UK Kidney Association

Ethnicity disparities in patients with kidney failure in the UK

A UK Kidney Association Disparities Sub-report

This report was produced by:

- **Editor** – Dr Barnaby Hole PhD MRCP
- **Chair of the UK Kidney Association Patient Council** – Sue Lyon
- **Lead Statistician** – Winnie Magadi

We would also like to acknowledge members of the UK Association Patient Council, Dr James Medcalf, Prof Dorothea Nitsch, Dr Retha Steenkamp, Esther Wong, Dr Anna Casula, Dr Shalini Santhakumaran, Dr Katharine Evans and Dr Rhodri Pyart who contributed to the preparation of this report.

What is this document?

This document is part of the UK Renal Registry's *Disparities Report*, which looks at age, sex, ethnicity, and deprivation levels amongst people with kidney failure. The analyses presented here are for ethnicity. The reports looking at age, sex, and deprivation will soon follow.

The decision to share these routinely collected data reflects increasing awareness that kidney health is strongly influenced by people's backgrounds. A document published by Kidney Research UK in 2018[1] highlighted how kidney disease is more likely, progresses faster, and is associated with earlier death amongst people from more deprived backgrounds. It also progresses faster in people from Black, Asian and minority ethnic populations, who are also less likely to receive a transplant. Women are more likely to get kidney disease, but men are more likely to start dialysis. Older people are less likely to receive a transplant. Organisations like the UK Renal Registry were advised in Kidney Research UK's report to make reporting and analysis of inequalities in kidney care part of their role.

Reporting of these disparities is the purpose of this document. We use the term 'disparities' as opposed to 'inequalities' for this report because it only looks at differences in the care and outcomes of patient groups. We are not able to provide insight on whether care and outcomes would be equal or fair, if all differences between the groups were considered. This is discussed further under *A note on statistics*, below.

[1] Kidney health inequalities in the UK. Kidney Research UK, 2018

Contents

Whose data are shown?

This report includes all adults and children in England and Wales reported to the UK Renal Registry as having started long-term treatment for kidney failure between 1st January 2014 and 31st December 2020. UK Kidney centres provide care for either adults or children. Adult centres reported 49,078 people. Children's centres reported 755 people under the age of 16. These are the same people who were in the UK Renal Registry's annual reports, where you can find more information about how these data reach us.

All people included in this report:

- Were diagnosed with kidney failure, *and*
- Were referred to a kidney specialist, *and*
- Were deemed to have permanent kidney failure, *and*
- Started dialysis or received a kidney transplant, *and*
- Were reported to the UK Renal Registry.

The UK Renal Registry does not reliably capture information on individuals who reach kidney failure, but do not start dialysis or receive a transplant – so these people cannot be included. Individuals who needed temporary dialysis are also not included.

What data are shown?

Whilst we hold detailed information about individuals' kidney care, we hold only limited information about who they are, taken from the health record provided by the kidney unit providing the person's care.

We present the following characteristics:

- Ethnicity categorised as per the Office of National Statistics – Asian, Black, Mixed, Other, White, or missing,
- Age in years,
- Male / female sex,
- A measure of deprivation called the "Index of Multiple Deprivation" based on where the individual lives.

Sex data held by the registry cannot adopt any value other than male/ female and does not capture gender. We do not hold any data relating to the following protected characteristics: disability, gender and gender reassignment, marital and partnership status, pregnancy and maternity, religion and beliefs, or sexual orientation. The absence of these characteristics – or others such as mental illness – from this report does not mean that they are not associated with disparities in kidney care.

We present the following medical and health factors:

- Diagnosis of diabetes, since this is a common cause of kidney failure,
- Survival one year after starting treatment for kidney failure,
- Whether the individual first met a kidney specialist more than three months (early presentation), or less than three months (late presentation) before starting treatment,
- Starting treatment type: hospital haemodialysis, home treatment (peritoneal dialysis or home haemodialysis), or a pre-emptive kidney transplant (transplantation without first doing dialysis),
- Whether or not the person has been transplanted within three years of reaching kidney failure.

How were these factors chosen?

The presented factors were chosen by people living with kidney disease, supported by clinicians and researchers. Our aim was to provide accessible data describing the care and outcomes of people living with kidney disease, without overwhelming detail. If you think something is missing, we are open to suggestions [contact: winnie.magadi@ukkidney.org]. UK Renal Registry data are available to researchers, who can contact us here [contact: ukka@ukkidney.org].

We chose to present data from 2014 onwards as the UK Kidney Association last formally reported on inequalities in kidney health in 2013.

Some analyses use general population data, drawn from the Office of National Statistics, whose data are openly available. At the time of preparing this document, the published 2021 census data were incomplete, so data were drawn from the 2011 census, or ONS annual reports, where available.

While the data held by the UK Renal registry provide the most reliable indicators of national kidney care, some of the data are incomplete. Complete data means that we have information for every person about a factor in a given centre or country – for example we have the age of every person in the database.

Completeness varies by centre. This means that we can be less certain about the importance and effects of some factors, especially when making comparisons between centres. Completeness is not the same as accuracy – we may hold a diabetic status for every record, but some of those listed as not having diabetes may have it, and some listed as having it may not.

A note on statistics

Associations between people's characteristics and healthcare must be made carefully, because one thing may not cause the other. This gets complicated because people's characteristics tend to group together, and it is not straightforward to tell which is 'most important'. For example, diabetes is one of the main causes of kidney failure, and a risk factor for other health problems such as heart disease. Rates of diabetes differ markedly between ethnicities. So, when comparing ethnicities, comparisons are also unintentionally made between those with higher and lower rates of diabetes. On the other hand, comparing those with and without diabetes leads to unintentional comparisons between people from different ethnicities. Ethnicity is itself a risk factor for kidney failure and is associated with other factors such as deprivation.

Researchers often use statistics to 'adjust' for such effects. This means using maths to unpick how much of one thing would be explained by another *if all other things were equal*. For example, examining how the age of onset of kidney failure would differ between ethnic groups *if* diabetes were equally common in each. These approaches can improve understanding of data, often revealing 'invisible' patterns. However, the output is less intuitive, and 'real-life' meaning can be lost. For example, such analysis would 'adjust away' the association between ethnicity and diabetes. This may not be meaningful if higher rates of diabetic kidney disease are genetic – a risk factor that cannot be eliminated.

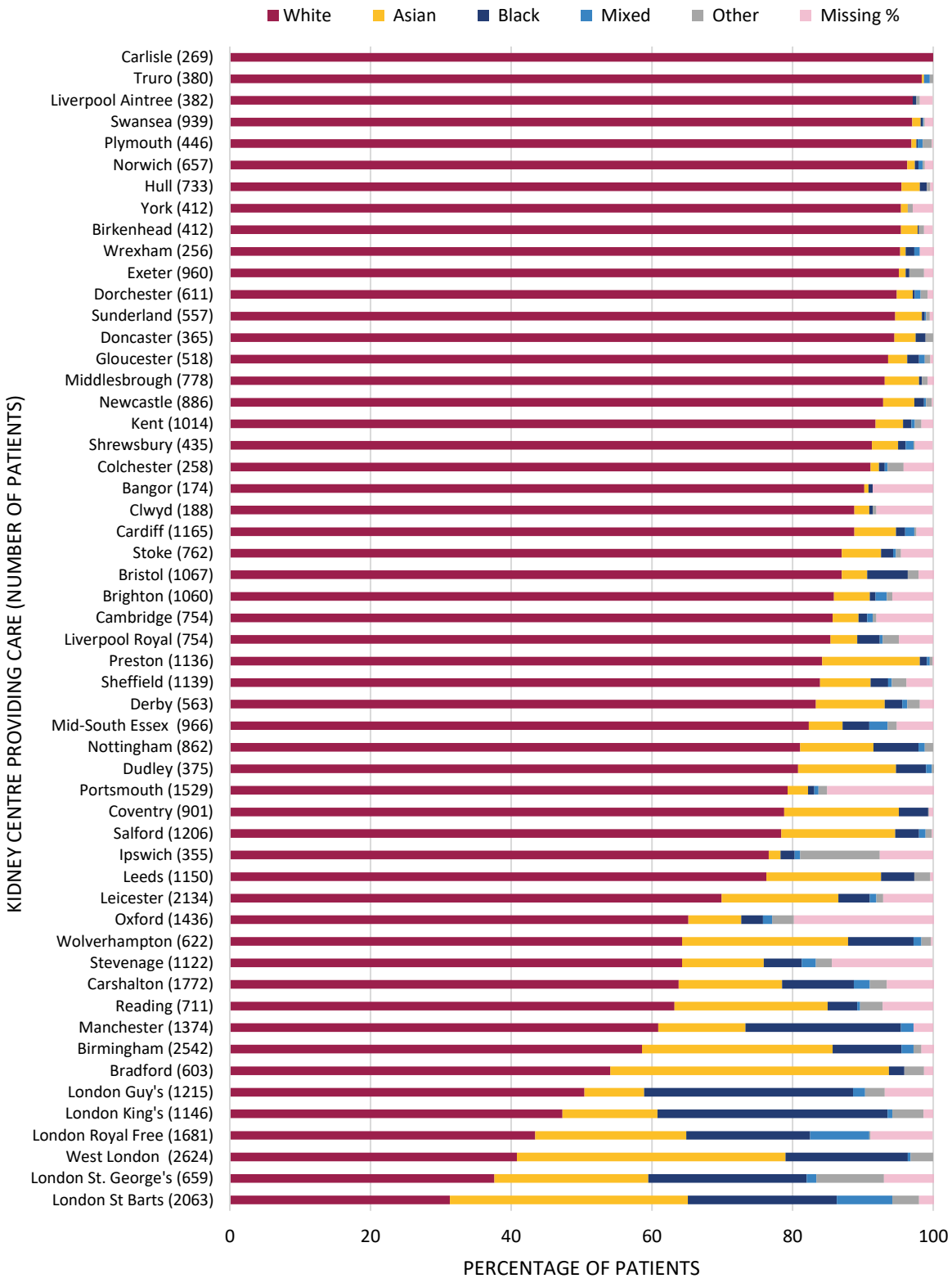
No statistical adjustment is provided in this report. Instead, the tables and figures have been designed to help people see patterns in the data. The full report includes a table developed to show how characteristics group together. Those reading this report are advised to consult this table whenever they find themselves noting an association between a characteristic and kidney care or outcomes. We must ask ourselves "what else might be going on?".

1. Ethnicity at each kidney centre

The following figures show the ethnicity breakdown of the kidney failure population at each of the adult and children's kidney centres in England and Wales. The populations cared for differ in their size and ethnic diversity. These differences represent the regional populations served by each centre.

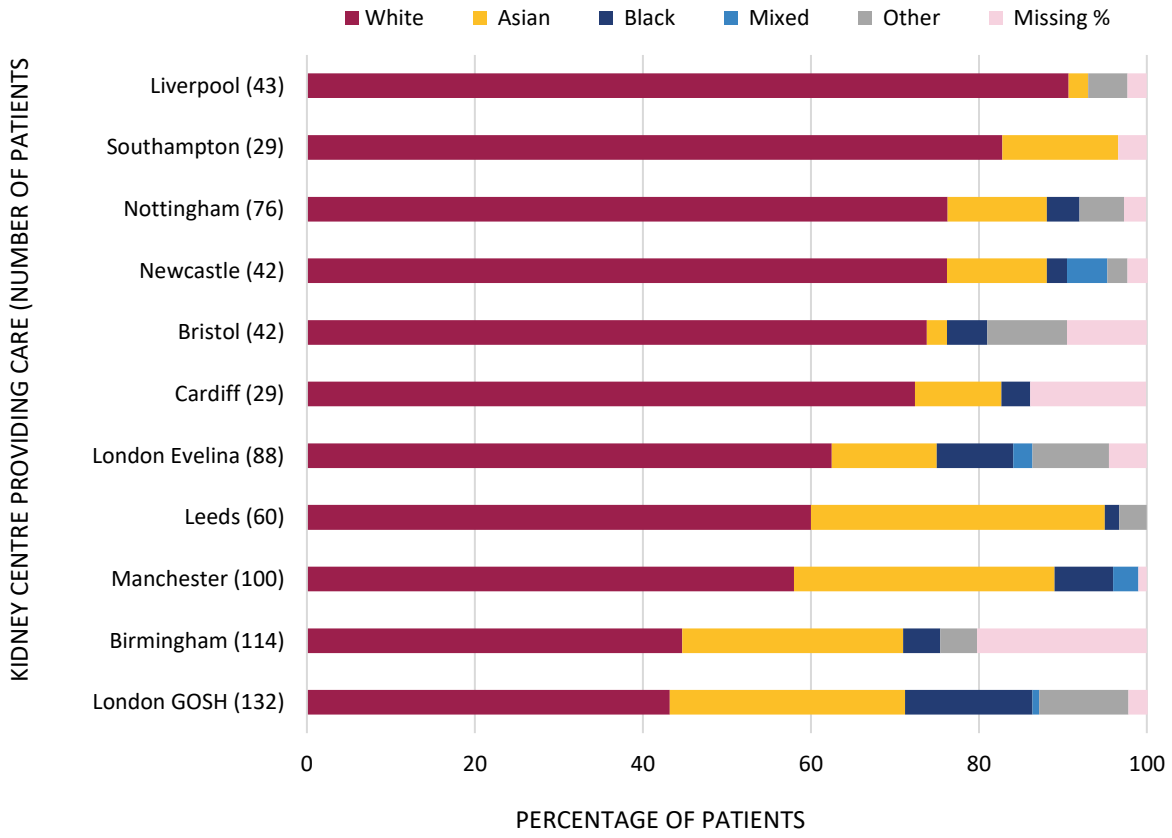
The total number of individuals cared for in each centre is listed next to the centre name. The coloured bars show the ethnic breakdown of the population with kidney failure treated at each centre. Ethnic groups are displayed in the following order: White / Asian / Black / Mixed / Other / Missing %. This ordering was chosen to allow easy comparison between centres – most of which care for a majority-White population. Elsewhere in this report, ethnicity is listed alphabetically.

Figure 1a – Ethnicity of adults by treating centre (%)



Number and ethnicity of adults reported to the UK Renal Registry who started treatment for kidney failure between 2014 and 2020.

Figure 1b – Ethnicity of children by treating centre (%)

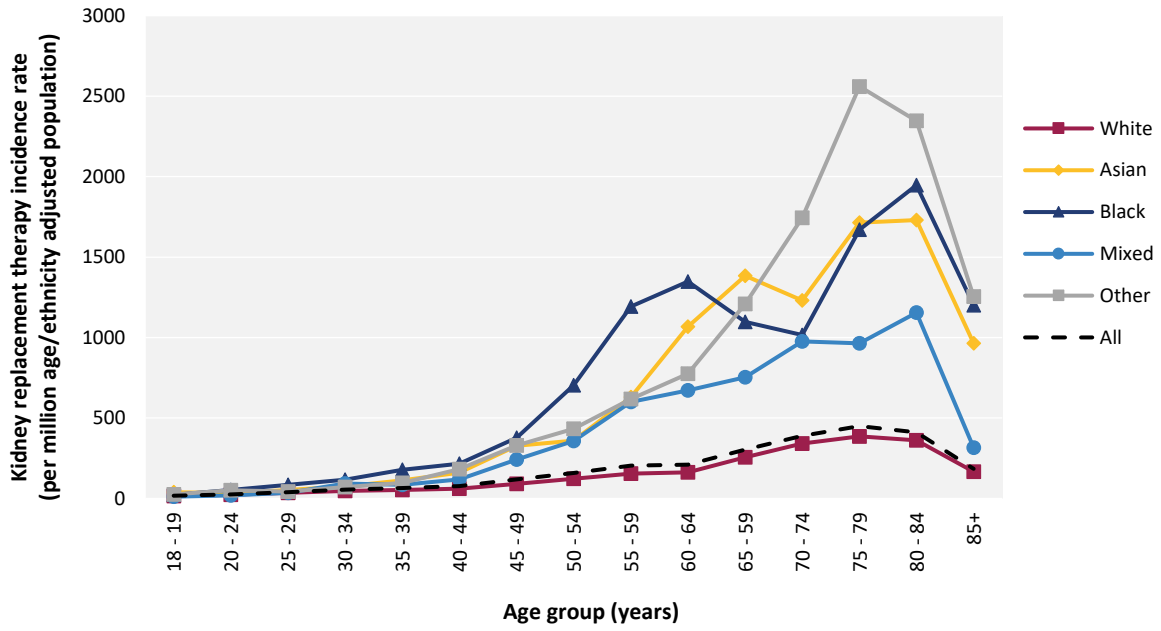


Number and ethnicity of children reported to the UK Renal Registry who started treatment for kidney failure between 2014 and 2020. GOSH, Great Ormond Street Hospital.

2. Ethnicity, age, and sex

Figure 2 shows rates of adults starting treatment for kidney failure – so called *incidence*. Along the horizontal axis is age, so that incidence rates can be compared between age groups. The vertical axis shows the number of people who started per million people in the population, labelled 'age/ethnicity adjusted population'. For each ethnicity, the rate is calculated using the number of people of that ethnicity who started, per million people in the population with the same ethnicity. For each age group, the rate is calculated using the number of people who started, per million people in the population in the same age group. The rates for the total population (dashed) and the White ethnic group (darker blue) look very similar because White is the most common ethnic group in the UK.

Figure 2 – Incidence rates for adults by ethnicity



The rate of new adult patients starting kidney replacement therapy (incidence) between 2014 and 2020 by age group and ethnicity per million age-ethnicity adjusted population (using age and ethnicity data from the 2011 Census).

Main findings:

- Adults whose ethnicity is Other, Black, Asian, or Mixed have much higher rates of kidney failure than those of White ethnicity, and kidney failure rates are higher at younger ages for those of ethnicities other than White.
    - The highest rate is for those whose ethnicity is listed as 'Other' aged 75-79 years – at approximately 2,500 in a million (one in 400 people).
    - The lowest rate for people in this age band is for people of White ethnicity: six times lower at approximately 400 in a million (one in 2,500 people).

The following tables show the percentage of people of each ethnicity who are under or over 65-years-old, and the percentage who are male or female. An age of 65 was chosen because approximately half the total kidney failure population is older than 65. The percentages for the whole kidney failure population (all groups) are also shown. The size of each coloured bar matches the percentage in its cell – the bigger the number, the longer the bar.

Table 2a – Age of adults (all people over 18 years of age, %)

			AGE	
		Number	Under 65 years (%)	65+ years
ETHNICITY	All groups	49,078	52	48
	Asian	6,309	60	40
	Black	3,636	71	29
	Mixed	684	69	31
	Other	825	61	39
	White	35,652	48	52
	Missing	1,972	46	54

Age of adults by ethnic group who started treatment for kidney failure between 2014 and 2020.

Main findings:

- People of White ethnicity and those whose ethnicity is missing are the oldest groups starting kidney replacement therapy.
- People of Black and Mixed ethnicity are the youngest groups starting kidney replacement therapy.

Table 2b – Sex of adults (all people over 18 years of age, %)

			SEX		
		Number	Male	(%)	Female
ETHNICITY	All groups	49,078	64		36
	Asian	6,309	62		38
	Black	3,636	60		40
	Mixed	684	62		38
	Other	825	65		35
	White	35,652	64		36
	Missing	1,972	66		34

Sex distributions by ethnicity of adults who started treatment for kidney failure between 2014 and 2020.

Main findings:

- Despite the higher levels of kidney disease amongst women, more men start dialysis or receive a transplant across all ethnic groups.

Table 2c – Sex of children (under 16-year-olds treated in children's centres, %)

			SEX		
		All groups	Male	(%)	Female
ETHNICITY	All groups	755	60		40
	Asian	153	60		40
	Black	48	65		35
	Mixed	8*	38		62
	Other	40	65		35
	White	462	60		40
	Missing	44	55		45

Sex distributions by ethnicity of children who started treatment for kidney failure between 2014 and 2020.

Main findings:

- More boys than girls get kidney failure across ethnic groups.
- Due to small numbers of children*, it is not advised to compare any differences by ethnicity to those seen in adults. Even comparisons between childhood ethnic groups are sensitive to chance effects given the small numbers.

3. Ethnicity and deprivation

The following tables show the percentage of patients of each ethnicity who live in regions of above-average deprivation (left) or below-average deprivation (right). Statistics for the whole kidney failure population (all groups) are also shown. The size of the bar represents the percentage in each cell – the bigger the number, the longer the bar.

Table 3a – Deprivation amongst adults

			DEPRIVATION		
		Number	Living in the regions of above-average deprivation (%)		Living in the regions of below-average deprivation
ETHNICITY	All groups	49,078	58		42
	Asian	6,309	71		29
	Black	3,636	81		19
	Mixed	684	71		29
	Other	825	65		35
	White	35,652	53		47
	Missing	1,972	50		50

Adults living in the most and least deprived 50% of regions (by Index of Multiple Deprivation) for each ethnic group who started treatment for kidney failure between 2014 and 2020.

Main findings:

- Patients of Black ethnicity are more likely to live in the most deprived regions than any other ethnic group.
- Those whose ethnicity is White or missing are least likely to live in the most deprived regions.
- The finding that more people of some ethnic groups are living in areas of higher deprivation is not only found in people with kidney disease, but often in the general UK population too.

Table 3b – Deprivation amongst children (%)

			DEPRIVATION		
		Number	Living in the regions of above-average deprivation (%)		Living in the regions of below-average deprivation
ETHNICITY	All groups	755	65		35
	Asian	153	84		16
	Black	48	79		21
	Mixed	8*	75		25
	Other	40	85		15
	White	462	54		46
	Missing	44	70		30

Children living in the most and least deprived 50% of regions (by Index of Multiple Deprivation) for each ethnic group who started treatment for kidney failure between 2014 and 2020.

Main findings:

- Children with kidney failure who are of Asian, Black, Mixed, or Other ethnicity, and those whose ethnicity is missing are more likely to live in deprived regions than those of White ethnicity.
- Note that national statistics show people from Black and minority ethnic backgrounds are more likely to live in deprived areas, whether or not they have kidney disease.
- Due to the very small numbers of children, it is not advised to compare any differences by ethnicity to those seen in adults. Even comparisons between childhood ethnic groups are sensitive to chance effects given the small numbers.

4. Ethnicity and cause of kidney failure

Whenever possible, doctors try to identify the cause of a person's kidney failure, their "primary kidney disease". Kidney failure tends to have different causes in children than in adults. Table 4a shows the percentage of adults whose kidney failure was reported as being due to:

- Diabetes – diabetes mellitus type 1 or 2,
- Glomerular disease – conditions that damage the microscopic filters of the kidney, such as IgA disease or vasculitis,
- Hypertension – kidney damage associated with high blood pressure,
- Polycystic kidney disease – a genetic disorder that causes fluid-filled cysts to grow in the kidneys
- Pyelonephritis – damage to the kidney from infection and/or reflux (backwashing) of urine,
- Renovascular disease – damage to the blood vessels of the kidneys,
- Uncertain – used when no cause of kidney failure can be diagnosed,
- Other – any other cause of kidney failure listed.

In table 4a, the breakdown of primary kidney diseases is shown for each adult ethnic group. Only data for those with primary kidney disease data is shown – 6% of adults had no recorded primary kidney disease. The cells for each ethnic group add up to 100%. The size of the bar represents the percentage in each cell – the bigger the number, the longer the bar.

Table 4a – Adult primary kidney disease by ethnicity (%)

Ethnicity	Primary Renal Disease	Total %
Asian	Diabetes	46
	Glomerular disease	12
	Hypertension	5
	Polycystic kidney disease	3
	Pyelonephritis	3
	Renovascular disease	4
	Uncertain	15
	Other	12
Black	Diabetes	35
	Glomerular disease	10
	Hypertension	16
	Polycystic kidney disease	4
	Pyelonephritis	2
	Renovascular disease	2
	Uncertain	13
	Other	19
Mixed	Diabetes	33
	Glomerular disease	12
	Hypertension	8
	Polycystic kidney disease	6
	Pyelonephritis	4
	Renovascular disease	3
	Uncertain	18
	Other	16
Other	Diabetes	31
	Glomerular disease	15
	Hypertension	10
	Polycystic kidney disease	5
	Pyelonephritis	4
	Renovascular disease	3
	Uncertain	18
	Other	15
White	Diabetes	25
	Glomerular disease	13
	Hypertension	6
	Polycystic kidney disease	8
	Pyelonephritis	6
	Renovascular disease	6
	Uncertain	15
	Other	20
Missing	Diabetes	28
	Glomerular disease	10
	Hypertension	8
	Polycystic kidney disease	5
	Pyelonephritis	5
	Renovascular disease	5
	Uncertain	18
	Other	21

Primary renal disease by ethnicity for adults who started treatment for kidney failure between 2014 and 2020. Not including those with no recorded primary kidney disease.

Main findings:

- Diabetes is the most common single cause of kidney failure in all groups.
- Diabetes is especially common amongst Asian and Black populations, and least common for White populations and those whose ethnicity is missing.

In table 4b, the breakdown of primary kidney diseases is shown for each childhood ethnic group. Only data for those with primary kidney disease data is shown – 2% of children had no recorded primary kidney disease. The cells for each ethnic group add up to 100%. The size of the bar represents the percentage in each cell – the bigger the number, the longer the bar.

A different list of primary kidney diseases is used for children as they experience different health conditions from adults:

- Familial / hereditary nephropathies – conditions that affect the kidneys which may run in families, or may be due to a new genetic mutation. Includes conditions such as nephronophthisis and cystinuria.
- Glomerular disease – conditions that damage the microscopic filters of the kidney, such as nephrotic syndrome and IgA nephropathy.
- Miscellaneous kidney disorders – where no primary kidney problem was identified.
- Systemic diseases affecting the kidney – conditions that affect the body and can also damage the kidney. Includes Systemic Lupus Erythematosus (SLE)
- Tubulo-CAKUT – conditions that people are born with which affect the kidney and/or urinary tract.
- Tubulo-non-CAKUT – conditions that are acquired after birth which affect the kidney and/or urinary tract.

Table 4b – Children's primary kidney disease by ethnicity (%)

Ethnicity	Primary Renal Disease	Total %
White	Familial / hereditary nephropathies	13
	Glomerular disease	16
	Miscellaneous renal disorders	16
	Systemic diseases affecting the kidney	5
	Tubulo-CAKUT	48
	Tubulo-non-CAKUT	2
Asian	Familial / hereditary nephropathies	23
	Glomerular disease	22
	Miscellaneous renal disorders	13
	Systemic diseases affecting the kidney	3
	Tubulo-CAKUT	38
	Tubulo-non-CAKUT	1
Black	Familial / hereditary nephropathies	14
	Glomerular disease	21
	Miscellaneous renal disorders	14
	Systemic diseases affecting the kidney	2
	Tubulo-CAKUT	49
	Tubulo-non-CAKUT	0
Mixed	Familial / hereditary nephropathies	14
	Glomerular disease	14
	Miscellaneous renal disorders	14
	Systemic diseases affecting the kidney	0
	Tubulo-CAKUT	43
	Tubulo-non-CAKUT	14
Other	Familial / hereditary nephropathies	24
	Glomerular disease	12
	Miscellaneous renal disorders	9
	Systemic diseases affecting the kidney	0
	Tubulo-CAKUT	53
	Tubulo-non-CAKUT	3
Missing	Familial / hereditary nephropathies	32
	Glomerular disease	11
	Miscellaneous renal disorders	16
	Systemic diseases affecting the kidney	11
	Tubulo-CAKUT	32
	Tubulo-non-CAKUT	0

Primary kidney disease by ethnicity for children who started treatment for kidney failure between 2014 and 2020. Not including those with no recorded primary kidney disease.

Main findings:

- Tubulo-CAKUT disorders – conditions that people are born with which affect the kidney and/or urinary tract – are the commonest causes of kidney failure in all groups.

5. Ethnicity and diabetes

People with kidney failure often have multiple other health conditions (comorbidities). Table 5a shows the percentage of adults in each ethnic group who have diabetes, as diabetes is especially common amongst adults with kidney failure. Sometimes diabetes is also their primary kidney disease (the cause of their kidney failure). The size of the coloured bars represents the percentage in each cell – the bigger the number, the longer the bar.

Approximately two in three adults and less than half of children in our system have comorbidity data. Whether comorbidity data are reported may depend upon a person's characteristics, or where they receive their care. Given these high levels of missing data, no figures are provided for conditions other than diabetes.

Table 5a – Diabetes amongst adults (%)

			DIABETES		
		Number	Yes	(%)	No
ETHNICITY	All groups	49,078	33		67
	Asian	6,309	49		51
	Black	3,636	37		63
	Mixed	684	33		67
	Other	825	33		67
	White	35,652	30		70
	Missing	1,972	28		72

Percentage with diabetes of each adult ethnic group who started treatment for kidney failure between 2014 and 2020.

Main findings:

- Higher rates of diabetes are seen amongst people of Asian ethnicity, in keeping with the higher rates of kidney failure caused by diabetes.

6. Ethnicity, presentation and first treatment

Individuals in this report all received dialysis or a kidney transplant for kidney failure. They may have started treatment with a transplant, or they may have first done haemodialysis or peritoneal dialysis. These treatments all require a person to have met a kidney specialist, and the time between first meeting a specialist and starting treatment influences the kind of treatment someone will begin. If someone first saw a specialist less than 90 days before starting, they are said to have presented late. An individual might present late because their kidney disease was new and rapidly progressing, because their disease was advanced when first detected, or if it their kidney condition was diagnosed, but their referral or appointment was delayed.

The following tables show the **percentage of people presenting late** to a kidney specialist, and the **breakdown of first treatment type**. The size of the coloured bars represents the percentage in each cell – the bigger the number, the longer the bar.

Table 6a – Late presentation amongst adults (%)

			PRESENTED LATE TO KIDNEY SERVICES		
		Number	Yes	(%)	No
ETHNICITY	All groups	49,078	16		84
	Asian	6,309	12		88
	Black	3,636	15		85
	Mixed	684	18		82
	Other	825	20		80
	White	35,652	16		84
	Missing	1,972	24		76

Percentage of each adult ethnic group who started treatment for kidney failure after a late presentation between 2014 and 2020.

Main findings:

- Late presentation to kidney services is least common amongst people of Asian ethnicity, which may reflect higher rates of monitored diabetes in this group.
- Late presentation is most common amongst those whose ethnicity data are missing.

Table 6b – First treatment type amongst adults (%)

			FIRST TREATMENT FOR KIDNEY FAILURE		
		Number	Hospital dialysis	Home dialysis	Transplanted
ETHNICITY	All groups	49,078	74	21	5
	Asian	6,309	74	22	5
	Black	3,636	77	21	2
	Mixed	684	73	20	7
	Other	825	75	21	4
	White	35,652	74	21	5
	Missing	1,972	80	16	4

Percentage of each adult ethnic group who started treatment for kidney failure between 2014 and 2020 with hospital haemodialysis, home dialysis, or a transplant.

Main findings:

- Hospital dialysis is the commonest first treatment across adult ethnic groups.
- Home dialysis is least commonly used as initial treatment by individuals whose ethnicity data are missing.
- Transplantation before starting dialysis is rare across all ethnic groups, but especially so for those of Black ethnicity.

Table 6c – Late presentation amongst children (%)

			PRESENTED LATE TO KIDNEY SERVICES		
		Number	Yes	(%)	No
ETHNICITY	All groups	755	23		77
	Asian	153	18		82
	Black	48	27		73
	Mixed	8*	13		88
	Other	40	33		68
	White	462	24		76
	Missing	44	23		77

Percentage of each child ethnic group who started treatment for kidney failure after a late presentation between 2014 and 2020.

Main findings:

- Late presentation to kidney services is least common amongst children of Asian ethnicity.
- Due to the very small numbers of children, it is not advised to compare any differences by ethnicity to those seen in adults. Even comparisons between childhood ethnic groups are sensitive to chance effects given the small numbers*.

Table 6d – First treatment type amongst children (%)

			FIRST TREATMENT FOR KIDNEY FAILURE		
		Number	Hospital dialysis	Home dialysis	Tranplanted
ETHNICITY	All groups	755	38	40	21
	Asian	153	37	49	14
	Black	48	42	50	8
	Mixed	8*	88	13	0
	Other	40	45	40	15
	White	462	36	37	27
	Missing	44	45	36	18

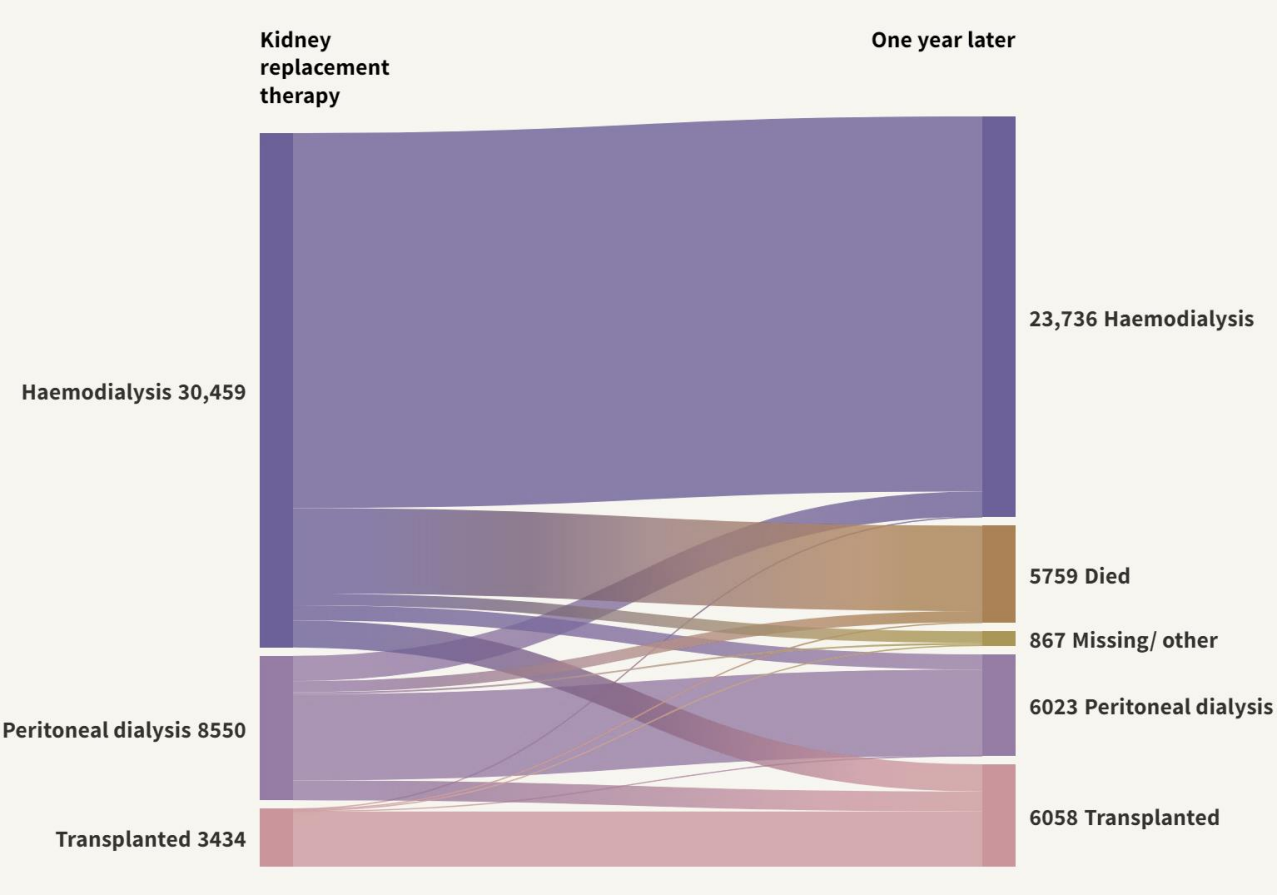
Percentage of each child ethnic group who started treatment for kidney failure between 2014 and 2020 with hospital haemodialysis, home dialysis, or a transplant.

Main findings:

- Overall, home and hospital dialysis are started equally frequently.
- Transplantation is the first treatment for one in five children.
- Children of White ethnicity are more likely to be transplanted as their first treatment than other ethnic groups.
- Children of Black and Mixed ethnicity children appear to be less likely to be transplanted as their first treatment than other groups.
- Due to the very small numbers of children, it is not advised to compare any differences by ethnicity to those seen in adults. Even comparisons between childhood ethnic groups are sensitive to chance effects given the small numbers.*

7. Ethnicity and treatment outcomes

The UK Renal Registry reports annually on survival and transplant listing, and its reports are available here. NHS Blood and Transplant also provide data and summaries of transplantation rates, available here. Transplant rates are lower for people whose ethnicity is other than White: Compared with White people, they have around 60% of the chance of being transplanted. This diagram shows what happens in the first year after starting kidney replacement therapy. Here, 42,443 adults of all ethnicities are included. Most people continued the modality they started, but others changed modality, and some died.



Click here to go to an interactive page where you can look at these data for each ethnic group.

The following tables show the percentage of adults and children of each ethnicity who were **alive one year after starting treatment** for kidney failure and the percentage who were **transplanted within three years** of starting treatment. The statistics for the whole kidney failure population are also shown. The size of the coloured bars represents the percentage in each cell – the bigger the number, the longer the bar.

Table 7a – Adult survival after starting treatment for kidney failure (%)

			ALIVE ONE YEAR AFTER STARTING TREATMENT		
		Number	Yes	(%)	No
ETHNICITY	All groups	49,078	87		13
	Asian	6,309	92		8
	Black	3,636	94		6
	Mixed	684	92		8
	Other	825	93		7
	White	35,652	86		14
	Missing	1,972	80		20

Percentage of each adult ethnic group who were alive one year after starting treatment for kidney failure between 2014 and 2020.

Main findings:

- The worst one-year survival is seen amongst those whose ethnicity data are missing, which could be due to the fact that they represent a different group of patients with more severe illness.
- Survival is also lower in the White population. This is incompletely understood, but is partly because people of White ethnicity are, on average, older and have a higher number of additional health problems than other ethnic groups at the time of starting.

Table 7b – Adult transplantation after starting treatment for kidney failure (%)

			TRANSPLANTED WITHIN THREE YEARS OF STARTING		
		Number	Yes	(%)	No
ETHNICITY	All groups	49,078	22		78
	Asian	6,309	23		77
	Black	3,636	16		84
	Mixed	684	26		74
	Other	825	20		80
	White	35,652	22		78
	Missing	1,972	13		87

Percentage of each adult ethnic group who were transplanted within three years of starting treatment for kidney failure between 2014 and 2020.

Main findings:

- Rates of transplantation three years after starting treatment are lowest for those of Black ethnicity, and those whose ethnicity data are missing.

Table 7c – Child survival after starting treatment for kidney failure (%)

			ALIVE ONE YEAR AFTER STARTING TREATMENT		
		Number	Yes	(%)	No
ETHNICITY	All groups	755	97		3
	Asian	153	97		3
	Black	48	98		2
	Mixed	8*	100		0
	Other	40	98		3
	White	462	98		2
	Missing	44	91		9

Percentage of each child ethnic group who were alive one year after starting treatment for kidney failure between 2014 and 2020.

Main findings:

- One-year survival exceeds 97% across ethnic groups.
- The much lower survival rates for children with missing ethnicity data suggest they represent a different group of children, with more severe illness.

Table 7d – Child transplantation after starting treatment for kidney failure (%)

			TRANSPLANTED WITHIN THREE YEARS OF STARTING		
		Number	Yes	(%)	No
ETHNICITY	All groups	755	59		41
	Asian	153	58		42
	Black	48	50		50
	Mixed	8*	63		38
	Other	40	48		53
	White	462	65		35
	Missing	44	11		89

Percentage of each child ethnic group who were transplanted within three years of starting treatment for kidney failure between 2014 and 2020.

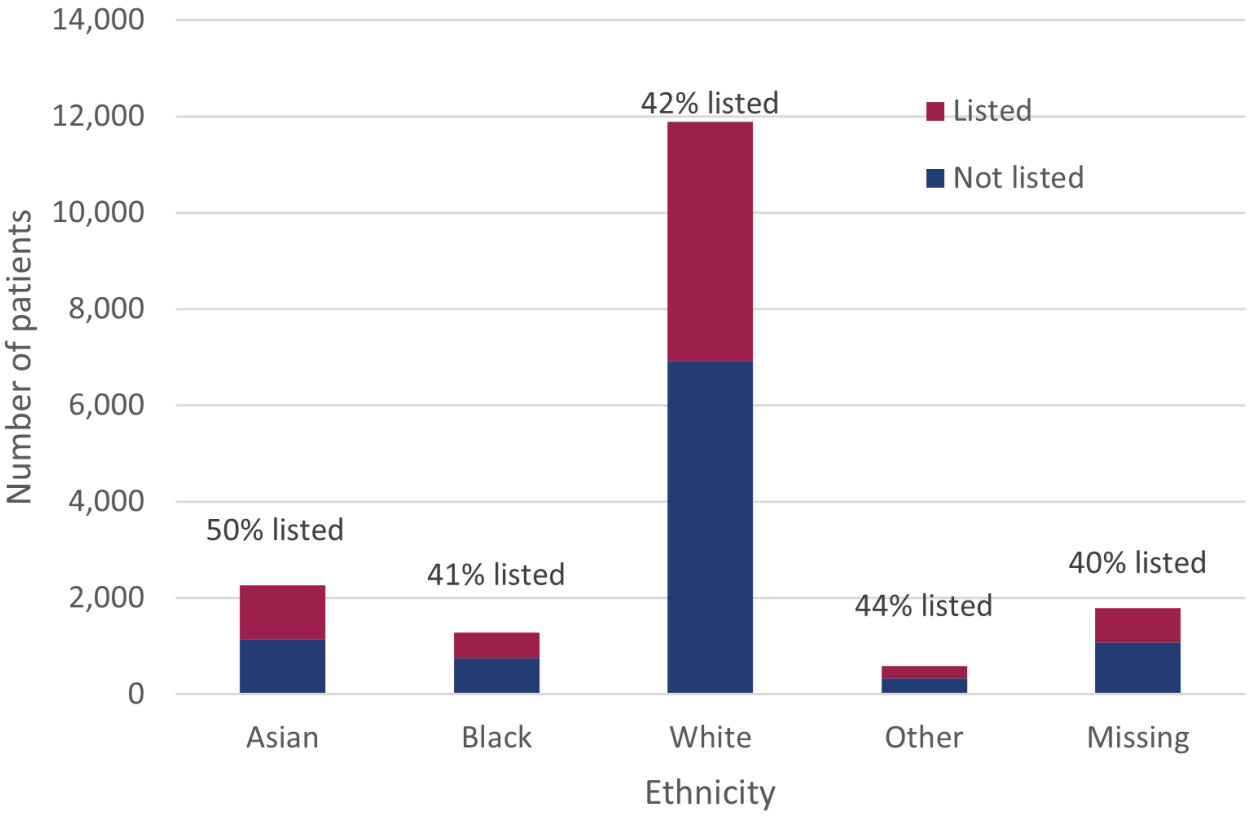
Main findings:

- Transplant rates are highest for children of White ethnicity, and lowest for children of Black ethnicity.
- The much lower transplant rates for children with missing ethnicity data suggest they represent a different group of children, with more severe illness.

8. Ethnicity and transplant wait-listing

Transplant 'wait-listing' refers to the point at which an individual is placed on the waiting list to receive a donated kidney. A report of a separate piece of work looking at wait-listing will be available on the UKKA website soon. Early findings are provided below. These data come from 17,829 adults aged between 18 and 75 who started treatment for kidney failure between March 2017 and February 2020. This report does not include children.

Figure 8a – Adult transplant wait-listing by ethnicity



Bar graph showing the proportion of people starting treatment for kidney failure (dialysis or transplant) who were listed (Red) or not listed for transplant within two years (Blue). Individuals who were transplanted before starting dialysis were counted as listed.

Main findings:

- Crude listing rates are approximately 40% for all ethnic groups, except for people of Asian ethnicity, for whom rates are higher, at 50%.

The full analysis of these data shows people of Asian ethnicity remained *more* likely to be wait-listed than those of White ethnicity, even once other factors are considered. People of Black ethnicity were *less* likely to be wait-listed than those of White ethnicity, once other factors were considered.

9. Conclusion

This descriptive report using UK Renal Registry (UKRR) data presents well-recognised disparities: Black and minority ethnic populations have higher rates of kidney failure and are affected at younger ages. At the same time, however, this report shows that these patterns are complicated.

Both within and between ethnic groups there are different patterns of disease, treatments, and outcomes. This complexity reflects the fact that ethnic groups are not easily compared because they differ in many ways other than ethnicity. These 'ways' include the different ages at which each ethnic group reaches kidney failure and the sociodemographic groups from which they tend to come.

Since this report describes rather than analyses UKRR data, a robust scientific approach will be needed if we are to understand the precise factors that lead to suboptimal outcomes and, critically, the factors that we can modify. In the meantime, further descriptive work will help reveal how demographic factors such as age, sex and socioeconomic deprivation intersect to influence outcomes. And in the future, regular reporting will help us to identify rising or declining standards of care, and guide where we should invest to address inequalities.

Contact information

For more information about this report or the UKRR, please contact us:

ukka@ukkidney.org

www.ukkidney.org

@UKKidney