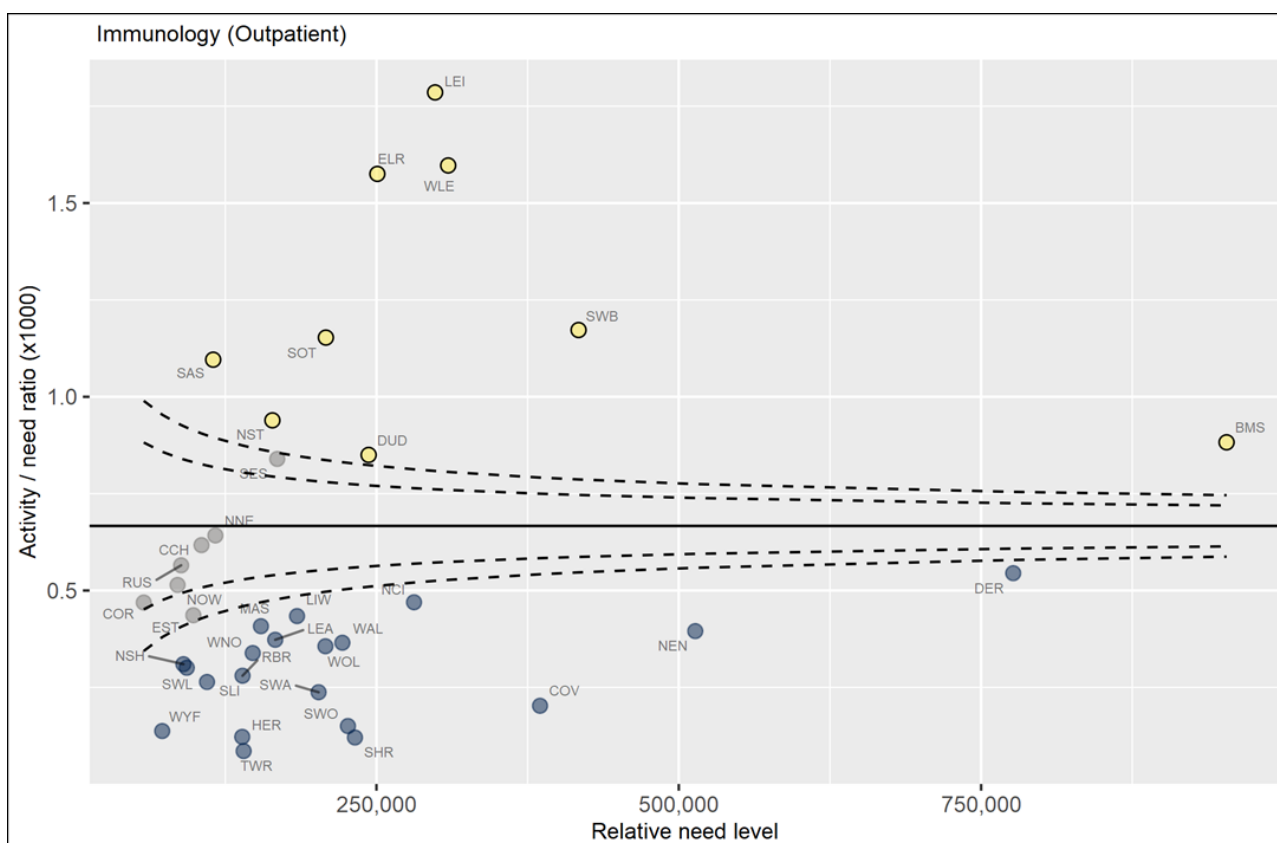| CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Nottingham West CCG	NOW	102,736	120	1.168
NHS Dudley CCG	DUD	372,413	335	0.900
NHS Newark and Sherwood CCG	NSH	154,593	116	0.750
NHS Leicester City CCG	LEI	333,532	213	0.639
NHS East Leicestershire and Rutland CCG	ELR	334,636	212	0.634
NHS Sandwell and West Birmingham CCG	SWB	539,975	336	0.622
NHS North Staffordshire CCG	NST	243,497	150	0.616
NHS Stoke on Trent CCG	SOT	314,622	188	0.598
NHS West Leicestershire CCG	WLE	376,852	224	0.594
NHS Birmingham and Solihull CCG	BMS	1,271,116	689	0.542
Not significantly different				
NHS Wyre Forest CCG	WYF	131,646	68	0.517
NHS Mansfield and Ashfield CCG	MAS	226,464	113	0.499
NHS Redditch and Bromsgrove CCG	RBR	184,267	90	0.488
NHS Nottingham North and East CCG	NNE	171,057	80	0.468
NHS South Worcestershire CCG	SWO	328,858	127	0.386
NHS Nottingham City CCG	NCI	335,645	127	0.378
NHS Wolverhampton CCG	WOL	298,979	106	0.355
NHS Walsall CCG	WAL	307,277	106	0.345
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	243,974	83	0.340
NHS Cannock Chase CCG	CCH	156,366	51	0.326
NHS Warwickshire North CCG	WNO	205,431	63	0.307
NHS South Lincolnshire CCG	SLI	186,991	50	0.267
NHS Rushcliffe CCG	RUS	128,932	33	0.256
Low				
NHS Coventry and Rugby CCG	COV	482,461	152	0.315
NHS Derby and Derbyshire CCG	DER	1,133,256	340	0.300
NHS Nene CCG	NEN	656,778	142	0.216
NHS Shropshire CCG	SHR	360,838	48	0.133
NHS Stafford and Surrounds CCG	SAS	168,092	21	0.125
NHS Lincolnshire East CCG	LEA	310,316	38	0.122
NHS South Warwickshire CCG	SWA	299,193	28	0.094
NHS Telford and Wrekin CCG	TWR	187,682	13	0.069
NHS South West Lincolnshire CCG	SWL	145,295	10	0.069
NHS Lincolnshire West CCG	LIW	241,922	10	0.041
NHS East Staffordshire CCG	EST	147,461	3	0.020

Immunology (Outpatient)

Activity data - Outpatient spells with (IR flag 16Z) Immunology (2018/19).

Indicative level of need – A directly related indicator or quantification of need could not be found for this service line. The population at CCG-level aged below 65 years[57] was used as a proxy for need as approximately 90% of the spells were for patients between 0-65 years old (source: SUS+).

Limitations: Population estimates by age group accounts for only for age. It is therefore considered a better indicator of likely need than just the overall population size but may not necessarily be an accurate indicator of need for this particular service line.

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[57] Office for National Statistics (2019). Table SAPE21DT6a: Mid-2018 Population Estimates for Clinical Commissioning Groups (CCGs) in England by Single Year of Age and Sex - National Statistics.

Immunology (Outpatient)

Activity and need data by CCG. Immunology (Outpatient).

Activity ratio is per 1,000 need

CCG name	CCG code	Need	Activity	Activity/ need ratio
High				
NHS Leicester City CCG	LEI	298,500	533	1.786
NHS West Leicestershire CCG	WLE	309,319	494	1.597
NHS East Leicestershire and Rutland CCG	ELR	250,747	395	1.575
NHS Sandwell and West Birmingham CCG	SWB	417,133	489	1.172
NHS Stoke on Trent CCG	SOT	208,184	240	1.153
NHS Stafford and Surrounds CCG	SAS	114,989	126	1.096
NHS North Staffordshire CCG	NST	163,971	154	0.939
NHS Birmingham and Solihull CCG	BMS	952,973	841	0.883
NHS Dudley CCG	DUD	243,549	207	0.850
Not significantly different				
NHS South East Staffordshire and Seisdon Peninsula CCG	SES	167,947	141	0.840
NHS Nottingham North and East CCG	NNE	116,805	75	0.642
NHS Cannock Chase CCG	CCH	105,325	65	0.617
NHS Rushcliffe CCG	RUS	88,493	50	0.565
NHS Nottingham West CCG	NOW	85,549	44	0.514
NHS Corby CCG	COR	57,571	27	0.469
NHS East Staffordshire CCG	EST	98,591	43	0.436
Low				
NHS Derby and Derbyshire CCG	DER	776,542	423	0.545
NHS Nottingham City CCG	NCI	281,072	132	0.470
NHS Lincolnshire West CCG	LIW	184,342	80	0.434
NHS Mansfield and Ashfield CCG	MAS	154,475	63	0.408
NHS Nene CCG	NEN	513,633	203	0.395
NHS Lincolnshire East CCG	LEA	166,302	62	0.373
NHS Walsall CCG	WAL	221,815	81	0.365
NHS Wolverhampton CCG	WOL	207,803	74	0.356
NHS Warwickshire North CCG	WNO	147,692	50	0.339
NHS Newark and Sherwood CCG	NSH	90,368	28	0.310
NHS South West Lincolnshire CCG	SWL	93,153	28	0.301
NHS Redditch and Bromsgrove CCG	RBR	139,268	39	0.280
NHS South Lincolnshire CCG	SLI	109,880	29	0.264
NHS South Warwickshire CCG	SWA	202,164	48	0.237
NHS Coventry and Rugby CCG	COV	385,258	78	0.202
NHS South Worcestershire CCG	SWO	226,412	34	0.150
NHS Wyre Forest CCG	WYF	72,838	10	0.137
NHS Herefordshire CCG	HER	139,024	17	0.122
NHS Shropshire CCG	SHR	232,223	28	0.121
NHS Telford and Wrekin CCG	TWR	140,174	12	0.086