NHS England

Diagnostic Imaging Dataset: Standardised CCG rates 2015/16

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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 2015/16 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 2015/16 DID activity by responsible CCG divided by October 2015 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 5.2 million (13%) cases in 2015/16, down from 6.5 million (16%) in 2014/15. Of those that were removed, 3.8 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 more often than age or sex, 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 2015/16*, NHS England, 27 October 2016. Available (with appended tables by CCG) from http://www.england.nhs.uk/statistics/statistical-work-areas/diagnostic-imaging-dataset/diagnostic-imaging-datasetdiagnostic-imaging-dataset-2015-16-data/
[2] See above publication for definitions of each modality and further details on the collection.
[3] The 2015/16 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 2015/16 per 10,000 people are shown in Tables 1 & 2 below.

Table 1. National Imaging Rates per 10,000 by modality, 2015/16

	X-ray	Ultrasound	CT Scan	MRI	Fluoro-scopy	Nuclear Medicine	PET Scan	SPECT Scan	Medical Photography
Rate per 10,000 people	3,431	1,368	682	469	158	65	14	4	4

Table 2. National Imaging Rates per 10,000 by Early Diagnosis of Cancer[5], 2015/16

	Brain MRI	Chest X-ray	Chest CT	Kidney or Bladder Ultrasound	Abdomen or Pelvis Ultrasound
Rate per 10,000 people	95	1,233	80	35	201

The improvement in completeness of the required fields for calculating standardised rates in 2015/16 compared with 2014/15 has contributed to generally higher rates per 10,000 population and less variance across CCGs. Nevertheless, some CCGs had 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 had 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 was 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 2015/16 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.

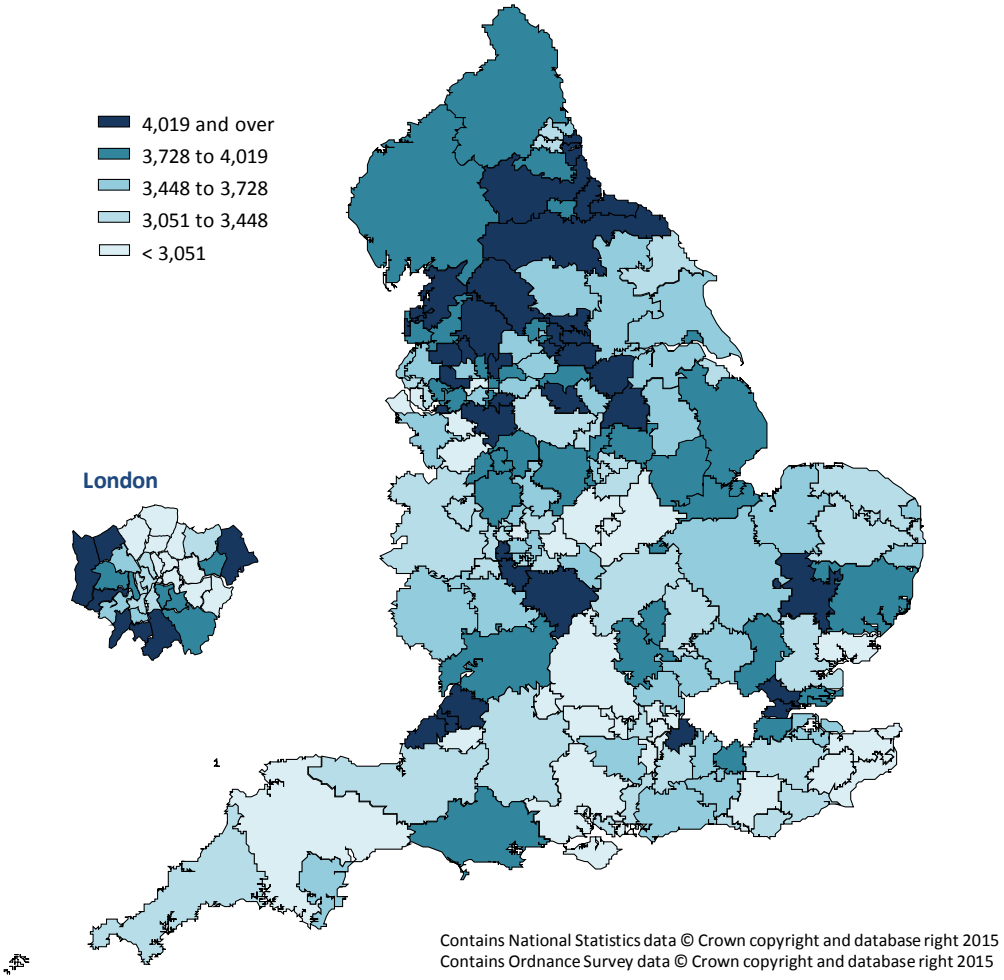
[4] These national rates exclude activity with missing age, sex, deprivation or CCG (13% of overall imaging tests).

[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.

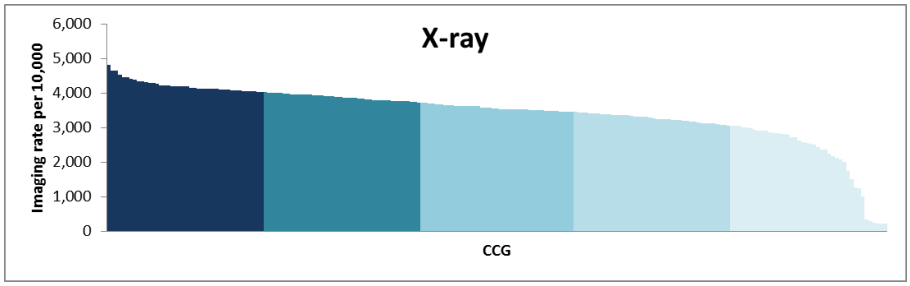
2.2.1 X-ray

There was some regional variation in X-ray rates, see Map 1 and Graph 1, with rates generally higher than average in CCGs in the North Region. The low level of rates for some CCGs 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 was 3,431 X-rays per 10,000 registered population and 82% CCGs were within one standard deviation of the mean, that is between 2,593 and 4,246 tests per 10,000 population.

Map 1. Standardised X-ray rates by CCG, 2015/16



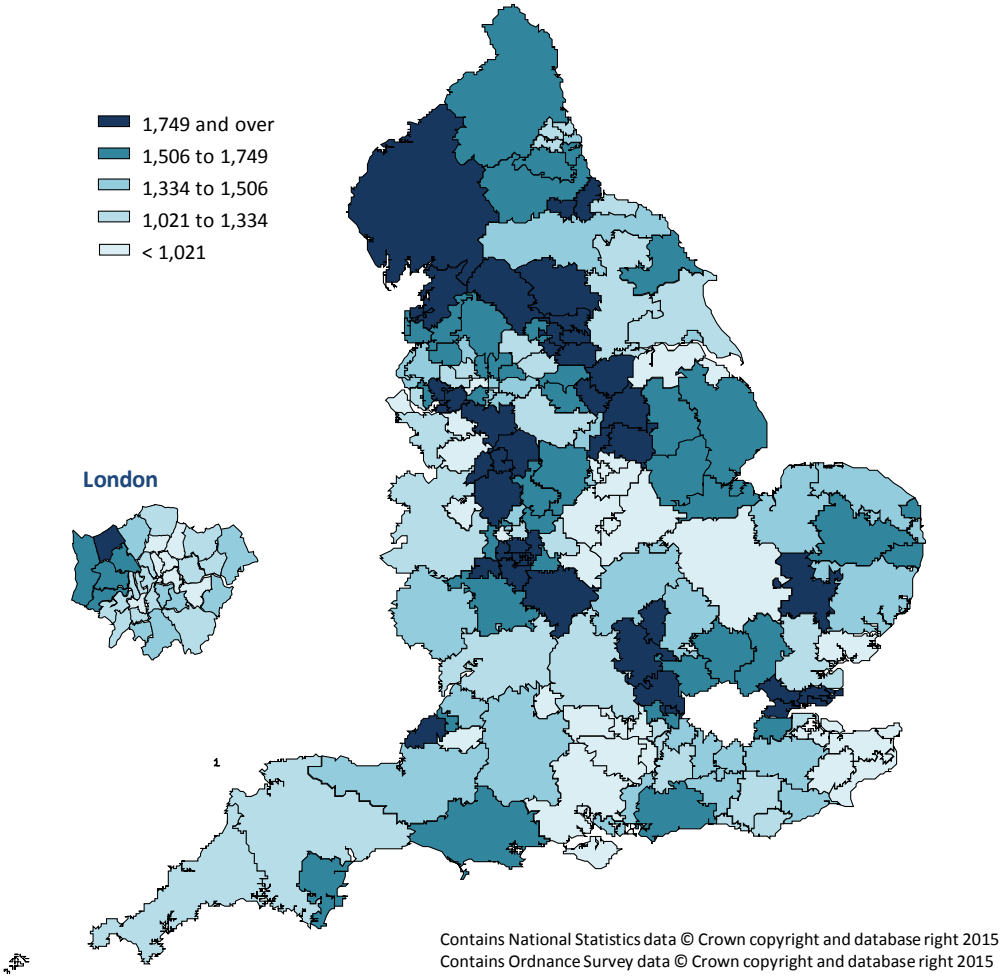
Graph 1. Standardised X-ray rates by CCG, 2015/16



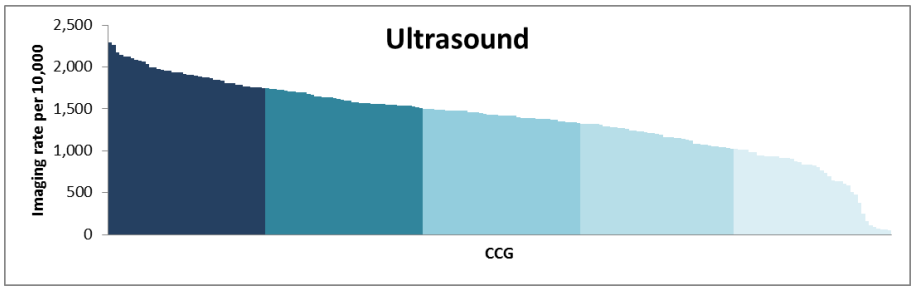
2.2.2 Ultrasound

As with X-ray, Ultrasound showed a concentration of higher rates in CCGs in the North region (Map 2). The comparison of standardised rates to crude rates showed that 96% of CCGs had 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 had less impact on the rate. Nevertheless, the rates varied more than the other major modalities and one standard deviation of the mean ranges from 915 to 1,825 ultrasounds per 10,000 registered population (72% CCGs were within this), with a national rate of 1,368 ultrasounds per 10,000 population.

Map 2. Standardised Ultrasound rates by CCG, 2015/16



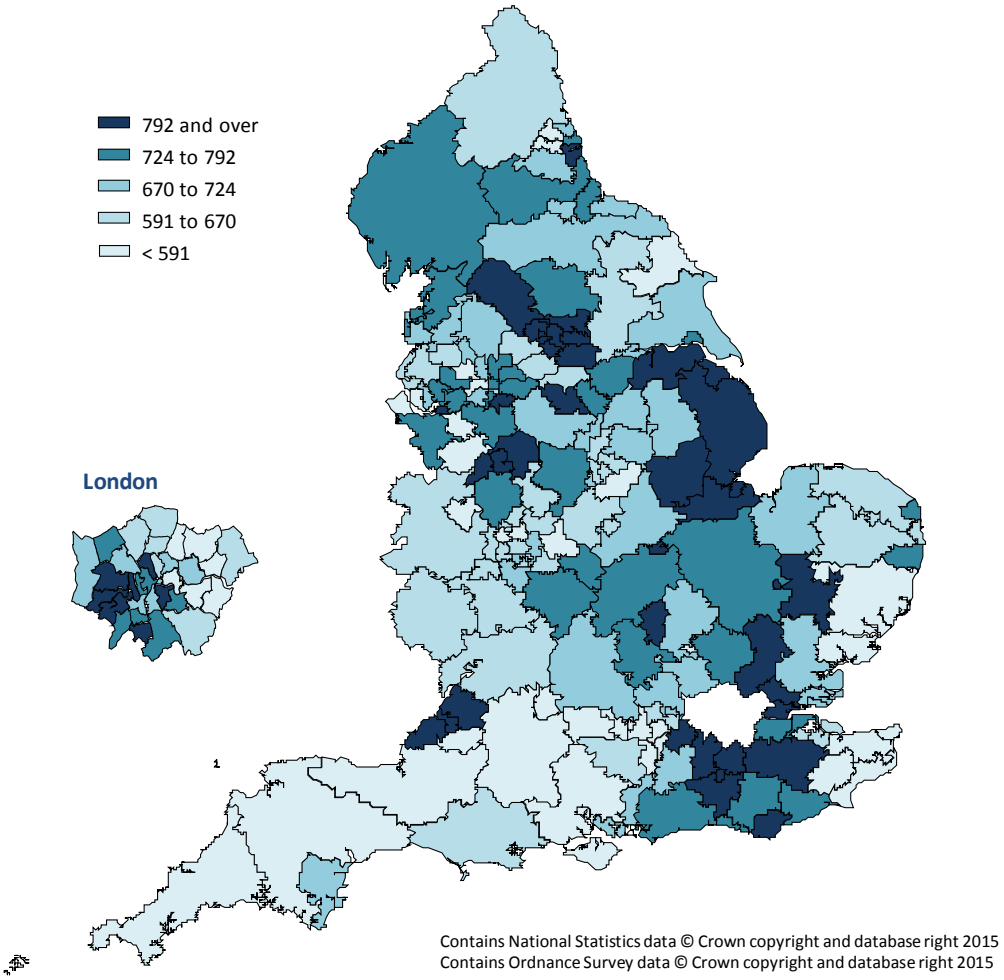
Graph 2. Standardised Ultrasound rates by CCG, 2015/16



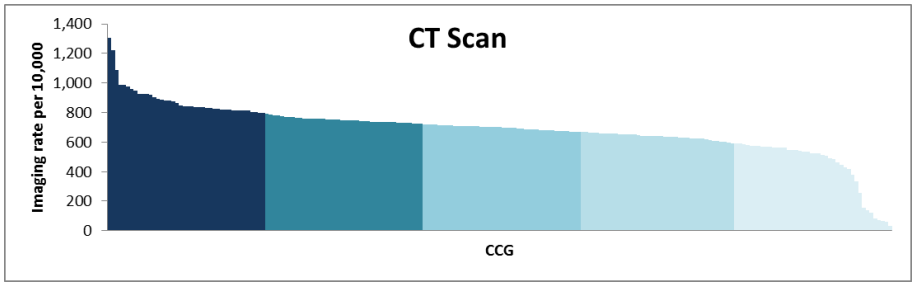
2.2.3 CT Scans

CT scans did not appear to show any strongly regional concentration and there were both high and lower rates across England (Map 3). The comparison of standardised rates to crude rates showed that only 54% of CCGs had a standardised rate within 10% of their crude rate, suggesting that demographics had a large effect on CT scans. The national rate was 682 CT scans per 10,000 registered population and 83% CCGs were within one standard deviation of the mean, that is between 505 and 858 tests per 10,000 population.

Map 3. Standardised CT rates by CCG, 2015/16



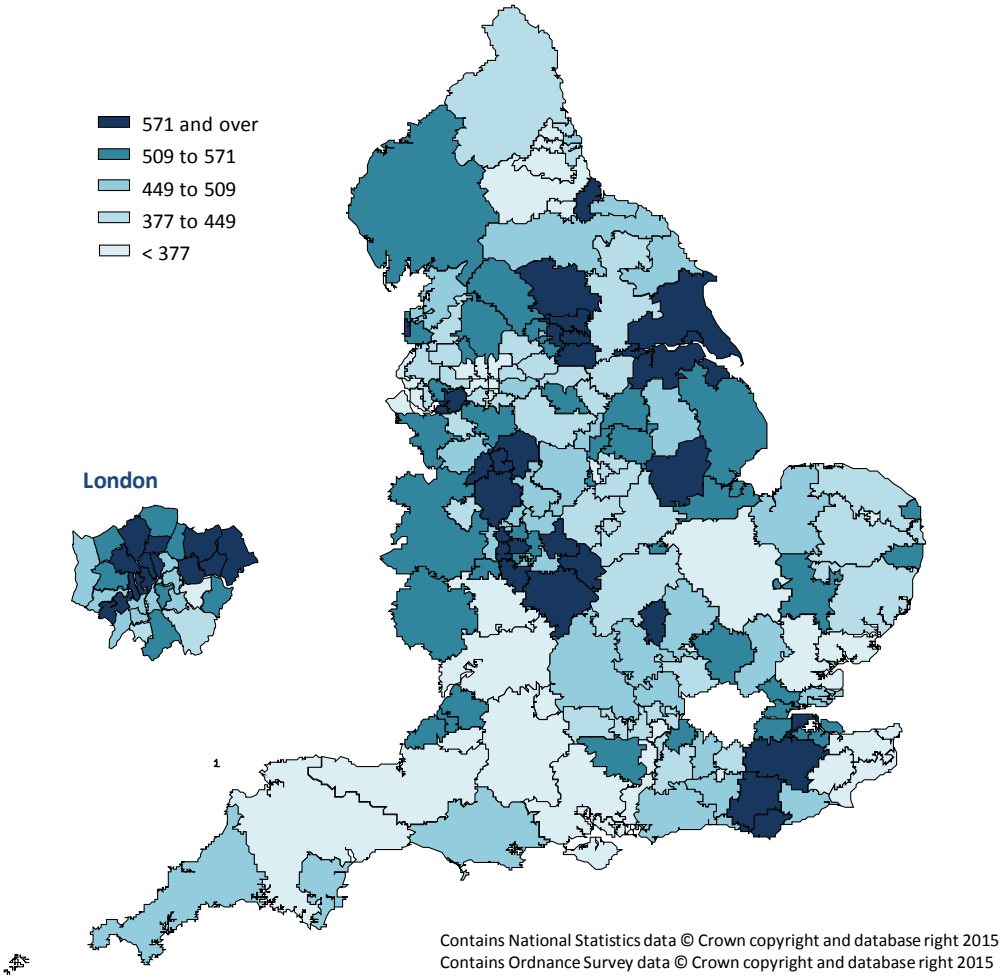
Graph 3. Standardised CT rates by CCG, 2015/16



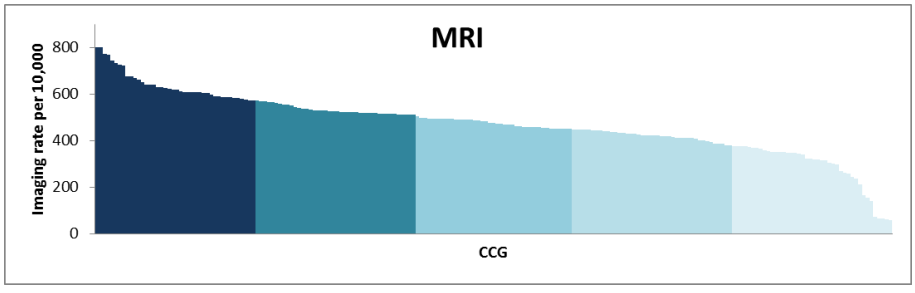
2.2.4 MRI Scans

MRI showed 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 was 469 MRI scans per 10,000 registered population and 75% CCGs were within one standard deviation of the mean, between 339 and 601 tests per 10,000 population.

Map 4. Standardised MRI rates by CCG, 2015/16



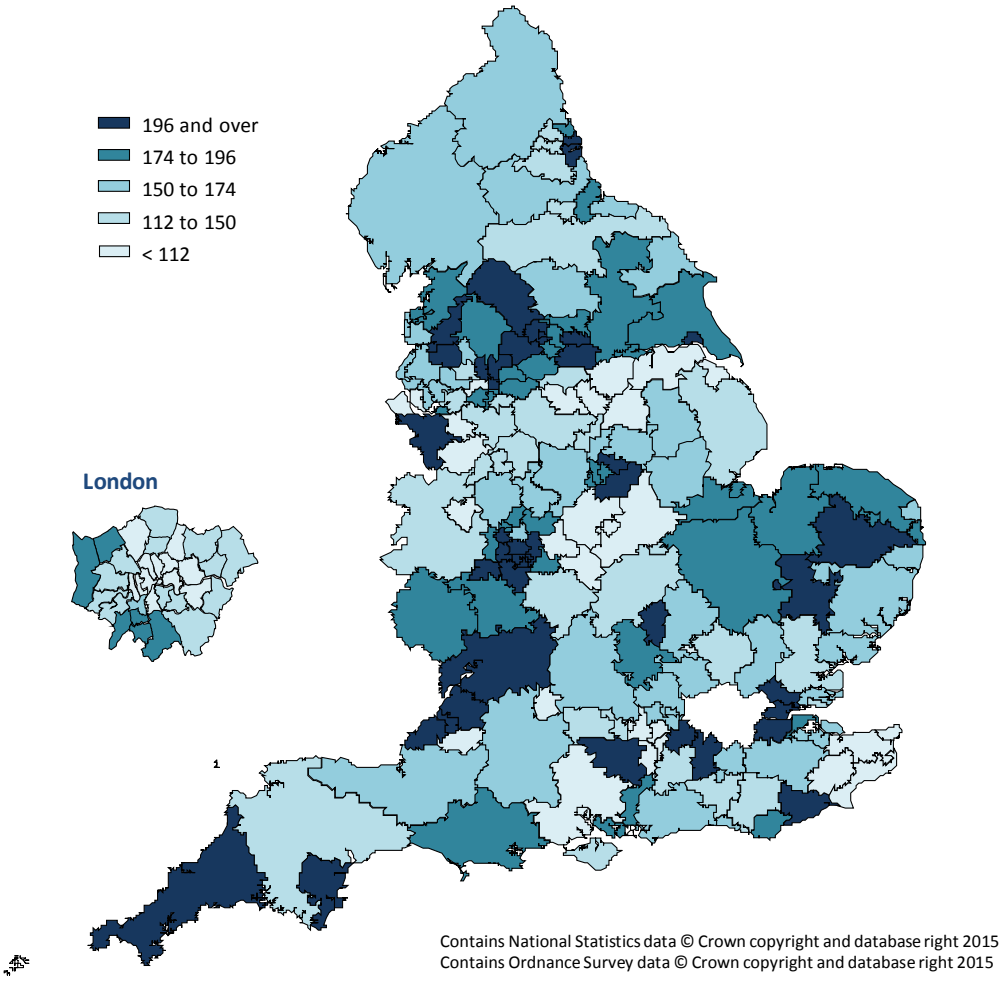
Graph 4. Standardised MRI rates by CCG, 2015/16



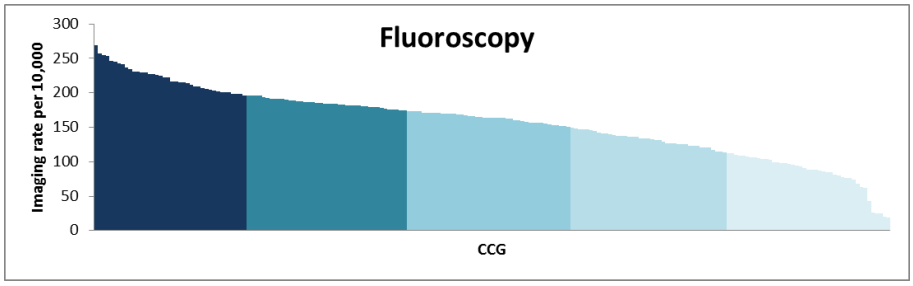
2.2.5 Fluoroscopy

Fluoroscopy showed no marked concentration of high or low standardised rates (Map 5), but rates were nonetheless quite variable across CCGs. The national rate was 158 Fluoroscopy scans per 10,000 registered population and 69% CCGs were within one standard deviation of the mean, that is between 107 and 206 tests per 10,000 population

Map 5. Standardised Fluoroscopy rates by CCG, 2015/16



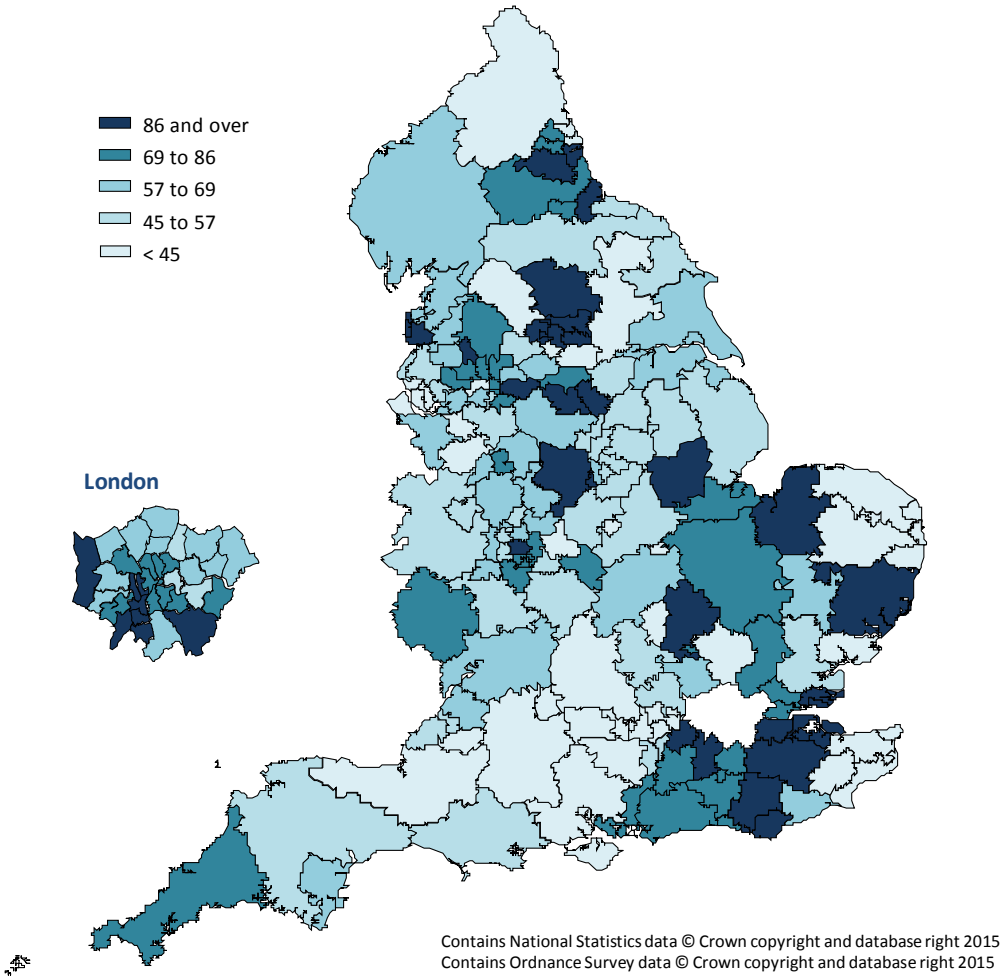
Graph 5. Standardised Fluoroscopy rates by CCG, 2015/16



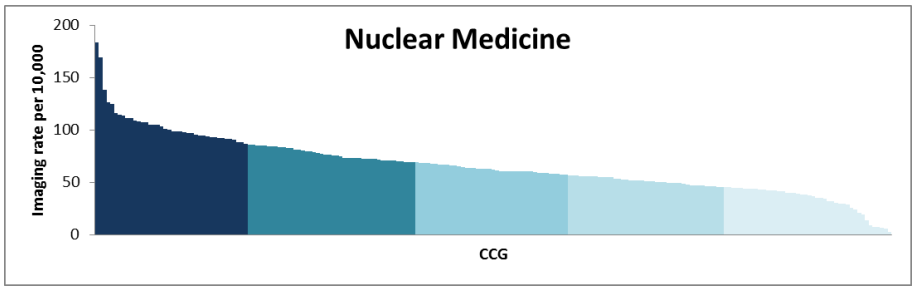
2.2.6 Nuclear Medicine

Nuclear Medicine showed 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 was 65 Nuclear Medicine exams per 10,000 registered population and 73% CCGs were within one standard deviation of the mean, that is between 38 and 92 tests per 10,000 population.

Map 6. Standardised Nuclear Medicine rates by CCG, 2015/16



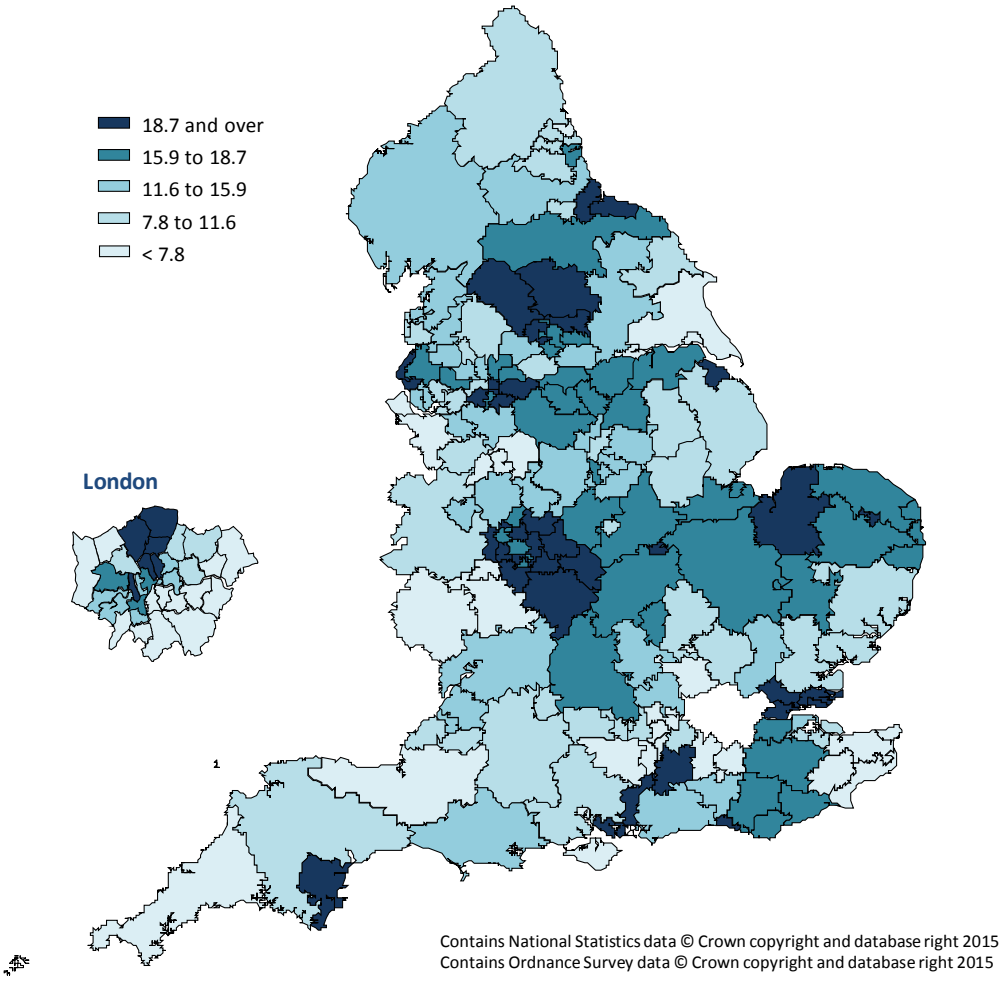
Graph 6. Standardised Nuclear Medicine rates by CCG, 2015/16



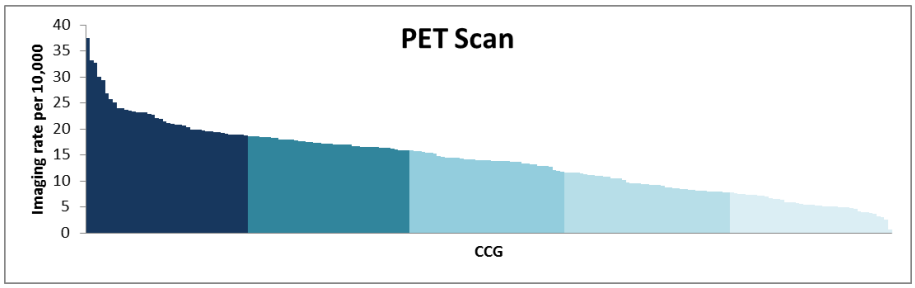
2.2.7 PET Scan

PET scan showed some regional variation, with clusters of higher rates in North Yorkshire and North London (Map 7). Some of the variability arose from the relatively small numbers: the national rate was 14 PET scans per 10,000 registered population and 69% CCGs were within one standard deviation of the mean between 7 and 20 tests per 10,000 population.

Map 7. Standardised PET Scan rates by CCG, 2015/16



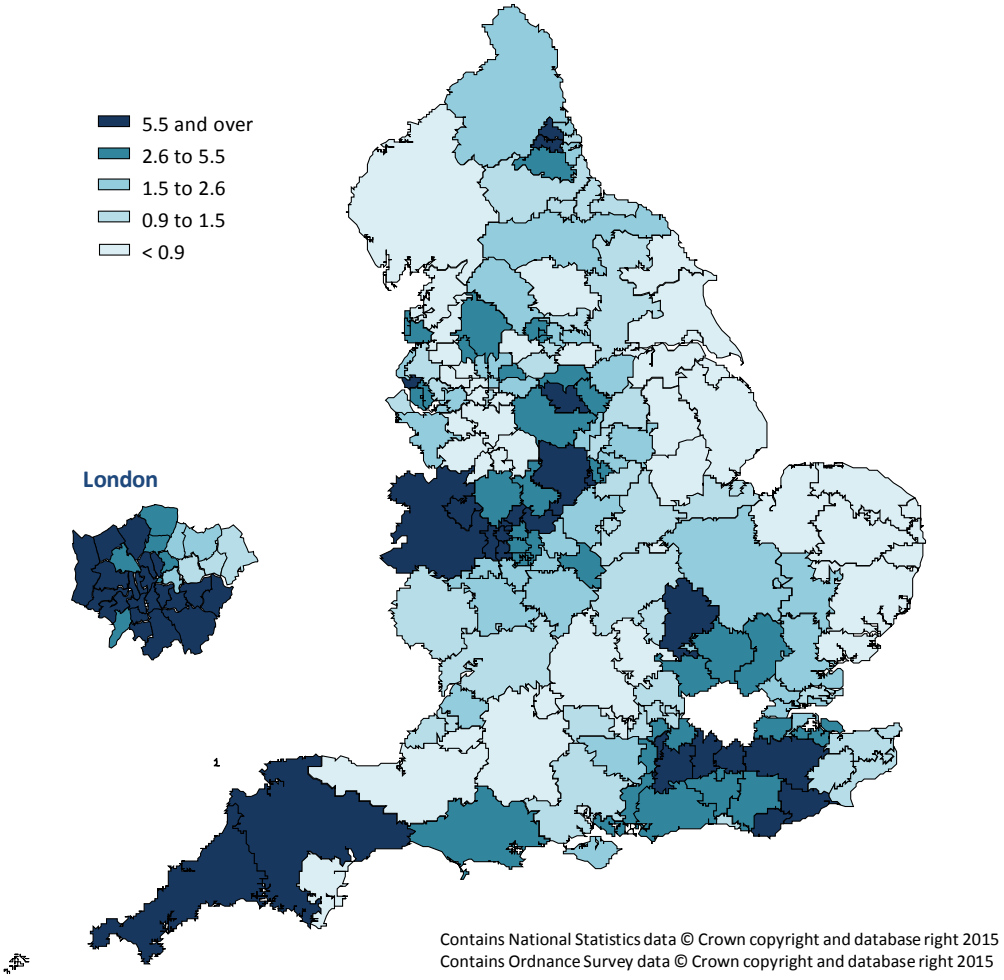
Graph 7. Standardised PET Scan rates by CCG, 2015/16



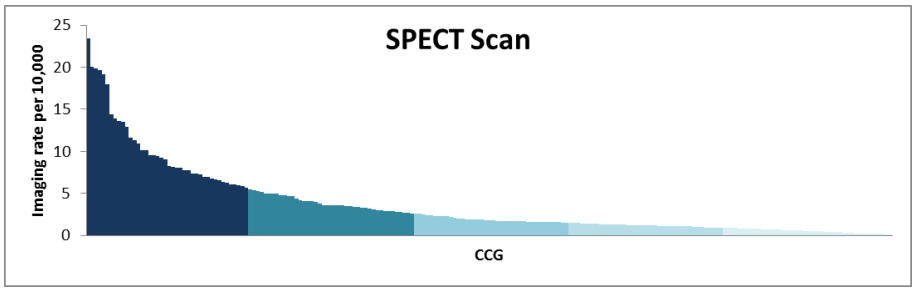
2.2.8 SPECT Scan

SPECT scan showed clusters of high rates amongst generally low rates. The West Midlands, Devon & Cornwall and the south east showed the greatest concentration of high rates (Map 8). The biggest volume providers of SPECT were reported in Plymouth, Derby and Sheffield, with others in and around London and the West Midlands, leading to higher rates in those and neighbouring CCGs (Chart 8). The national rate was 3.9 SPECT scans per 10,000 registered population but the variance was wide and one standard deviation of the mean extended from 0 to 7.7 tests per 10,000 population (with 87% CCGs within this range, but some considerably higher).

Map 8. Standardised SPECT Scan rates by CCG, 2015/16



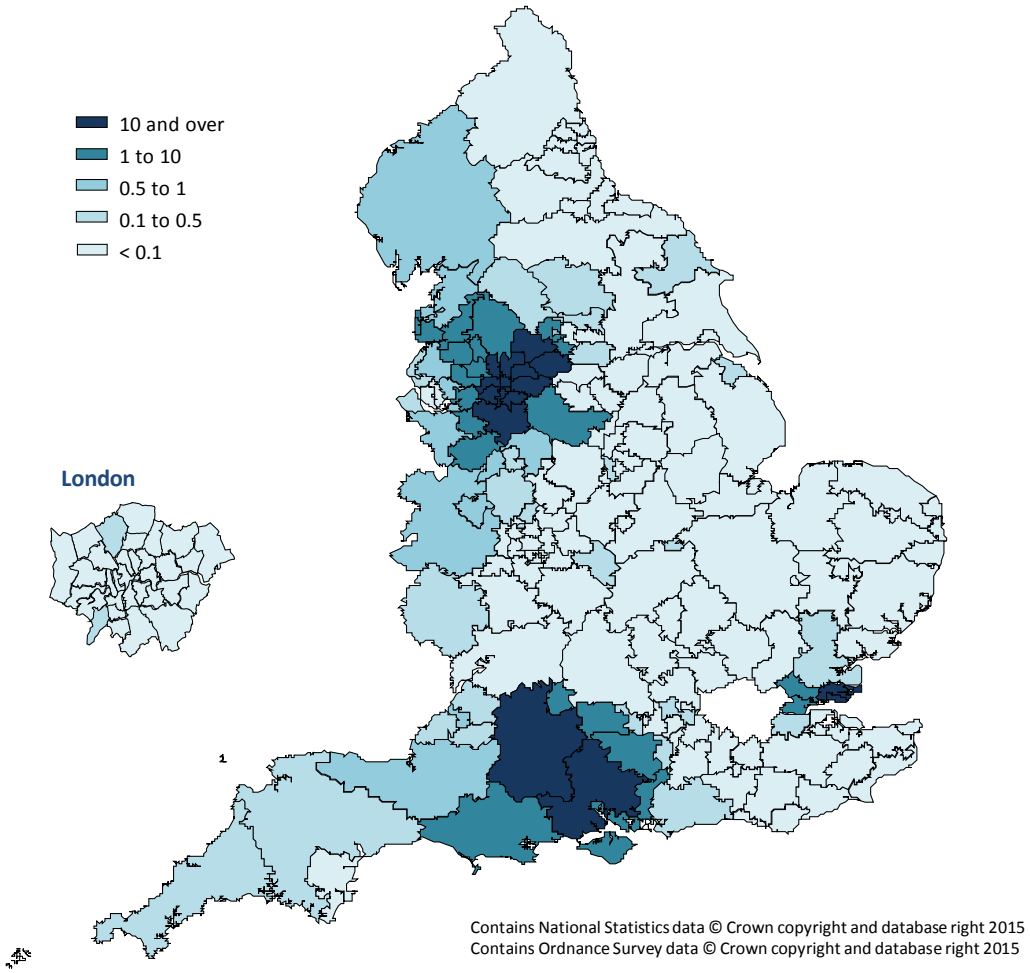
Graph 8. Standardised SPECT Scan rates by CCG, 2015/16



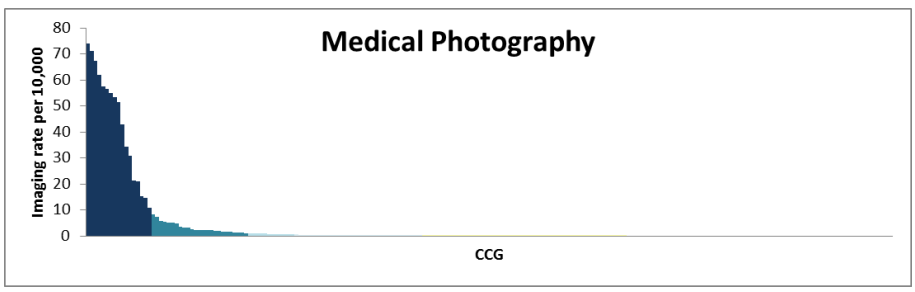
2.2.9 Medical Photography

Medical Photography showed a very marked cluster of high rates in the North West of England and Wessex (Map 9). Only seven providers nationally reported more than a few Medical Photography images in the DID (up from five in 2014-15): University Hospital of South Manchester NHS Foundation Trust, Pennine Acute Hospitals NHS Trust, Salisbury NHS Foundation Trust, Calderdale & Huddersfield NHS Foundation Trust, Salford Royal NHS Foundation Trust, The Christie NHS Foundation Trust and Southend University Hospital NHS Foundation Trust, so the majority of CCGs had no reported Medical Photography (Chart 9).

Map 9. Standardised Medical Photography rates by CCG, 2015/16



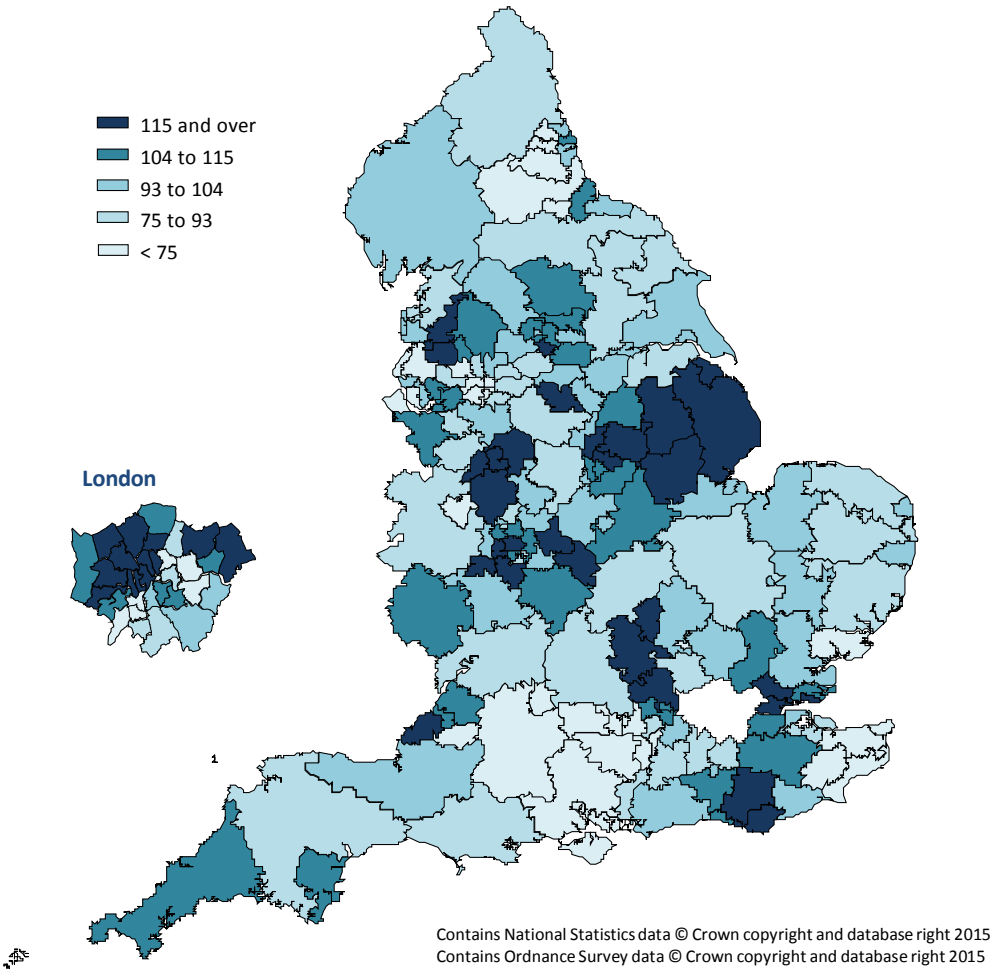
Graph 9. Standardised Medical Photography rates by CCG, 2015/16



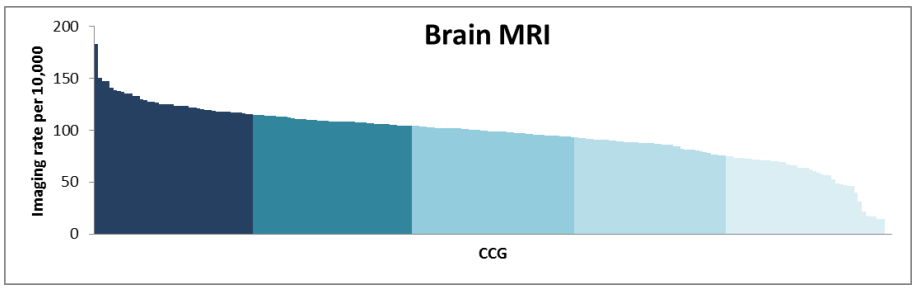
2.2.10 Brain MRI

Brain MRI showed little consistent regional variation (Map 10), as for all MRI (see section 2.2.4). High rates tended to cluster around neighbouring CCGs and many of these areas had at least one high-volume provider, but there was a wide variety of providers of different levels of activity. The national rate was 95 Brain MRIs per 10,000 registered population and 74% CCGs were within one standard deviation of the mean, between 69 and 122 tests per 10,000 population.

Map 10. Standardised Brain MRI rates by CCG, 2015/16



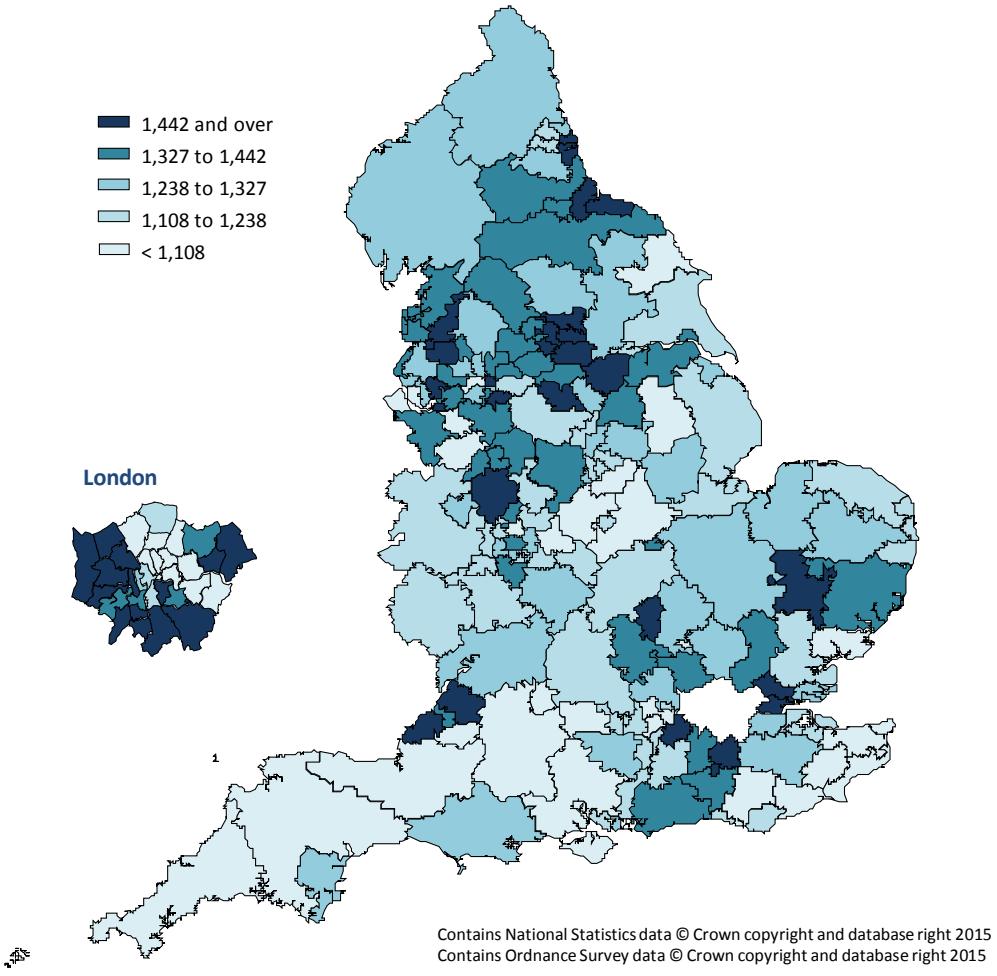
Graph 10. Standardised Brain MRI rates by CCG, 2015/16



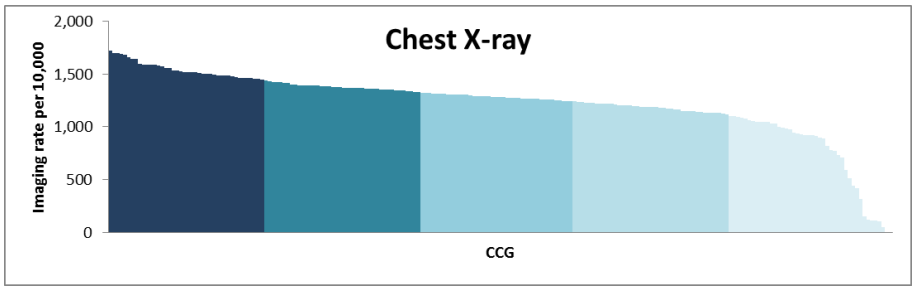
2.2.11 Chest X-ray

Chest X-ray showed less variation across CCGs than the other tests for potential early diagnosis of cancer (with much bigger numbers of tests), but there were generally higher rates in the north of England (Map 11). The national rate was 1,233 Chest X-rays per 10,000 registered population and 81% CCGs were within one standard deviation of the mean, between 933 and 1,532 tests per 10,000 population.

Map 11. Standardised Chest X-ray rates by CCG, 2015/16



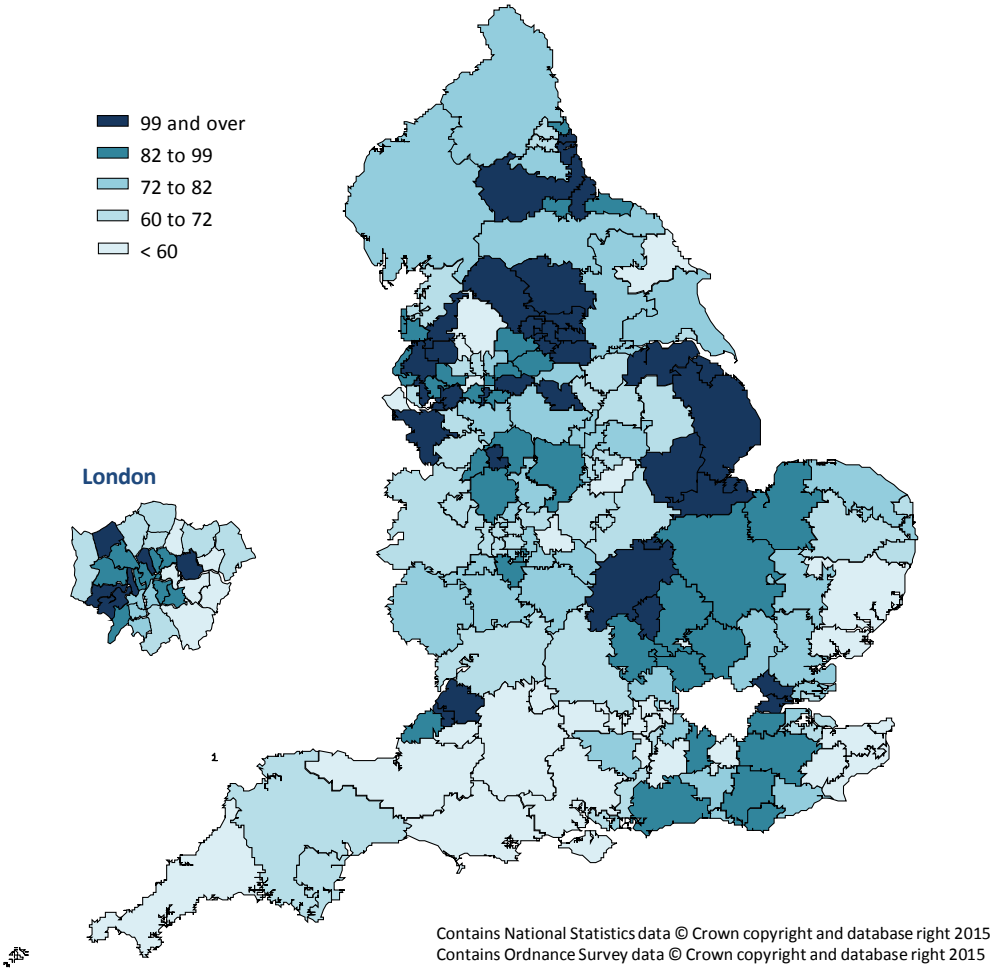
Graph 11. Standardised Chest X-ray rates by CCG, 2015/16



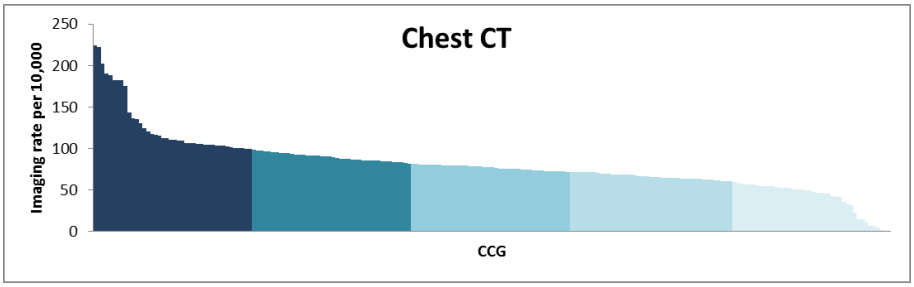
2.2.12 Chest CT

Chest CT showed little regional variation although there were high rates clustered around West Yorkshire (Map 12). The national rate was 80 Chest CTs per 10,000 registered population and 83% CCGs were within one standard deviation of the mean, between 47 and 115 tests per 10,000 population.

Map 12. Standardised Chest CT rates by CCG, 2015/16



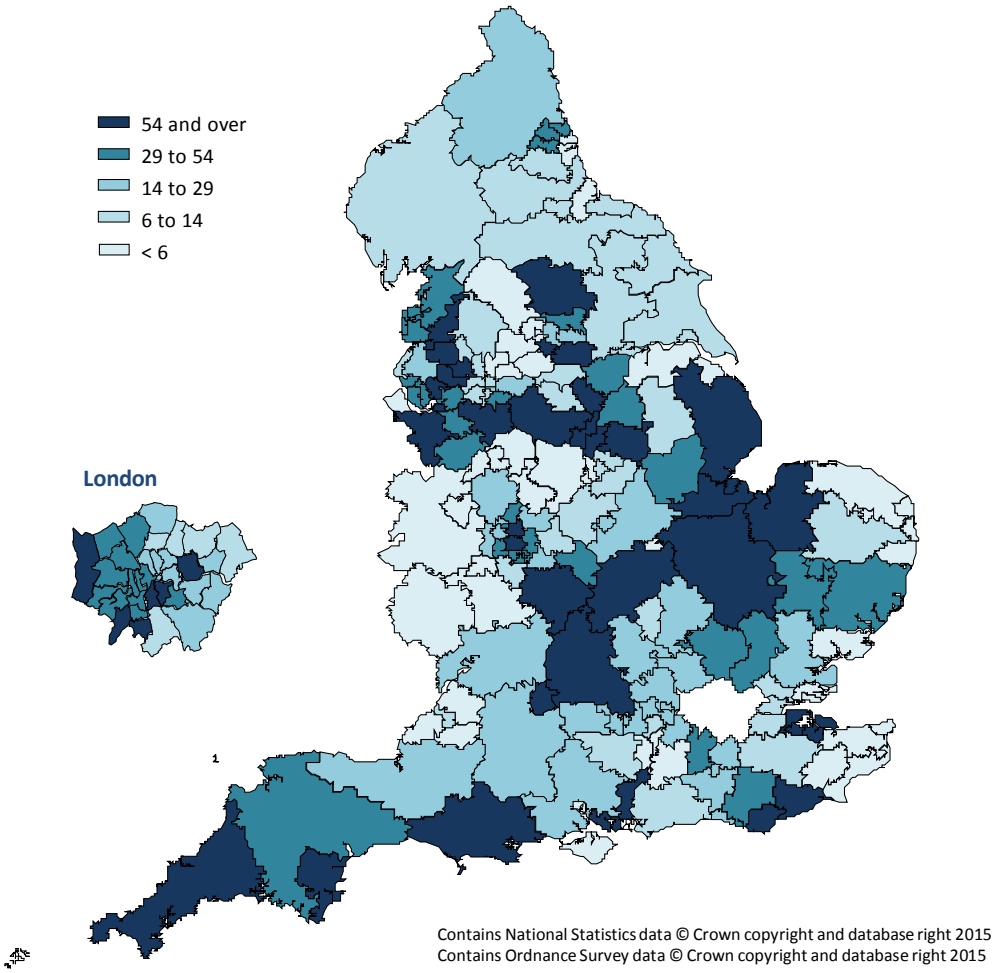
Graph 12. Standardised Chest CT rates by CCG, 2015/16



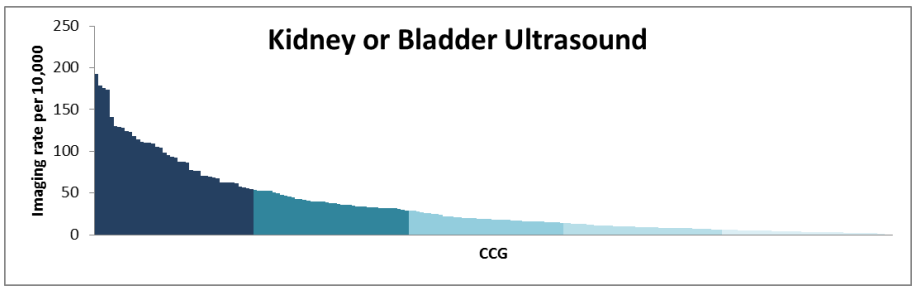
2.2.13 Kidney & Bladder Ultrasound

Kidney & Bladder Ultrasound showed more regional variation in the lower standardised rates than other Early Diagnosis of Cancer (EDOC) tests. A few CCGs were affected by missing data, as for all the modalities above, but many more had rates barely a tenth of the highest reported (Graph 13). Both the highest rates and lowest rates were grouped together in clusters of CCGs (Map 13). The national rate was 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 72 tests per 10,000 population (87% CCGs within this range).

Map 13. Standardised Kidney & Bladder Ultrasound rates by CCG, 2015/16



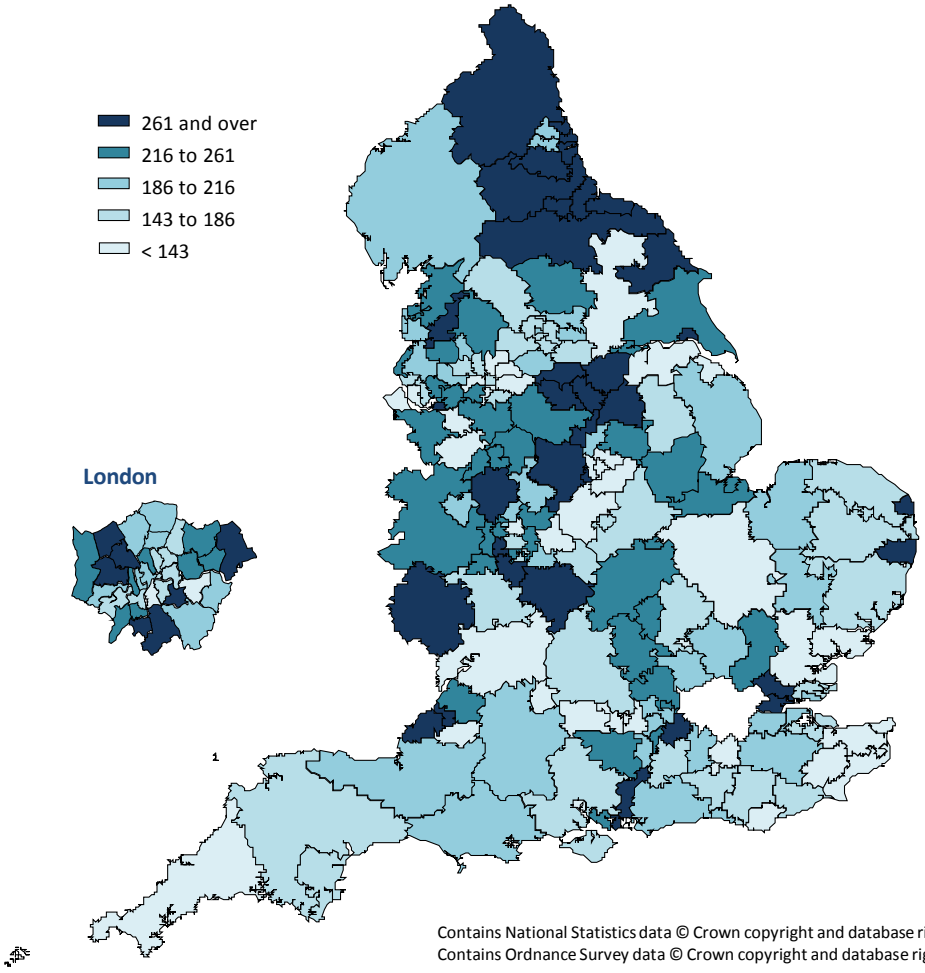
Graph 13. Standardised Kidney & Bladder Ultrasound rates by CCG, 2015/16



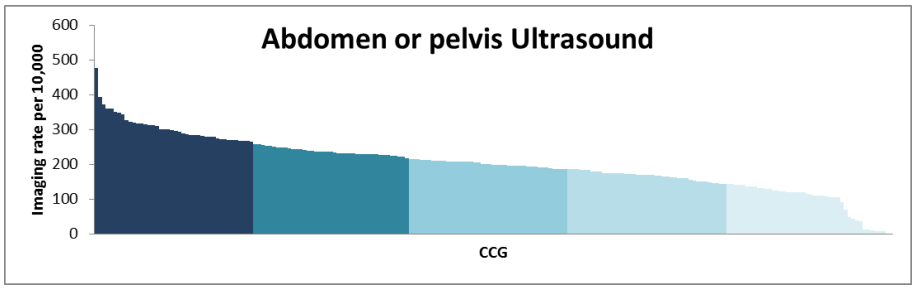
2.2.14 Abdomen & Pelvis Ultrasound

The highest rates of Abdomen & Pelvis Ultrasound appeared to be clustered in the North, with relatively few high rates in the South and East (Map 14). The national rate was 201 Abdomen & Pelvis ultrasounds per 10,000 registered population, with one standard deviation of the mean ranging from 126 to 277 tests per 10,000 population (71% CCGs within this range).

Map 14. Standardised Abdomen & Pelvis Ultrasound rates by CCG, 2015/16



Graph 14. Standardised Abdomen & Pelvis Ultrasound rates by CCG, 2015/16



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 was 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	3,650	0.3650	0.5747	1.00
Male	3,068	0.3068	0.4426	0.77

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

In this example, males were 23% 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 was some variation in how likely each gender was to have a particular imaging test, see Tables 1 and 2. As would be expected, men were only a third as likely to have an ultrasound (odds ratio = 0.33), however they were 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, 2015/16

	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	0.77***	0.33***	0.99	0.85*	1.01	0.83	1.23	0.65	0.90

Table 2. Sex odds ratios by Early Diagnosis of Cancer, 2015/16

	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	0.83	1.15**	1.22	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 was significant at all levels for X-ray, Ultrasound, CT and Chest X-ray, whilst the two or three least deprived quintiles were significantly different from the most deprived for MRI, Chest CT and Abdomen or Pelvis Ultrasound. The odds ratio for Medical Photography showed 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, 2015/16

	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***	0.90**	0.88*	0.96	0.92	0.94	0.84	1.07	0.61
3 Mid quintile	0.75***	0.85***	0.78***	0.90	0.87	0.86	0.75	0.89	0.54
4 Less deprived	0.68***	0.81***	0.72***	0.85*	0.81	0.84	0.73	0.83	0.51
5 Least deprived	0.62***	0.78***	0.68***	0.83**	0.77*	0.82	0.68	0.77	0.51

* 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, 2015/16

	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	0.82***	0.83	0.96	0.90
3 Mid quintile	0.90	0.69***	0.69*	0.84	0.79*
4 Less deprived	0.84	0.61***	0.63**	0.78	0.71**
5 Least deprived	0.81	0.56***	0.57***	0.72	0.66***

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 compared with age under 45. All modalities and EDOCs have a significant result for the 65+ age bands. Other age bands were 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, 2015/16

	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	2.05***	1.07	3.14***	2.27***	2.59***	3.20***	4.40*	2.52	2.09
55 - <65	3.51***	1.05	5.24***	2.63***	4.10***	5.51***	10.00***	3.94	3.03
65 - <75	17.89***	1.27***	9.24***	2.99***	6.01***	8.83***	16.99***	6.21*	4.72*
75+		1.54***	18.98***	2.53***	7.73***	9.59***	14.93***	6.84*	11.93***

Note: Due to limitations in the odd ratio methodology it was 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, 2015/16

	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	1.82***	2.43***	4.83***	1.52	1.97***
55 - <65	2.18***	4.15***	10.30***	1.91*	2.32***
65 - <75	2.64***	7.50***	18.80***	2.92***	2.68***
75+	2.90***	21.80***	23.93***	4.90***	3.26***

4 Conclusion

After standardising the DID for age, sex and deprivation differences between CCGs, there were a number of modalities with regional variation in the rates of imaging per 10,000 population. Several modalities had higher rates of diagnostic imaging in the North region, particularly X-ray, Ultrasound and MRI. Although there were 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 were nearly 18 times more likely to have an X-ray than those who were under 45. Ultrasound has the least variation by age band.

In general, sex was not a significant factor in the likelihood of having a diagnostic imaging procedure, with the exceptions of X-ray and ultrasound. Women were 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 was missing or unknown for 9% imaging activity in 2015/16 (down from 11% in 2014/15). 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 had GP Practice Code not known (V81999) or missing data.

Where there was no derived CCG, the activity was omitted from the CCG imaging rates. Many of the lowest CCG imaging rates had these shortfalls, but they also affected 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 2015/16. 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, 2015/16

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	37,000	89%	307,000	
Wirral University Teaching Hospital NHS FT			305,000	100%
NHS South Kent Coast CCG	10,000	95%	177,000	
East Kent Hospitals University NHS FT			176,000	100%
NHS Canterbury and Coastal CCG	11,000	93%	152,000	
East Kent Hospitals University NHS FT			151,000	100%
NHS Newcastle Gateshead CCG	288,000	33%	139,000	
The Newcastle Upon Tyne Hospitals NHS FT			137,000	56%
NHS Salford CCG	51,000	72%	133,000	
Salford Royal NHS FT			130,000	98%
NHS Thanet CCG	7,000	95%	124,000	
East Kent Hospitals University NHS FT			124,000	100%
NHS North East Essex CCG	146,000	47%	130,000	
Colchester Hospital University NHS FT			123,000	51%
NHS Ashford CCG	7,000	93%	94,000	
East Kent Hospitals University NHS FT			93,000	100%
NHS Northern, Eastern and Western Devon CCG	508,000	16%	97,000	
Plymouth Hospitals NHS Trust			90,000	35%
NHS Walsall CCG	151,000	32%	72,000	
Walsall Healthcare NHS Trust			70,000	40%
NHS Newham CCG	181,000	26%	63,000	
Barts Health NHS Trust			60,000	30%
NHS West Kent CCG	309,000	18%	70,000	
Maidstone and Tunbridge Wells NHS Trust			59,000	19%
NHS Northumberland CCG	238,000	18%	53,000	
The Newcastle Upon Tyne Hospitals NHS FT			49,000	56%
NHS Waltham Forest CCG	125,000	28%	49,000	
Barts Health NHS Trust			46,000	30%
NHS North Tyneside CCG	144,000	24%	47,000	
The Newcastle Upon Tyne Hospitals NHS FT			44,000	56%
NHS Tower Hamlets CCG	118,000	28%	45,000	
Barts Health NHS Trust			43,000	30%
NHS South Cheshire CCG	79,000	34%	41,000	
Mid Cheshire Hospitals NHS FT			38,000	42%
NHS North East Hampshire and Farnham CCG	100,000	27%	38,000	
Frimley Health NHS FT			37,000	28%
NHS Warwickshire North CCG	103,000	26%	36,000	
George Eliot Hospital NHS Trust			34,000	35%
NHS City and Hackney CCG	158,000	18%	35,000	
Homerton University Hospital NHS FT			24,000	18%

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 Kernow CCG	378,000	12%	52,000	
Plymouth Hospitals NHS Trust			30,000	35%
NHS Slough CCG	87,000	22%	25,000	
Frimley Health NHS FT			24,000	28%
NHS Vale Royal CCG	44,000	35%	24,000	
Mid Cheshire Hospitals NHS FT			22,000	42%
NHS Windsor, Ascot and Maidenhead CCG	79,000	21%	22,000	
Frimley Health NHS FT			21,000	28%
NHS Bracknell and Ascot CCG	63,000	24%	20,000	
Frimley Health NHS FT			19,000	28%
NHS Surrey Heath CCG	47,000	28%	18,000	
Frimley Health NHS FT			18,000	28%
NHS Medway CCG	180,000	11%	23,000	
Medway NHS FT			17,000	11%
NHS Redbridge CCG	172,000	10%	19,000	
Barts Health NHS Trust			15,000	30%

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 2015/16 (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, 2015/16

See separate excel file (Annex 4a – DID Standardised CCG Rates 2015-16).

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.

For more information, please visit the iView website http://content.digital.nhs.uk/iview. If you would like to register to use iView for DID, please email enquiries@nhsdigital.nhs.uk (subject: DID iView Access).

5.3.3 Websites

The DID information website can be found here: http://content.digital.nhs.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:

Sheila Dixon
Operational Information for Commissioning
NHS England
Room 5E24, Quarry House, Quarry Hill, Leeds LS2 7UE
Email: did@dh.gsi.gov.uk