Diagnostic Imaging Dataset: Standardised CCG rates 2014/15

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Contents

1 Introduction

Imaging activity from the Diagnostic Imaging Dataset (DID) is presented by Clinical Commissioning Group (CCG) in Tables 7 and 8 of the annual 2014/15 report[1]. This Annex to the report expresses CCG activity as a rate per population, for each modality and for early diagnosis of cancer (EDOC) tests[2], standardised by age, sex and deprivation. It additionally shows the impact of age, sex and deprivation on the rates via Odds Ratios.

2 CCG Standardised Rates

2.1 Method

Rates per 10,000 population were calculated using 2014/15 DID activity by responsible CCG divided by July 2014 GP Practice-registered CCG populations from the Exeter system. Both sources were available by age and sex, with Index of Multiple Deprivation (IMD) quintile information added based on Lower Super Output Area (LSOA[3]).

Monthly counts of imaging activity by CCG, sex, 5 year age band, imputed IMD quintile and modality or EDOC were extracted from DID. Cases that did not have full completeness for all required fields were removed: approximately 6.5 million (16%) cases. Of those that were removed, 4.5 million did not have a valid English CCG in the DID (derived from GP Practice code). Of the others, IMD (matched from a valid English LSOA) was missing slightly more often than age or sex (the latter rarely missing), but there was considerable overlap. The missing data were often clustered around particular data submitters and so affect some areas more than others.

Rates were indirectly standardised by applying the national rate by modality or EDOC for each IMD/Sex/Age breakdown to the local CCG population, to obtain an expected rate for each CCG based on their demography. The extent to which the observed rate differed from the expected rate indicated the extent to which the CCG differed from the standard, national rate. A standardised rate for each CCG by modality or EDOC was calculated as:

$$\text{Standardised Rate}_{\text{CCG}} = \left(\frac{\text{Observed Rate}_{\text{CCG}}}{\text{Expected Rate}_{\text{CCG}}}\right) \times \text{National Rate}$$

Indirect standardisation allows each rate to be compared with the national average, but does not allow direct comparison between CCGs. Nevertheless, it can demonstrate regional patterns and indicate the extent of variation.

[1] *Diagnostic Imaging Dataset Annual Statistical Release 2014/15*, NHS England, 29 October 2015. Available (with appended tables by CCG) from http://www.england.nhs.uk/statistics/statistical-work-areas/diagnostic-imaging-dataset/diagnostic-imaging-datasetdiagnostic-imaging-dataset-2014-15-data/

[2] See above publication for definitions of each modality and further details on the collection.

[3] The 2014/15 DID has 2001 LSOA derived from patient postcode, which was matched to 2010 IMD quintiles.

2.2 Results

The national rates[4] of diagnostic imaging tests in 2014/15 per 10,000 people are shown in Tables 1 & 2 below.

Table 1. National Imaging Rates per 10,000 by modality, 2014/15

	X-ray	Ultrasound	CT Scan	MRI	Fluoro-scopy	Nuclear Medicine	PET Scan	SPECT Scan	Medical Photography
Rate per 10,000 people	3,356	1,283	630	422	153	65	9	3	2

Table 2. National Imaging Rates per 10,000 by Early Diagnosis of Cancer[5], 2014/15

	Brain MRI	Chest X-ray	Chest CT	Kidney or Bladder Ultrasound	Abdomen or Pelvis Ultrasound
Rate per 10,000 people	87	1,215	75	35	191

Some CCGs have very low rates across all modalities because their providers did not report the GP Practice and thereby the CCG responsible for commissioning the activity. Even CCGs with higher rates may have shortfalls for this reason. Further details are given in Annex A, which gives a list of the CCGs thought to be most affected. Consequently the rates should be interpreted with caution, especially those at the lower end of the distribution across all modalities.

For most CCGs the standardised rate is within 10% of the crude rate, but there are bigger differences particularly in areas with predominantly younger or older populations. The impact of age, sex and deprivation on imaging rates is explored in Section 3.

Standardised 2014/15 rates by CCG are available in Annex B (separate Excel file). The following sections summarise the distribution of rates for each modality or EDOC and illustrate these on a map.

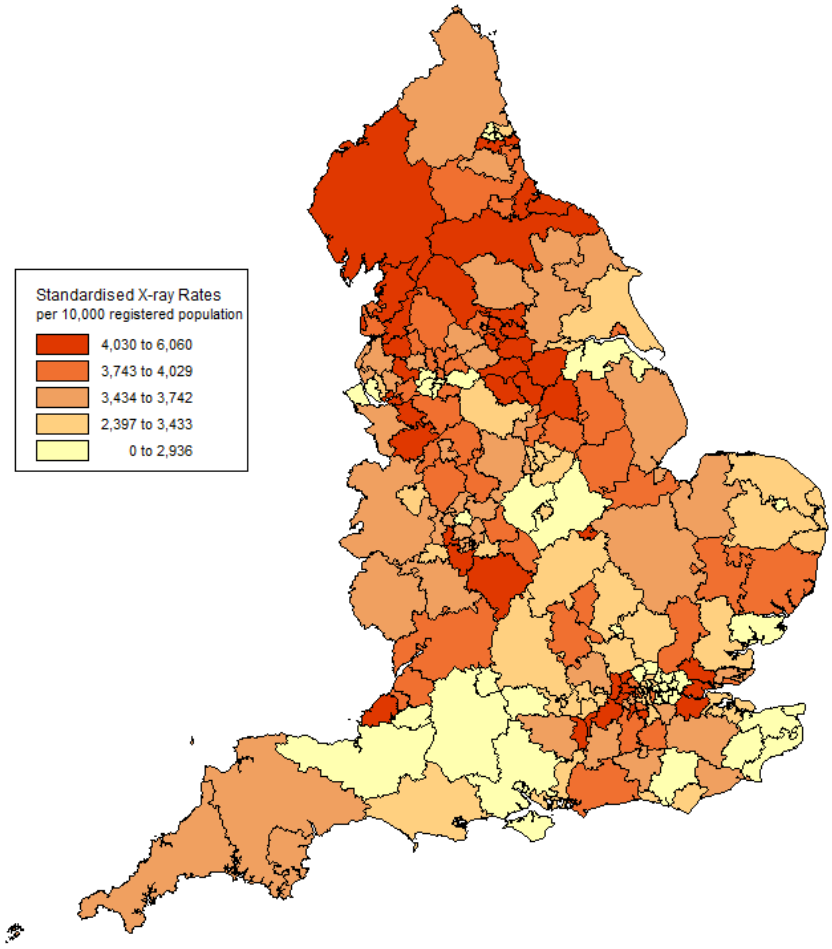
[4] These national rates exclude activity with missing age, sex, deprivation or CCG (16% of overall imaging tests).

[5] Brain MRI may be used to diagnose brain cancer; Chest X-ray and Chest CT to diagnose lung cancer, Kidney or Bladder ultrasound to diagnose kidney or bladder cancer and Abdomen and/or pelvis ultrasound to diagnose ovarian cancer (but this test, and the rates given here, are not restricted to females). Although these tests may be used to diagnose cancer, many have wider clinical uses and it is not possible to distinguish between the different uses of these tests.

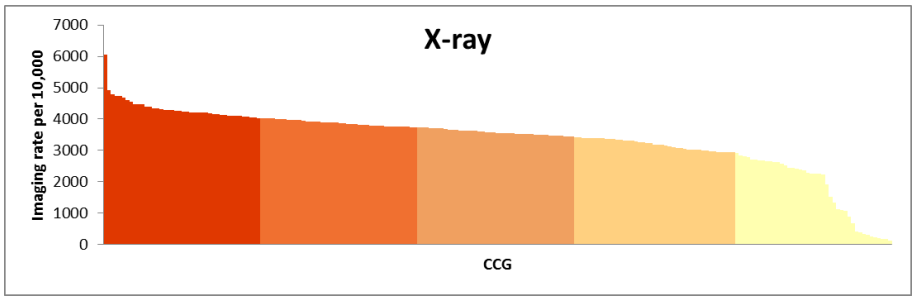
2.2.1 X-ray

As can be seen from Map 1 and Graph 1 there appears to be some regional variation in X-ray rates, with rates generally higher than average in CCGs in the North Region. The low level of rates in the lower fifth of CCGs illustrates the impact of missing data – some of these rates will be understated for that reason. The national rate is 3,356 X-rays per 10,000 registered population and 83% CCGs are within one standard deviation of the mean, that is between 2,343 and 4,353 tests per 10,000 population.

Map 1. Standardised X-ray rates by CCG, 2014/15



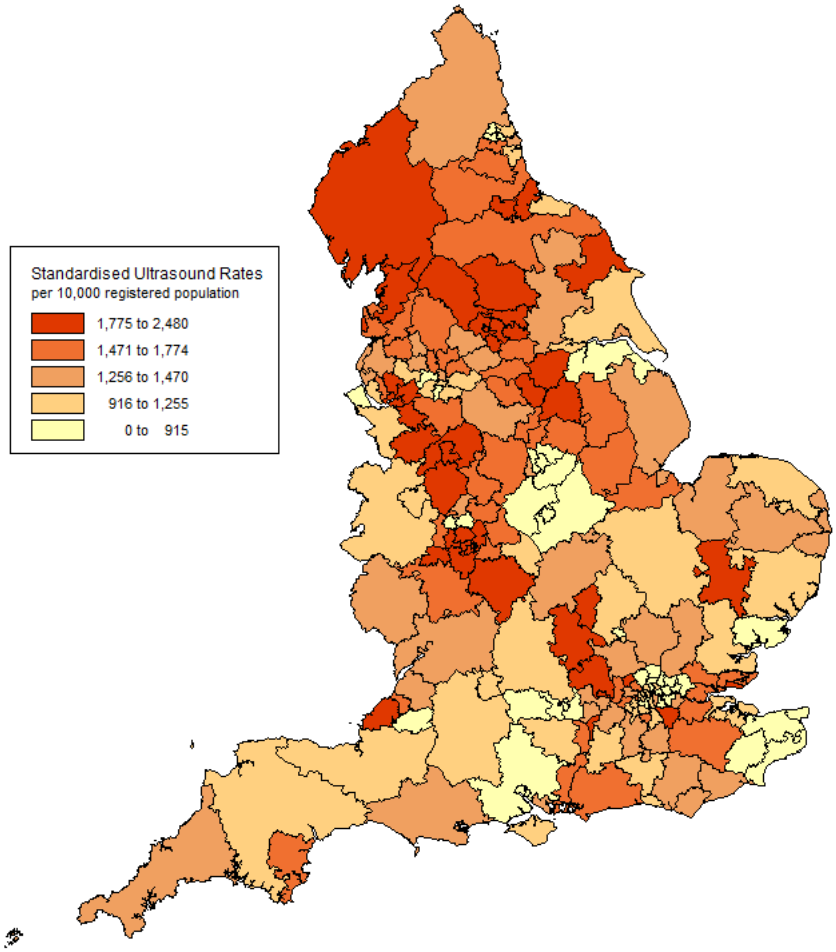
Graph 1. Standardised X-ray rates by CCG, 2014/15



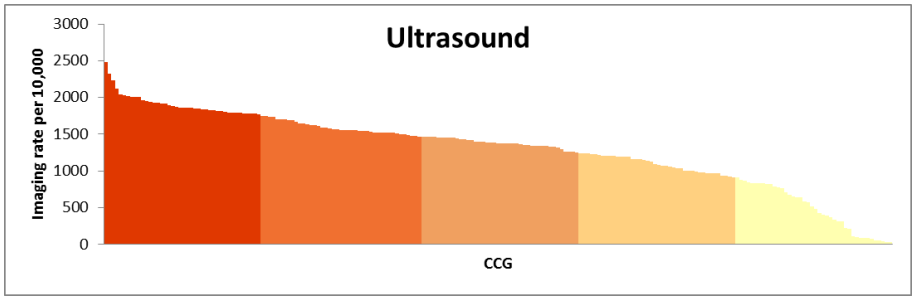
2.2.2 Ultrasound

As with X-ray, Ultrasound shows a concentration of higher rates in CCGs in the North region (Map 2). The comparison of standardised rates to crude rates shows that 97% of CCGs have a standardised rate within 10% of their crude rate, mainly because ultrasound does not rise as steeply with age as the other modalities (see Odds ratios) so demographics have less impact on the rate. Nevertheless, the rates vary more than the other major modalities and one standard deviation of the mean ranges from 779 to 1,806 ultrasounds per 10,000 registered population (70% CCGs are within this), with a national rate of 1,283 ultrasounds per 10,000 population.

Map 2. Standardised Ultrasound rates by CCG, 2014/15



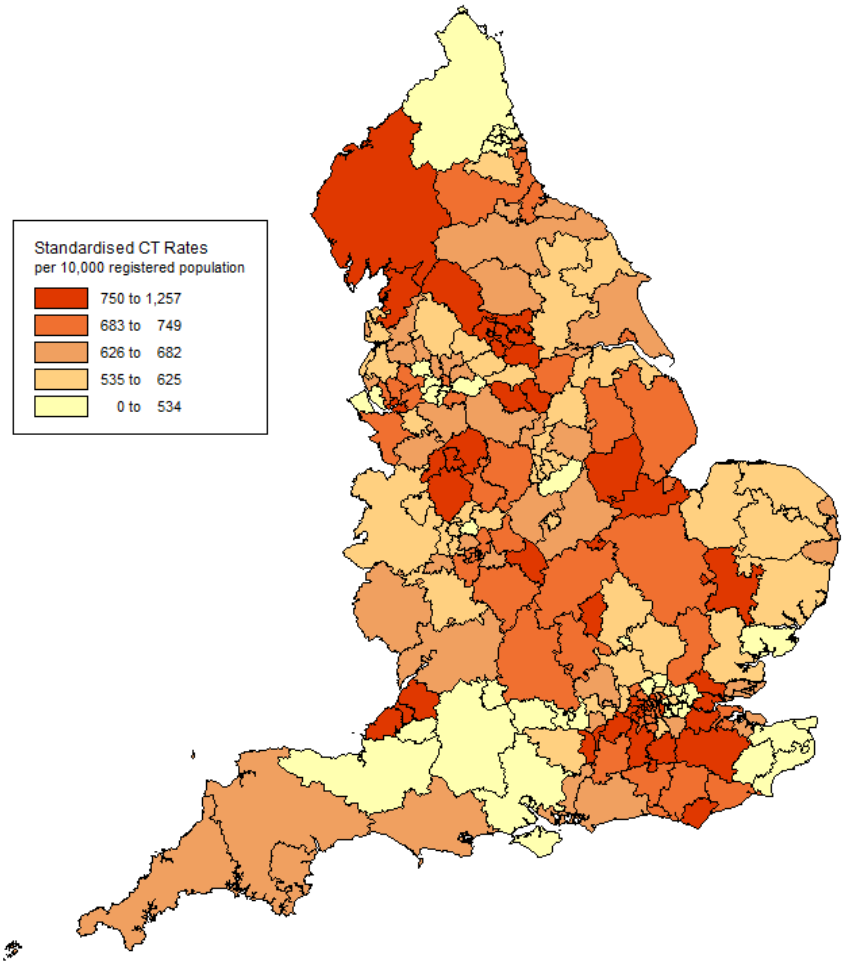
Graph 2. Standardised Ultrasound rates by CCG, 2014/15



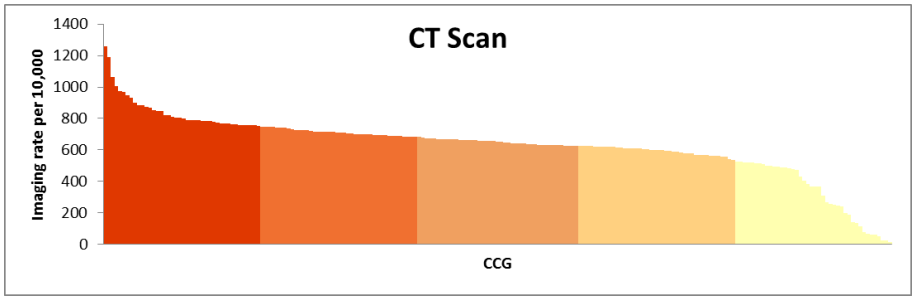
2.2.3 CT Scans

CT scans do not appear to show any strongly regional concentration and there are both high and lower rates across England (Map 3). The comparison of standardised rates to crude rates shows that only 56% of CCGs have a standardised rate within 10% of their crude rate, suggesting that demographics have a large effect on CT scans. The national rate is 630 CT scans per 10,000 registered population and 81% CCGs are within one standard deviation of the mean, that is between 428 and 823 tests per 10,000 population.

Map 3. Standardised CT rates by CCG, 2014/15



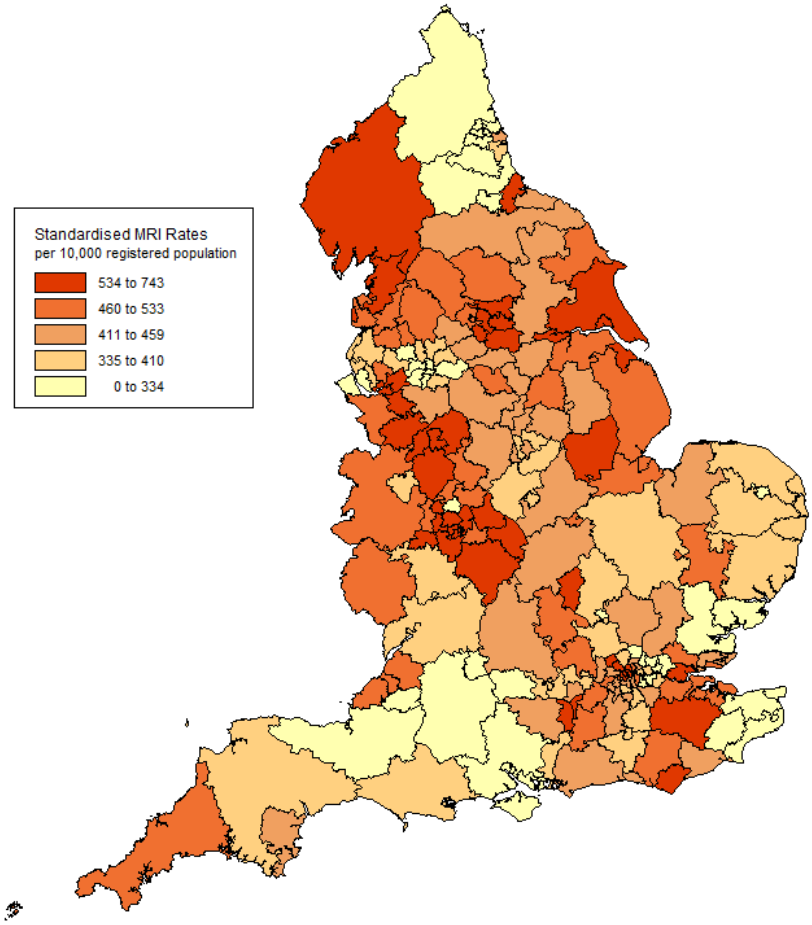
Graph 3. Standardised CT rates by CCG, 2014/15



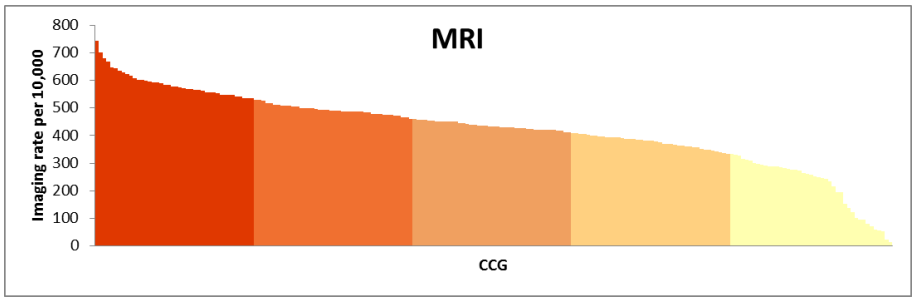
2.2.4 MRI Scans

MRI shows relatively little regional pattern but with a slight concentration of high rates in the North Region and the West Midlands (Map 4). The national rate is 422 MRI scans per 10,000 registered population and 71% CCGs are within one standard deviation of the mean, between 287 and 556 tests per 10,000 population.

Map 4. Standardised MRI rates by CCG, 2014/15



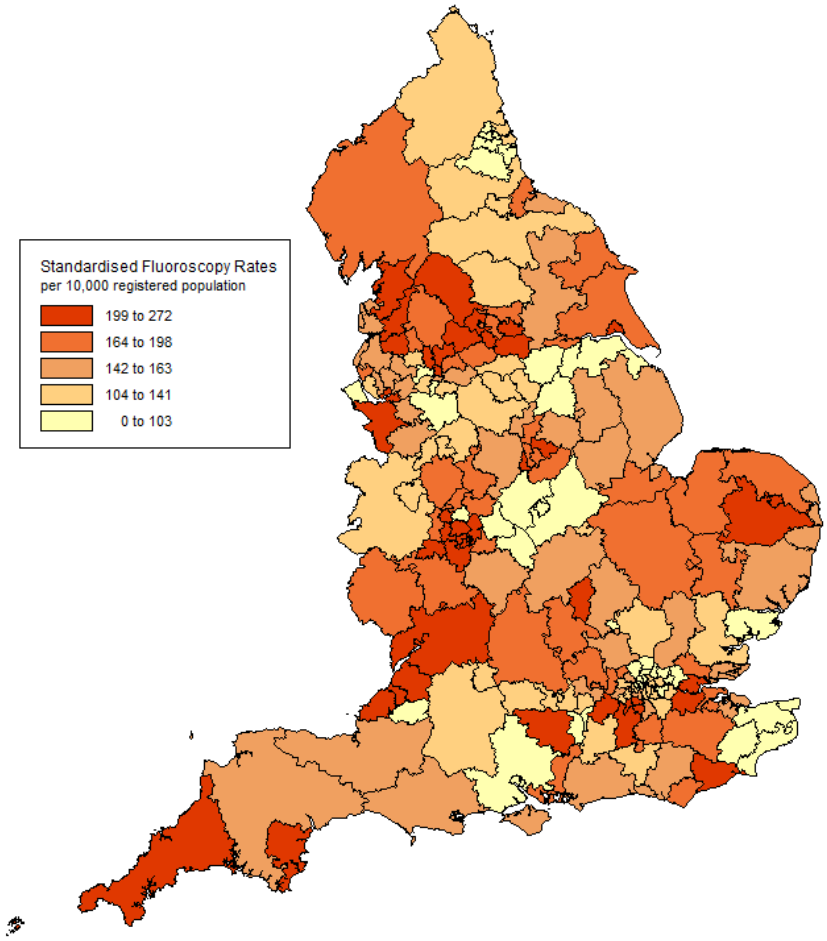
Graph 4. Standardised MRI rates by CCG, 2014/15



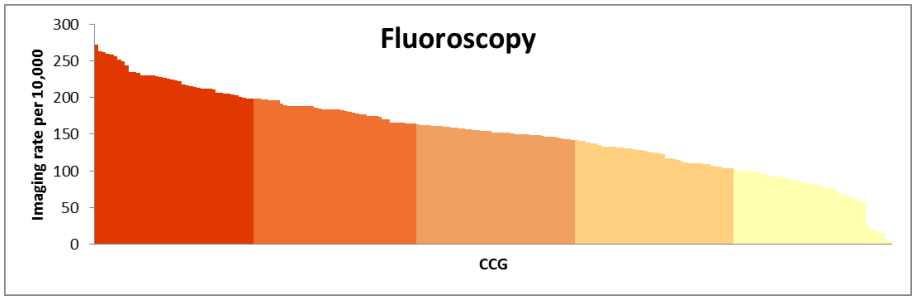
2.2.5 Fluoroscopy

Fluoroscopy shows no marked concentration of high or low standardised rates (Map 5), but rates are relatively variable across CCGs. The national rate is 153 Fluoroscopy scans per 10,000 registered population and 67% CCGs are within one standard deviation of the mean, that is between 97 and 206 tests per 10,000 population

Map 5. Standardised Fluoroscopy rates by CCG, 2014/15



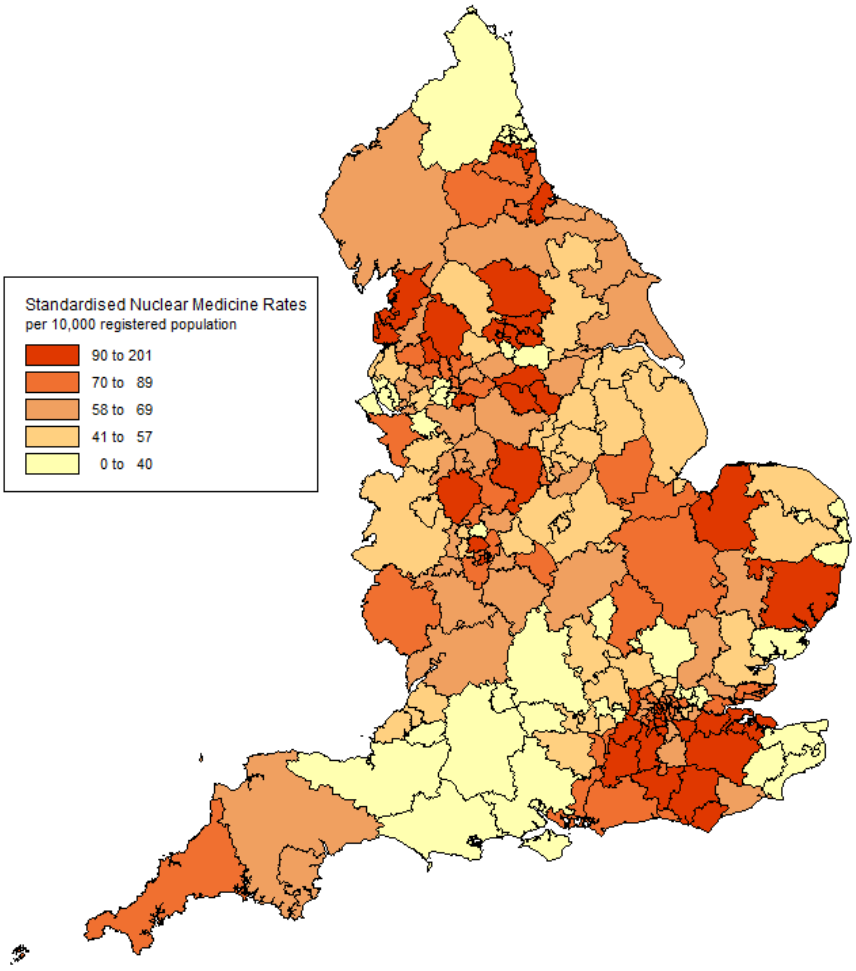
Graph 5. Standardised Fluoroscopy rates by CCG, 2014/15



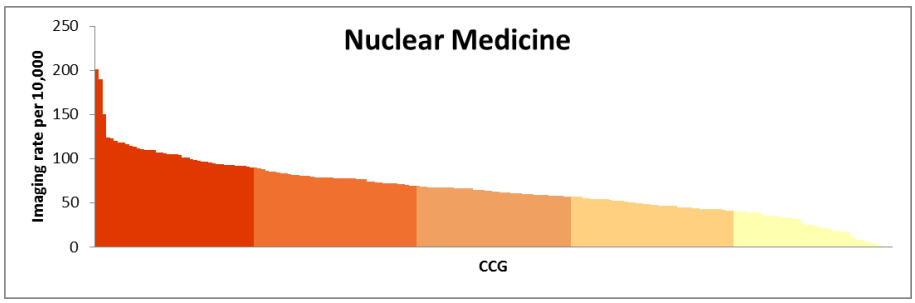
2.2.6 Nuclear Medicine

Nuclear Medicine shows considerable regional variation, with higher rates in the south east of England and lower rates in South Central and Wessex (Map 6). The national rate is 65 Nuclear Medicine exams per 10,000 registered population and 73% CCGs are within one standard deviation of the mean, that is between 33 and 96 tests per 10,000 population.

Map 6. Standardised Nuclear Medicine rates by CCG, 2014/15



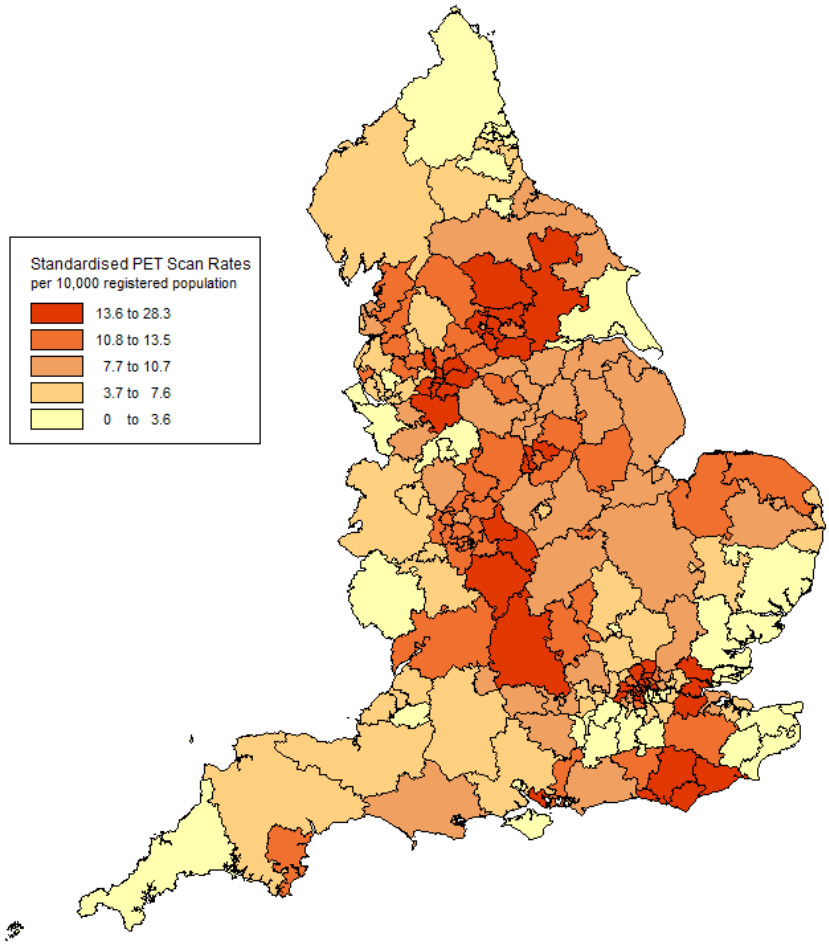
Graph 6. Standardised Nuclear Medicine rates by CCG, 2014/15



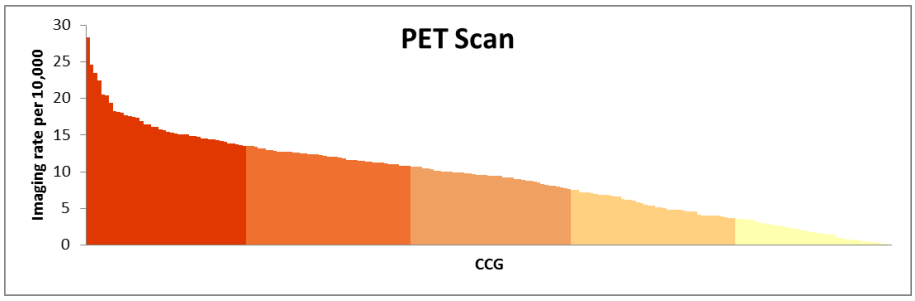
2.2.7 PET Scan

PET Scan shows some regional variation, with clusters of higher rates in North Yorkshire and North London (Map 7). Some of the variability arises from the relatively small numbers: the national rate is 9 PET scans per 10,000 registered population and 64% CCGs are within one standard deviation of the mean between 4 and 15 tests per 10,000 population.

Map 7. Standardised PET Scan rates by CCG, 2014/15



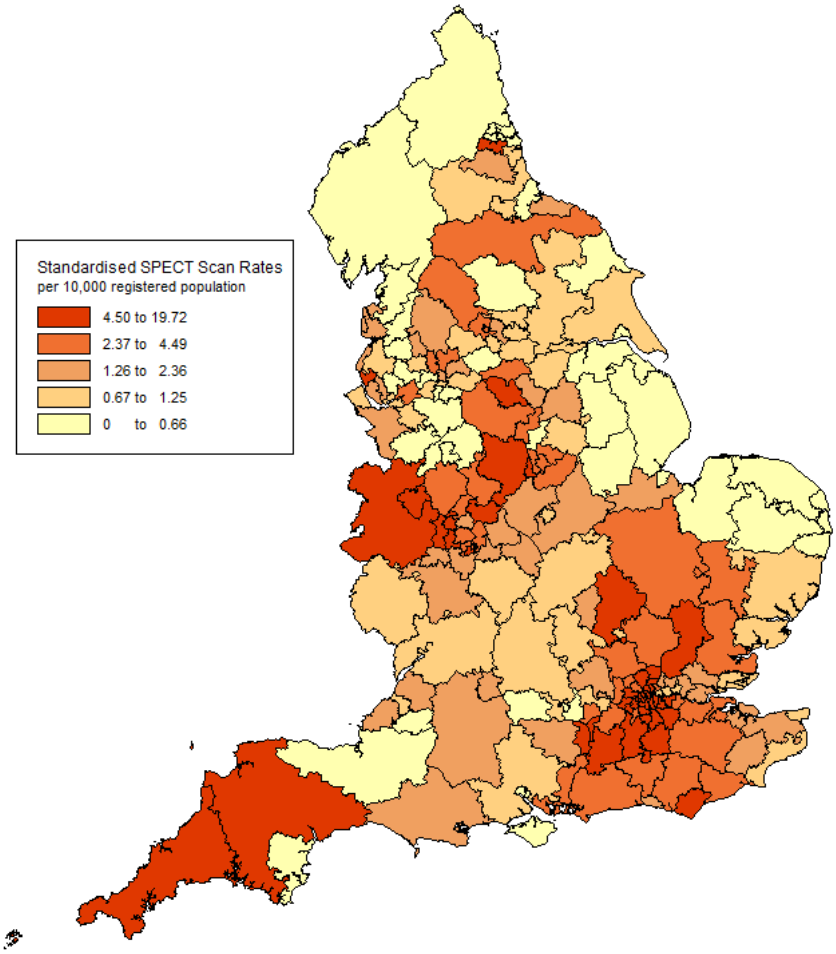
Graph 7. Standardised PET Scan rates by CCG, 2014/15



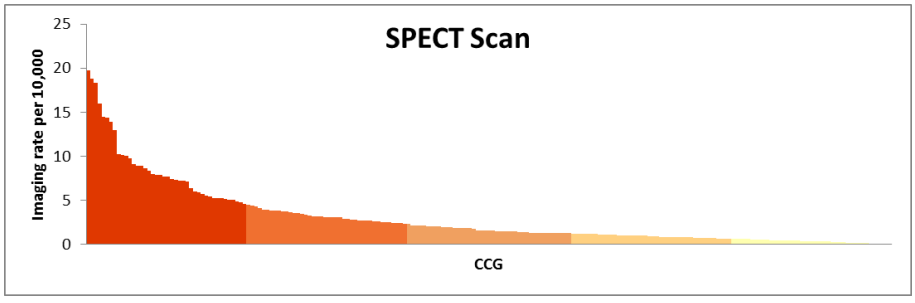
2.2.8 SPECT Scan

SPECT Scan shows clusters of high rates amongst generally low rates. The West Midlands, Devon & Cornwall and the south east show the greatest concentration of high rates (Map 8). The biggest volume providers of SPECT are reported in Plymouth and Derby, with others in and around London, leading to higher rates in those and neighbouring CCGs (Chart 8). The national rate is 3.3 SPECT scans per 10,000 registered population but the variance is wide and one standard deviation of the mean extends from 0 to 6.5 tests per 10,000 population (with 87% CCGs within this range, but some considerably higher).

Map 8. Standardised SPECT Scan rates by CCG, 2014/15



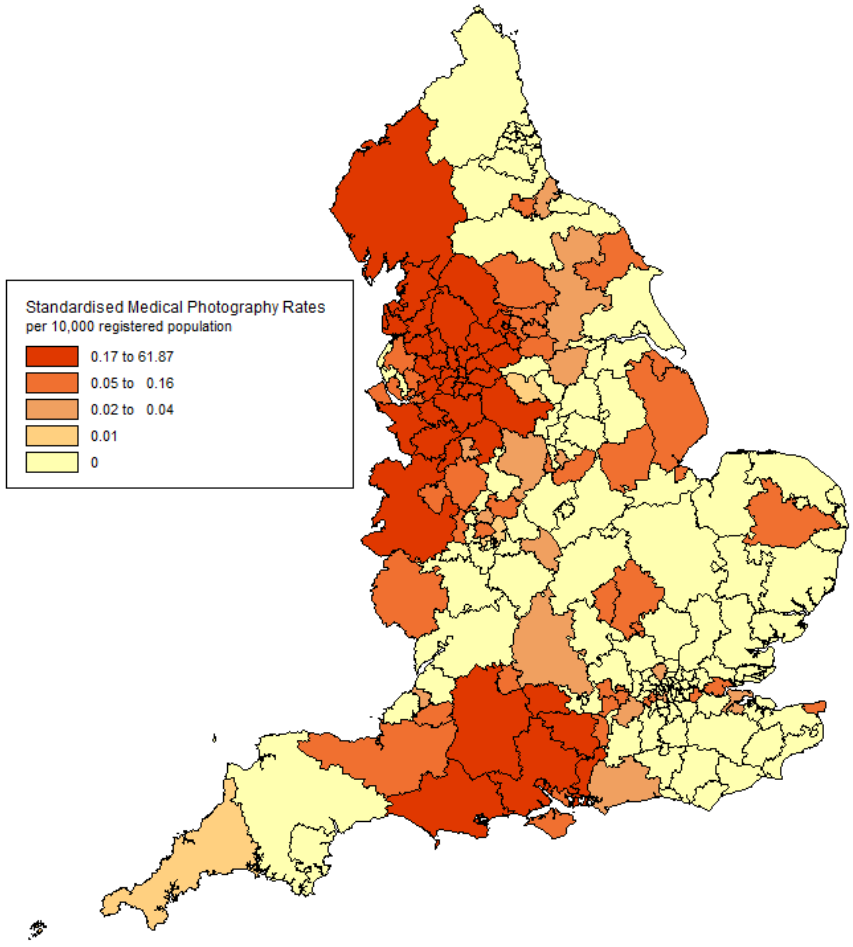
Graph 8. Standardised SPECT Scan rates by CCG, 2014/15



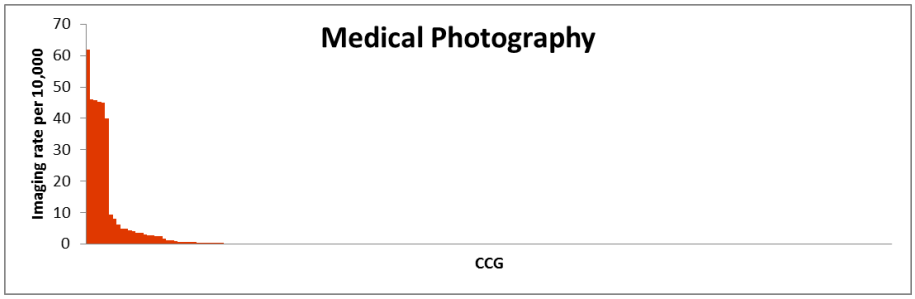
2.2.9 Medical Photography

Medical Photography shows a very marked cluster of high rates in the North west of England and Wessex (Map 9). There are only five providers nationally that report more than a few Medical Photography images in the DID: Pennine Acute Hospitals NHS Trust, University Hospital of South Manchester NHS Foundation Trust, The Christie NHS Foundation Trust, Calderdale & Huddersfield NHS Foundation Trusts and Salisbury NHS Foundation Trust, so the majority of CCGs have no reported Medical Photography (Chart 9).

Map 9. Standardised Medical Photography rates by CCG, 2014/15



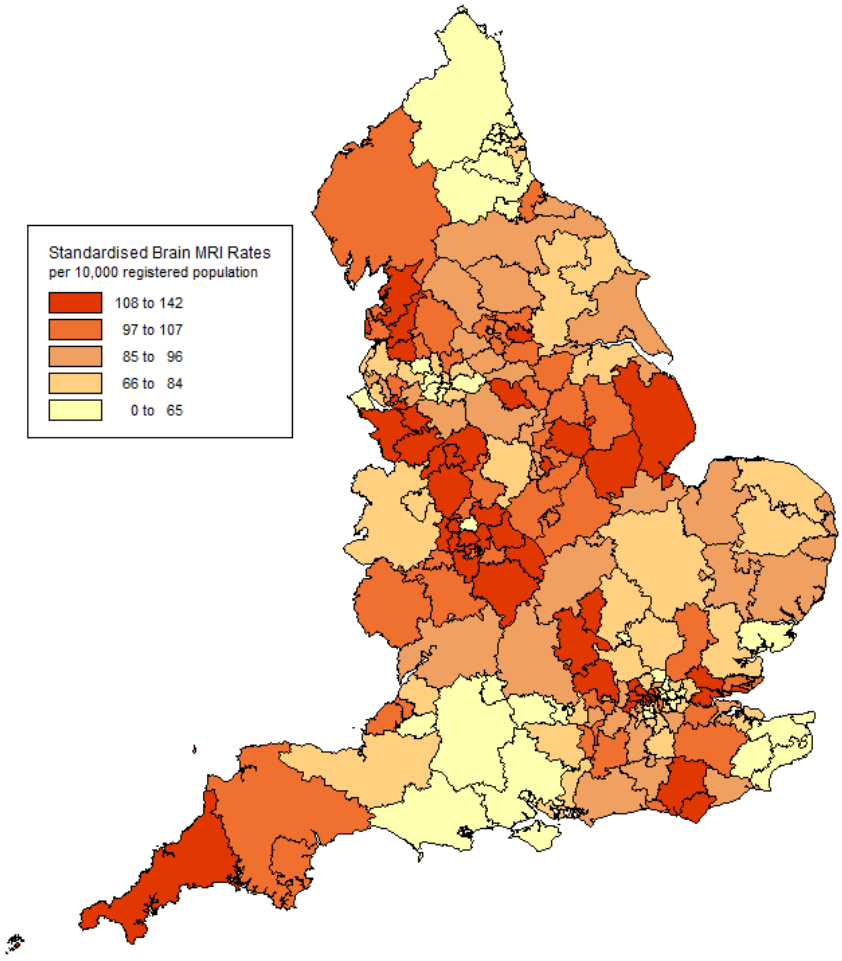
Graph 9. Standardised Medical Photography rates by CCG, 2014/15



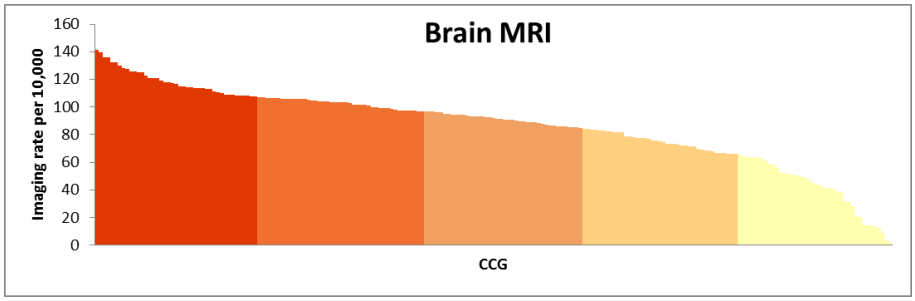
2.2.10 Brain MRI

Brain MRI shows little consistent regional variation (Map 10). High rates tend to cluster around neighbouring CCGs and many of these areas have at least one high-volume provider, but there is a wide variety of providers of different levels of activity. The national rate is 87 Brain MRIs per 10,000 registered population and 74% CCGs are within one standard deviation of the mean, between 58 and 115 tests per 10,000 population.

Map 10. Standardised Brain MRI rates by CCG, 2014/15



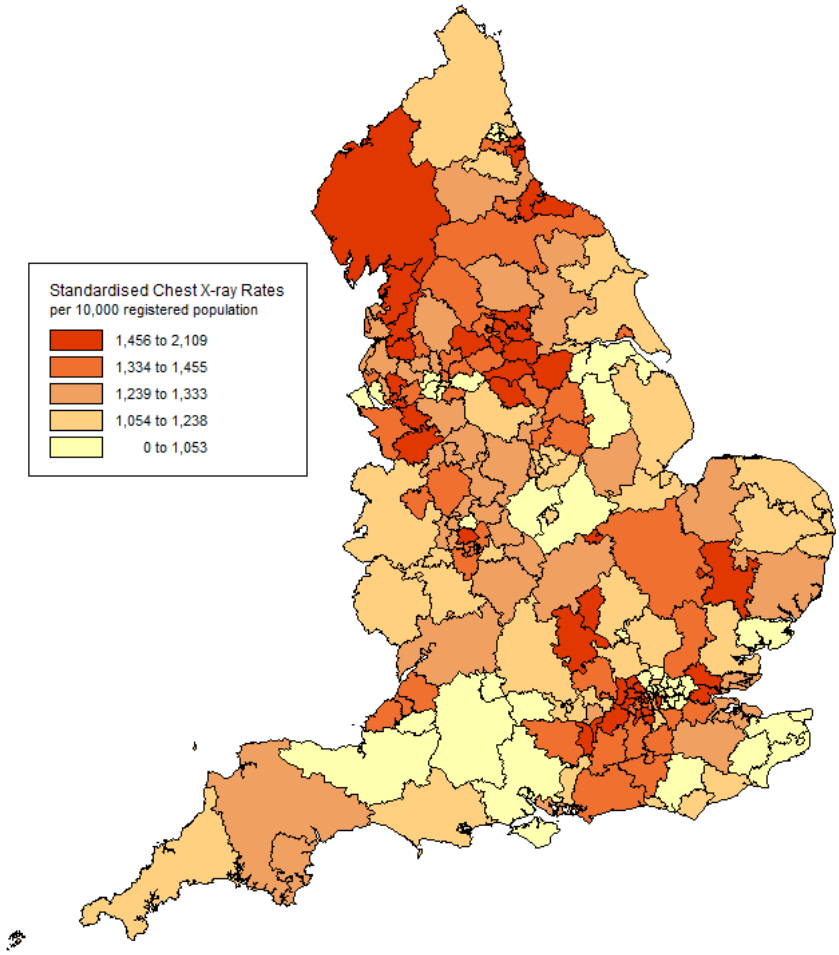
Graph 10. Standardised Brain MRI rates by CCG, 2014/15



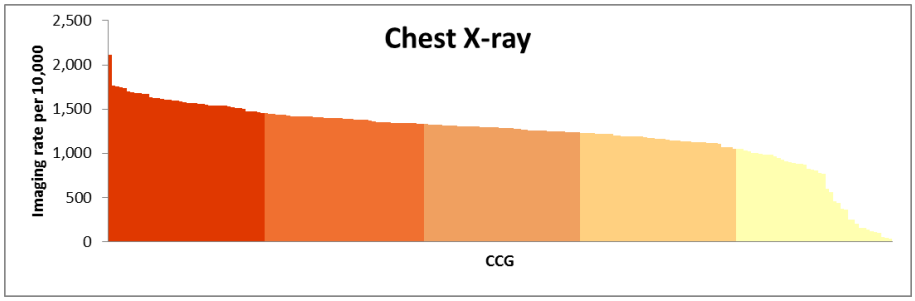
2.2.11 Chest X-ray

Chest X-ray shows less variation across CCGs than the other tests for potential early diagnosis of cancer (with much bigger numbers of tests), but there are generally higher rates in the north of England (Map 11). The national rate is 1,215 Chest X-rays per 10,000 registered population and 80% CCGs are within one standard deviation of the mean, between 849 and 1,581 tests per 10,000 population.

Map 11. Standardised Chest X-ray rates by CCG, 2014/15



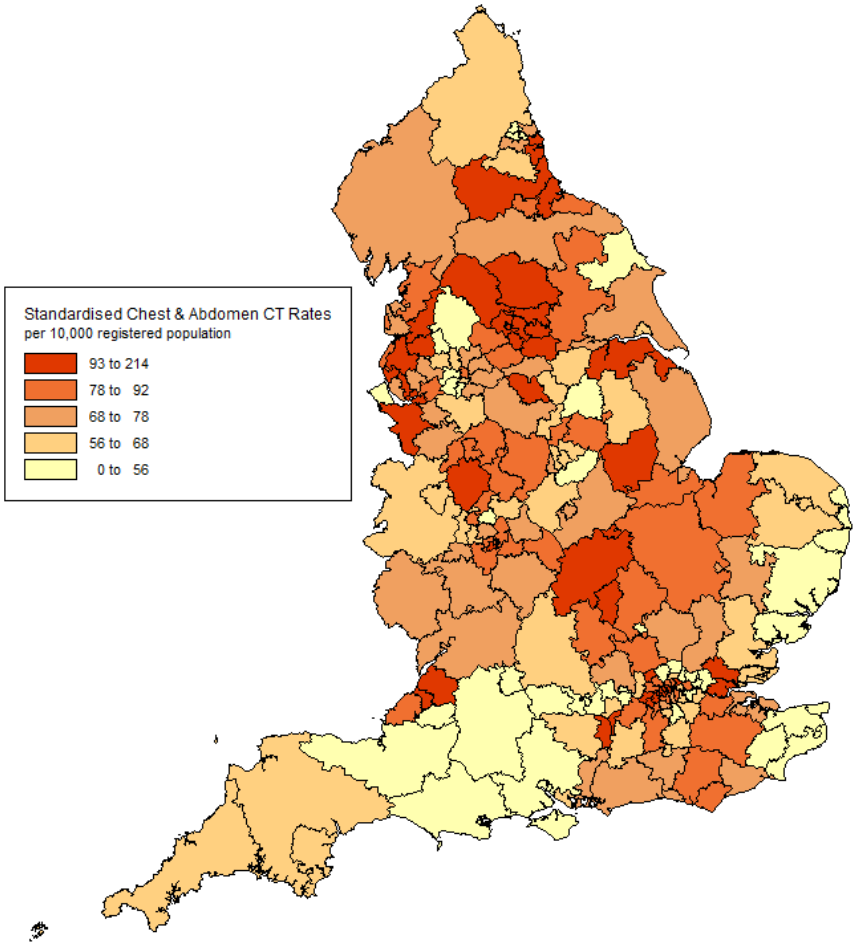
Graph 11. Standardised Chest X-ray rates by CCG, 2014/15



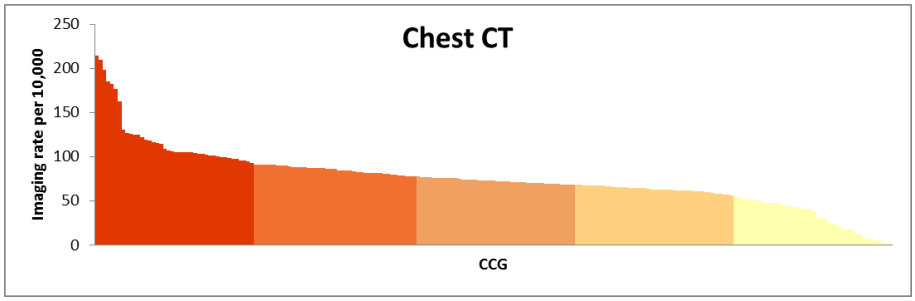
2.2.12 Chest CT

Chest CT shows little regional variation although there are high rates clustered around West Yorkshire (Map 12). The national rate is 75 Chest CTs per 10,000 registered population and 80% CCGs are within one standard deviation of the mean, between 41 and 109 tests per 10,000 population.

Map 12. Standardised Chest CT rates by CCG, 2014/15



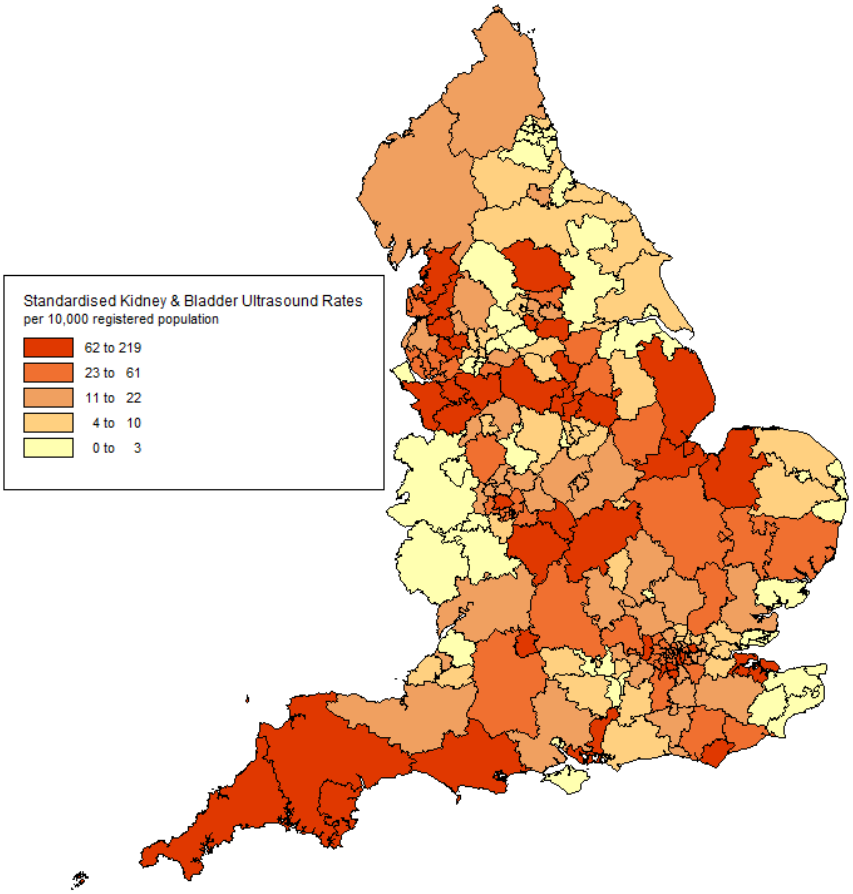
Graph 12. Standardised Chest CT rates by CCG, 2014/15



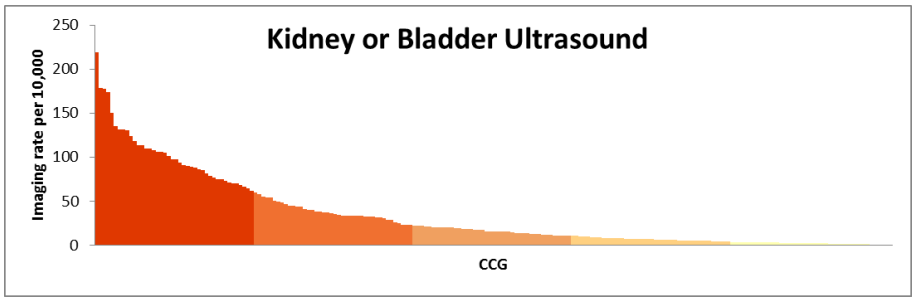
2.2.13 Kidney & Bladder Ultrasound

Kidney & Bladder Ultrasound shows more regional variation in the lower standardised rates than other Early Diagnosis of Cancer (EDOC) tests. A few CCGs will be affected by missing data, as for all the modalities above, but many more have rates barely a tenth of the highest reported (Graph 13). Both the highest rates and lowest rates are grouped together in clusters of CCGs (Map 13). The national rate is lower than the other EDOC tests at 35 Kidney & Bladder ultrasounds per 10,000 registered population, with one standard deviation of the mean ranging from 0 to 75 tests per 10,000 population (84% CCGs within this range).

Map 13. Standardised Kidney & Bladder Ultrasound rates by CCG, 2014/15



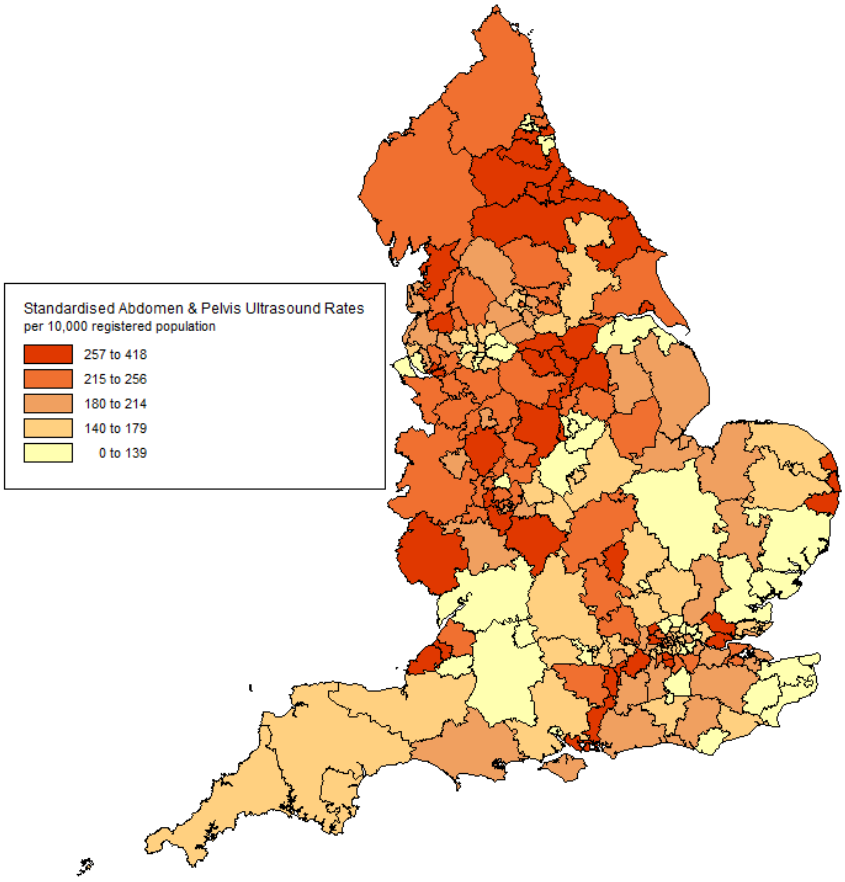
Graph 13. Standardised Kidney & Bladder Ultrasound rates by CCG, 2014/15



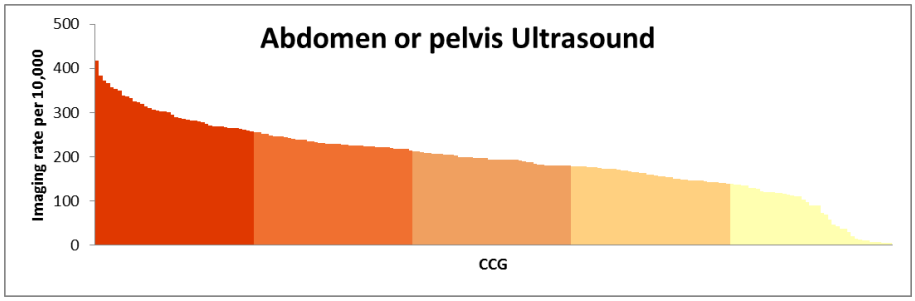
2.2.14 Abdomen & Pelvis Ultrasound

The highest rates of Abdomen & Pelvis Ultrasound appear to be clustered in the North, with relatively few high rates in the South and East (Map 14). The national rate is 191 Abdomen & Pelvis ultrasounds per 10,000 registered population, with one standard deviation of the mean ranging from 112 to 274 tests per 10,000 population (73% CCGs within this range).

Map 14. Standardised Abdomen & Pelvis Ultrasound rates by CCG, 2014/15



Graph 14. Standardised Abdomen & Pelvis Ultrasound rates by CCG, 2014/15



3 Odds Ratios

3.1 Method

Three factors were considered that could have an impact on the rate of diagnostic testing: age (five year age bands[6]), sex (male and female) and deprivation (quintiles of the Index of Multiple Deprivation). Differences in the distribution of these factors across CCGs might be partially responsible for the differences in crude observed rates between CCGs. Odds ratios were used to demonstrate the impact of each factor on the rate of diagnostic testing, whilst controlling for the others. Significant differences between the odds ratios for each factor suggest that it is worth standardising for these.

Odds ratios were calculated using similar methodology to the standardised rates (above). National rates of diagnostic testing activity were calculated by two of the three factors at a time, in order to estimate expected values for the third factor (IMD, Sex or Age). For example, if odds ratios were being calculated for IMD, rates were standardised by Sex and Age. This resulted in three sets of standardised rates per 10,000 population. Odds ratios then used the following formula:

$$\text{Ratio}_2 = \frac{\left(\frac{p_2}{1-p_2}\right)}{\left(\frac{p_1}{1-p_1}\right)}$$

Where
p_1 = standardised rate for the base category (e.g. female)
p_2 = standardised rate for the comparison category (e.g. male)
expressed per unit of population.

So for example the odds ratio for male X-rays was calculated by:

	Standardised rate per 10,000	p	p/(1-p)	Odds Ratio
Female	3,523	0.3523	0.5440	1.00
Male	2,992	0.2922	0.4270	0.78

Note: The base level will always be set to 1 with other levels given as a ratio of this.

In this example, males were 22% less likely to have an X-ray than females, even after standardising for the effect of age and IMD.

Further statistical analysis of the odds ratios was conducted using Pearson's Chi Square test of significance.

[6] Although five year age bands were used for analysis and standardisation, Odds ratios are given for broader age bands. This illustrates the age effect whilst overcoming the complication that p>1 for the higher 5-year age bands for some modalities.

3.2 Results

3.2.1 Sex

There is some variation in how likely each gender is to have a particular imaging test, see Tables 1 and 2. As would be expected, men are only a third as likely to have an ultrasound (odds ratio = 0.33), however they are more likely to a have a Chest X-ray (1.15). Of these odds ratios, X-ray, Ultrasound, MRI, Chest X-ray and Abdomen or Pelvis Ultrasound were found to be significant.

Table 1. Sex odds ratios by modality, 2014/15

	X-ray	Ultrasound	CT Scan	MRI	Fluoro-scopy	Nuclear Medicine	PET Scan	SPECT Scan	Medical Photography
Female	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Male	0.78***	0.33***	0.99	0.86*	1.00	0.82	1.23	0.64	1.05

Table 2. Sex odds ratios by Early Diagnosis of Cancer, 2014/15

	Brain MRI	Chest X-ray	Chest CT	Kidney or Bladder Ultrasound	Abdomen or Pelvis Ultrasound
Female	1.00	1.00	1.00	1.00	1.00
Male	0.84	1.15**	1.23	0.95	0.68***

3.2.2 Deprivation

There appears to be a consistent tendency for areas of highest deprivation to have most imaging tests, see Tables 3 and 4. Deprivation is significant at all levels for X-ray, CT, Ultrasound and Chest X-ray, whilst the 3 least deprived quintiles were significantly different from the most deprived for Chest CT and Abdomen or Pelvis Ultrasound. The odds ratio for Medical Photography shows the lowest values for all groups compared to the most deprived areas, but this may be coincidental as relatively few areas report Medical Photography in the DID.

Table 3. Deprivation odds ratios by modality, 2014/15

	X-ray	Ultrasound	CT Scan	MRI	Fluoro-scopy	Nuclear Medicine	PET Scan	SPECT Scan	Medical Photography
1 Most deprived	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2 More deprived	0.86***	0.88**	0.88*	0.96	0.94	0.92	0.85	1.04	0.52
3 Mid quintile	0.76***	0.85***	0.79***	0.92	0.89	0.84	0.74	0.88	0.40
4 Less deprived	0.71***	0.82***	0.74***	0.90	0.85	0.82	0.71	0.81	0.35
5 Least deprived	0.67***	0.81***	0.71***	0.89	0.81	0.81	0.66	0.78	0.24

* significant at $p < 0.05$
** significant at $p < 0.01$
*** significant at $p < 0.001$

Table 4. Deprivation odds ratios by Early Diagnosis of Cancer, 2014/15

	Brain MRI	Chest X-ray	Chest CT	Kidney or Bladder Ultrasound	Abdomen or Pelvis Ultrasound
1 Most deprived	1.00	1.00	1.00	1.00	1.00
2 More deprived	0.97	0.83***	0.82	0.98	0.87
3 Mid quintile	0.90	0.71***	0.69*	0.87	0.78*
4 Less deprived	0.87	0.63***	0.64**	0.81	0.71**
5 Least deprived	0.84	0.59***	0.59**	0.72	0.68***

3.2.3 Age

Age has the largest impact on the likelihood of having an imaging test, with the age band of 75 or older showing much higher odds ratios across all modalities and early diagnosis of cancer tests. All modalities and EDOCs have a significant result for the 75+ age band (65+ for X-ray). Other age bands are also significantly higher than the 0 to 45 group with the exception of ultrasound, which varies least by age perhaps because of a large number of obstetric ultrasounds for pregnant women, and the modalities with small numbers (SPECT Scan and Medical Photography). Full breakdowns are given in Tables 5 and 6.

Table 5. Age band odds ratios by modality, 2014/15

	X-ray	Ultrasound	CT Scan	MRI	Fluoro-scopy	Nuclear Medicine	PET Scan	SPECT Scan	Medical Photography
0 - <45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
45 - <55	1.99***	1.05	3.09***	2.23***	2.51***	3.28***	4.37	2.40	2.25
55 - <65	3.37***	1.03	5.20***	2.58***	3.99***	5.57***	9.66***	3.87	3.98
65 - <75	16.46***	1.26***	9.08***	2.97***	5.80***	8.78***	16.16***	5.58*	6.42
75+		1.53***	18.12***	2.48***	7.49***	9.45***	13.52***	5.72*	17.67*

Note: Due to limitations in the odd ratio methodology it is not possible to calculate ratios for the 75+ x-rays category (p>1). The odds ratio for 65+ has been reported instead.

Table 6. Age band odds ratios by Early Diagnosis of Cancer, 2014/15

	Brain MRI	Chest X-ray	Chest CT	Kidney or Bladder Ultrasound	Abdomen or Pelvis Ultrasound
0 - <45	1.00	1.00	1.00	1.00	1.00
45 - <55	1.80***	2.44***	4.74***	1.53	1.95***
55 - <65	2.17***	4.16***	10.39***	1.93*	2.32***
65 - <75	2.64***	7.59***	18.71***	2.96***	2.71***
75+	2.87***	22.02***	23.13***	4.85***	3.38***

4 Conclusion

After standardising the DID for age, sex and deprivation differences between CCGs, there are a number of modalities with regional variation in the rates of imaging per 10,000 population. Several modalities have higher rates of diagnostic imaging in the North region, particularly X-ray, Ultrasound and MRI. Although there are big differences in the CT and Fluoroscopy rates between CCGs, these show little regional consistency, whilst the modalities with lower activity show different patterns of variation. However, some of the low rates result from missing activity or poor coding by submitting organisations resulting in activity not being reported against their CCGs, which generally affects all modalities for those areas.

Based on the odds ratio calculations, age has the strongest impact on the rate of imaging procedures, particularly the over 75 age band. Over 65s are over 16 times more likely to have an X-ray than those who are under 45. Ultrasound has the least variation by age band.

In general, sex is not a significant factor in the likelihood of having a diagnostic imaging procedure, with the exception of ultrasound. Women are three times as likely to have an ultrasound than men, which is expected given the number of obstetric ultrasounds reported in DID.

The odds ratios for deprivation suggest that imaging increases with increased deprivation, with significant differences for all deprivation levels in the three largest modalities: X-ray, Ultrasound and CT Scans.

5 Annex

5.1 Annex A - Data quality and the impact of missing GP practice

The CCG of patients in the DID is derived from their GP Practice code. Nationally, the CCG in DID is missing or unknown for 11% imaging activity. Some of this reflects valid non-English or other GP Practices (e.g. prisons and Ministry of Defence practices) and some is where there is no Registered GP Practice (V81997) or GP Practice Code is not applicable (V81998), but the majority either has GP Practice Code not known (V81999) or missing data.

Where there is no derived CCG, the activity is omitted from the CCG imaging rates. Many of the lowest CCG imaging rates have these shortfalls, but they also affect some CCGs with higher rates.

An estimate of how the activity with missing GP Practice information might be split between CCGs was made using the Monthly Diagnostic Waiting times and Activity return (DM01) for 2014/15. DM01 is collected by provider and commissioner, so each CCG's share of each provider's total diagnostic test activity from DM01 was used to pro-rate the missing GP Practice tests from DID (defined as GP Practice code V81997 to V81999 or unknown). The CCGs thought to be missing at least 10% of their activity and 10,000 tests from at least one of their providers across all modalities are listed in Table A.1 (ranked in descending order of the estimated number of omitted tests).

Table A.1. CCGs with suspected shortfalls of more than 10% and 10,000 imaging tests in the Diagnostic Imaging Dataset, 2014/15

CCG Provider	Total reported imaging tests [1]	Estimated % imaging tests missing	Estimated no. tests missing [2] of which, from this provider [3]	Percent of GP practice missing for this Trust [4]
NHS Wirral CCG	36,000	89%	307,000	
Wirral University Teaching Hospital NHS FT			304,000	100%
NHS North East Essex CCG	26,000	90%	248,000	
Colchester Hospital University NHS FT			237,000	100%
NHS South Kent Coast CCG	10,000	95%	177,000	
East Kent Hospitals University NHS FT			177,000	100%
NHS Walsall CCG	60,000	74%	169,000	
Walsall Healthcare NHS Trust			166,000	93%
NHS Canterbury And Coastal CCG	10,000	94%	158,000	
East Kent Hospitals University NHS FT			157,000	100%
NHS Thanet CCG	6,000	95%	122,000	
East Kent Hospitals University NHS FT			104,000	100%
NHS Newcastle West CCG	3,000	97%	109,000	
The Newcastle Upon Tyne Hospitals NHS FT			122,000	100%
NHS Wiltshire CCG	204,000	35%	108,000	
Salisbury NHS Foundation Trust			109,000	91%
NHS Newcastle North And East CCG	5,000	96%	103,000	
The Newcastle Upon Tyne Hospitals NHS FT			102,000	100%
NHS Ashford CCG	7,000	93%	94,000	
East Kent Hospitals University NHS FT			93,000	100%
NHS Salford CCG	42,000	69%	94,000	
Salford Royal NHS Foundation Trust			89,000	99%
NHS South Manchester CCG	33,000	71%	80,000	
University Hospital of South Manchester NHS FT			74,000	100%
NHS Northumberland CCG	204,000	28%	79,000	
The Newcastle Upon Tyne Hospitals NHS FT			74,000	100%
NHS North Tyneside CCG	114,000	40%	76,000	
The Newcastle Upon Tyne Hospitals NHS FT			72,000	100%
NHS Croydon CCG	190,000	28%	73,000	
Croydon Health Services NHS Trust			68,000	37%
NHS Trafford CCG	100,000	46%	85,000	
University Hospital of South Manchester NHS FT			66,000	100%
NHS Lewisham CCG	119,000	33%	57,000	
Lewisham & Greenwich NHS Trust			51,000	65%
NHS Liverpool CCG	358,000	13%	54,000	
Royal Liverpool & Broadgreen Uni Hosp NHS Trust			32,000	19%
Aintree University Hospital NHS FT			16,000	20%
NHS Greenwich CCG	53,000	50%	53,000	
Lewisham & Greenwich NHS Trust			47,000	65%
NHS Newham CCG	159,000	23%	47,000	
Barts Health NHS Trust			42,000	21%

CCG Provider	Total reported imaging tests [1]	Estimated % imaging tests missing	Estimated no. tests missing [2] of which, from this provider [3]	Percent of GP practice missing for this Trust [4]
NHS Gateshead CCG	155,000	18%	34,000	
The Newcastle Upon Tyne Hospitals NHS FT			34,000	100%
NHS Stockport CCG	197,000	18%	43,000	
University Hospital of South Manchester NHS FT			34,000	100%
NHS Wigan Borough CCG	223,000	17%	45,000	
Wrightington, Wigan & Leigh NHS FT			32,000	14%
NHS Tower Hamlets CCG	140,000	20%	35,000	
Barts Health NHS Trust			32,000	21%
NHS Waltham Forest CCG	120,000	22%	35,000	
Barts Health NHS Trust			28,000	21%
NHS West Cheshire CCG	165,000	15%	30,000	
Wirral University Teaching Hospital NHS FT			26,000	100%
NHS North Durham CCG	162,000	12%	22,000	
The Newcastle Upon Tyne Hospitals NHS FT			20,000	100%
NHS City And Hackney CCG	153,000	16%	29,000	
Homerton University Hospital NHS FT			19,000	15%
NHS South Sefton CCG	112,000	15%	20,000	
Aintree University Hospital NHS Foundation Trust			18,000	20%
NHS Central Manchester CCG	93,000	23%	28,000	
University Hospital of South Manchester NHS FT			16,000	100%
NHS South Norfolk CCG	134,000	11%	17,000	
Norfolk & Norwich University Hospitals NHS FT			16,000	13%
NHS South Tyneside CCG	115,000	13%	16,000	
The Newcastle Upon Tyne Hospitals NHS FT			15,000	100%
NHS Norwich CCG	111,000	12%	15,000	
Norfolk & Norwich University Hospitals NHS FT			15,000	13%
NHS North Norfolk CCG	108,000	12%	15,000	
Norfolk & Norwich University Hospitals NHS FT			15,000	13%
NHS Haringey CCG	182,000	12%	25,000	
The Whittington Hospital NHS Trust			14,000	19%
NHS Islington CCG	140,000	14%	22,000	
The Whittington Hospital NHS Trust			12,000	19%
NHS Slough CCG	84,000	15%	15,000	
Heatherwood & Wexham Park Hospitals NHS FT			11,000	23%

Notes
(1) Total reported imaging tests (all modalities) where GP practice is valid and matches to the CCG.
(2) Estimated missing imaging tests for CCG based on DID activity reported without a valid GP Practice at its providers. Providers for each CCG were identified using the Diagnostic Waiting times and Activity return for 2014/15 (DM01, all diagnostic tests).
(3) Share of this provider's imaging tests with missing GP Practice that are estimated to be for this CCG. Providers with fewer than 10,000 missing tests for this CCG are omitted from the list.
(4) Percentage of all imaging activity for this provider where the GP practice code is missing or unknown.
FT = Foundation Trust

5.2 Annex B - CCG Standardised Imaging Rates per 10,000, 2014/15

See separate excel file (Annex 4a – DID Standardised CCG Rates 2014-15).

5.3 Contact Us

5.3.1 Feedback

We welcome feedback on this publication. Please contact us at did@dh.gsi.gov.uk

5.3.2 iView

The HSCIC allow health sector colleagues to access DID information through their web-based reporting tool, iView. Registered users can access anonymised data at aggregate level in a consistent and flexible format:

- **Access Information** – choose from a variety of data areas.
- **Build Reports** – select data to suit your needs.
- **Generate Charts** – customise report tables and graphs.
- **Export Data** – copy to Excel and manipulate data your way.
- **Save Reports** – store your favourite views for future use.

If you would like to register to use iView for DID, please email enquiries@hscic.gov.uk (subject: DID iView Access). For more information, please visit the iView website https://iview.hscic.gov.uk/

5.3.3 Websites

The DID website can be found here: http://www.hscic.gov.uk/DID

The DID Tables and Reports can be found here:
http://www.england.nhs.uk/statistics/diagnostic-imaging-dataset/

5.3.4 Additional Information

For press enquiries contact the NHS England Media team on 0113 825 0958 or 0113 825 0959. Email enquiries should be directed to nhsengland.media@nhs.net

The Government Statistical Service (GSS) statistician responsible for producing these data is:

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