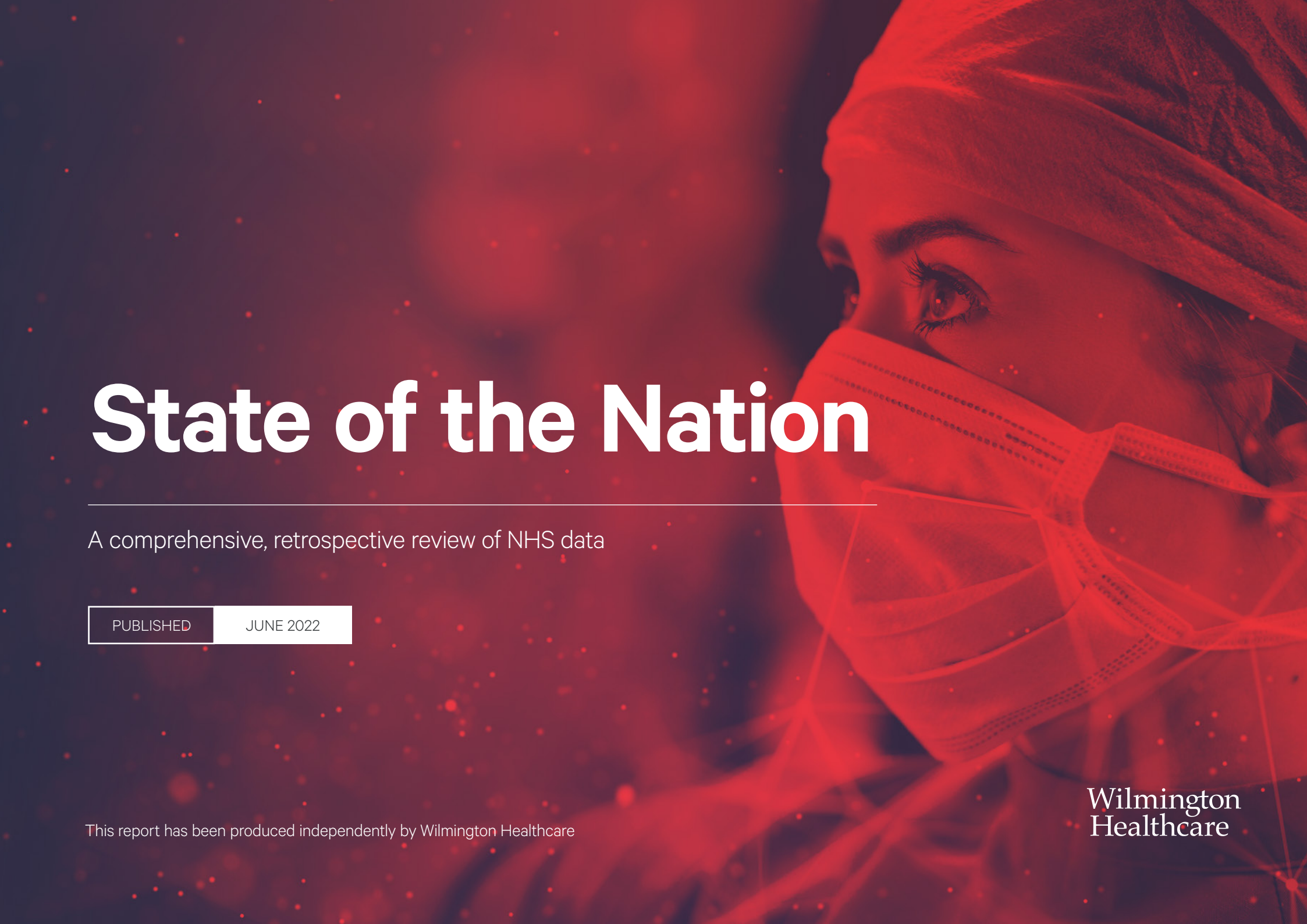

State of the Nation

A comprehensive, retrospective review of NHS data

PUBLISHED JUNE 2022

This report has been produced independently by Wilmington Healthcare

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Contents

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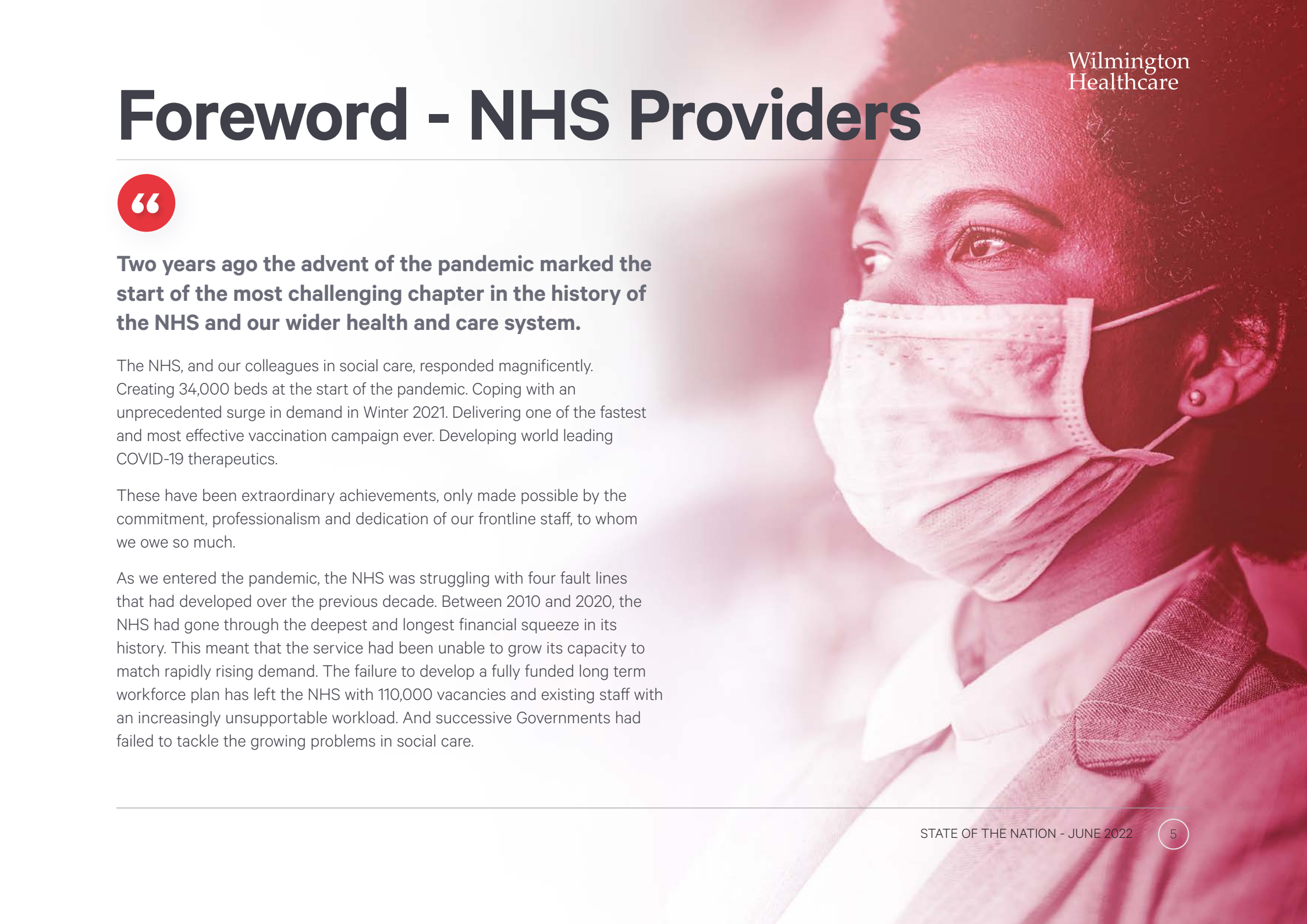
Foreword - NHS Providers

Two years ago the advent of the pandemic marked the start of the most challenging chapter in the history of the NHS and our wider health and care system.

The NHS, and our colleagues in social care, responded magnificently. Creating 34,000 beds at the start of the pandemic. Coping with an unprecedented surge in demand in Winter 2021. Delivering one of the fastest and most effective vaccination campaign ever. Developing world leading COVID-19 therapeutics.

These have been extraordinary achievements, only made possible by the commitment, professionalism and dedication of our frontline staff, to whom we owe so much.

As we entered the pandemic, the NHS was struggling with four fault lines that had developed over the previous decade. Between 2010 and 2020, the NHS had gone through the deepest and longest financial squeeze in its history. This meant that the service had been unable to grow its capacity to match rapidly rising demand. The failure to develop a fully funded long term workforce plan has left the NHS with 110,000 vacancies and existing staff with an increasingly unsupportable workload. And successive Governments had failed to tackle the growing problems in social care.



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COVID-19 has exacerbated these fault lines, leaving the NHS with a series of vital challenges to meet – record care backlogs, an unstable urgent and emergency care pathway, a tired and exhausted workforce in desperate need of a sustainable workforce model, significant inflationary pressures and a new statutory integrated health and care organisational structure to implement.

COVID-19 also laid bare the full, very worrying, extent of health inequalities in our country. As this valuable State of the Nation report illustrates, the pandemic disproportionately affected people living in deprived areas and from black, Asian and minority ethnic communities. In a growing cost of living crisis there are real concerns that disparities in health outcomes could become even more pronounced. Health inequalities are not new, they existed pre-pandemic. But it remains intolerable that whole swathes of our society suffer worse health outcomes because of factors such as ethnicity, socio-economic background, employment and housing status and income and education.

There are significant reasons for optimism. Our frontline staff are as committed as ever. The pandemic has turbo charged more integrated working at local level. Digital and 21st century personalised medicine offer the opportunity to transform how we provide care. The creation of integrated care systems (ICSs) should enable us to genuinely manage the health of the whole local population we serve, with the chance to finally get upstream and prevent illness rather than just treat it.

But any attempt to improve health outcomes needs to start for a healthy respect for the data and the evidence. By bringing together a series of different sources of data and evidence into a single place, this report provides a valuable overview of where the NHS, and the wider health and care system, needs to focus as we continue our vital task of improving the health of the nation".

SAFFRON CORDERY, Interim Chief Executive, **NHS Providers**

1. Executive Summary

Wilmington Healthcare

Wilmington Healthcare is a company founded on the interpretation and analysis of data. Our dedicated teams have access to a huge range of UK health and social care datasets; they specialise in creating platforms, tabulations and visualisations that enable NHS stakeholders, and their suppliers, to gain insight that can help change services for the better.

Data offers a unique view of the NHS at any given point in time, revealing its many challenges, priorities and preoccupations. Our new State of the Nation report exposes key insights from healthcare data patterns over the course of the pandemic. Drawing on a raft of data from across primary and secondary care spanning the last two years, it paints an extraordinary picture of what happened to the NHS during one of the most turbulent periods in its history.

The review covers six broad areas: Hospital Episode Statistics (HES), demographic segmentation, therapy area analysis, referral to treatment analysis, prescribing insight and regional insight.

Each area tells a story of impact – from COVID-19 and other healthcare-environmental factors – and of variation, in how different localities, populations, and therapy areas have fared in their wake. Many of our visualisations reveal challenges in access to and speed of treatment, and health inequalities correlating in some cases to ethnicity and deprivation.

A transformation in delivery

First and foremost, the report highlights the scale and immediacy of the transformation in delivery across the NHS. Services were dramatically remoulded – virtually overnight in some cases – as restrictions and emergency protocols forced the NHS to remodel care pathways at break-neck speed.

Our analysis of the NHS's Hospital Episode Statistics (HES) data shows inpatient admissions collapsed from 17.3m in 2019/20 to 12.8m in 2020/21, as the NHS took dramatic steps to minimise patient footfall. Outpatient care saw a similarly stark redrawing of activity, with a 39% drop in in-person appointments and over a five-fold increase in telemedicine appointments.

With the exception of infectious disease – which saw an increase for obvious reasons – all therapy areas saw annual declines in admissions in 2020/21. Spells in oncology, gastroenterology, musculoskeletal, respiratory and ophthalmology all fell in 2020/21, undoing historic growth. Genitourinary and cardiovascular admission also fell, but not as sharply as the other major therapy areas.

Overall, our cost analysis shows the NHS spent between 12% and 51% less across all therapy areas in 2020/21 compared to the previous year.

Prescribing patterns

This operational shock left its mark on prescribing patterns too. In secondary care, mucolytics saw the sharpest percentage increase in costs in 2020/21 following the launch of ivacaftor for cystic fibrosis. Spend on ophthalmic preparations, meanwhile, fell by 14.6% as problems maintaining routine eye appointments in secondary care impacted spend on high-value treatments for wet AMD.

Antibacterials fell sharply too as prescribing of antibiotics continued to shrink – though this was potentially exacerbated by the reduction of inpatient admissions, which meant fewer non-COVID-19-related hospital-acquired infections. Drug areas associated with oncology and immunology provided the largest source of prescribing expenditure, showing their considerable cost burden on NHS budgets. Cytotoxic drug costs increased by 9.0% to £1.8 billion in 2020/21, making it by far the largest single section in terms of prescribing costs.

In primary care, meanwhile, the largest area of expenditure was diabetes, which accounted for £1.2 billion of prescribing costs in 2020/21. However, by far the largest percentage increase in expenditure involved antidepressants, which rose by two-thirds (66%) to £371m in 2020/21: a reflection, perhaps, of the toll that the pandemic took on the nation's mental health.

Drilling down into specific drugs, the use of innovative treatments in secondary care remained strong despite the pandemic. Leading products were specialty medicines such as monoclonal antibody therapies, many of which are used to treat cancer or immunological indications. The NHS's commitment to provide innovative therapies to

address unmet patient needs is exemplified by the cystic fibrosis treatment ivacaftor, spending on which rose over three-fold to £393.9m in 2020/21. Other recently approved products, emicizumab for haemophilia A and asfotase alfa for hypophosphatasia, also saw costs increase by more than 200% in 2020/21.

In primary care, a different story unfolds. Unlike secondary care, the leading primary care products sat primarily within respiratory, cardiovascular and diabetes therapy areas. There are also a greater number of generic products prescribed within primary care. Anticoagulant therapies such as apixaban, rivaroxaban and edoxaban topped the spending charts, while respiratory products such as inhalable treatments for asthma and COPD were another significant area of spend.

However, the most dramatic change in primary care prescribing in 2020/21 involved the anti-depressant sertraline, which saw more than four-fold growth (305%). Statins, such as atorvastatin, and the GERD drug omeprazole also saw significant gains. All are suggestive of the strains that the pandemic placed on people's lifestyles and ability to manage their conditions.

It is also worth noting the type of drugs that saw the biggest falls – in particular, there were notable dips in the prescribing of new, high value drugs in primary care during the peak of the pandemic. We can only speculate about why this may be – perhaps because some of these drugs are likely to need an acute sponsor which may have been more challenging during a period of restricted access to outpatient care. It may also be that GPs and/or area prescribing committees were more reticent to prescribe new medications at a time when primary care was less able to have regular, face-to-face contact with patients.

Conclusions

Two final data sets should give stakeholders food for thought. The first is the referral to treatment (RTT) waiting list, which ballooned from 4 million incomplete pathways at the start of the pandemic to more than 6 million in November 2021. There is no better illustration of the magnitude of the backlog facing the NHS, and the enormous pressure on the health service to deliver.

The other is the regional variation in per capita spend on prescribing, which ranges from over £400 per person in the highest spending regions, to just over £200 per person in the lowest spending ICSs. Many factors are likely to be behind this, including demography, patient demands and expectations, clinical choice, differences in interpretation of guidelines, and the level of bureaucratic burden and financial stress within systems.

Whatever the cause, the scale of variation underlines the continuing disparities in population health management within the NHS. The importance of prescribing in managing both chronic and acute health conditions is well-known yet there are still stark variations in prescribing practice which means where you live continues to define how you are treated.

It leaves much to ponder, for NHS leaders in Integrated Care Systems and Places, for clinicians on the frontline, and for industry suppliers, as they prepare for the future.

OLI HUDSON, Content Director, **Wilmington Healthcare**

2. Hospital Episode Statistics Overview

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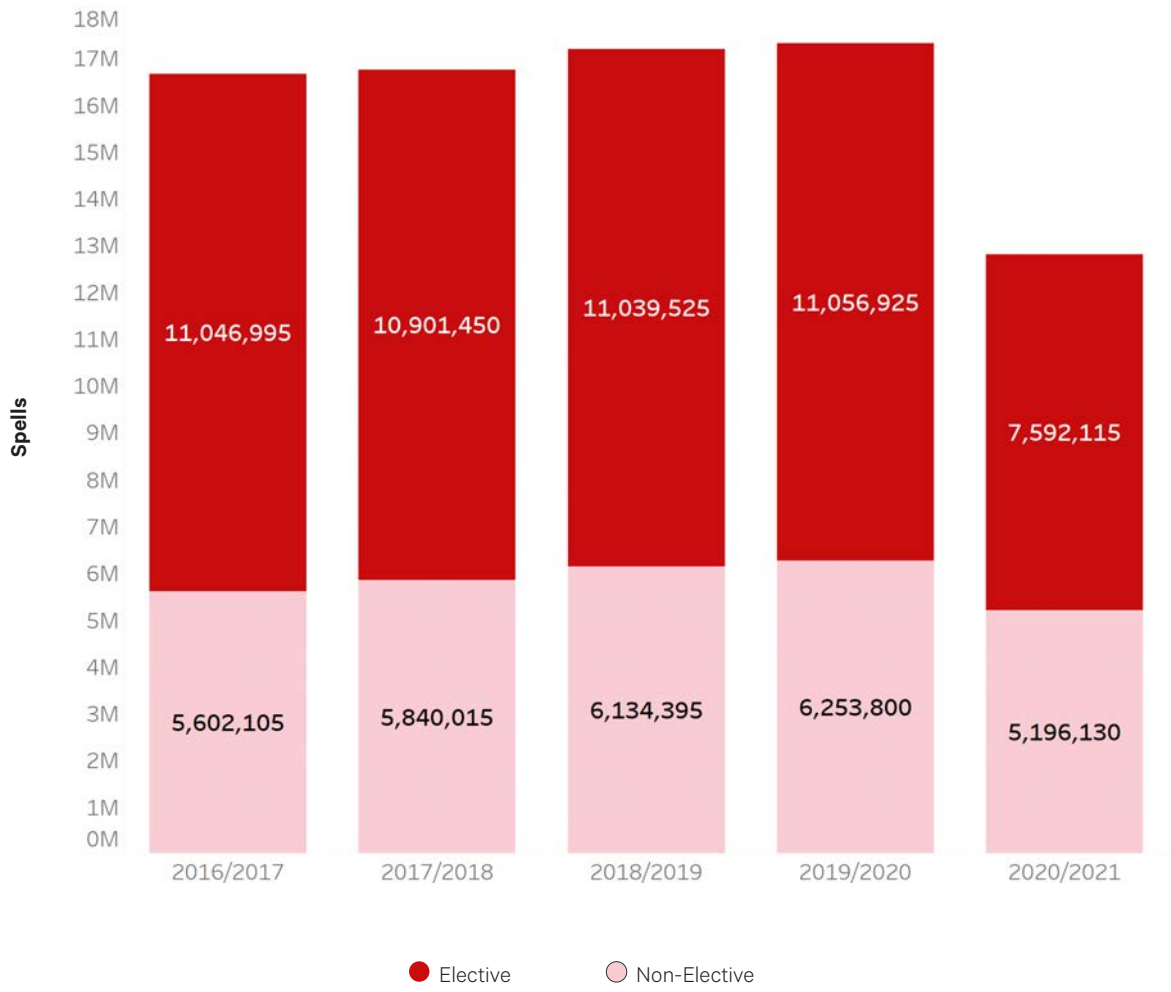
Spells by Admission Type, Inpatient, 2016/17 to 2020/21



Elective admissions fell by almost a third in 2020/21

In what was an unprecedented year for the health service, inpatient spells fell by over a quarter (-26.1%) from 17.3m in the 2019/20 financial year to 12.8m in 2020/21. Inpatient activity had seen a steady increase in the four years prior to 2020/21, due largely to rising non-elective admissions, however COVID-19's impact on the health service saw a decline in elective admissions by 3.5m (-31.3%), while non-elective admissions fell by 1.1m (-16.9%).

Source: HES

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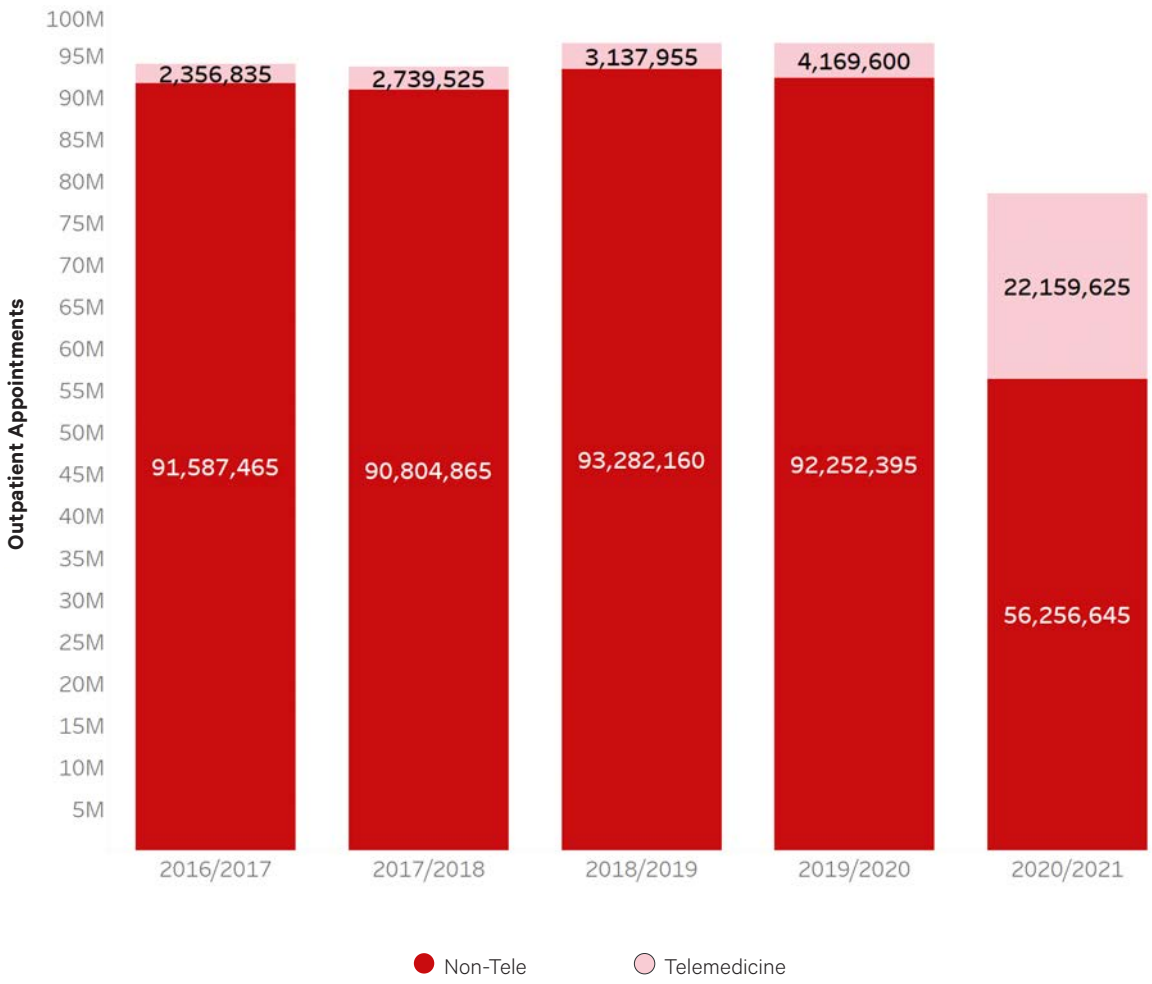
Appointments by Attendance Type, Outpatient, 2016/17 to 2020/21



Telemedicine appointments were up over 400% in 2020/21

Outpatient activity was similarly impacted by the COVID-19 pandemic, with an overall decrease in outpatient appointments of 18m (-18.7%) between 2019/20 and 2020/21. This net change in outpatient activity is attributable to the 36m (-39.0%) drop in in-person appointments, which fell in line with the barriers to secondary care imposed during the height of the pandemic. Conversely, there was a dramatic 18m (+431.5%) increase in telemedicine appointments as the health service transitioned towards remote and digital care.

Source: HES

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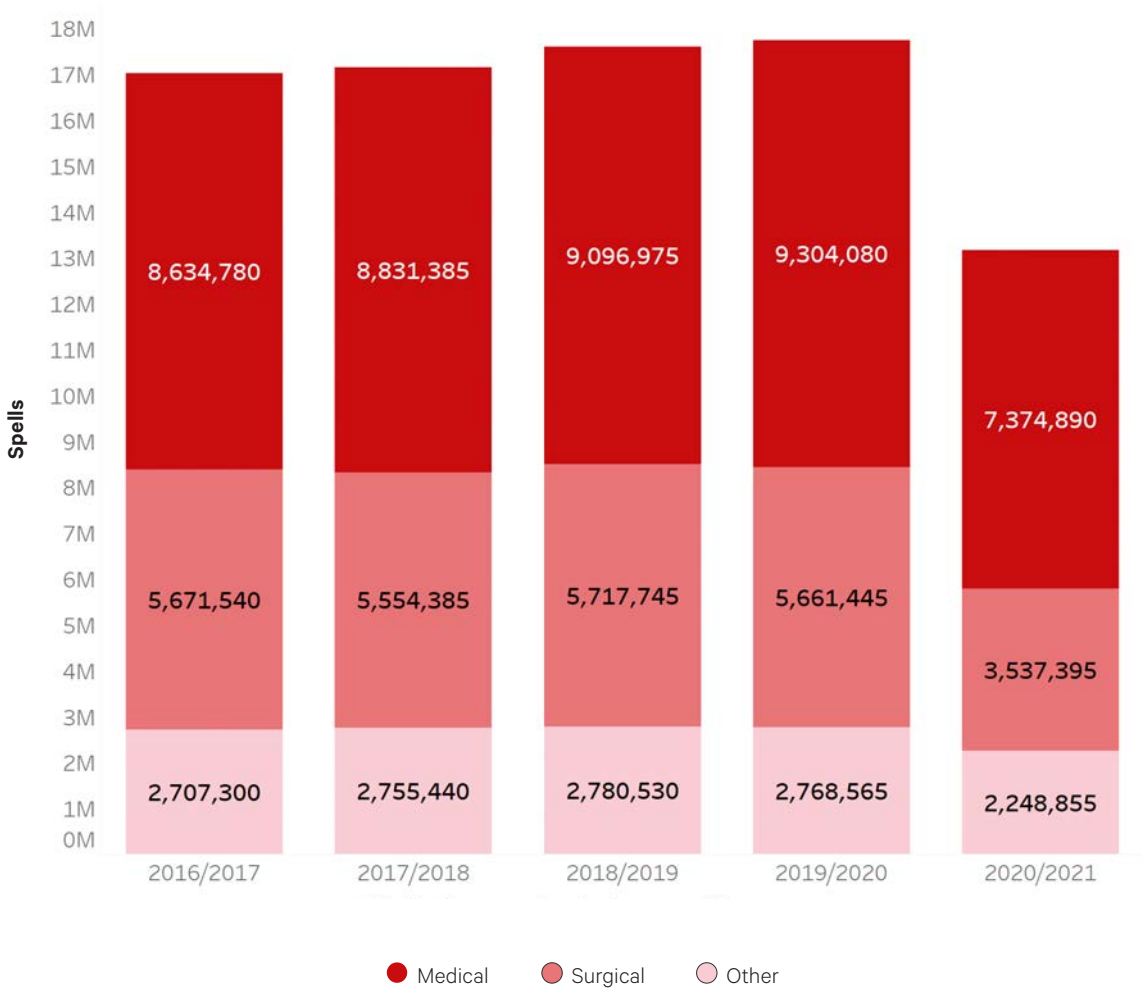
Spells by Specialty Type, Inpatient, 2016/17 to 2020/21



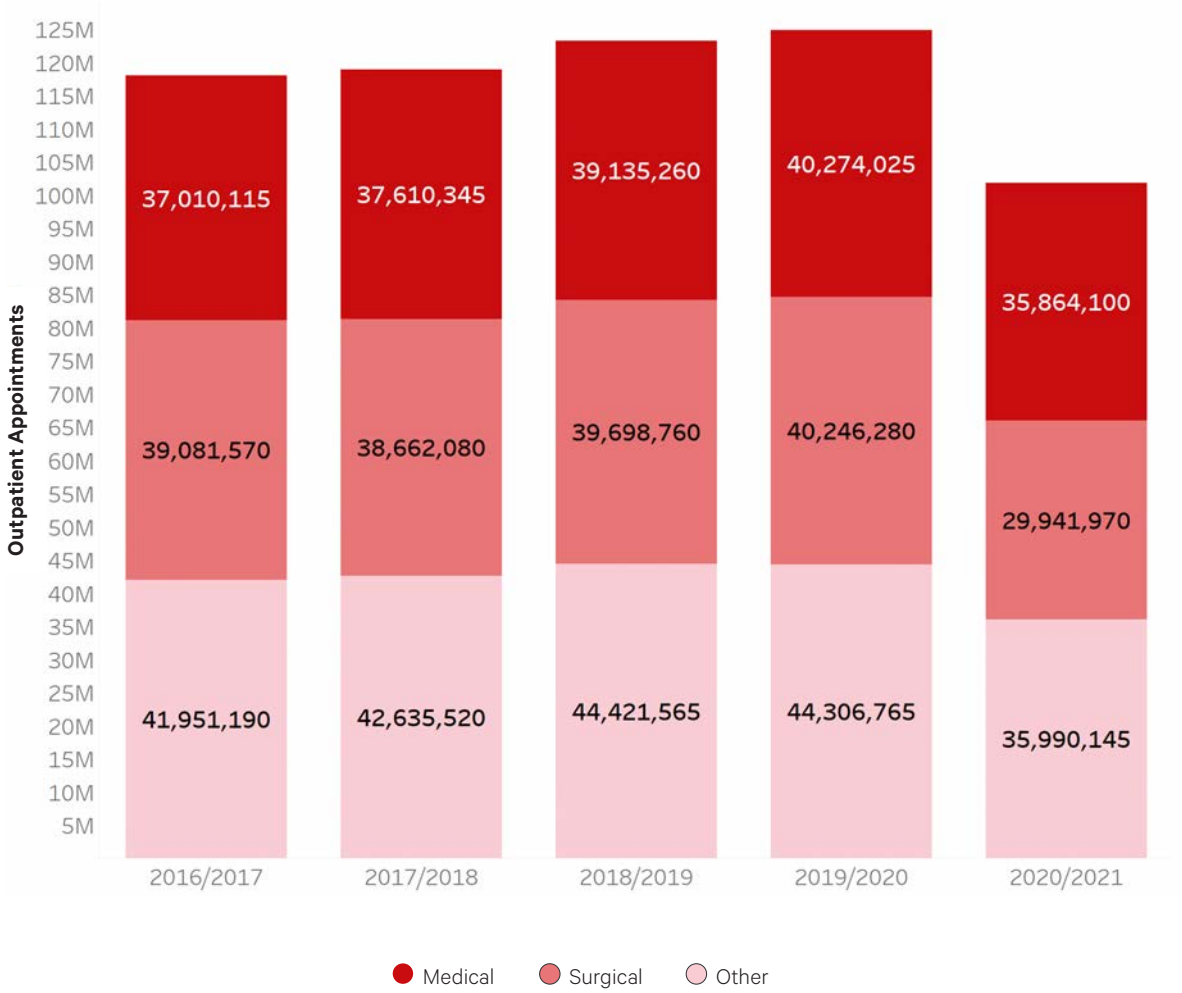
Surgical admissions fell by more than 2 million

The decline in inpatient activity in 2020/21 was observed across all specialty types. In percentage terms, surgical inpatient spells fell sharpest with a decrease of -37.5% (2.1m in absolute terms) as fewer surgical pathways were provided in line with barriers to secondary care. Medical inpatient activity, which had an upward trend prior to the pandemic year, rising by 0.7m (+7.8%) between 2016/17 and 2019/20, fell by 1.9m (-20.7%) in 2020/21.

Source: HES

Wilmington Healthcare

Appointments by Specialty Type, Outpatient, 2016/17 to 2020/21



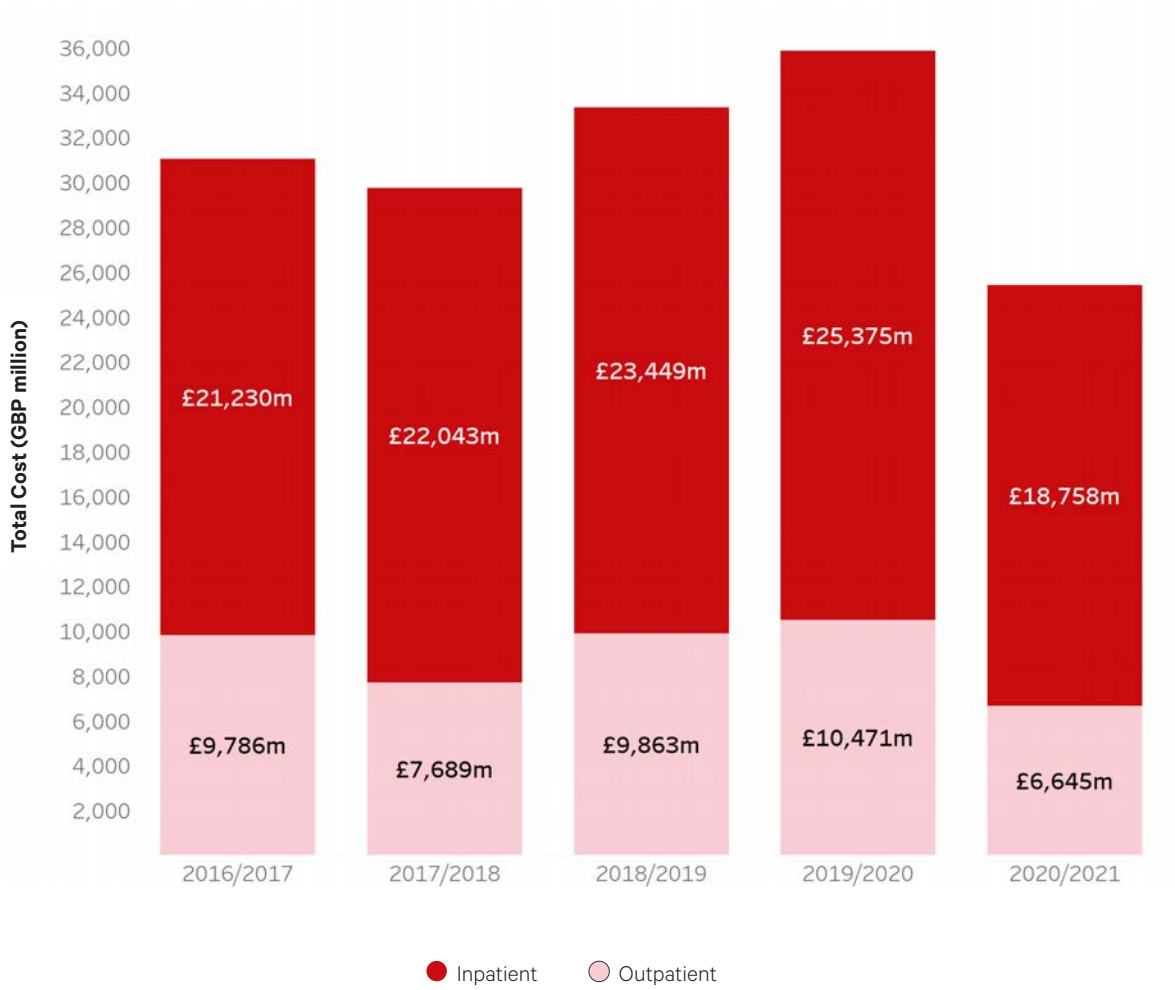
There were 10 million fewer outpatient surgical appointments in 2020/21

A similar picture is seen when looking at outpatient appointments by specialty type. Surgical outpatient appointments fell sharpest in 2020/21, with a drop of 10.3m (-25.6%) due to reduced access to surgical specialists following the onset of the pandemic, while medical appointments fell by 4.4m (-10.9%) having historically increased by 3.3m (+8.8%) between 2016/17 and 2019/20.

Source: HES

Wilmington Healthcare

Total Cost by Hospital Setting, Inpatient & Outpatient, 2016/17 to 2020/21



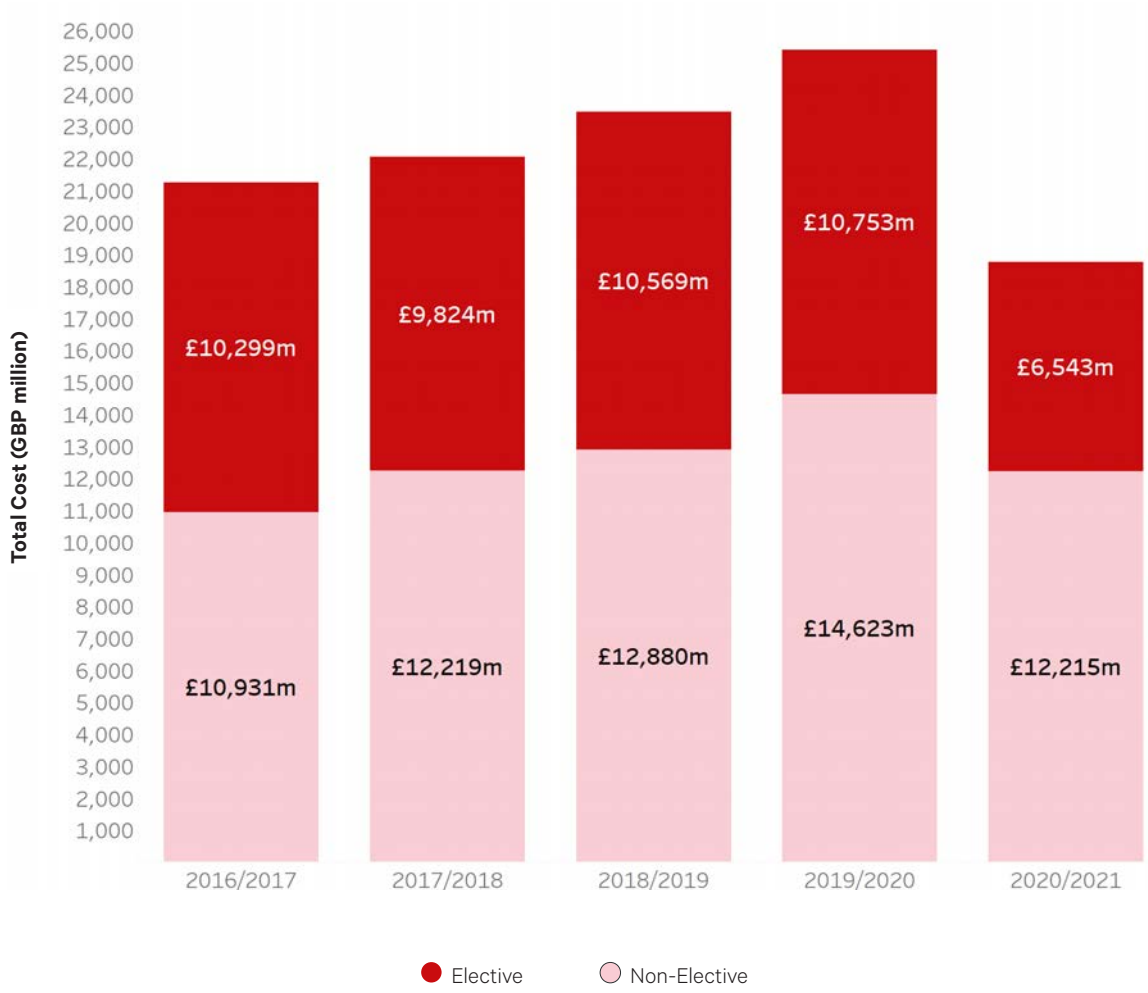
Overall secondary care costs decreased by over GBP 10 billion in 2020/21

Despite a significant drop in 2020/21 due to the impact of COVID-19, inpatient services accounted for the majority of secondary care costs with 73.8% of total secondary care costs going on inpatient care in 2020/21. Despite a drop in 2017/18, total outpatient costs remained relatively flat from 2016/2017 to 2019/20 until a sharp drop in 2020/21 on account of COVID-19, which saw outpatient services rely more heavily on remote, telehealth appointments. Indeed, reduced appointments and the shift to telehealth resulted in a reduction in outpatient costs of GBP 3.8 billion or a 36.5% decrease in 2020/21. Total inpatient costs meanwhile, which saw a steady rise historically between 2016/17 and 2019/20, fell by GBP 6.6 billion or 26.1% in 2020/21 due to the increased barriers to inpatient services that followed the onset of the COVID-19 pandemic.

Source: HES

Wilmington Healthcare

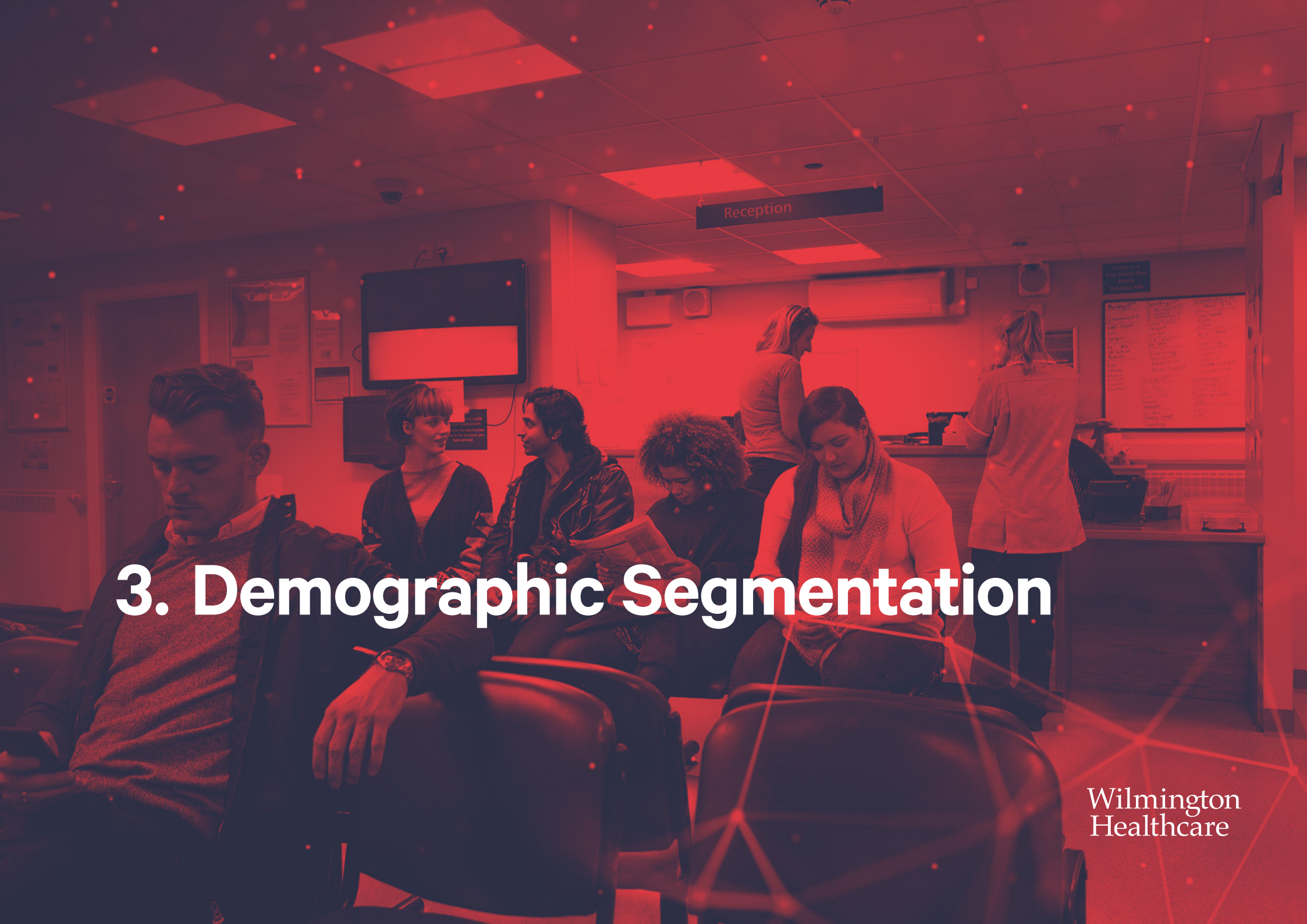
Total Cost by Admission Type, Inpatient, 2016/17 to 2020/21



Elective costs were down by over a third in 2020/21

Prior to the impact of the COVID-19 pandemic in 2020/21, non-elective/emergency admissions accounted for an increasing proportion of overall inpatient costs, while elective costs remained relatively flat from 2016/17 through to 2019/20. Furthermore, following the onset of the COVID-19 pandemic, spend on elective services was disproportionately impacted, with total costs of elective care falling GBP 4.2 billion or 39.2% between 2019/20 and 2020/21. In contrast, non-elective/emergency costs fell by GBP 2.4 billion or 16.5% between 2019/20 and 2020/21. As a result, non-elective admissions accounted for 65.1% of overall inpatient spend in 2020/21 (compared to 51.5% of total spend in 2016/17), highlighting the challenge facing the NHS to better manage the rate of emergency admissions in order in the wake of the COVID-19 pandemic. This challenge puts greater emphasis on population health management which the NHS will be better placed to tackle following the formation of the ICSs and associated collaborative approach across primary and secondary care networks.

Source: HES



3. Demographic Segmentation

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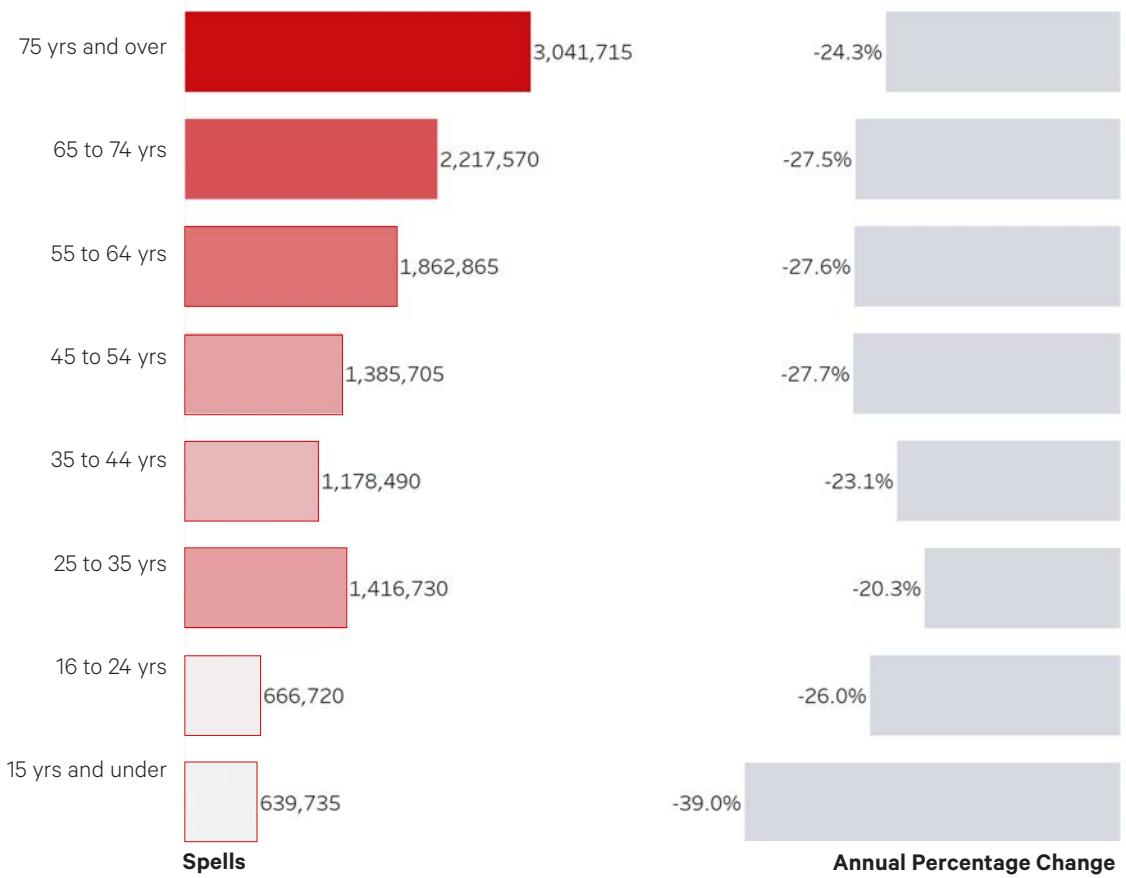
Spells by Age Band, Inpatient, 2020/21



Patients 55 and over account for almost 60% of all hospital admissions

Looking at inpatient activity by age shows that patients were impacted by the COVID-19 pandemic across all age bands. Paediatric patients (15 and under) were the most heavily impacted by the changing healthcare environment with a 39.0% drop in inpatient spells. Adult patients in the 55 and over age bands comprise the majority of admissions, collectively accounting for 57.4% of all inpatient spells in 2020/21, and exhibited a reduction in activity by approximately a quarter.

Source: HES

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Indexed Spells by Gender, Inpatient, 2016/17 to 2020/21

Male admissions grew faster than female admissions historically

The trend of inpatient activity by gender demonstrates a similarly impactful decline in activity in 2020/21. Overall spells in the male category had historically increased at a faster rate than activity in the female category, with a 4.7% increase in spells for male patients between 2016/17 and 2019/20 vs a 3.4% increase for females over the same period. However, the male category saw a sharper 27.7% drop in spells in 2020/21 as COVID-19 impacted services, while female inpatient activity fell 26.9% year-on-year, indicating that despite a historically faster rate of growth in admissions, inpatient activity in males was more heavily impacted by the changing healthcare landscape.

Source: HES

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Admission Rates Trend by Ethnicity, Inpatient, 2016/17 to 2020/21

Patients from black ethnic backgrounds accounted for the greatest number of admissions per 100,000 population in 2020/21

Inpatient spells per 100,000 population were significantly lower for all ethnic groups in 2020/21 as the impact of COVID-19 on access to secondary care was felt across all communities. Patients from white backgrounds, who had historically represented the greatest burden on the health service in proportional terms, experienced the sharpest drop in activity with a 27.1% fall to 19,739 spells per 100,000 people in 2020/21. Patients from black ethnic backgrounds saw a less steep decline in inpatient activity, falling 22.4% to 20,449 spells per 100,000 population in 2020/21 and as a result overtook the white population in terms of proportional burden on inpatient services. Patients from Asian and mixed ethnicities represent a proportionally lower burden on inpatient services and saw a decline in spells per 100,000 population of 25.9% and 23.3% in 2020/21, respectively.

Source: HES, ONS, QOF

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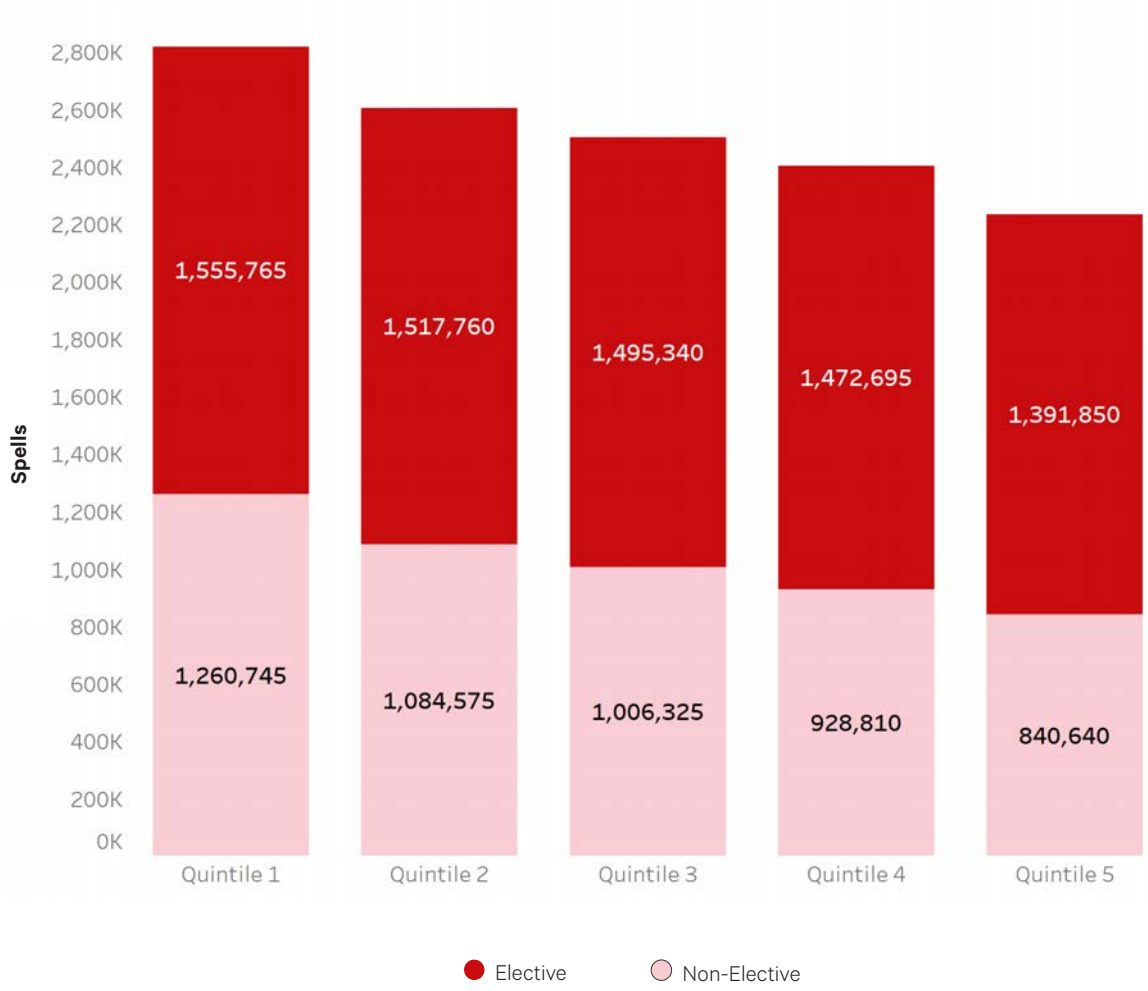
Spells by Admission Type and IMD Quintile, Inpatient, 2020/21

(where 1 = most deprived, and 5 = least deprived)



Patients from the most deprived areas account for the highest number of hospital admissions

Looking at the distribution of inpatient activity across the deprivation spectrum reveals a clear relationship between patient deprivation and overall burden on the health service in 2020/21. Overall inpatient spells were 2.8m in the most deprived patient quintile compared to 2.2m in the least deprived quintile. This difference was largely driven by non-elective (emergency) admissions, which were considerably higher in the most deprived quintile (1.3m) than in the least deprived patient quintile (0.8m).

Source: HES, IMD

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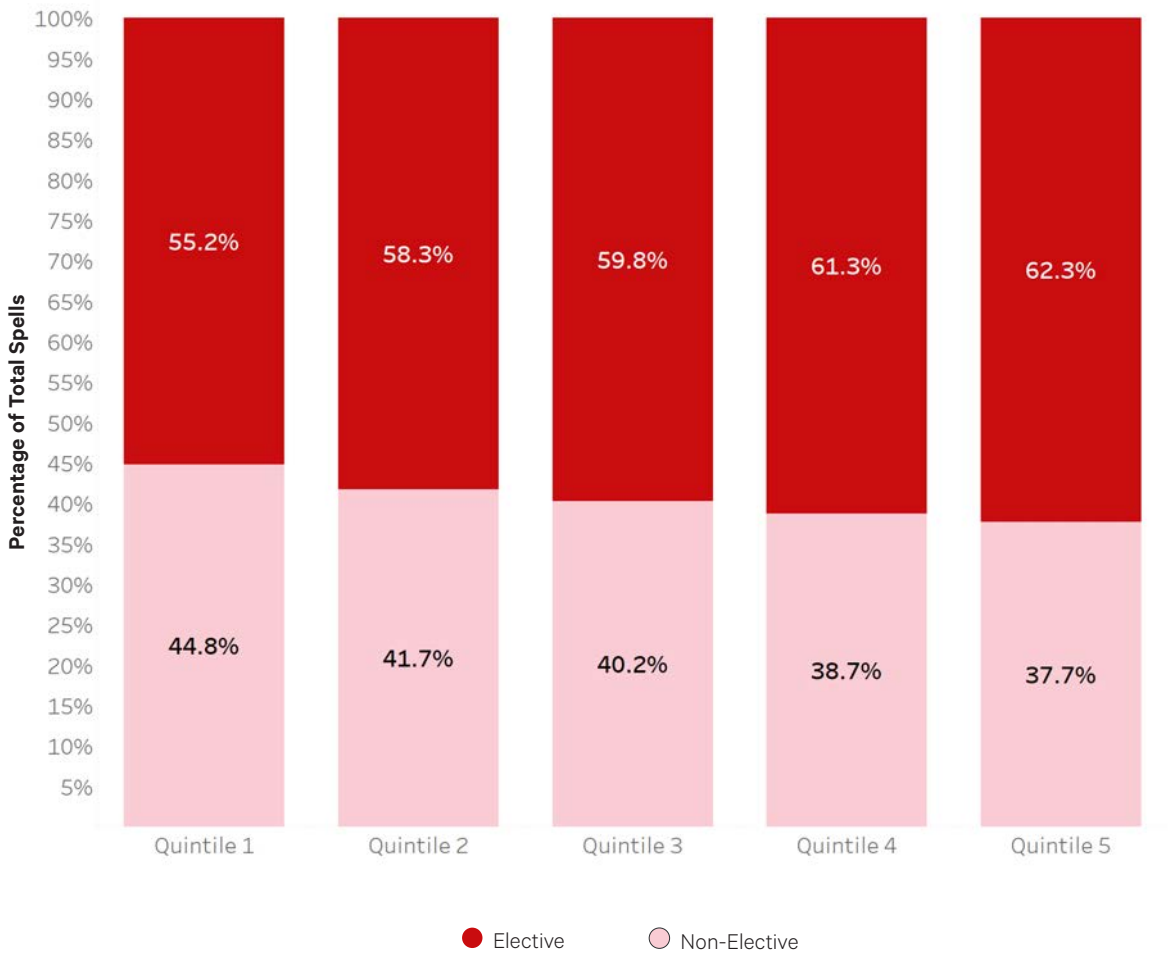
Percentage of Total Spells by Admission Type and IMD Quintile, Inpatient, 2020/21 (where 1 = most deprived, and 5 = least deprived)



Deprived patients have a disproportionate number of emergency admissions to secondary care

If we view the same data in percentage terms, the notion that deprivation is associated with disproportionately to higher non-elective admissions can be clearly observed. The number of non-elective/ emergency admissions as a percentage of total admissions is highest in the most deprived patient cohort and decreases with reduced levels of deprivation. This clearly illustrates the challenge facing the NHS as it transitions towards integrated care and population health management via the formation of ICS, namely, to tackle the health burden stemming from areas of higher deprivation.

Source: HES, IMD

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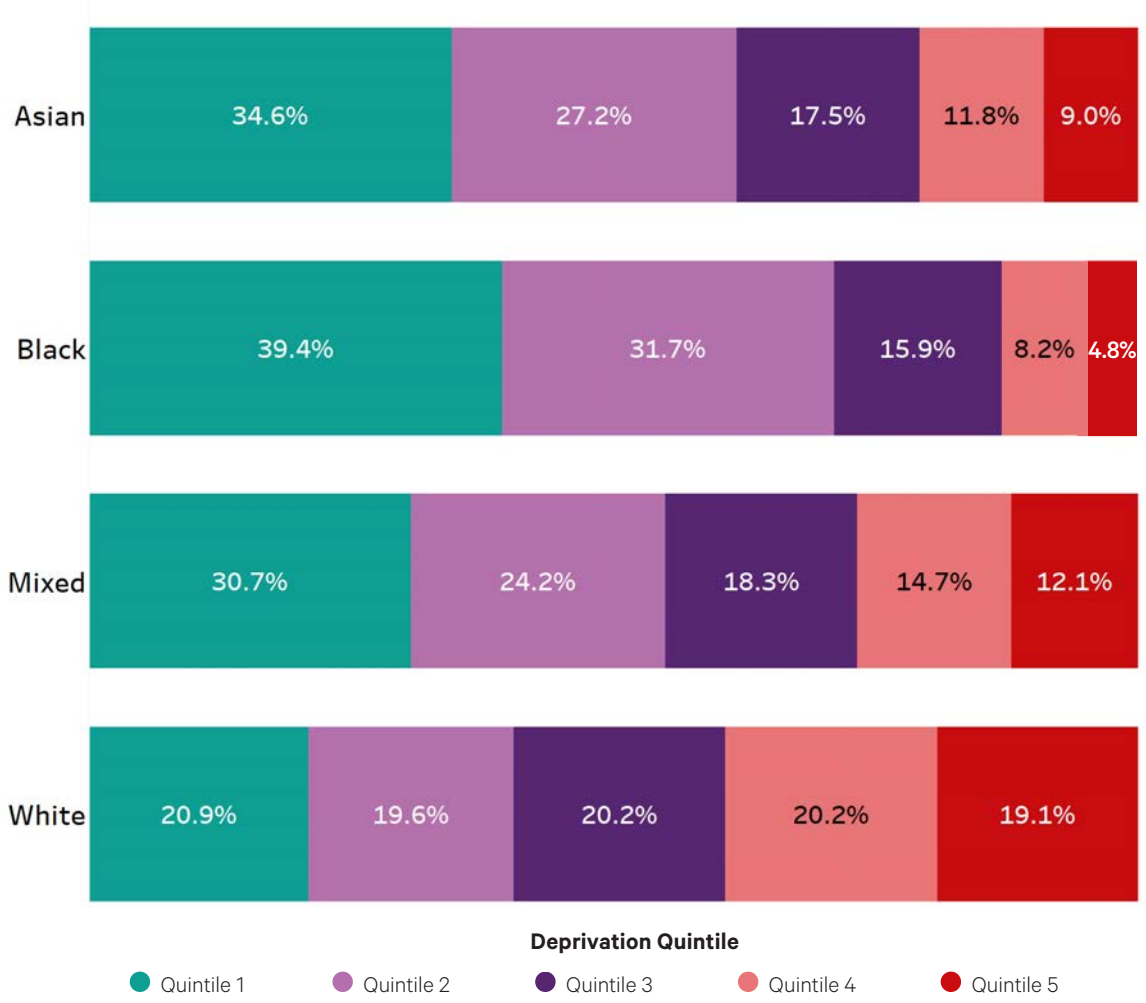
Patient Distribution by Ethnicity and IMD Quintile, Inpatient, 2020/21

(where 1 is most deprived and 5 is least deprived)



Minority ethnic patients are more likely to come from deprived communities

When patients admitted to secondary care are segmented by both ethnicity and deprivation a clear bias emerges in terms of the distribution of ethnic groups across areas associated with higher deprivation. Whereas the white patient population is evenly distributed across the five deprivation quintiles, patients from black and Asian groups disproportionately come from areas associated with higher deprivation. Indeed, 71.0% of black patients and 61.7% of Asian patients are from two most deprived deprivation quintiles compared to just 40.5% of the white population. Subsequently, efforts to tackle poorer health outcomes associated with deprivation must also understand that ethnicity and deprivation are in many instances not mutually exclusive.

Source: HES, IMD

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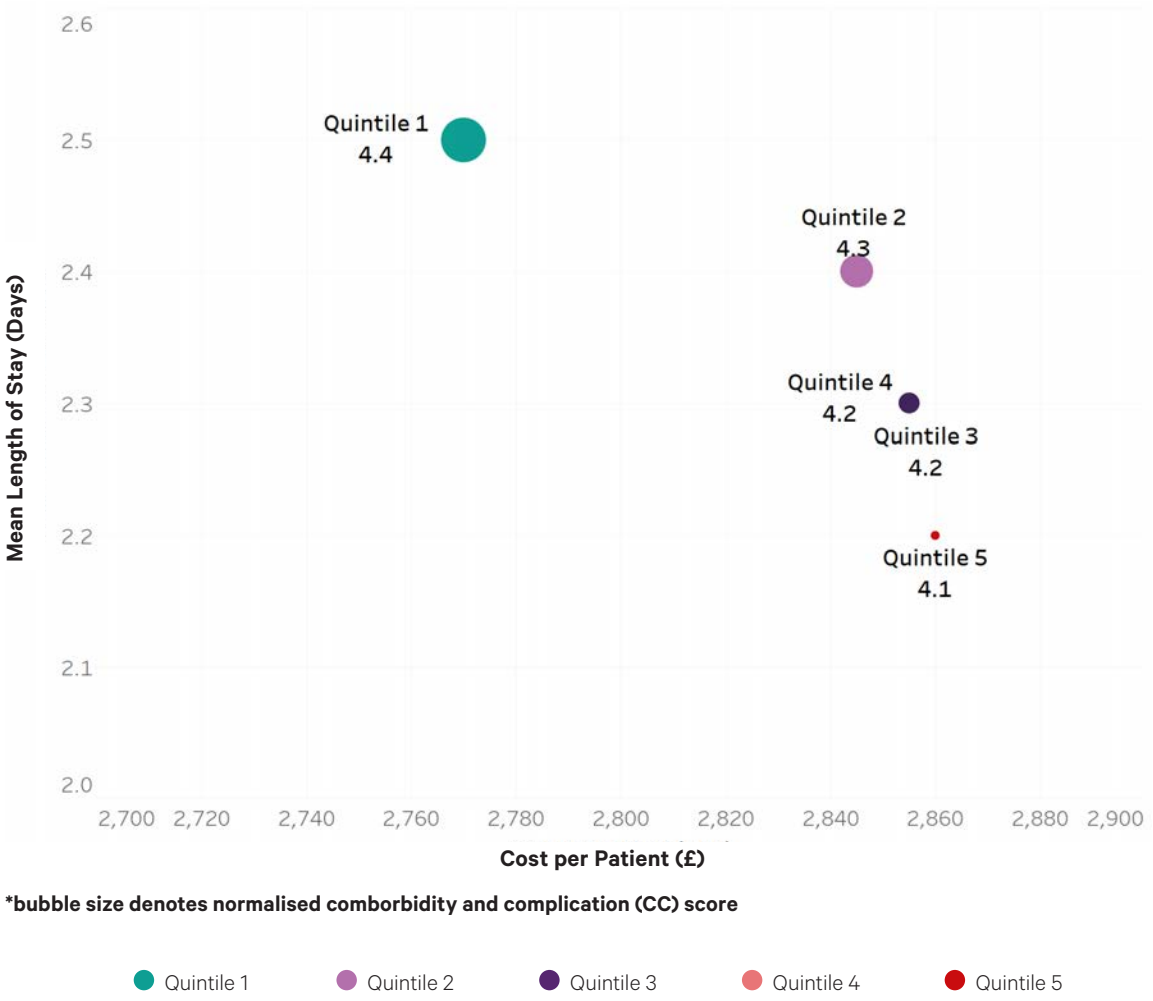
IMD Quintile Benchmark, Inpatient, 2020/21

(where 1 = most deprived, 5 = least deprived)



***bubble size denotes normalised comorbidity and complication (CC) score**

Deprived patients exhibit considerable disparity in health outcomes

Analysis of aggregate health outcomes nationally in 2020/21 reveals disparity in terms of patient deprivation status. Patients from the most deprived quintile on average stay longer in hospital (MLOS = 2.5 days), have a higher average aggregate comorbidity and complication (CC) score (4.4), and yet cost less than the least deprived patients on an average per patient basis (GBP 2,770). In contrast, patients from the least deprived quintile spend less time in hospital on average (MLOS = 2.2 days), have a lower aggregate CC score of 4.1 and yet cost more on a per patient basis (GBP 2,860). Having already identified disparity between quintiles 1 and 5 in terms of the ratio of elective to non-elective admissions, it is important to identify why health outcomes such as MLOS, CC score and per patient cost vary across the deprivation spectrum to achieve greater parity and reduce levels of inequality within the health service.

Source: HES, IMD

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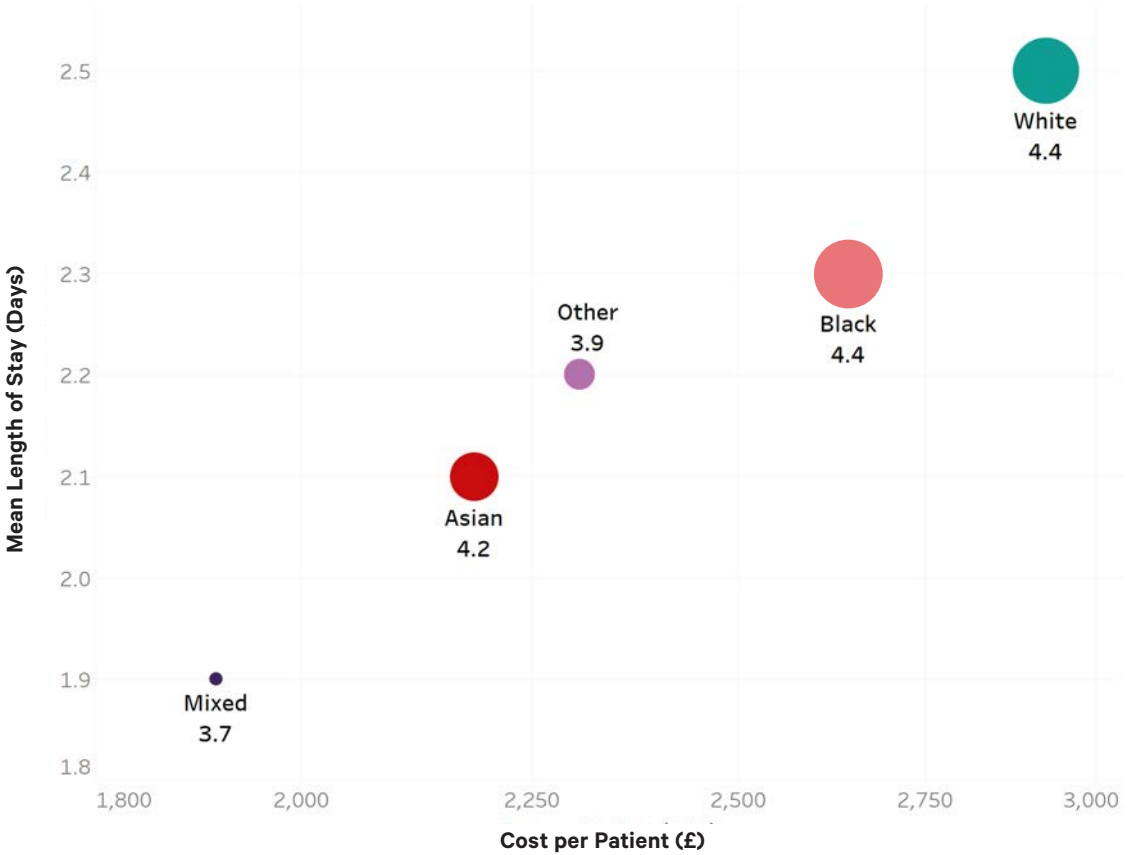
Ethnicity Benchmark, Inpatient, 2020/21



***bubble size denotes comorbidity and complication (CC) score**

White Asian Black Mixed Other

Minority ethnic patients exhibit considerable variation in outcomes compared to the national average

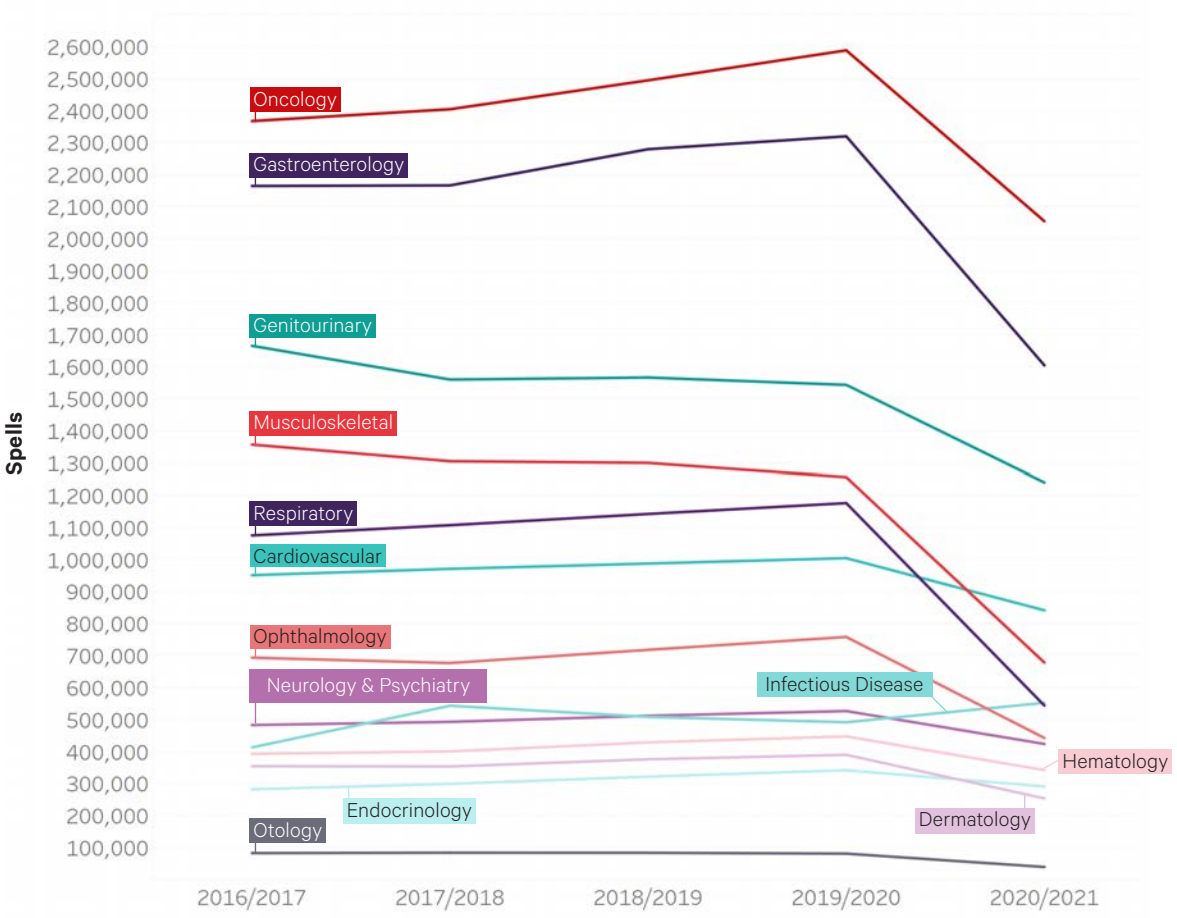
Looking at the same metrics in terms of ethnicity reveals similar levels of disparity. Patients from ethnic minority groups are associated with shorter hospital stays and lower per patient costs than the majority white population in England. They are also, aside from black patients, associated with lower aggregate comorbidity and complication (CC) scores.

Source: HES

4. Therapy Area Analysis

Wilmington Healthcare

Therapy Area (ICD-10 Chapter) Trend Analysis Inpatient, 2016/17 to 2020/21



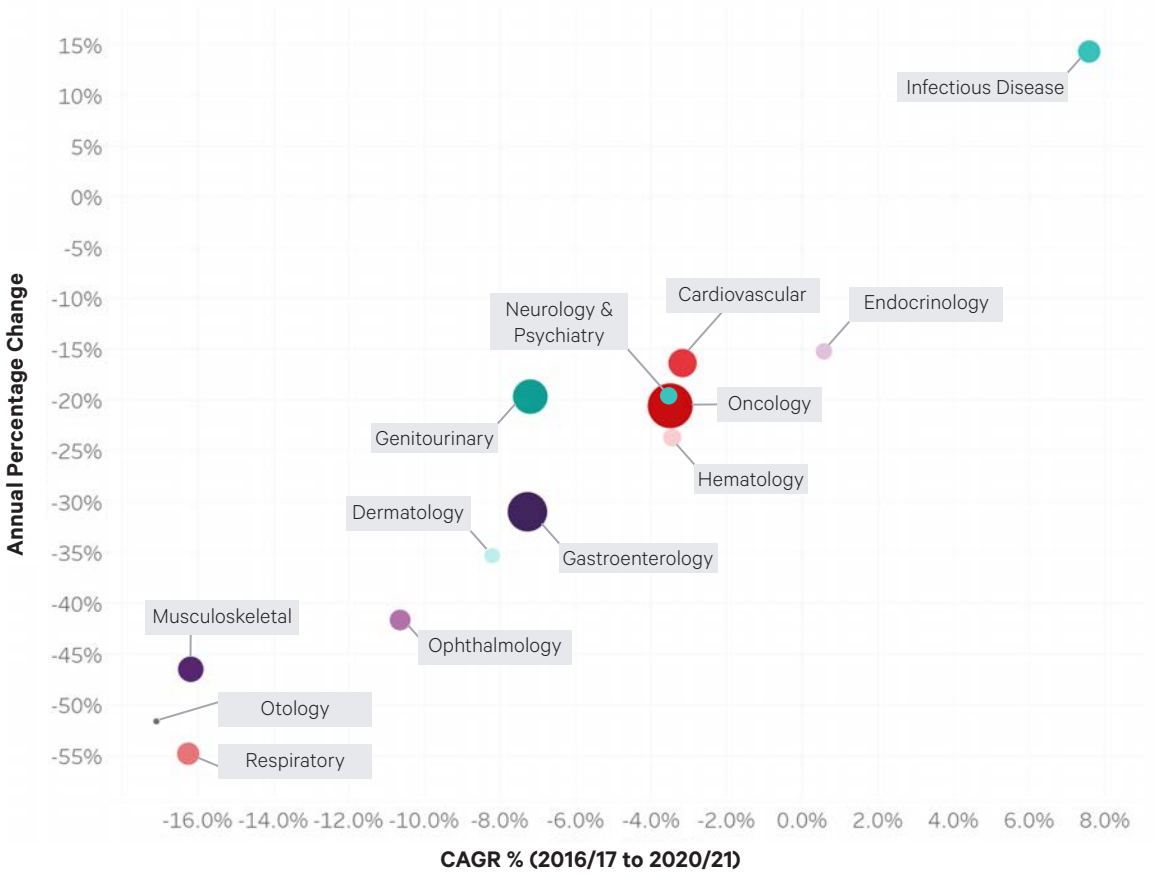
Declines in admissions were seen across all therapy areas in 2020/21 with the exception of infectious disease

Analysis of inpatient activity based on the primary reason for hospital admissions demonstrates the impact that the pandemic has had across all therapy areas. With the exception of infectious disease, which saw an increase in admissions, all therapy areas saw annual declines in admissions in 2020/21. Spells in oncology, gastroenterology, musculoskeletal, respiratory and ophthalmology, which collectively account for a large volume of admissions, all fell significantly in 2020/21, undoing any historic growth. Genitourinary and cardiovascular admission also fell, but not as sharply as the other major therapy areas.

Source: HES

Wilmington Healthcare

Therapy Area (ICD-10 Chapter) Admissions Analysis, Inpatient, 2016/17 to 2020/21



***bubble size denotes number of spells**

Infectious disease admissions increased more than 10% in 2020/21

The impact of the pandemic across the therapy area spectrum can also be observed in terms of growth rates. In 2020/21, every therapy area with the exception of infectious disease saw a greater than 10% annual decrease in admissions. Conversely, infectious disease admissions increased by more than 10% in line with hospitalisations due to COVID-19 infections. The impact of COVID-19 also eroded most historical growth as illustrated by negative compound annual growth rates (CAGRs) between 2016 and 2021 across every therapy area except for infectious disease and endocrinology.

Source: HES

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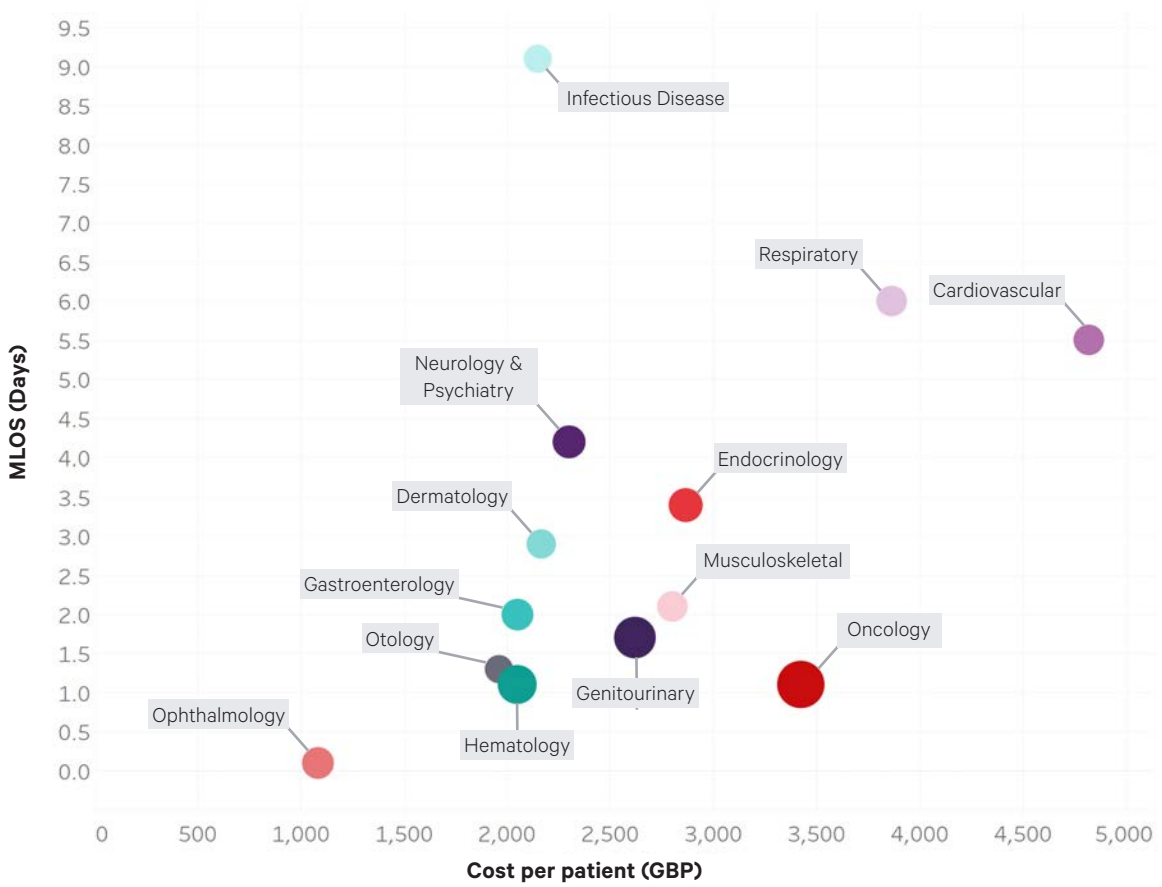
Therapy Area (ICD-10 Chapter) Benchmark Analysis, Inpatient, 2020/21



***bubble size denotes spells per patient**

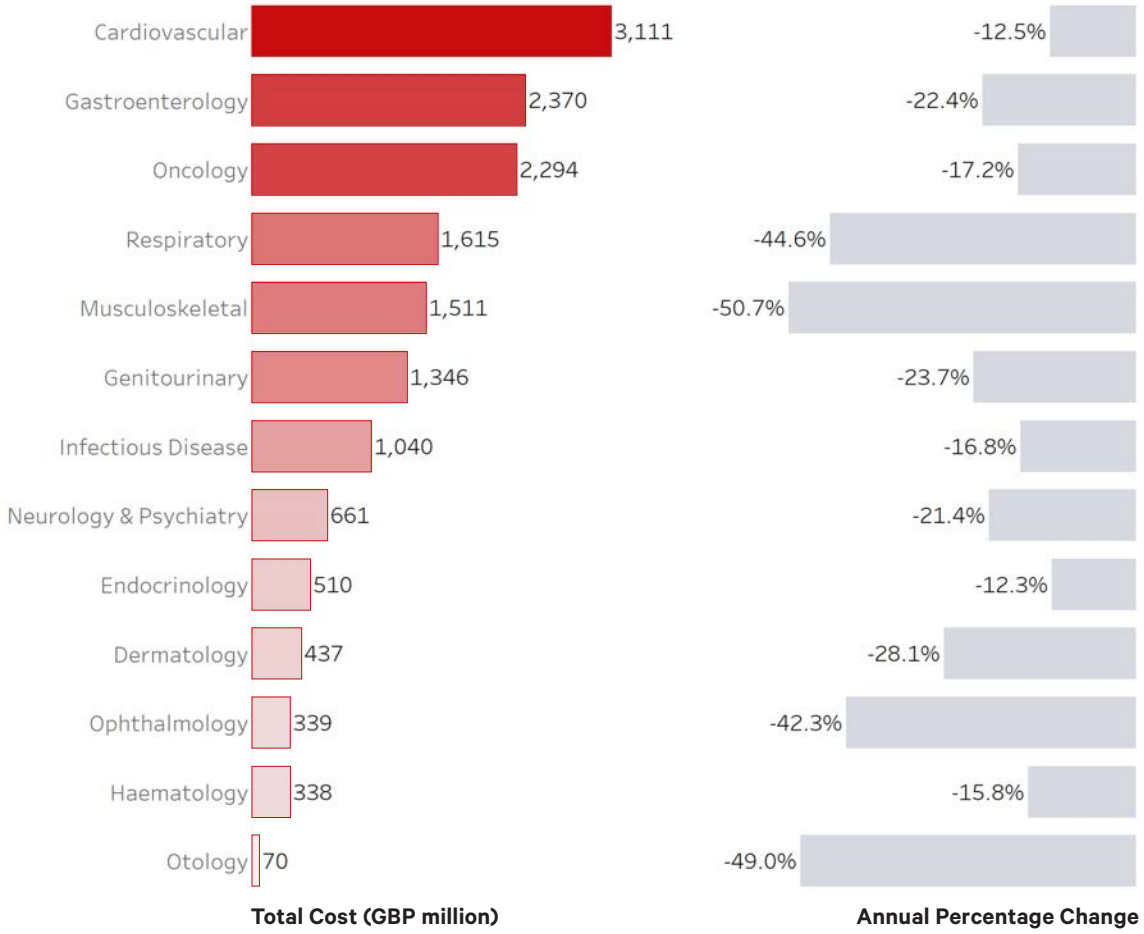
Cardiovascular admissions were associated with the highest per patient costs in 2020/21

Analysis of outcomes by therapy area in 2020/21 reveals considerable variation depending on primary reason for admission. Again, in line with COVID-19 hospitalisations, infectious disease admissions resulted in the longest hospital stays, with a mean length of stay of 9.1 days, far exceeding the national average MLOS of 2.5 days. A primary cardiovascular diagnosis was associated with the highest average costs at £4,820 per patient, compared to national average per patient costs of £3,195. Oncology has the highest spells per patient on account of the high volume of day case admissions for chemotherapy infusion treatment.

Source: HES

Wilmington Healthcare

Therapy Area (ICD-10 Chapter) Cost Analysis, Inpatient, 2020/21



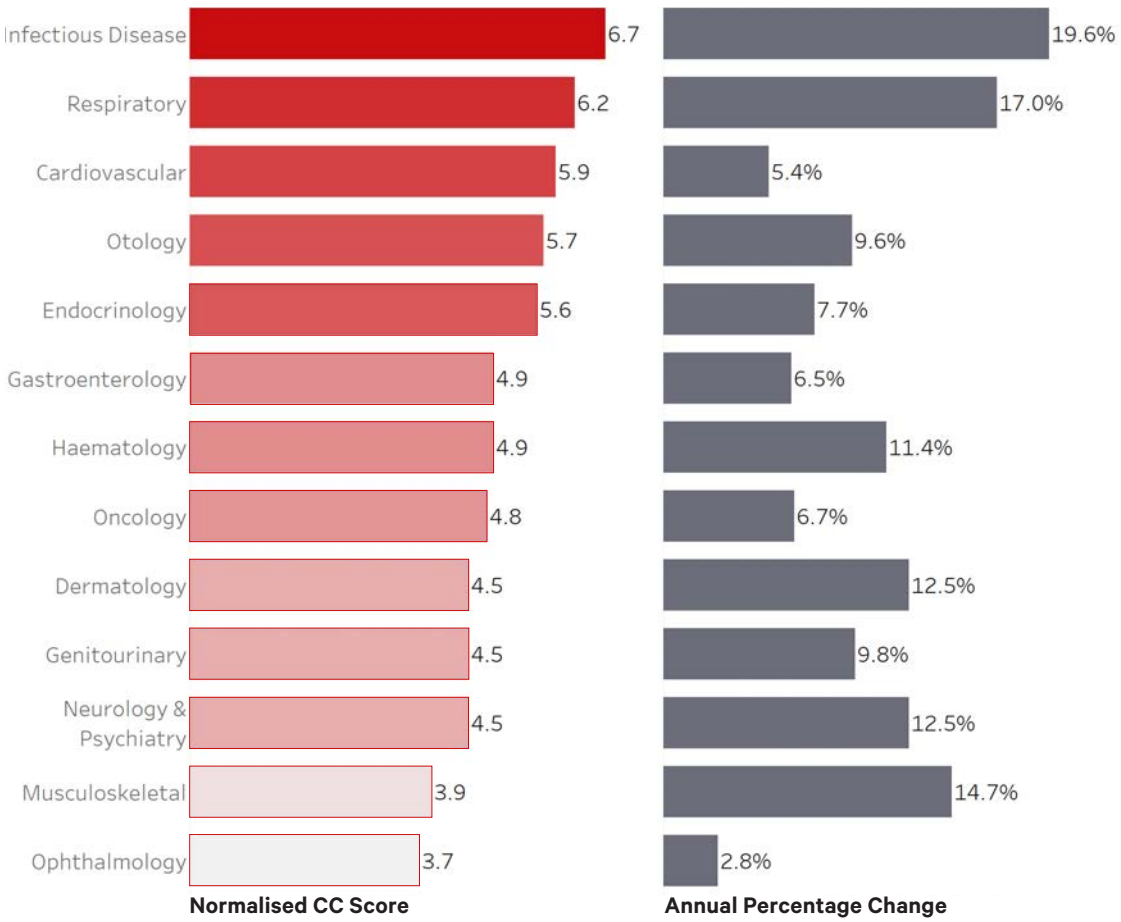
Cardiovascular, oncology and gastroenterology incurred the highest secondary care costs in 2020/21

We can also assess the burden within secondary care in terms of overall expenditure across therapy areas. In 2020/21, admissions with a primary diagnosis in either cardiovascular, oncology or gastroenterology therapy areas accounted for almost half of all inpatient care costs, with each resulting in costs of over GBP 2 billion in 2020/21. Although there was a measurable impact from COVID-19, spend within these areas was not as dramatically impacted by the pandemic and associated barriers to secondary care as other therapy areas such as musculoskeletal and respiratory, which saw overall costs fall by 50.7% and 44.6%, respectively. Indeed, the demand on cardiovascular services remained high with a comparatively low 12.5% fall in costs despite a significant drop in inpatient activity across the board.

Source: HES

Wilmington Healthcare

Normalised Comorbidity and Complication (CC) Score by ICD-10 Chapter, Inpatient, 2020/21



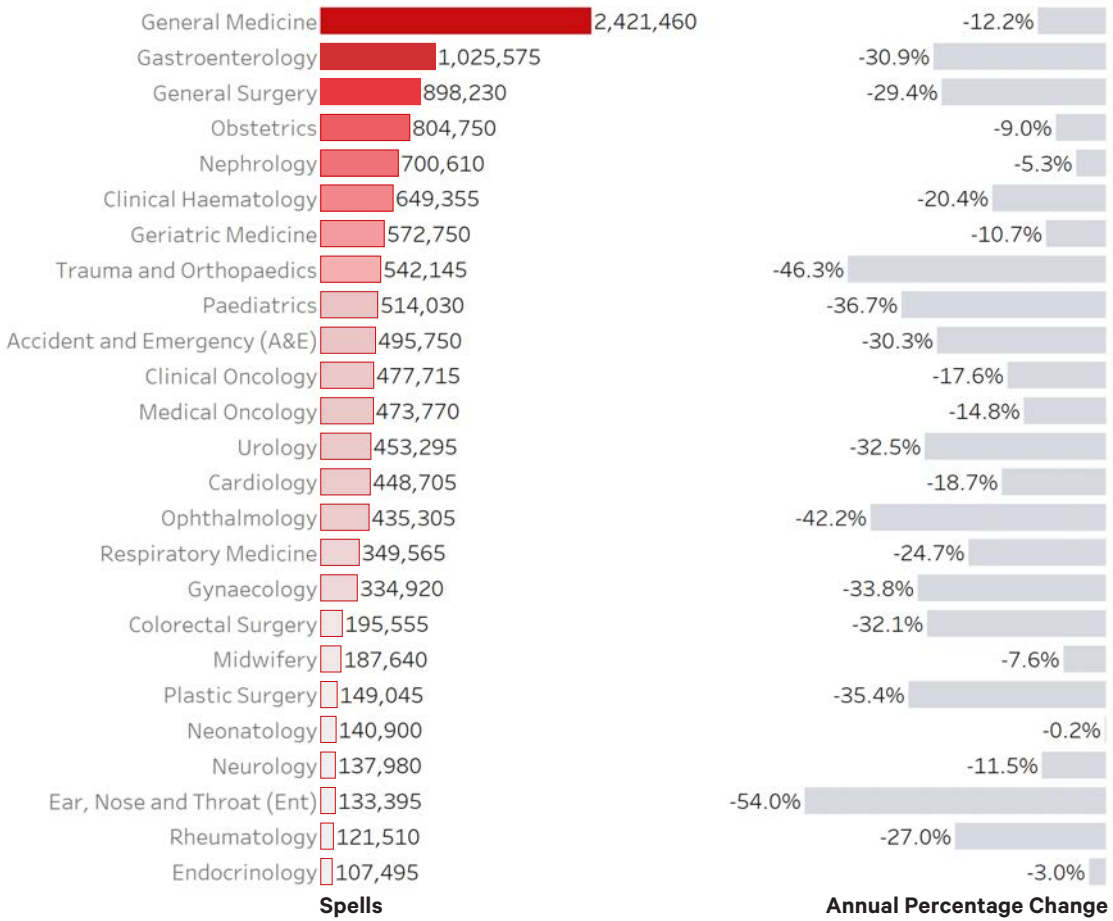
Infectious disease and respiratory admissions exhibit the highest level of comorbidity and complication scores

We can also view primary diagnosis in terms of the aggregate comorbidity and complication (CC) score attached to each therapy area which ultimately informs the payment process. In 2020/21, infectious disease emerged as the therapy area with the highest level of comorbidity and complication, a possible consequence of admissions associated with COVID-19, as evidenced by the 19.6% increase in normalised CC score. Respiratory admissions were also associated with high CC scores and were higher than in the previous year, a possible consequence of higher barriers to secondary care which meant only patients with the most serious respiratory conditions resulted in a hospital admission. CC scores associated with cardiovascular admissions increased only marginally (5.4%) implying little shift in the nature of admissions associated with CV disease. Musculoskeletal and ophthalmology admissions were associated with the lowest CC scores in 2020/21.

Source: HES

Wilmington Healthcare

Top 25 Consultant Specialties, Inpatient, 2020/21



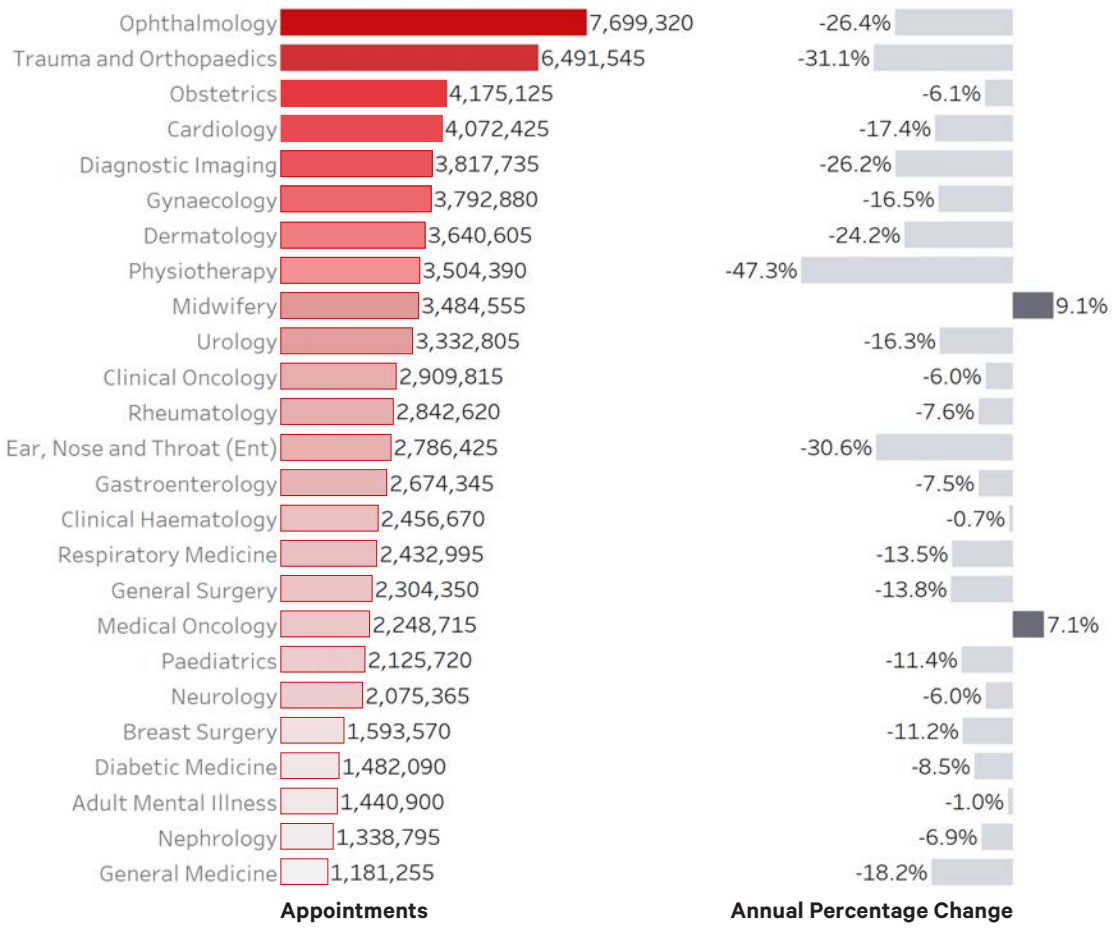
Some inpatient specialities saw admissions fall by over 30% in 2020/21

The impact of COVID-19 can also be assessed in terms of the change in inpatient activity across the major consultant specialties associated with spells of care. While general medicine, which was by far the largest inpatient specialty in 2020/21, accounting for over 2.4m admissions, fell by only 12.2% annually in 2020/21, admissions in gastroenterology and general surgery, which were the 2nd and 3rd largest specialties in 2020/21 fell by approximately 30%. Indeed, the largest percentage falls in activity were observed in trauma and orthopaedics (-46.3%), paediatrics (-36.7%), ophthalmology (-42.2%) and ear, nose and throat (-54.0%) specialties. Neonatology (-0.2%), endocrinology (-3.0%) nephrology (-5.3%) and obstetrics (-9.0%) did not fall as sharply as the national average (-26.1%).

Source: HES

Wilmington Healthcare

Top 25 Consultant Specialties, Outpatient, 2020/21



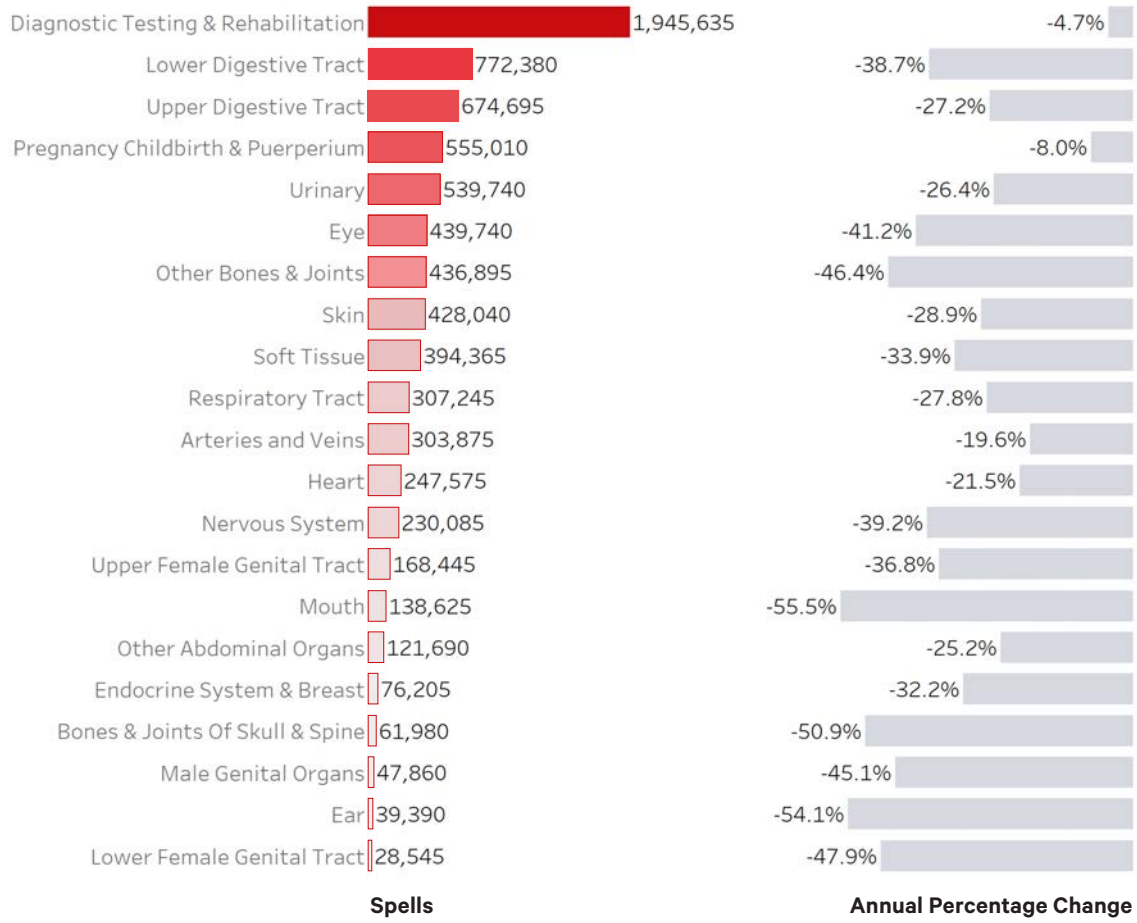
Yearly declines were observed across almost all outpatient specialties in 2020/2021

As previously discussed, outpatient appointments were down 18.7% overall in 2020/21, with some specialties seeing above average annual declines in activity. The two largest outpatient specialties, ophthalmology and trauma and orthopaedics both fell sharper than average with falls of -26.4% and -31.1%, respectively. Above average declines were also observed in diagnostic imaging (-26.2%), dermatology (-24.2%), physiotherapy (-47.3%) and ear, nose and throat (-30.6%). Medical oncology was one of only two of the largest specialties to have seen an increase in outpatient appointments in 2020/21, a possible result of an increased number of patients previously receiving chemotherapy treatment as day case inpatients being treated as outpatients. The significant decline observed in diagnostic imaging appointments illustrates the higher barriers to secondary care since the start of the COVID-19 pandemic.

Source: HES

Wilmington Healthcare

Procedures by OPCS Chapter, Inpatient, 2020/21



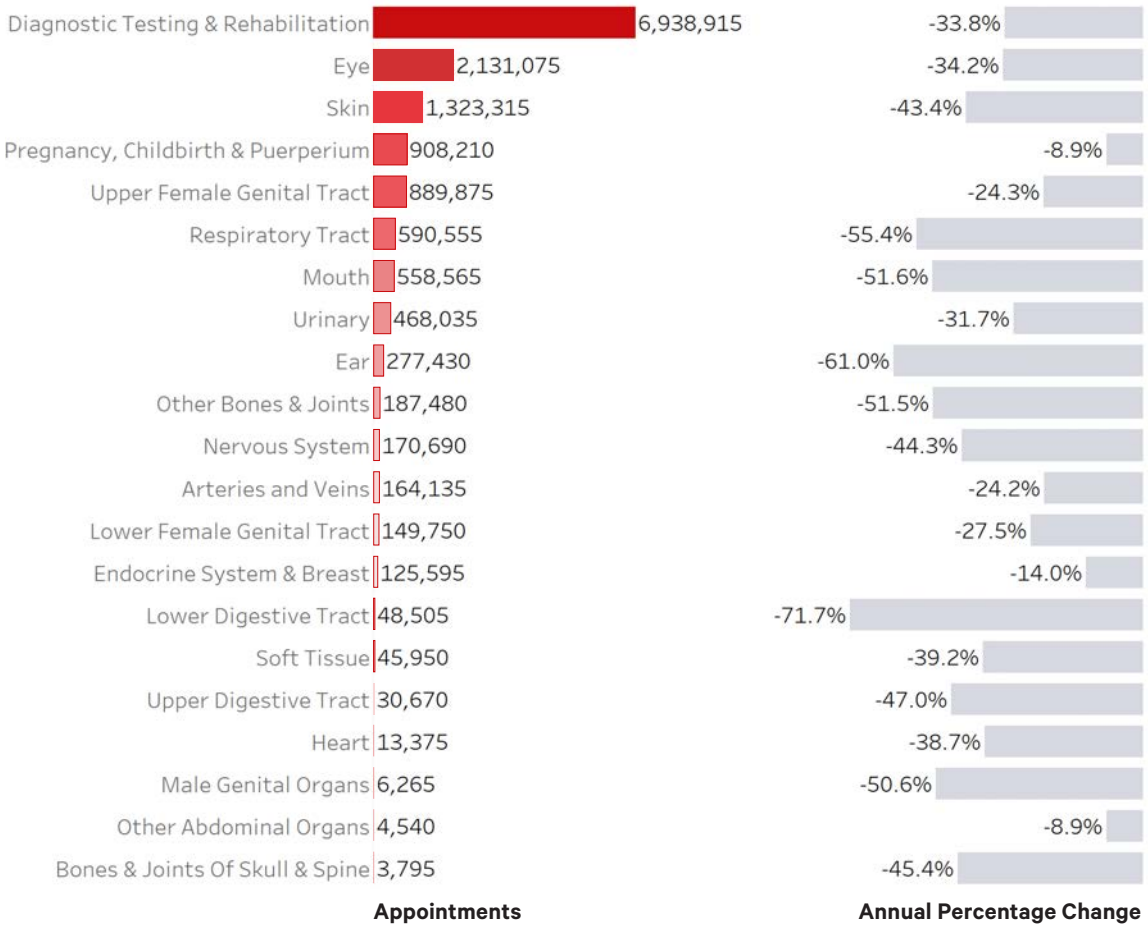
The drop in procedures carried out in 2020/21 was dramatic across most procedure types

The impact of COVID-19 can also be measured in terms of procedures. There was a significant reduction in procedures carried out in inpatient care in line with the 26.1% drop in overall inpatient admissions in 2020/21, with some procedure types, as defined by OPCS chapter, seeing a more than a 50% decline. Indeed, spells associated with digestive tract procedures fell by more than 30% while spells associated with urinary (-26.4%), eye (-41.2%), skin (-28.9%) and other bone & joint (-46.4%) procedures also fell significantly. It is clear that while inpatient admissions/ spells declined significantly in 2020/21, the volume of procedures associated with admissions fell disproportionately across most major specialties.

Source: HES

Wilmington Healthcare

Procedures by OPCS Chapter, Outpatient, 2020/21



Outpatient procedures associated with diagnostic testing fell by more than a third in 2020/21

A similarly impactful shift was observed in the volume of outpatient procedures carried out in 2020/21. Outpatient procedures, as measured by outpatient appointments, fell across all OPCS chapters. The three largest areas, diagnostic testing & rehabilitation, eye and skin all fell by more than a third, while some areas, as defined by OPCS chapter, saw the volume of outpatient procedures fall by more than 50%.

Source: HES

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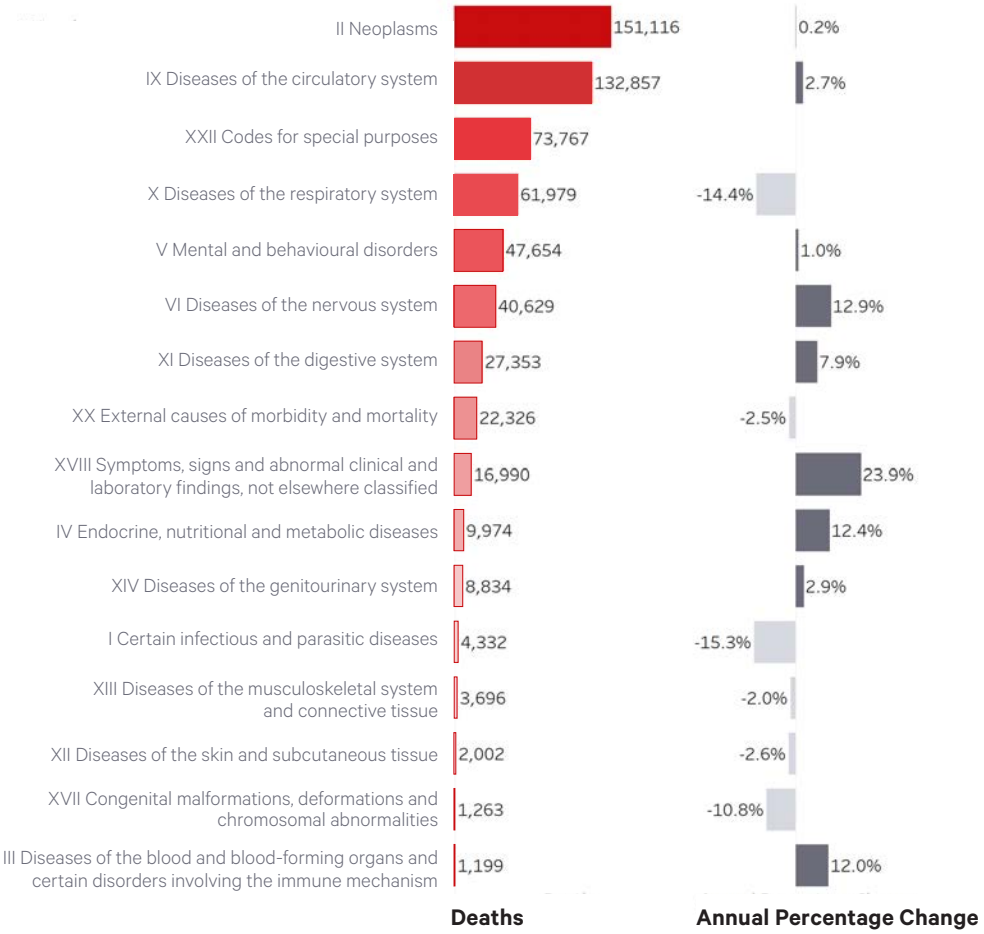
Mortality by underlying cause (ICD-10 Chapter) in England and Wales, 2020



Oncology and cardiology remained the most common cause of death in 2020

The healthcare landscape can also be viewed in terms of underlying cause of death in 2020. While neoplasms (oncology) and cardiovascular (CV) disease remained the highest cause of mortality in England and Wales in 2020, a significant number of deaths were attributed to COVID-19 infection as illustrated by the 73,767 deaths under the special purposes code used to denote COVID-19 diagnosis. While oncology and CV deaths remained relatively steady in 2020, respiratory deaths were down 14.4%, while nervous system and endocrine/metabolic deaths were up more than 10%. It is clear however than despite COVID-19, oncology and CV remain the leading cause of deaths and efforts to tackle these diseases remain a high priority for the NHS as it transitions towards an integrated care landscape and tackle the impact COVID-19 has had on the provision of secondary care services both in terms of diagnosis and treatment.

Source: ONS

5. Referral to Treatment Insights

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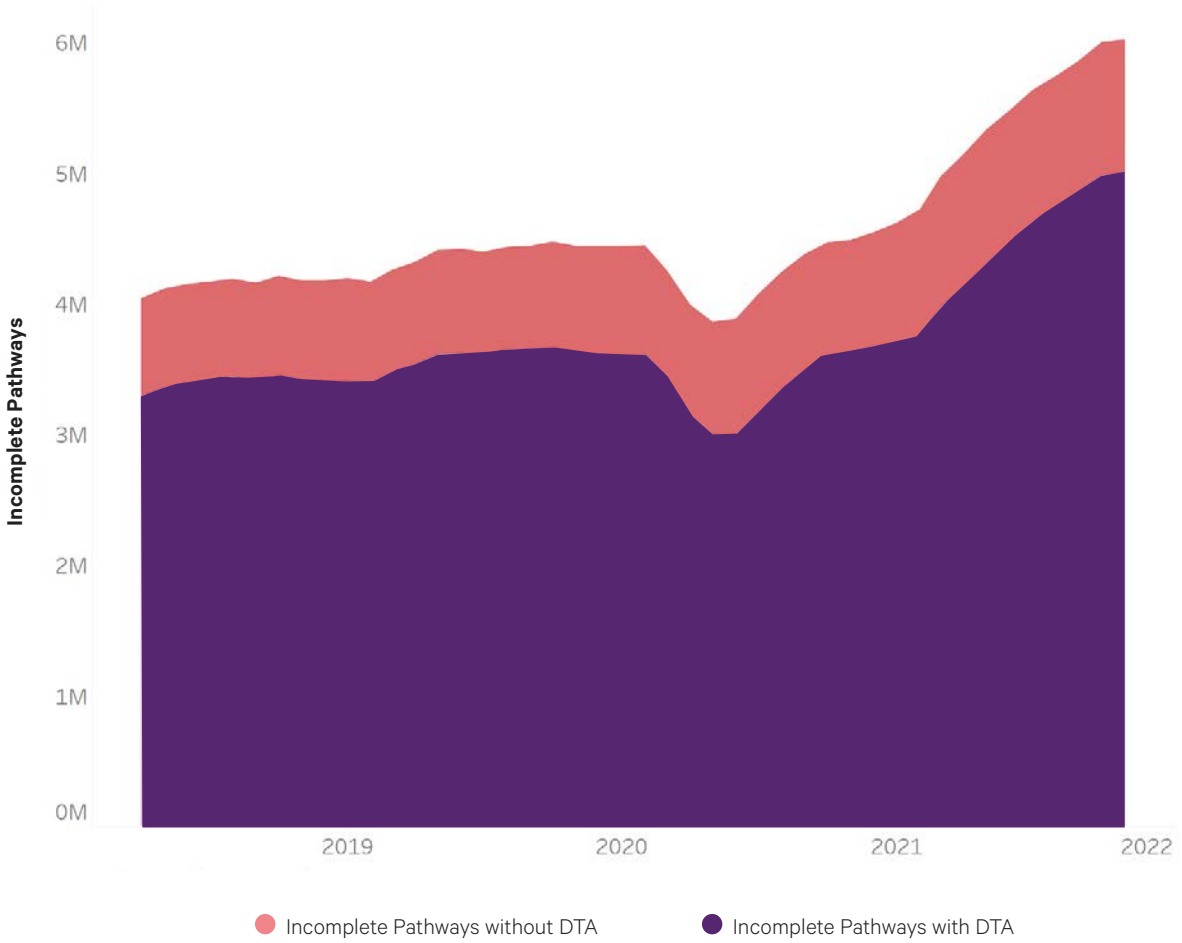
Incomplete Pathways by Admission Type, April 2018 to November 2021



Total backlog is 50% higher since the start of the pandemic

Nowhere is the changing NHS landscape in the post-pandemic era more apparent than from the referral to treatment (RTT) waiting list. Having historically been very steady at around 4.4m incomplete pathways prior to the pandemic, the impact of COVID-19 on healthcare services from April 2020 onwards had a demonstrable impact on the referral to treatment waiting list. Initially the waiting list had shrunk in line with higher barriers to referrals to secondary care, falling by over 580,000 between February and May 2020. As barriers to secondary care were lifted following successful roll-out of the COVID-19 vaccination program, the waiting list has since grown to more than 6 million in November 2021, with over 2 million additional incomplete pathways than the start of the pandemic in April 2020. This illustrates quite clearly the magnitude of the backlog facing the NHS and the enormous pressure on the health service to deliver. Furthermore, while the majority of the backlog relates to pathways without a decision to admit (DTA), incomplete pathways with DTA have increased by 23.7% or just over 190,000 additional pathways in absolute terms between March 2020 and November 2021.

Source: RTT

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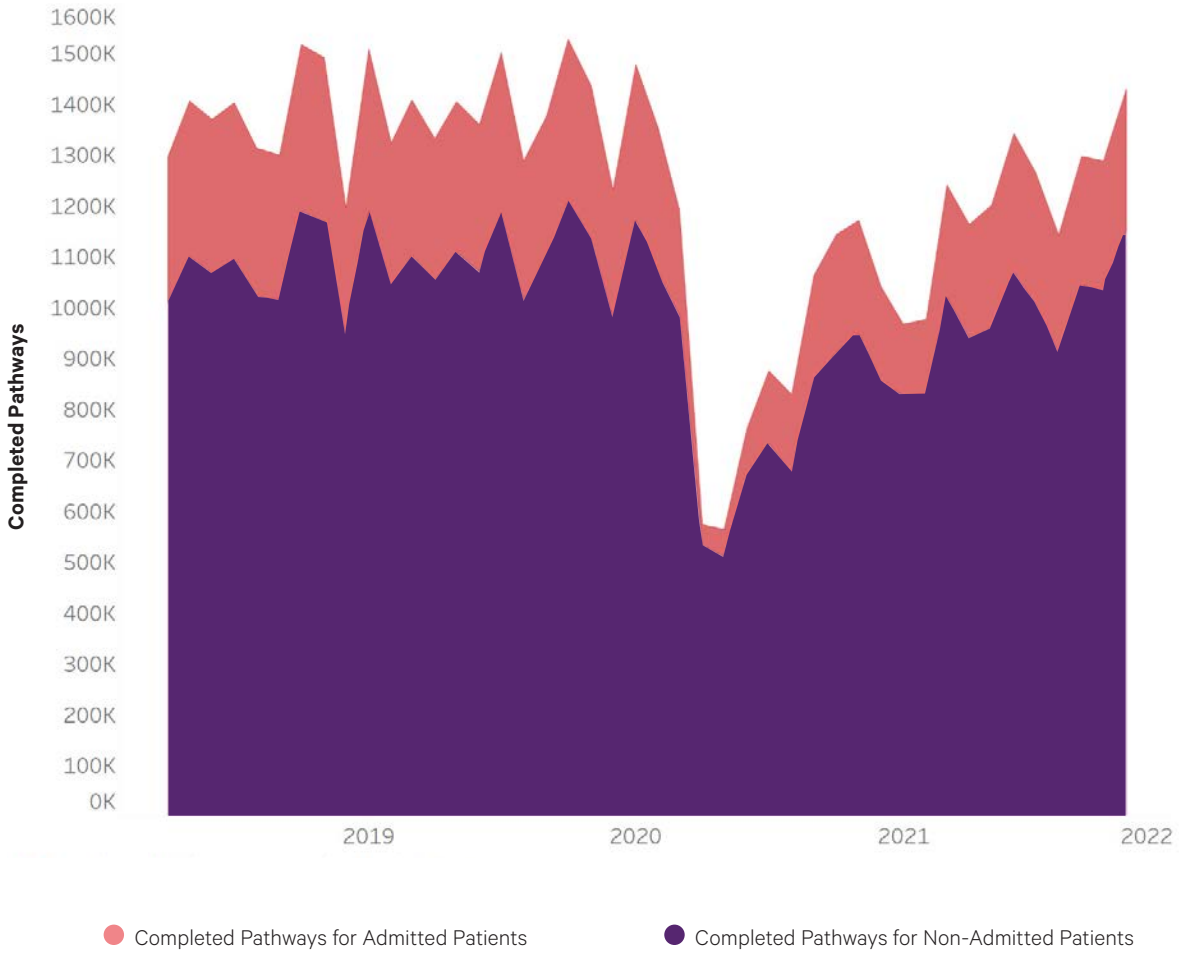
Completed Pathways by Admission Type, April 2018 to November 2021



Completed pathways fell by over a half at the height of the pandemic

The dynamics of the RTT waiting list can also be viewed in terms of completed pathways. The volume of completed pathways fell dramatically following the onset of restrictions associated with the COVID-19 pandemic from April 2020 onwards, with over 600,000 fewer pathways completed in May 2020 compared to March 2020. Completed pathways for admitted patients took the biggest hit, with a more than 70% drop in pathways over this period as barriers to admitted patient care increased in line with COVID-19 policy. The easing of restrictions within secondary care has seen the volume of completed pathways slowly return to pre-pandemic levels, however given the scale of the backlog, considerable pressure remain on the secondary care healthcare system to maintain pre-pandemic performance levels.

Source: RTT

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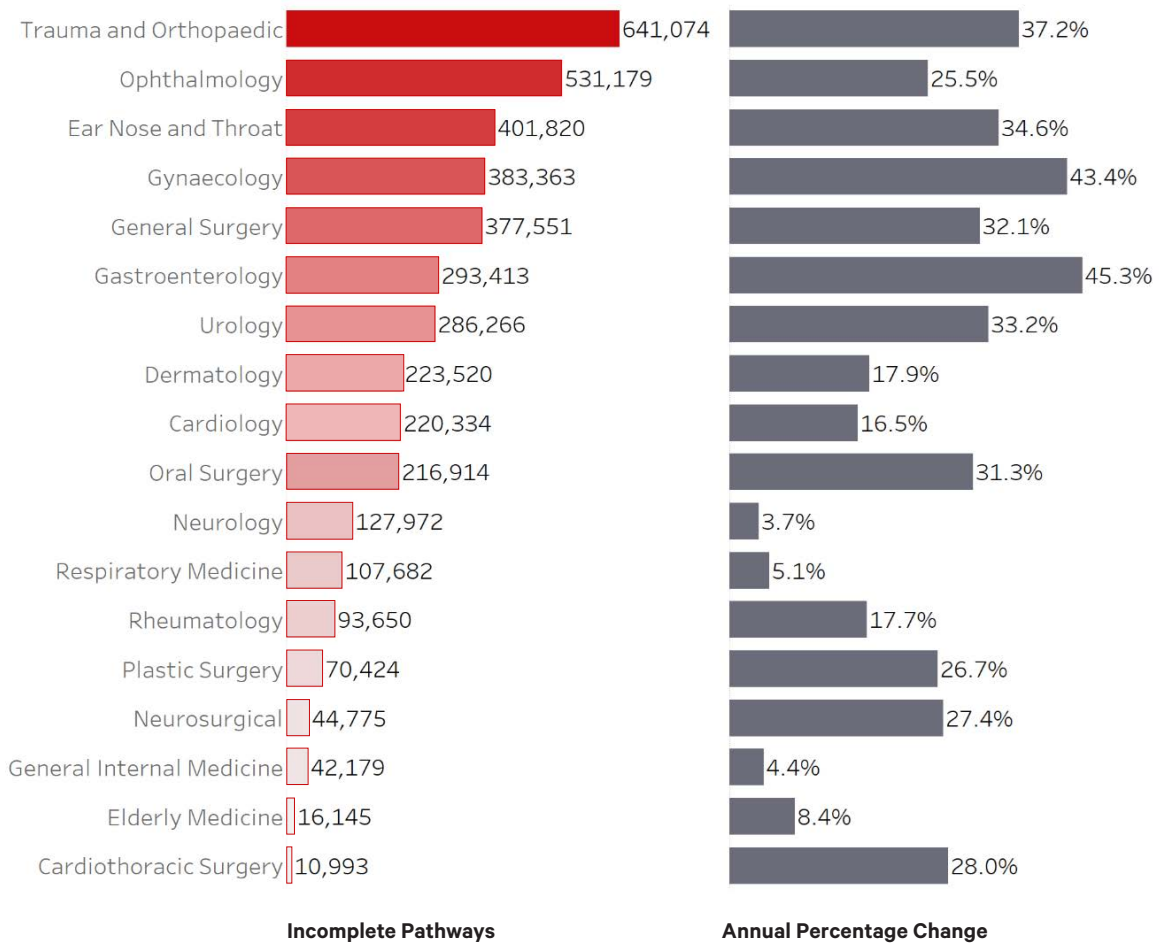
Incomplete Pathways by Consultant Specialty, April 2021



Backlog up by over a third across some major specialties

The impact of COVID-19 was seen across all consultant specialities with respect to patients on the waiting list for secondary care services. The seven largest specialties in terms of incomplete pathways in April 2021 all saw the number of incomplete pathways increase by more than a quarter from April 2020 to April 2021, with the most notable increases seen in Trauma and Orthopaedic (+37.2%), Ear Nose and Throat (+34.6%), Gynaecology (+43.4%), Gastroenterology (+45.3%) and Urology (+33.2%).

Source: RTT

6. Prescribing Insights

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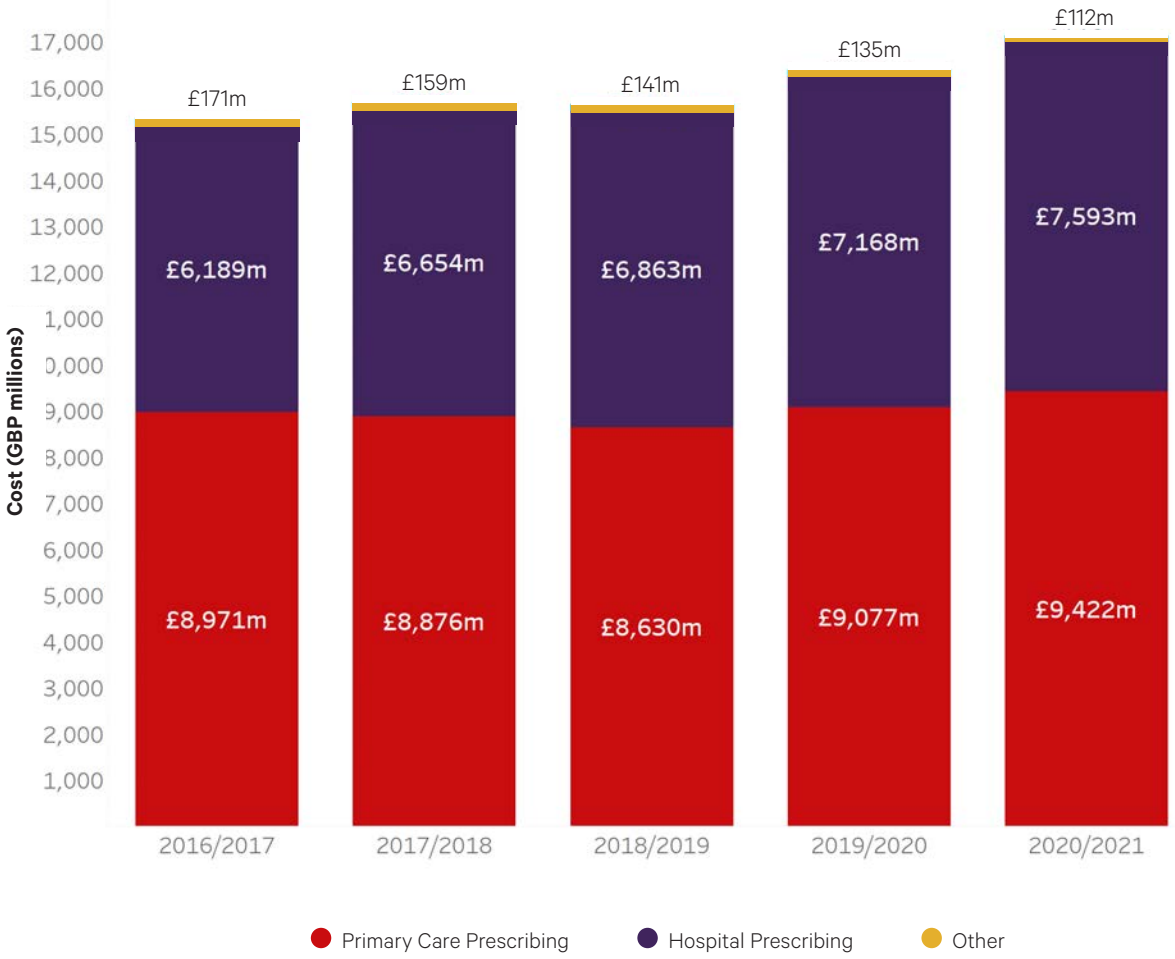
Prescribing Costs by Healthcare Setting, 2016/17 to 2020/21



Increased secondary care prescribing costs drives up overall spend on prescribing

Total prescribing costs in England have increased by GBP 1.8 billion historically from GBP 15.3 billion in 2016/17 to GBP 17.1 billion in 2020/21, representing a CAGR of 2.8%. Much of this increase has come from the growing costs within secondary care/hospital prescribing, which increased by GBP 1.4 billion between 2016/17 and 2020/21. Overall spend on primary care prescribing, which accounted for 55.0% of total prescribing costs in 2020/21, only grew by GBP 451 million between 2016/17 and 2020/21. Hospital prescribing costs have outstripped primary care prescribing costs as an abundance of new, innovative treatments for diseases with high unmet medical need have been added to secondary care formularies during the past few years having been green-lighted by NICE.

Source: NHS Business Service Authority; Prescription Cost Analysis

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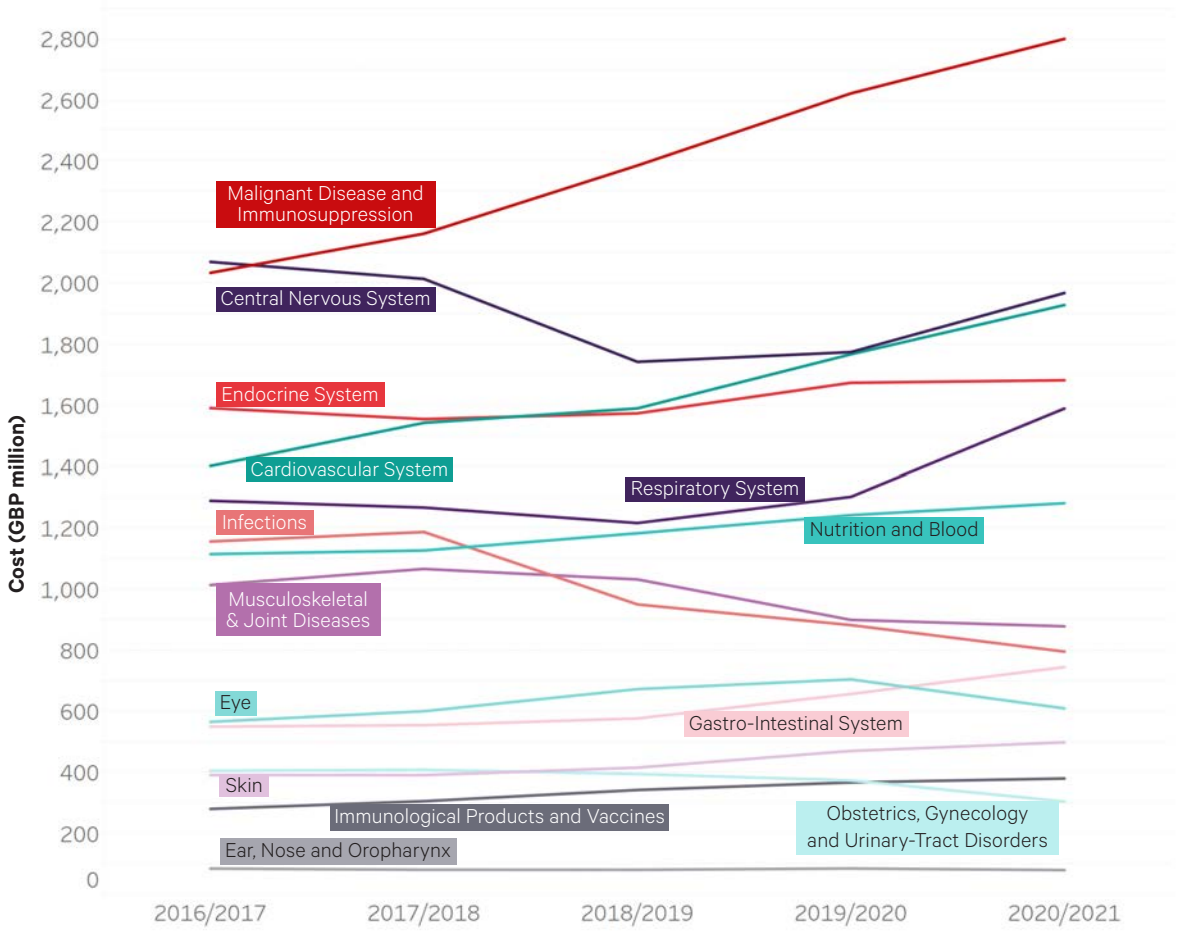
All Prescribing by BNF Chapter, 2016/17 to 2020/21



Oncology and immunology prescribing costs up by GBP 766 million in five years

The changing prescribing landscape can also be observed in terms of prescribing costs by BNF chapter. Malignant disease and immunosuppression (MD&I) overtook central nervous system (CNS) as the largest area of prescribing expenditure in 2017/18 and has grown significantly over the past five years, increasing to GBP 2.8 billion in 2020/21 from GBP 2.0 billion in 2016/17 in line with the expanding array of innovative treatments within this BNF chapter. While spending within CNS had been on a downward trend historically, that trend reversed in 2019/20 and 2020/21. Cardiovascular (CV) prescribing has also increased over the last five years while endocrine system prescribing, which includes diabetes, has been relatively flat. Prescribing costs within the infections category have declined steadily over the past five years, perhaps illustrating efforts to dampen the use of antibiotics.

Source: NHS Business Service Authority; Prescription Cost Analysis

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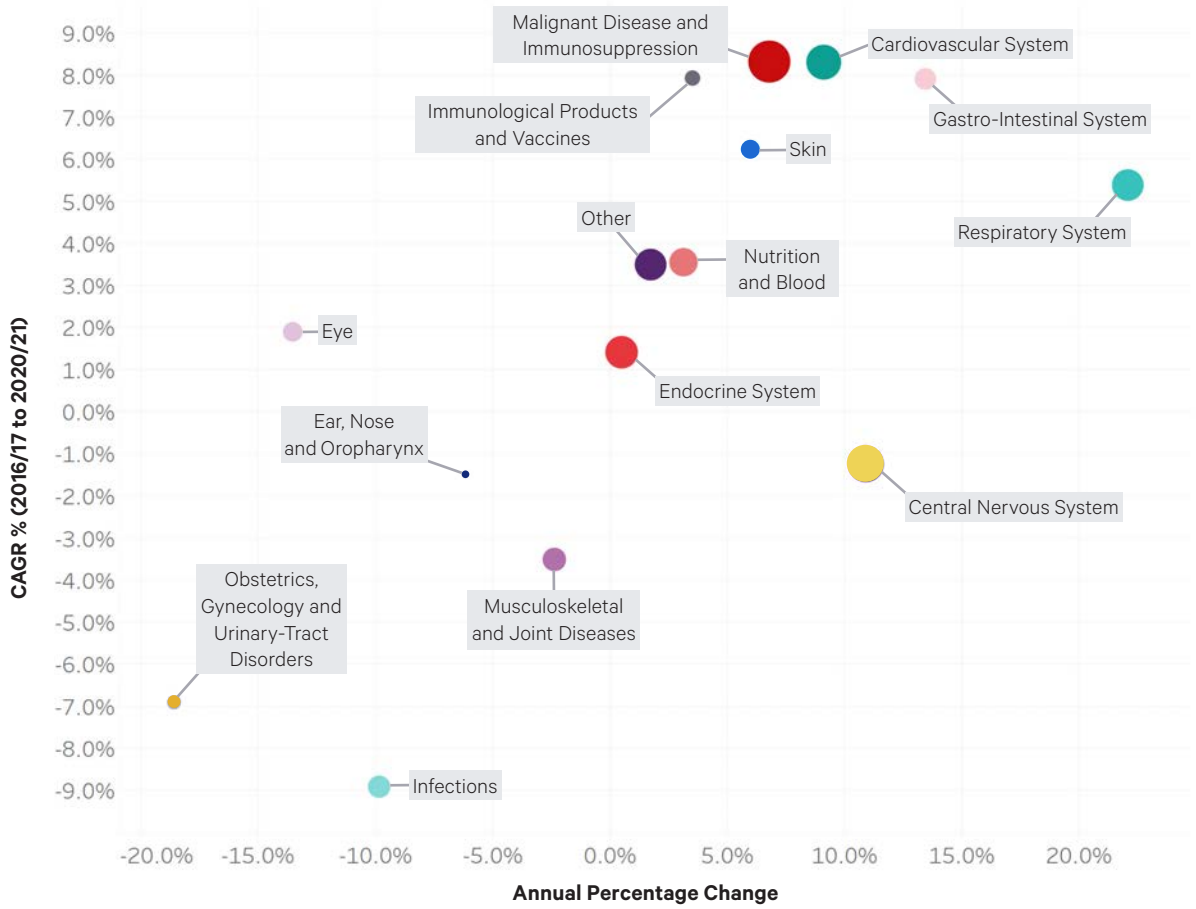
Prescribing Growth Rates by BNF Chapter, 2016/17 to 2020/21



***bubble size denotes cost (GBP million)**

Despite a negative trend historically, CNS prescribing costs saw a sharp increase in 2020/21 due to the impact of pandemic on the nation's mental health

Prescribing expenditure by BNF chapter can also be viewed in terms of growth rates. Those chapters in the top right of the chart illustrate the fastest growing areas of spend, such as gastro-intestinal, respiratory, CV and MD&I. Despite net negative growth historically, CNS saw a dramatic increase in prescribing spend in 2020/21 due to the impact of COVID-19 mandated lockdowns on the mental health of the nation at large. MD&I, CV, CNS, endocrine and respiratory comprise the largest areas of spend, each registering costs of over a billion pounds in 2020/21.

Source: NHS Business Service Authority; Prescription Cost Analysis

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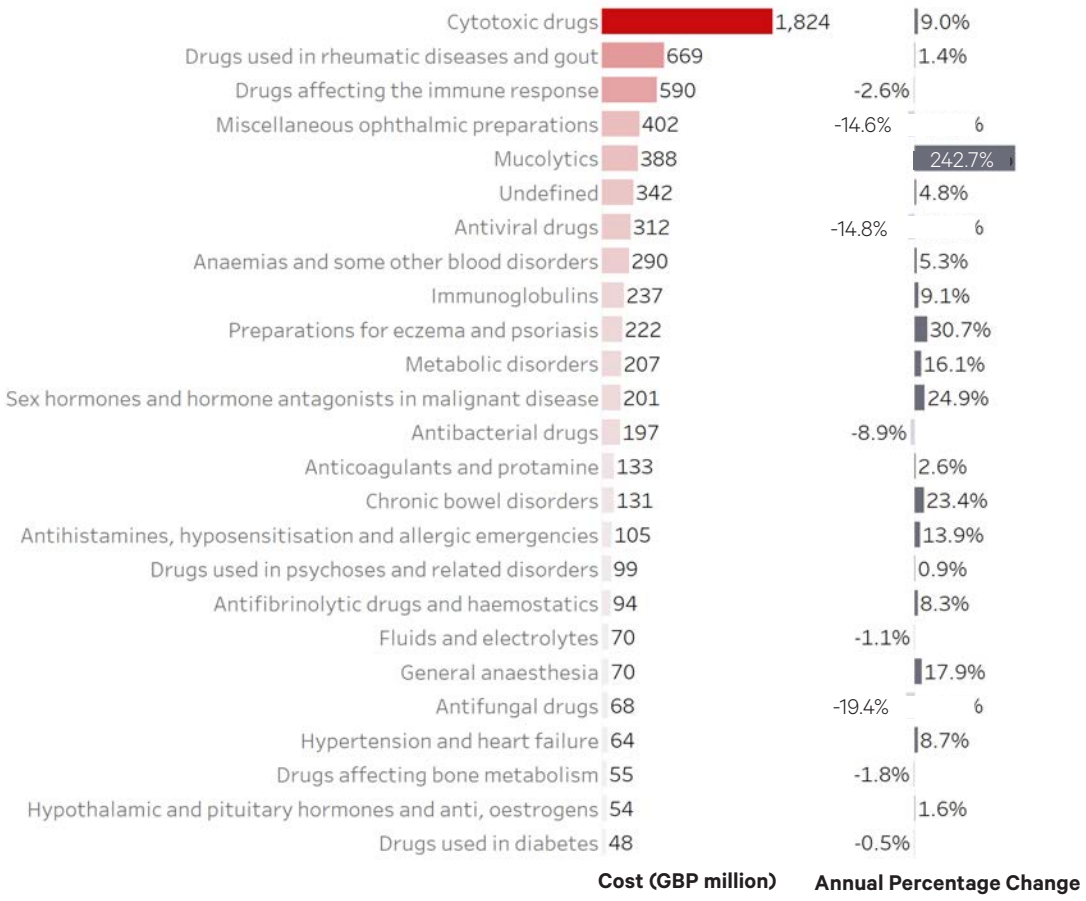
Top 25 BNF Sections in Secondary Care, 2020/21



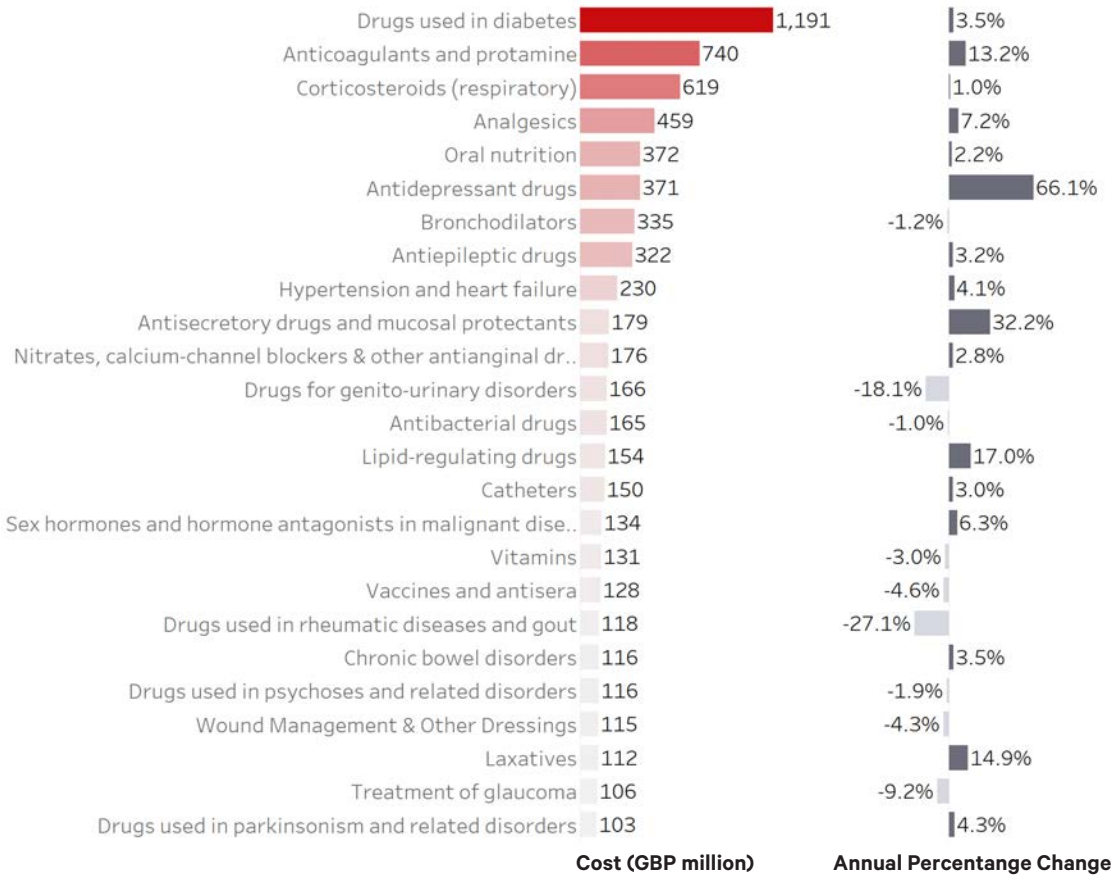
Cytotoxic drugs incur the biggest costs within secondary care

Prescribing cost data can be drilled down further into BNF section, in this case restricted to secondary care/hospital prescribing. Once more we see areas associated with oncology and immunology providing the largest source of prescribing expenditure. Cytotoxic drug costs increased by 9.0% to GBP 1.8 billion in 2020/21, making it by far the largest single BNF section in terms of prescribing costs. Mucolytics saw the sharpest percentage increase in costs in 2020/21, due to the prescribing of ivacaftor for cystic fibrosis. Spend on ophthalmic preparations fell by 14.6% as barriers to routine eye appointments in secondary care impacted spend on high-value treatments for wet AMD. Antibacterials also fell sharply as prescribing of antibiotics continues to shrink, potentially exacerbated by the reduction of inpatient admissions and subsequently hospital infections not associated with COVID-19.

Source: NHS Business Service Authority; Prescription Cost Analysis

Wilmington Healthcare

Top 25 BNF Sections in Primary Care, 2020/21



Antidepressants and antisecretory drug costs experience significant increases following onset of pandemic

Primary care spend by BNF section paints a very different picture, with the largest area of expenditure being diabetes, which accounted for GBP 1.2 billion of prescribing costs in 2020/21, growing at 3.5% annually. Anticoagulant prescribing in primary care grew by 13.2% to GBP 740 million over this period. By far the largest percentage increase in primary care expenditure came in the antidepressant section as the onset of COVID-19 pandemic and associated mental health impacts resulted in a 66.1% increase in antidepressant costs, which rose to GBP 371 million in 2020/21.

Source: NHS Business Service Authority; Prescription Cost Analysis

Wilmington Healthcare

Top 20 Secondary Care Drugs, (GBP million)

Generic Name	Manufacturer	Therapy Area	2019/2020 (GBP million)	2020/2021 (GBP million)	Annual Percentage Change
adalimumab	Various	Immunology	503.3	625.8	24.3%
aflibercept	Bayer	Wet AMD/CrC	492.5	562.8	14.3%
pembrolizumab	Merck Sharp & Dohme	Oncology	605.3	557.9	-7.8%
ivacaftor	Vertex Pharmaceuticals	Cystic fibrosis	121.0	393.9	225.5%
infliximab	Various	Immunology	265.3	314.7	18.6%
etanercept	Various	Immunology	253.8	282.2	11.2%
nivolumab	Bristol-Myers Squibb	Oncology	135.6	242.3	78.7%
lenalidomide	Celgene	Oncology	169.3	237.9	40.5%
enzalutamide	Astellas Pharma	Oncology	129.9	226.6	74.5%
ibrutinib	Janssen-Cilag	Oncology	159.3	195.6	22.8%
emicizumab	Roche	Haemophilia	54.8	190.3	247.3%
ustekinumab	Janssen-Cilag	Immunology	132.3	183.6	38.8%
trastuzumab	Various	Oncology	160.1	171.2	6.9%
sofosbuvir/velpatasvir	Gilead Sciences	Hepatitis C	210.5	170.8	-18.9%
pertuzumab	Roche	Oncology	125.7	165.5	31.7%
vedolizumab	Takeda	Immunology	107.9	153.9	42.6%
dimethyl fumarate	Biogen	Multiple sclerosis	130.2	146.8	12.7%
palbociclib	Pfizer	Oncology	121.3	136.1	12.2%
asfotase alfa	Alexion Pharma	Hypophosphatasia	43.5	131.2	201.3%
ranibizumab	Novartis Pharmaceuticals	Wet AMD	150.9	129.9	-13.9%

NHS demonstrates commitment to providing innovative, life-changing therapies

A look at the top 20 prescription products in secondary care by cost reveals that despite the considerable impact of COVID-19 the use of innovative treatments remained strong within the NHS in England in 2020/21. The leading secondary care products largely comprise specialty medicines such as monoclonal antibody therapies, many of which are used to treat oncological or immunological indications. The NHS's commitment to provide innovative therapy to address unmet patient needs is exemplified by the cystic fibrosis treatment ivacaftor, which cost GBP 393.9 million in 2020/21, growth of over 200%. Other recently approved products, emicizumab for haemophilia A and asfotase alfa for hypophosphatasia, also saw costs increase by more than 200% in 2020/21. While rare disease treatments become an increasingly important part of the NHS's secondary care model, oncology and immunology treatments continue to dominate the secondary care prescribing landscape.

NB: costs calculated based on NHS Indicative Price

Source: SCMD, NICE

Wilmington Healthcare

Top 20 Primary Care Drugs, (GBP million)

Chemical Name	Manufacturer	Therapy Area	2019/2020 (GBP million)	2020/2021 (GBP million)	Annual Percentage Change
apixaban	Bristol-Myers Squibb	Anticoagulant	285.0	331.0	16.0%
beclometasone dipropionate	Various	Respiratory	254.0	267.0	4.9%
rivaroxaban	Bayer Plc	Anticoagulant	208.0	218.0	5.1%
sertraline hydrochloride	Various	Depression	38.0	156.0	305.5%
fluticasone propionate	GlaxoSmithKline	Respiratory	137.0	123.0	-10.7%
budesonide	Various	Respiratory	126.0	122.0	-3.3%
metformin hydrochloride	Various	Diabetes	88.0	111.0	26.3%
influenza	Various	Infectious disease	88.0	105.0	19.4%
tiotropium	Various	Respiratory	106.0	90.0	-15.1%
colecalciferol	Various	Musculoskeletal	87.0	86.0	-2.1%
omeprazole	Various	GERD	55.0	83.0	49.6%
insulin aspart	Novo Nordisk	Diabetes	84.0	82.0	-2.6%
mesalazine (systemic)	Various	IBD	78.0	81.0	3.3%
sitagliptin	Merck Sharp & Dohme	Diabetes	83.0	78.0	-5.8%
atorvastatin	Various	Cardiovascular	61.0	76.0	24.8%
fluticasone fuorate (inh)	GlaxoSmithKline	Respiratory	62.0	73.0	18.8%
edoxaban	Daiichi Sankyo	Anticoagulant	42.0	72.0	73.3%
insulin glargine	Sanofi	Diabetes	74.0	72.0	-2.9%
empagliflozin	Boehringer Ingelheim	Diabetes	56.0	70.0	25.3%
levothyroxine sodium	Various	Hypothyroidism	66.0	68.0	3.6%

Prescribing costs of the antidepressant sertraline triple in pandemic year

The primary care prescribing landscape offers a distinct picture to that in secondary care when viewing the leading products in terms of cost. Unlike secondary care, the leading primary care products sit primarily within respiratory, cardiovascular and diabetes therapy areas. There are also a greater number of generic products as denoted by the fact many of them are manufactured by multiple companies. Anticoagulant therapies such as apixaban, rivaroxaban and edoxaban incur significant expenditure in primary care, as do diabetes treatments such as insulins and novel anti-diabetics. Respiratory products such as inhalable treatments for asthma and COPD are another significant area of spend within primary care prescribing. The most dramatic change in primary care prescribing in 2020/21 was seen by the anti-depressant sertraline however, which saw more than 300% growth in spend as a result of increased prescribing following the onset of the COVID-19 pandemic.

Source: English Prescribing Dataset

7. Regional Insights

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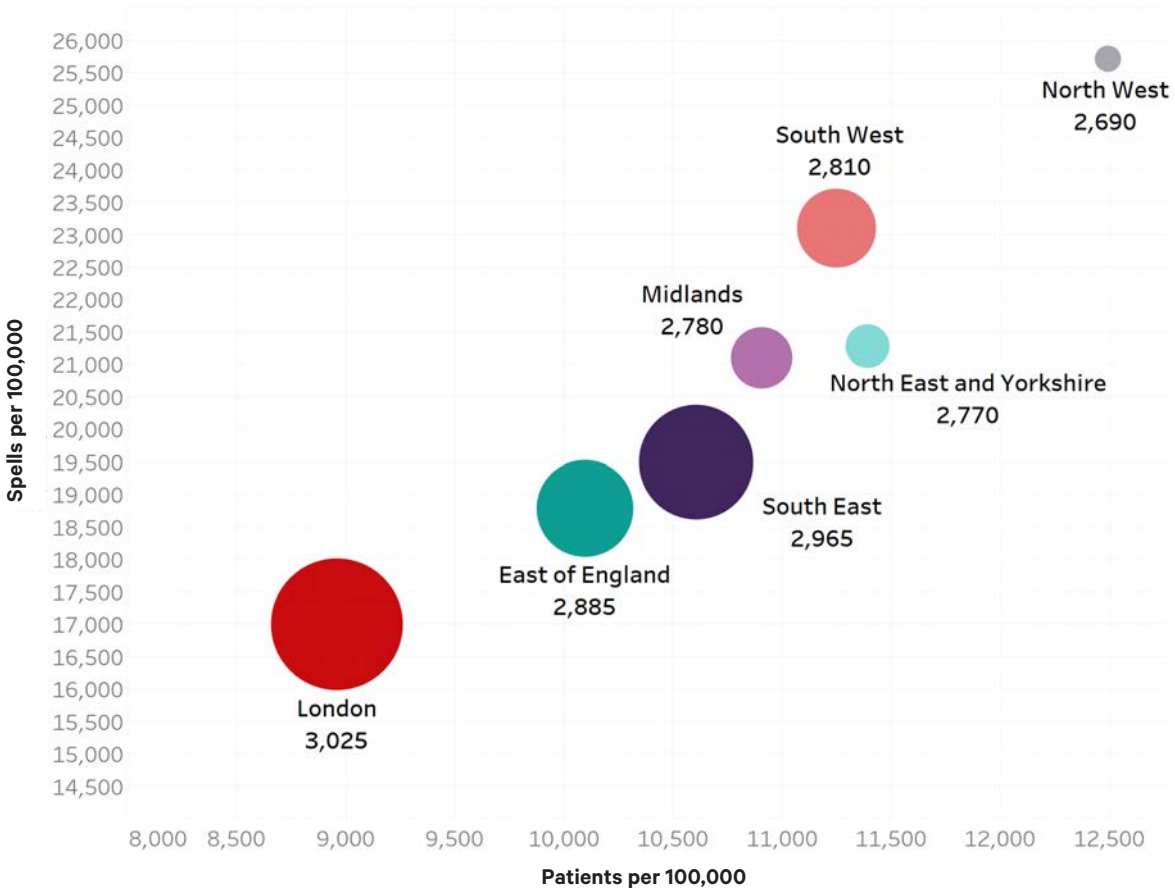
NHS England Region Benchmark, 2020/21



***bubble size denotes cost per patient (GBP)**

There is considerable variation in the burden on secondary care across England

There is considerable regional variation in health outcomes in secondary care across England. If we segment all secondary care activity by NHS England region a north-south divide emerges from the data. Regions such as the North West, North East and Yorkshire and Midlands are associated with a higher volume of spells/admissions per 100,000 population and a higher volume of patients per 100,000 population and yet are associated with lower per patient costs than their southern counterparts, the exception being the South West which has an ageing population compared to other southern NHS regions. Regions in the South however, namely London, East of England and South East, are associated with fewer spells per 100,000, fewer patients per 100,000 and yet higher costs per patient.

Source: HES; QOF

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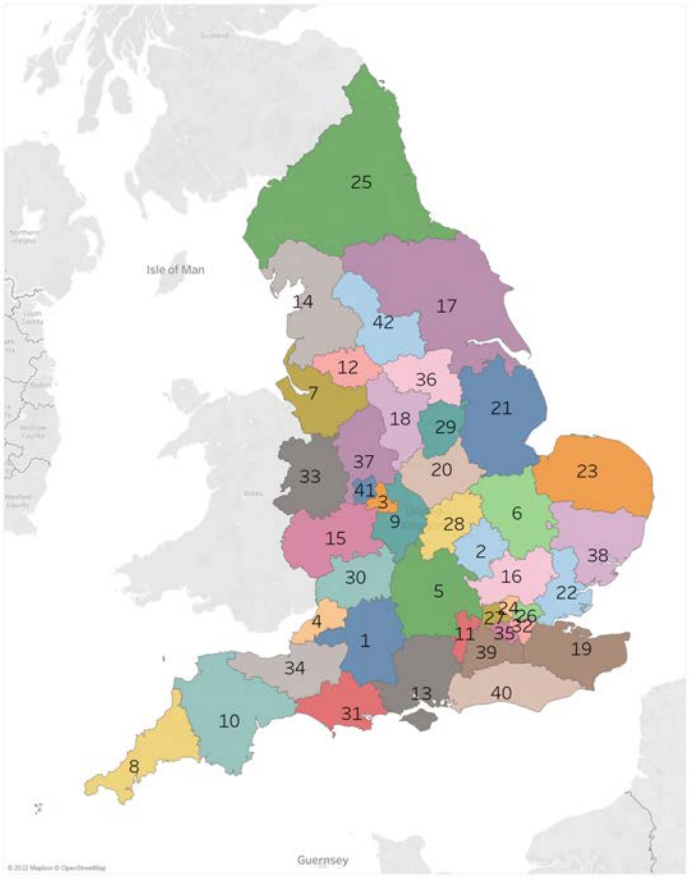
ICS Map: Index



1 - BATH & NORTH EAST SOMERSET,SWINDON & WILTSHIRE ICS
2 - BEDFORDSHIRE, LUTON AND MILTON KEYNES ICS
3 - BIRMINGHAM AND SOLIHULL ICS
4 - BRISTOL,NORTH SOMERSET & SOUTH GLOUCESTERSHIRE ICS
5 - BUCKINGHAMSHIRE, OXFORDSHIRE & BERKSHIRE WEST ICS
6 - CAMBRIDGE AND PETERBOROUGH ICS
7 - CHESHIRE AND MERSEYSIDE HEALTH & CARE PARTNERSHIP
8 - CORNWALL AND THE ISLES OF SCILLY ICS
9 - COVENTRY AND WARWICKSHIRE ICS
10 - DEVON ICS
11 - FRIMLEY HEALTH AND CARE
12 - GREATER MANCHESTER HLTH & SOCIAL CARE PARTNERSHIP
13 - HAMPSHIRE AND THE ISLE OF WIGHT ICS
14 - HEALTHIER LANCASHIRE & SOUTH CUMBRIA
15 - HEREFORD AND WORCESTERSHIRE ICS
16 - HERTFORDSHIRE AND WEST ESSEX ICS
17 - HUMBER COAST & VALE HEALTH & CARE PARTNERSHIP
18 - JOINED UP CARE DERBYSHIRE ICS
19 - KENT AND MEDWAY ICS
20 - LEICESTER & RUTLAND ICS
21 - LINCOLNSHIRE ICS
22 - MID AND SOUTH ESSEX ICS
23 - NORFOLK AND WAVENEY ICS
24 - NORTH LONDON PARTNERS IN HEALTH & CARE ICS
25 - NORTH EAST AND NORTH CUMBRIA ICS
26 - NORTH EAST LONDON ICS
27 - NORTH WEST LONDON ICS
28 - NORTHAMPTONSHIRE ICS
29 - NOTTINGHAM AND NOTTINGHAMSHIRE HEALTH & CARE ICS
30 - ONE GLOUCESTERSHIRE
31 - OUR DORSET
32 - OUR HEALTHIER SOUTH EAST LONDON ICS
33 - SHROPSHIRE, TELFORD & WREKIN ICS
34 - SOMERSET ICS
35 - SOUTH WEST LONDON HEALTH & CARE PARTNERSHIP
36 - SOUTH YORKSHIRE AND BASSETLAW ICS
37 - STAFFORDSHIRE AND STOKE ON TRENT ICS
38 - SUFFOLK AND NORTH EAST ESSEX ICS
39 - SURREY HEARTLANDS HEALTH & CARE PARTNERSHIP ICS
40 - SUSSEX HEALTH & CARE PARTNERSHIP ICS
41 - THE BLACK COUNTRY AND WEST BIRMINGHAM ICS
42 - WEST YORKSHIRE & HARROGATE HLTH & CARE PARTNERSHIP

The following section looks at regional variation by ICS across a range of metrics. Please refer to this index as a guide for the specific location of individual ICSs.

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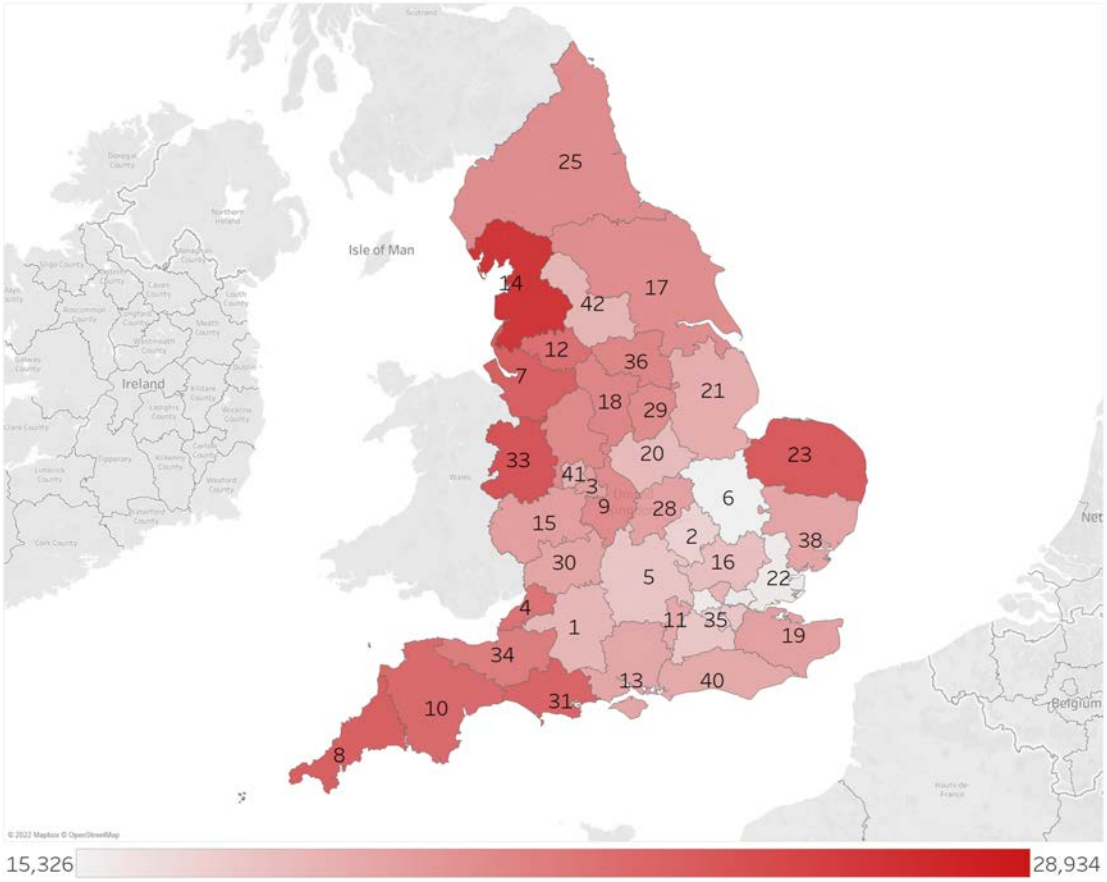
ICS Map: Spells per 100,000 population, Inpatient, 2020/21



***please refer to index map to identify individual ICSs**

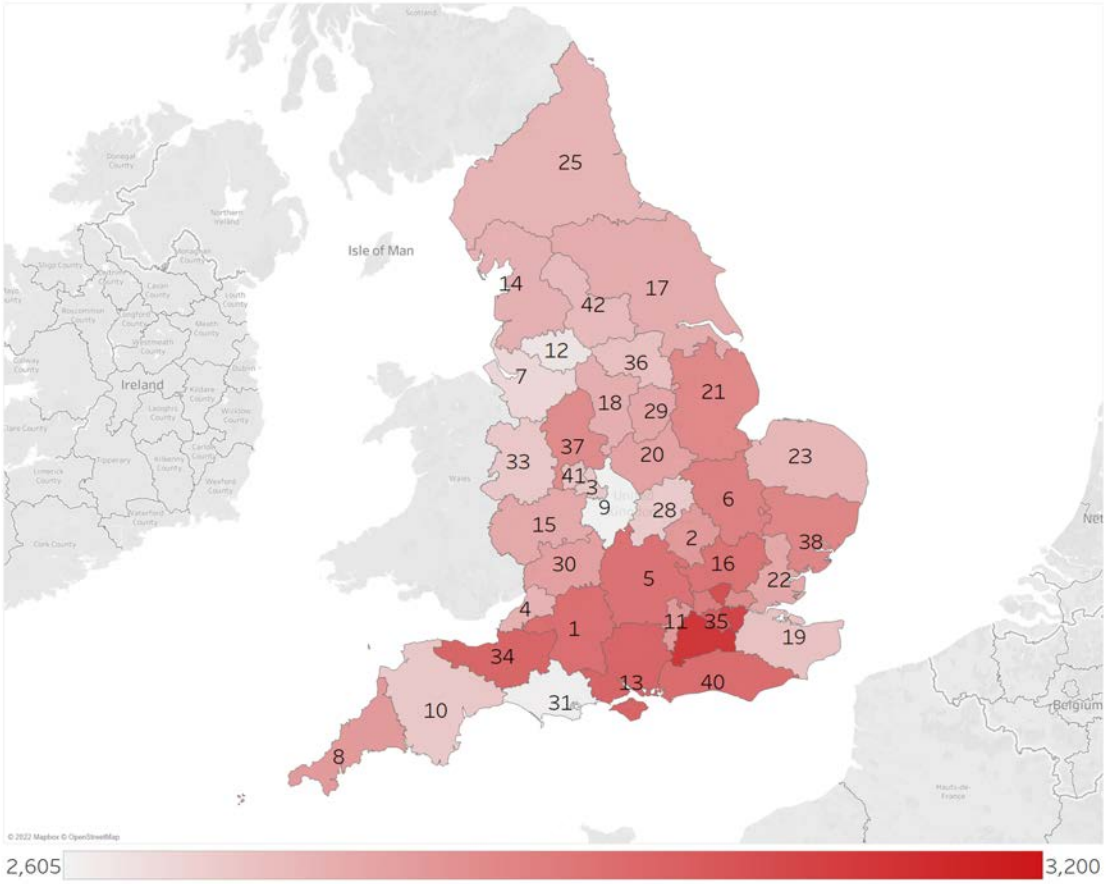
Hospital admissions as a proportion of population size varies significantly by ICS

Looking at the ICS map of spells per 100,000 population in 2020/21 illustrates considerable national variation, with as few as 15,326 admissions per 100,000 population in Cambridge and Peterborough ICS and as many as 28,934 admissions per 100,000 population in Healthier Lancashire and South Cumbria. The highest burden on secondary care services as a proportion of the population is broadly seen in the North West and South West, while the South East exhibits demonstrably lower volumes of admissions into secondary care as a proportion of the population.

Source: HES; QOF

Wilmington Healthcare

ICS Map: Cost per Patient (GBP), Inpatient, 2020/21



***please refer to index map to identify individual ICSs**

Per patient costs are lower in the North than South of England

Having identified variation in terms of proportional admissions into secondary care across England, the inverse is true in terms of per patient costs in secondary care. While the south and south east demonstrated fewer normalised admissions than the north and north west, ICSs in the southern region broadly exhibit higher costs on an average per patient basis. This illustrates that while there is a variation in the demand for secondary care services that skews higher in the North, there is disproportionate resource allocation that skews higher in the South. Indeed, per patient costs are highest in Surrey Heartlands Health and Care Partnership (GBP 31,200), where there are comparatively low normalised admissions, but lowest in areas such as Coventry and Warwickshire ICS (GBP 2,605), Our Dorset (GBP 2,610) and Greater Manchester Health & Social Care Partnership (GBP 2,640), where normalised admissions are comparatively high.

Source: HES

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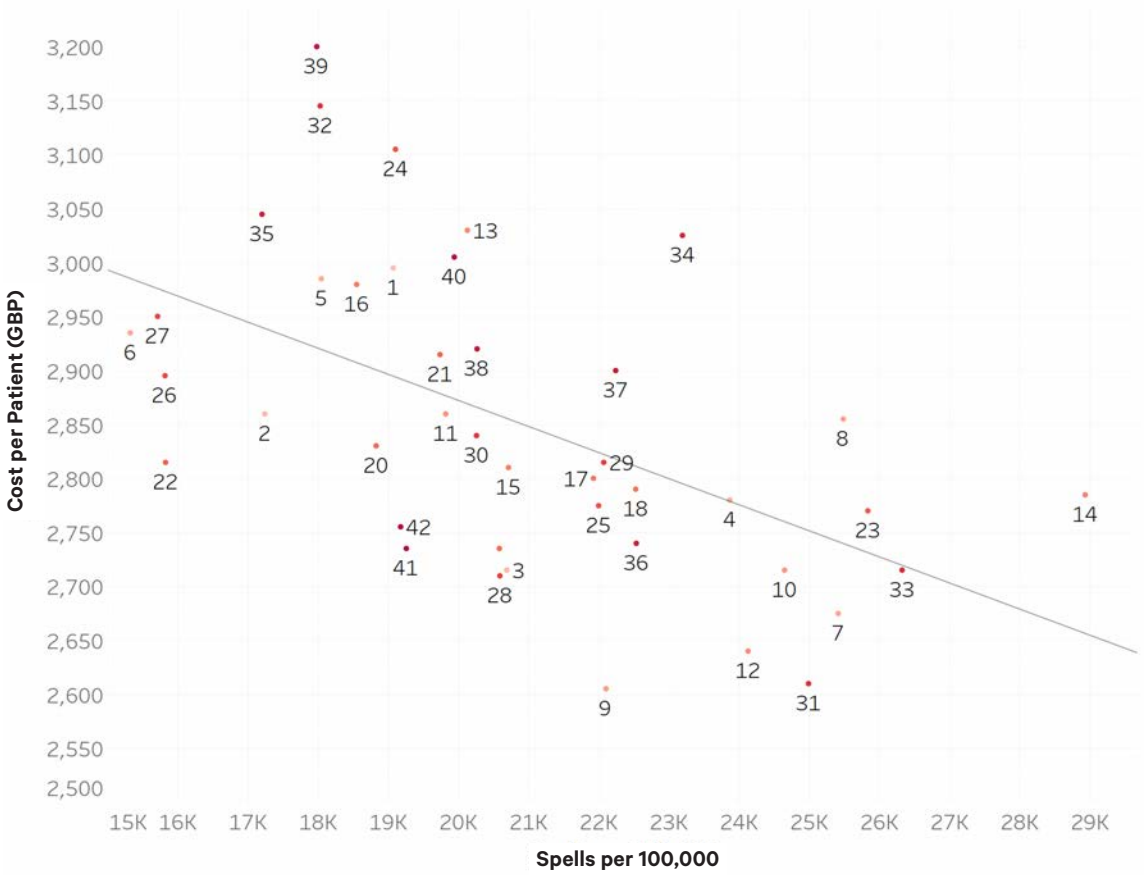
Spells per 100,000 x Cost per patient (GBP) for ICSs, Inpatient, 2020/21



***number labels refer to ICSs in index map**

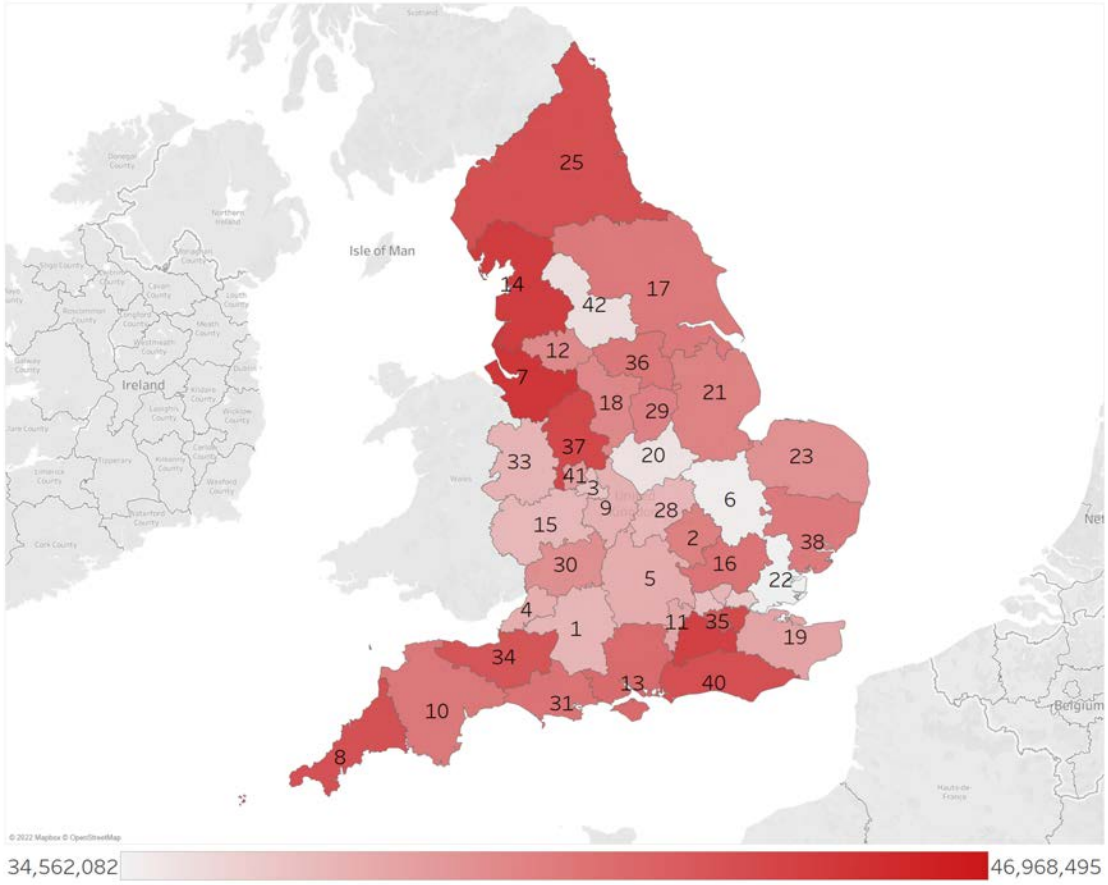
Per patient costs correlate inversely with overall burden on secondary care

Indeed, we can clearly see from the below that there is an inverse correlation between burden on secondary services in terms of number of inpatient spells per 100,000 population and cost per patient, with per patient costs higher in ICSs where normalised inpatient admissions are lower, and per patient costs lower where inpatient services are comparatively stretched.

Source: HES, QOF

Wilmington Healthcare

ICS Map: Total Cost per 100,000 population (GBP), Inpatient & Outpatient, 2020/21



***please refer to index map to identify individual ICSs**

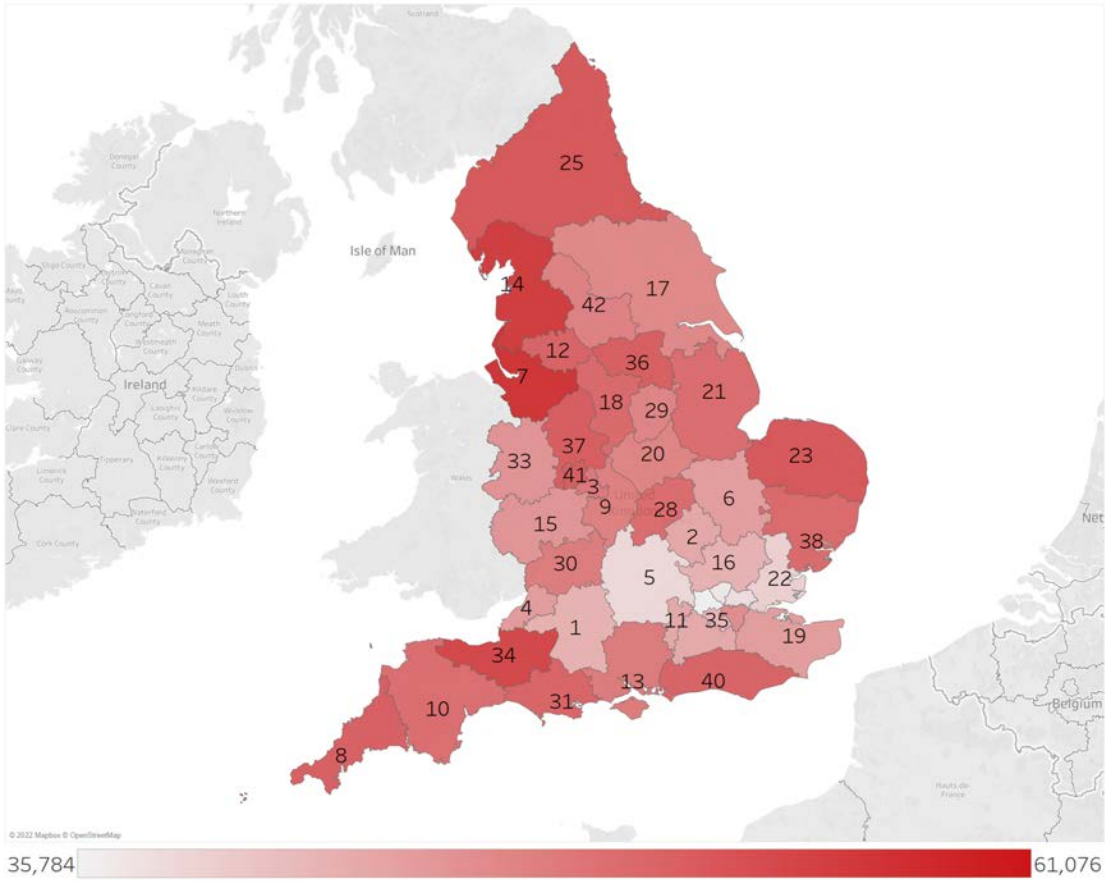
Overall per capita spend is highest in ICSs in the North West and South Coast regions

Having identified disparity in terms of inpatient per patient costs nationally, we can also look at overall costs for secondary care services (combined inpatient and outpatient) on a normalised, per population basis to better understand how resources are allocated from a healthcare burden and population health management perspective. Broadly speaking, ICSs in the North and North West, and South and South West spend considerably more on secondary care on a normalised basis than ICSs in North London, the South East, Central England and the East of England. This illustrates that while per patient inpatient costs are higher in London and the South East, overall resource allocation for secondary care in terms of population is highest where demand for secondary care services is highest.

Source: HES, QOF

Wilmington Healthcare

ICS Map: Bed days per 100,000 population, Inpatient, 2020/21



***please refer to index map to identify individual ICSs**

The normalised demand for hospital beds is comparatively low in London and the Home Counties

The regional burden on inpatient services can also be viewed in terms of total bed days normalised by 100,000 population for each ICS. As can be clearly seen once more, there is considerable variation in terms of demand on secondary care services with respect to capacity of beds, with ICSs in the North, North West and South West exhibiting a higher burden on bed capacity per 100,000 population than ICSs in the South East and London. Indeed, normalised bed days ranged from highs of 61,076 for Cheshire And Merseyside Health & Care Partnership and 59,820 in Healthier Lancashire & South Cumbria to lows of 35,784 in North West London ICS and 36,814 in North London Partners in Health & Care. As with normalised admissions, the disparity in demand for beds per 100,000 of the ICS population again correlates inversely with per patient costs which are broadly higher in those areas where secondary care services appear less strained, once more raising questions around resource allocation across the perceived North-South divide.

Source: HES, QOF

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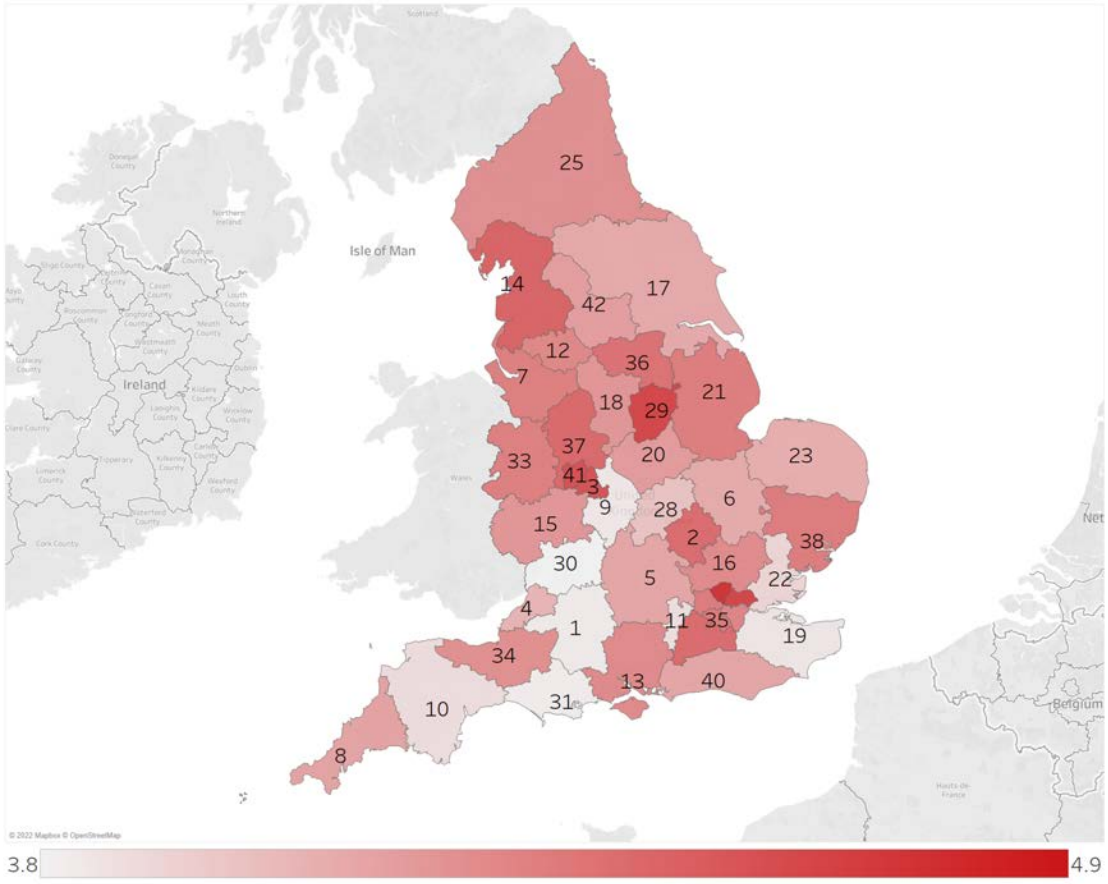
ICS Map: Normalised comorbidity and complication (CC) score, Inpatient, 2020/21



***please refer to index map to identify individual ICSs**

Aggregate normalised comorbidity and complication scores are highest in the North West, Midlands and London

Regional disparity can also be observed in terms of comorbidity and complication (CC) scores, which ultimately inform the payment process across NHS providers. There is considerable variation in aggregate normalised CC scores across ICSs, ranging from a low of 3.8 in Coventry and Warwickshire ICS, Our Dorset, Kent and Midway ICS, One Gloucestershire, and Bath & North East Somerset, Swindon and Wiltshire Partnership, to a high of 4.9 in North London Partners in Health & Care ICS, 4.8 in Nottingham and Nottinghamshire ICS and 4.7 in North East London Health and Care Partnership, Birmingham and Solihull ICS and The Black Country and West Birmingham ICS. Higher aggregate CC scores tend to be observed in ICSs associated with larger, urbanised areas where population health issues are more apparent, and patients are associated with higher levels of comorbidities and complications as a result.

Source: HES

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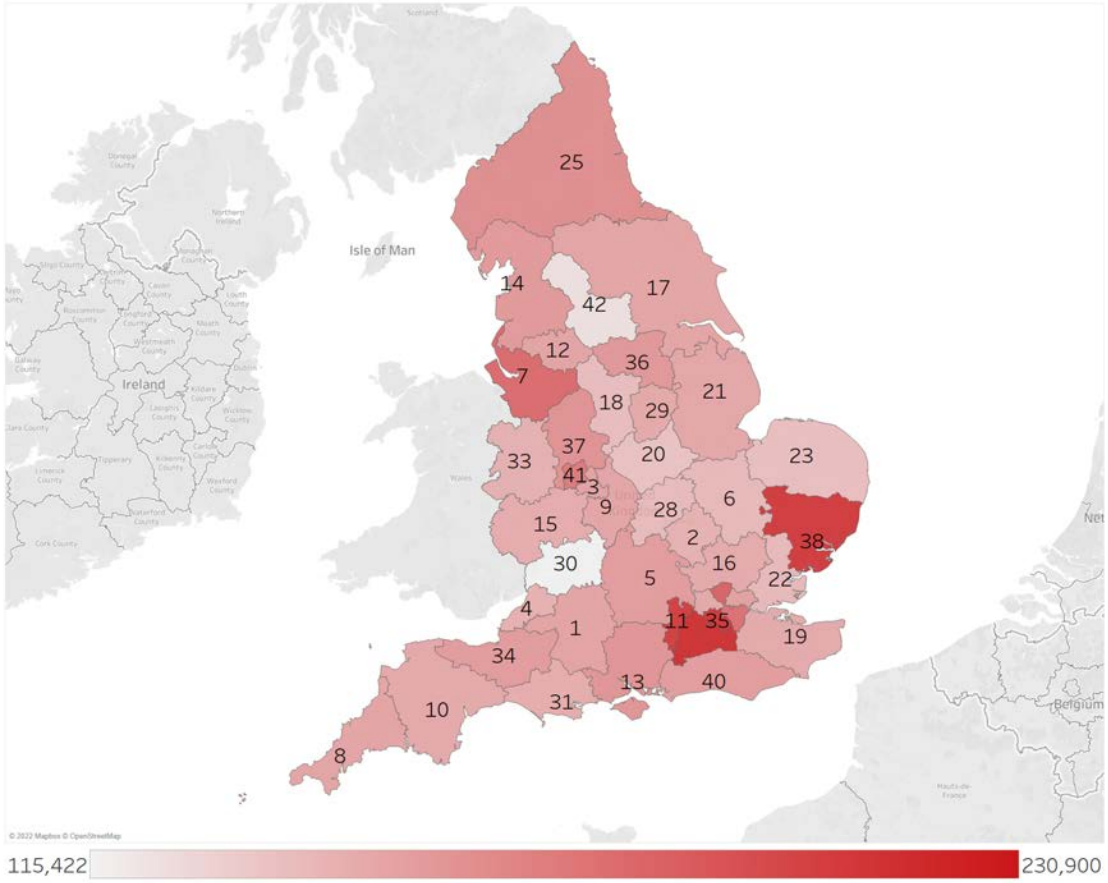
ICS Map: Appointments per 100,000, Outpatient, 2020/21



***please refer to index map to identify individual ICSs**

Demand for outpatient services lower in rural areas where access is relatively poor

Another important indicator of demand on secondary care is in terms of outpatient appointments normalised per 100,000. For the most part the variation nationally in terms of demand on outpatient services is not as noteworthy as with prior illustrated inpatient metrics, however the range between high and low remains considerable, with as many as 2.3 outpatient appointments per capita in Surrey Heartlands Health & Care Partnership and 2.2 outpatient appointments per capita in South West London Health & Care Partnership, Suffolk and North East Essex ICS and Frimley Health and Care ICS, and as few as 1.2 outpatient appointments per capita in One Gloucestershire and in West Yorkshire and Harrogate Health and Care Partnership. Broadly speaking, the ICSs with the highest normalised outpatient activity are in the south east region, and those areas with fewer normalised outpatient appointments can be deemed to have poorer or inadequate access to secondary care.

Source: HES, QOF

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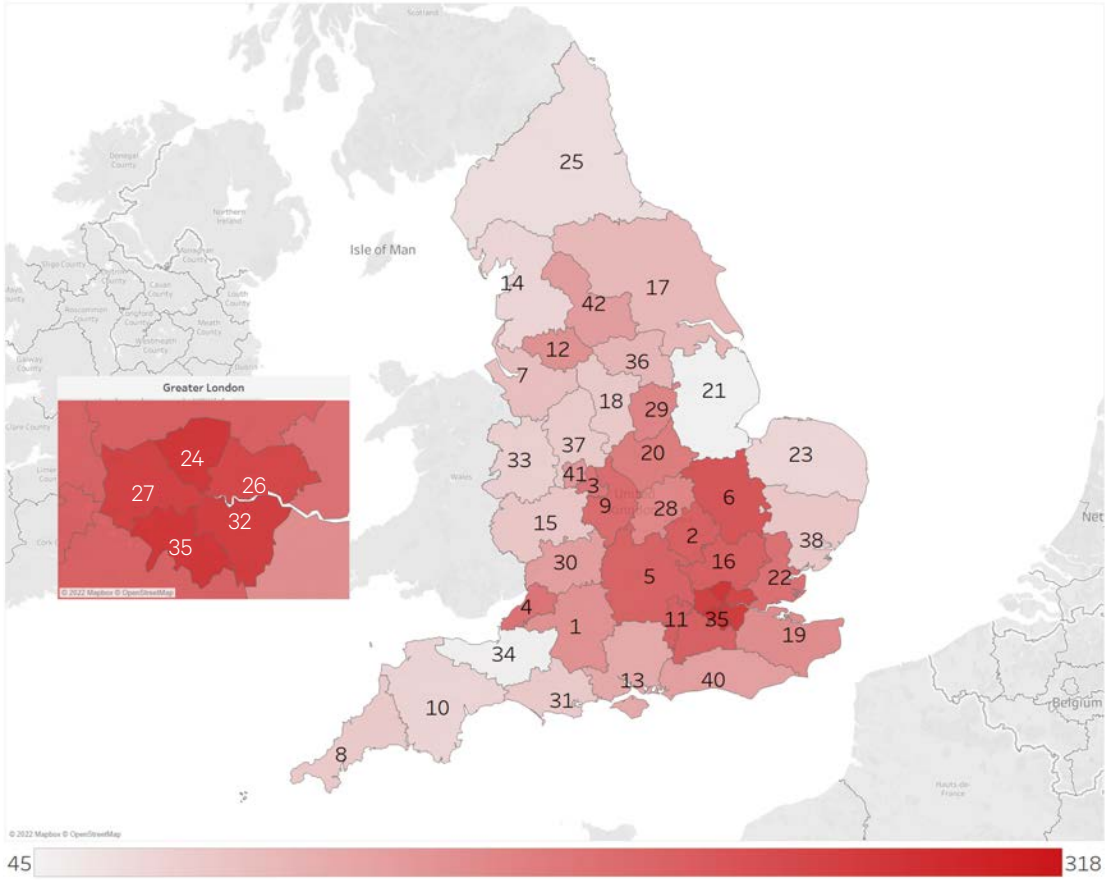
ICS Map: Population Health Score, Quality Outcomes Framework, 2020/21



***please refer to index map to identify individual ICSs**

Prevalence indicators are highest in London, South East and Midlands

One of the primary objectives of the NHS's shift towards an integrated care model is to better position itself to tackle population health management issues. An aggregate score of prevalence indicators spanning hypertension, coronary heart disease, asthma, obesity, diabetes, cancer, dementia and depression reveals there is considerable variation across ICSs in terms of the proportional burden of these diagnoses, with London, the South East and Midlands broadly scoring much higher on prevalence indicators than other parts of the country, such as the North, North West and South West, where, despite lower aggregate prevalence indicators, there is a disproportionate burden on secondary care services on a normalised basis. Higher prevalence indicators could indeed be a proxy for better access to care/ diagnosis and in turn better management of chronic health conditions, reducing the overall burden on secondary care services, which, in areas with lower aggregate QOF prevalence indictors, are more heavily relied upon to manage acute/non-elective admissions.

Source: Wilmington Healthcare, QOF

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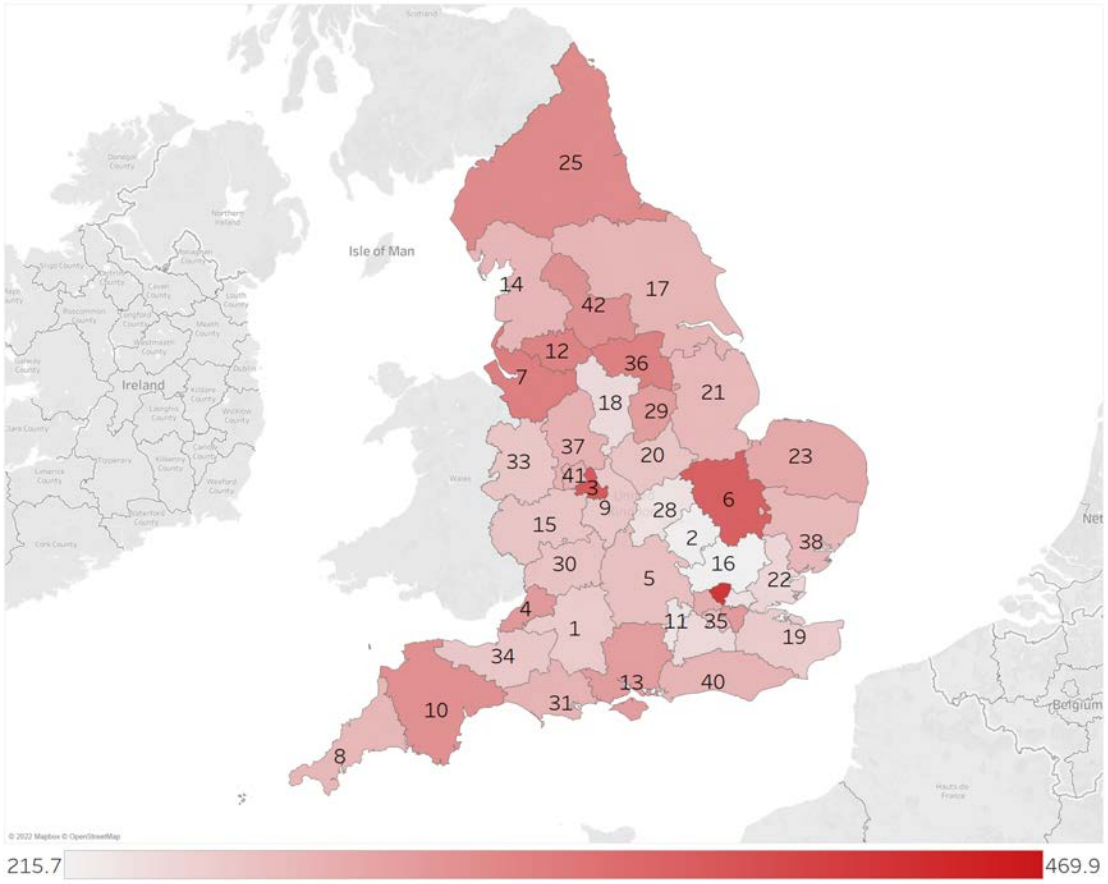
ICS Map: Prescribing Cost per Capita (GBP), 2020/21



***please refer to index map to identify individual ICSs**

Considerable variation in prescribing costs across the ICS landscape

Regional variation across the health service can also be viewed in terms of per capita spend on prescribing. Once again there is considerable disparity across ICSs, with the highest per capita spend on prescribing being observed in North London Partners in Health & Care ICS (GBP 469.9), Birmingham and Solihull ICS (GBP 413.1) and Cambridge and Peterborough ICS (GBP 405.5), while the lowest per capita prescribing spend is seen in Hertfordshire and West Essex ICS (GBP 215.7), Bedfordshire, Luton and Milton Keynes ICS (GBP 218.2) and Frimley Health and Care (GBP 228.9). This variation represents a significant degree of disparity and underlines the inequality in population health management that remains within the NHS in England today given the importance of prescribing, particularly innovative treatments, in managing both chronic and acute health conditions, and the need to distribute resources accordingly.

Source: NHS Business Service Authority; Prescription Cost Analysis

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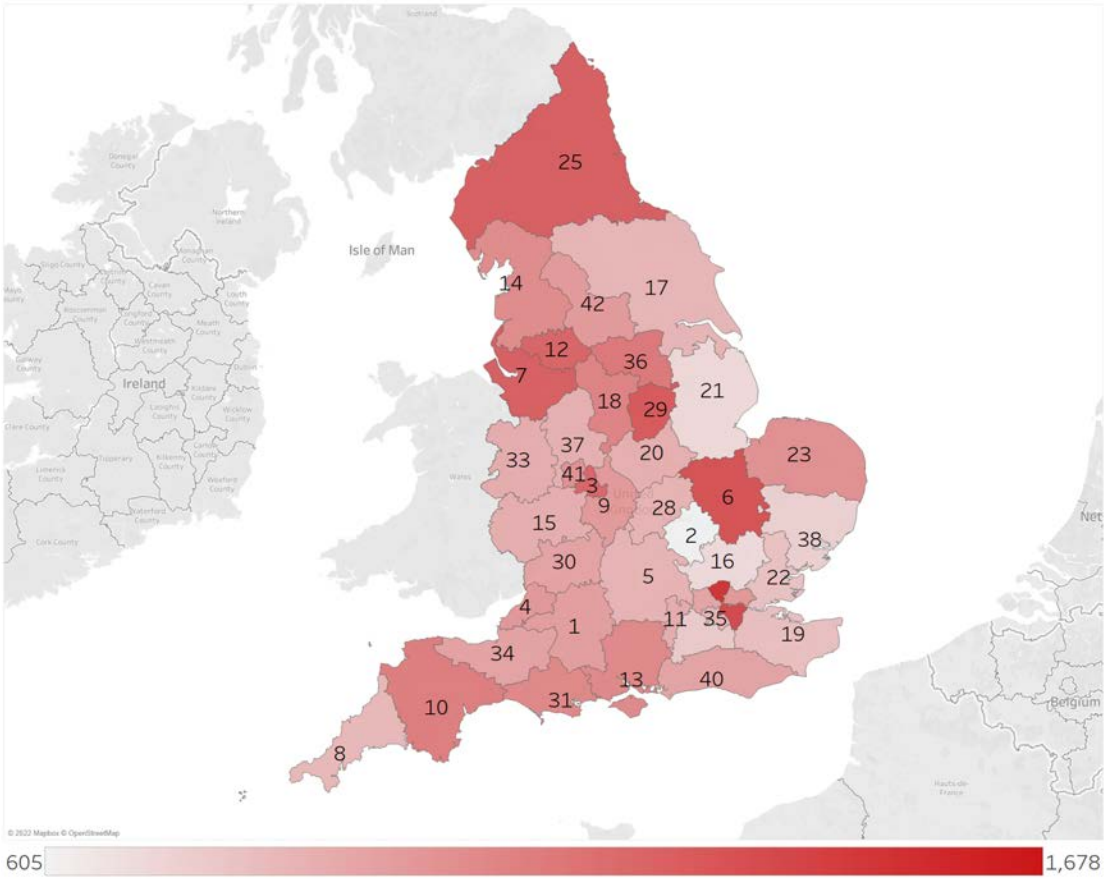
ICS Map: Qualified clinical staff per 100,000 population, 2020/21

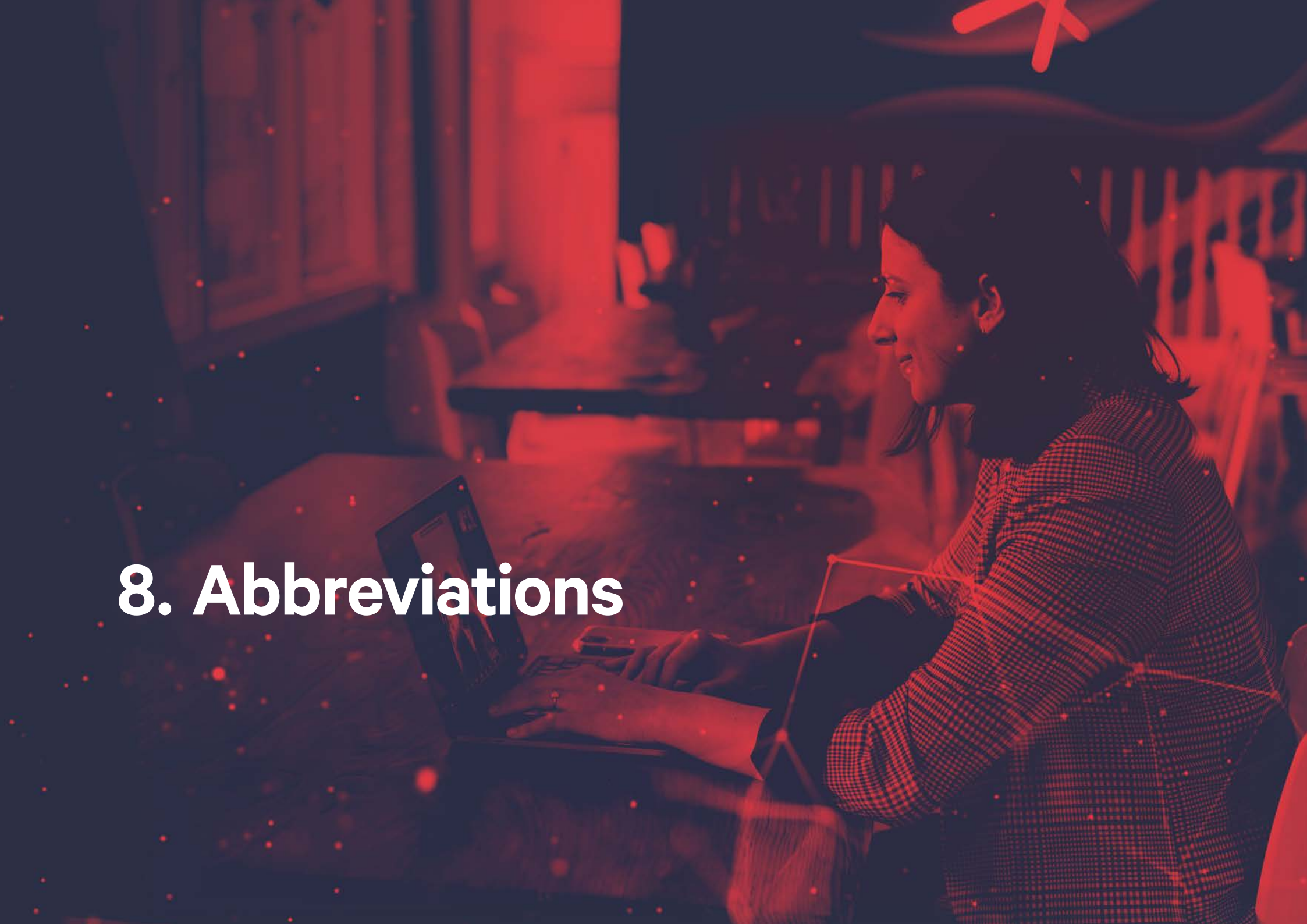


***please refer to index map to identify individual ICSs**

Disproportionately high levels of per capita clinical staffing in North West, Midlands and London

The size of the NHS England secondary care workforce is another important indicator of service provision nationally. Mapping trust level workforce data to ICSs and ICS populations has allowed us to determine the variation that exists in the secondary care workforce by population at ICS organisation level. This analysis again shows considerable variation by ICS, with the number of qualified clinical staff per 100,000 population ranging from a high of 1,678 in North London Partners in Health & Care ICS to a low of 605 in Bedfordshire, Luton and Milton Keynes ICS. Broadly speaking workforce allocation nationally is resourced according to demand and maps with the overall burden on secondary care services that exists within an ICS, however there is still considerable variation when looking at this data. Indeed, the highest level of staffing as a proportion of the population is seen in the North West, parts of the Midlands and London, whereas much of the South East is relatively understaffed in comparison.

Source: NHS workforce statistics (NHS Digital), QOF



8. Abbreviations

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CAGR – compound annual growth rate

CC – complication and comorbidity

COPD – chronic obstructive pulmonary disease

CPP – cost per patient

DTA – decision to admit

GERD – gastroesophageal reflux disease

HES – hospital episode statistics

ICS – integrated care system

IMD – Indices of multiple deprivation

MLOS – mean length of stay

NHS – National Health Service

ONS – Office for National Statistics

QOF – Quality Outcomes Framework

RTT – referral to treatment

9. Sources

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Wilmington Healthcare

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We hope you found this white paper useful. Much of the insight contained in this document is drawn from Wilmington Healthcare's portfolio of data and intelligence solutions, curated by our team of experts and consultants.

For more information or to request a demo of a solution please contact us in any of the following ways:

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