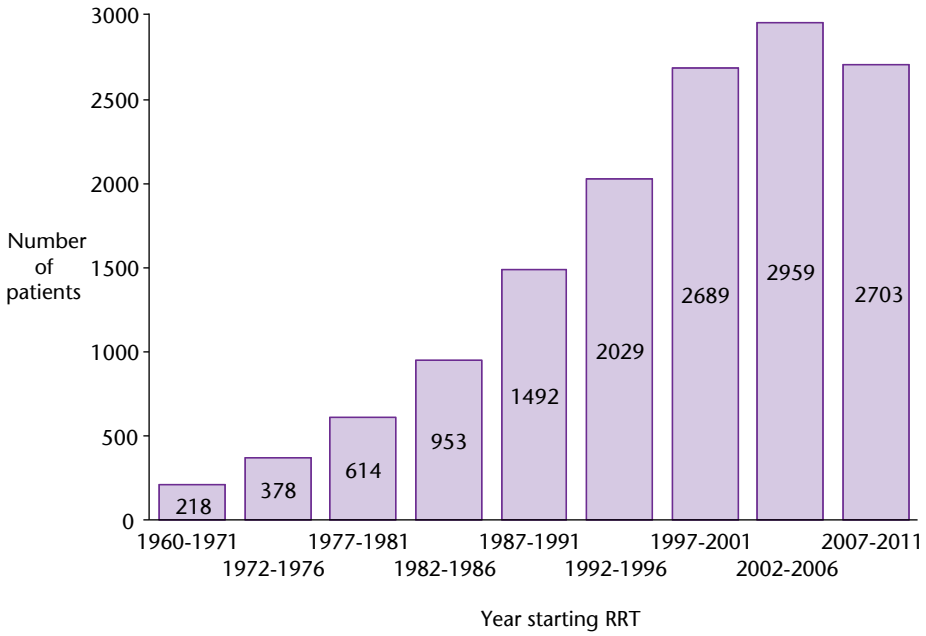
# SECTION A INCIDENCE

## A1 Incidence of new patients starting RRT

### A1.1 Incidence of new patients starting RRT 1960-2011




### A1.2 Annual incidence per million population of new patients starting RRT 1982-2011

| Year | Number starting RRT (number of males) | Population of Scotland | Incidence per million |
|---|---|---|---|
| 1982-1986 | 953 (556) | 5138238 * | 37 |
| 1987-1991 | 1492 (880) | 5083850 * | 59 |
| 1992-1996 | 2029 (1173) | 5095234 * | 80 |
| 1997-2001 | 2689 (1557) | 5071900 * | 106 |
| 2002 | 551 (313) | 5054800 | 109 |
| 2003 | 608 (332) | 5057400 | 120 |
| 2004 | 579 (321) | 5078400 | 114 |
| 2005 | 628 (363) | 5094800 | 123 |
| 2006 | 593 (353) | 5116900 | 116 |
| 2007 | 575 (336) | 5144200 | 112 |
| 2008 | 551 (317) | 5168500 | 107 |
| 2009 | 551 (335) | 5194000 | 106 |
| 2010 | 519 (317) | 5222100 | 99 |
| 2011 | 507 (290) | 5254800 | 96 |

Population figures are from the General Register Office for Scotland.
They are population estimates for the 30 June of each year.

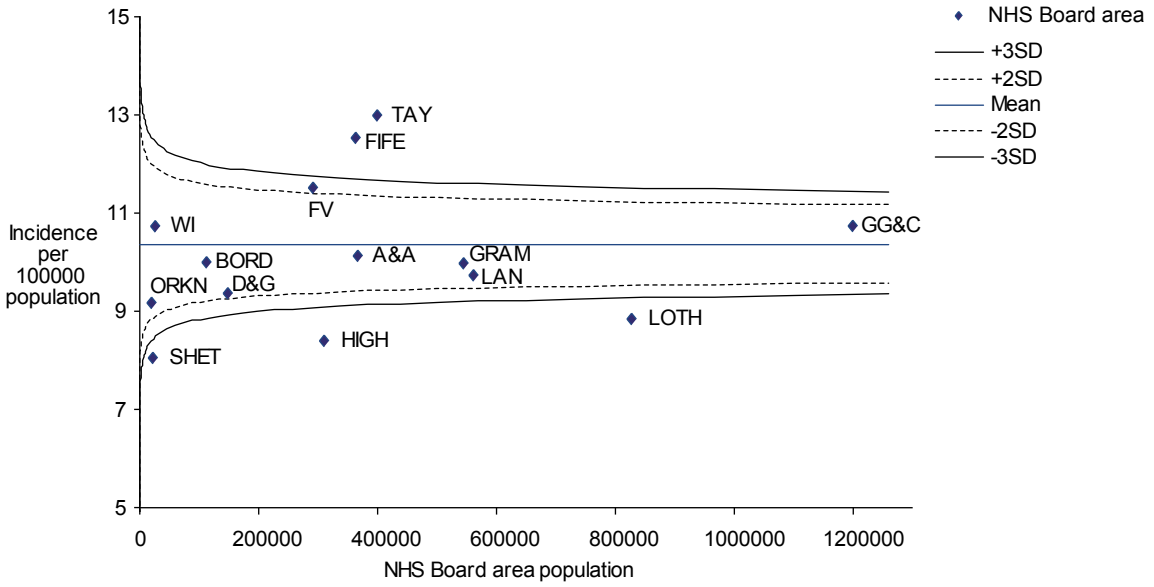
* The population estimates shown for the five year bands between 1982 and 2001 are the arithmetical mean of the mid-year population estimate for each of the years in question, the annual incidence of new patients is averaged over the five year periods.

## A1.3 Age standardised incidence of new patients starting RRT 2007-2011 by NHS Board area of residence

| NHS Board | Number starting RRT | Incidence per 100000 population | Age standardised incidence per 100000 population |
|---|---|---|---|
| A&A | 198 | 11 | 10.2 |
| BORD | 62 | 11 | 10.0 |
| D&G | 80 | 11 | 9.4 |
| FIFE | 232 | 13 | 12.6 |
| FV | 166 | 11 | 11.5 |
| GG&C | 622 | 10 | 10.8 |
| GRAM | 270 | 10 | 10.0 |
| HIGH | 142 | 9 | 8.4 |
| LAN | 267 | 10 | 9.8 |
| LOTH | 346 | 8 | 8.9 |
| ORKN | 10 | 10 | 9.2 |
| SHET | 9 | 8 | 8.1 |
| TAY | 276 | 14 | 13.0 |
| WI | 16 | 12 | 10.8 |
| **SCOT** | ***2696*** | **10** | **10.4** |

The incidence of new patients starting RRT in each NHS Board area of residence has been standardised to take into account differences in the age distribution of residents to allow direct comparison between areas.
The age standardised incidence is the total number of residents expected to start RRT in a NHS Board area population, if the age structure of the Board area was the same as that of Scotland.
A five year incident period from 2007 to 2011 has been used to minimise the impact of year to year fluctuations in numbers of patients.

## A1.4 Age standardised incidence of new patients starting RRT 2007-2011 by NHS Board area of residence

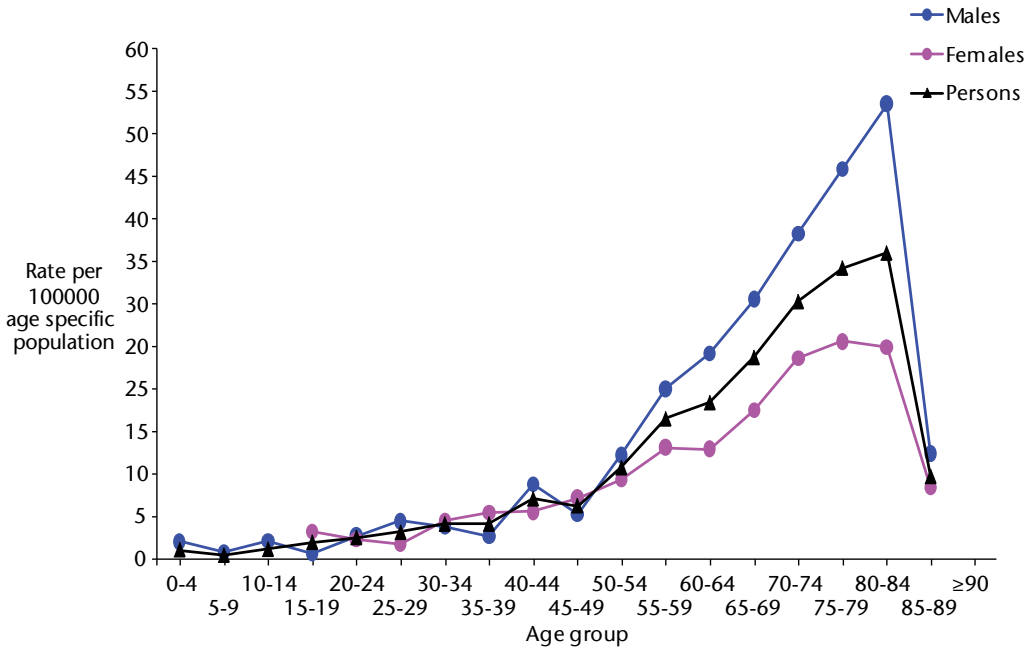



FIFE and TAY NHS Board areas have age standardised incidence rates, over the period 2007-2011, more than 3SD above the national mean. These areas have more incident RRT patients than expected according to the age spread of the NHS Board areas populations.

SHET, HIGH and LOTH have age standardised incidence rates more than 3SD below the national mean and have fewer incident RRT patients than would be expected if the variation between the areas were due to differences in age demographic alone.

# A2 General population and incident RRT population 2011

## A2.1 Age specific incidence of new patients starting RRT 2011 per 100000 population



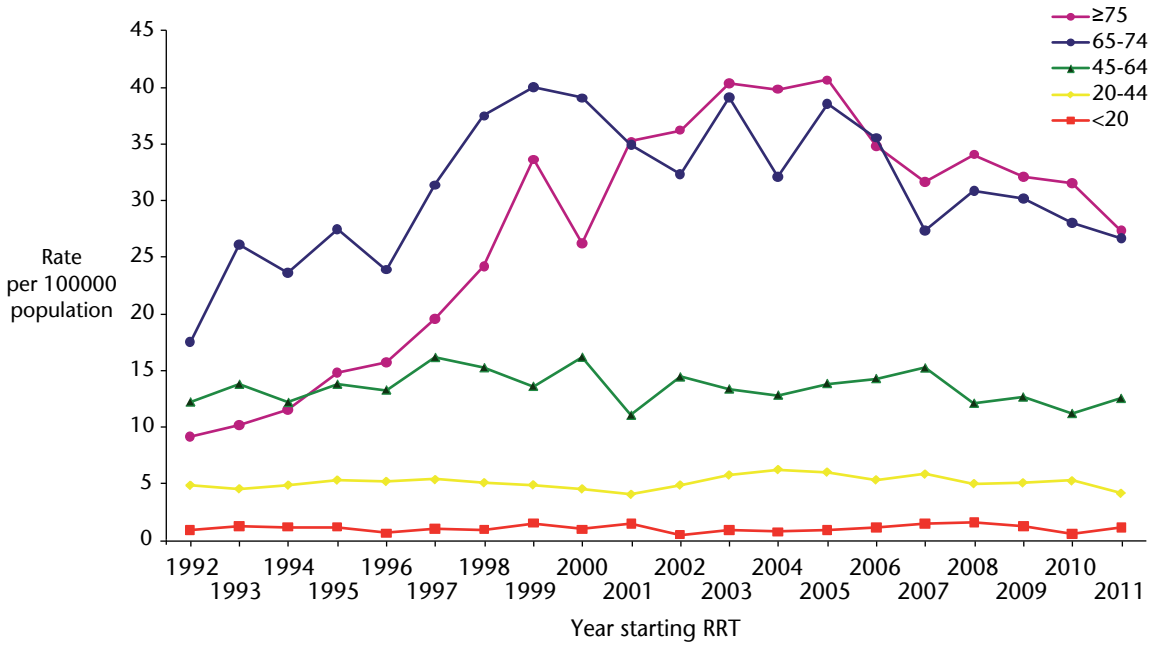

## A2.2 Age specific incidence and prevalence of RRT patients 2011

| Age | Estimated population 30/06/2011 | Number starting RRT 2011 | Incidence per million population of each age group | All prevalent patients receiving RRT on 30/06/2011 | Prevalence per million population of each age group* |
|---|---|---|---|---|---|
| ≥75 | 413074 | 113 | 274 | 584 | 1414 |
| 65-74 | 479313 | 128 | 267 | 790 | 1648 |
| 45-64 | 1436617 | 180 | 125 | 1885 | 1312 |
| 20-44 | 1754025 | 73 | 42 | 1040 | 593 |
| <20 | 1171771 | 13 | 11 | 90 | 77 |
| **Total** | **5254800** | **507** | | **4389** | |

Source: http://www.gro-scotland.gov.uk/statistics/theme/population/index.html
* Age on June 30 2011

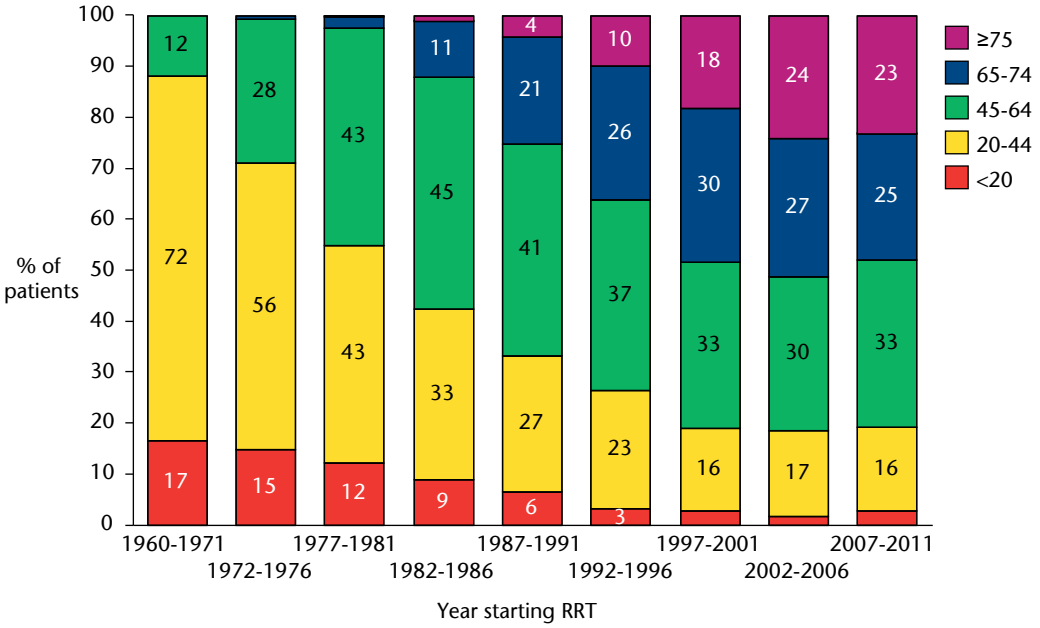
This table shows age specific incidence and prevalence on 30 June 2011, of patients receiving RRT per million population. Ages given are at the start of RRT for incident figures and on 30 June 2011 for prevalence figures. This allows use of the General Register Office mid-year population statistics to calculate age specific rates.

## A2.3 Age specific incident RRT population 1992 to 2011 per 100000 population




# A3 Age distribution of patients when starting RRT

## A3.1 Age distribution of patients when starting RRT 1960-2011




The age distribution in the most recent period 2007-2011 is statistically different from the previous period 2002-2006 (Chi-square, p=0.01).

## A3.2 Number of patients in each age group and median age when starting RRT 1960-2011

| Year starting RRT | <20 | 20-44 | 45-64 | 65-74 | ≥75 | Median age |
|---|---|---|---|---|---|---|
| 1960-1971 | 36 | 156 | 26 | 0 | 0 | 31 |
| 1972-1976 | 56 | 212 | 107 | 3 | 0 | 36 |
| 1977-1981 | 75 | 262 | 261 | 15 | 1 | 42 |
| 1982-1986 | 85 | 319 | 433 | 106 | 10 | 48 |
| 1987-1991 | 95 | 401 | 619 | 314 | 63 | 54 |
| 1992-1996 | 66 | 467 | 759 | 535 | 202 | 59 |
| 1997-2001 | 74 | 436 | 875 | 815 | 489 | 64 |
| 2002-2006 | 50 | 499 | 890 | 806 | 714 | 65 |
| 2007-2011 | 71 | 445 | 890 | 671 | 626 | 63 |
| **Total** | **608** | **3197** | **4860** | **3265** | **2105** | |

## A3.3 Number and median age of patients starting RRT 2007-2011 by renal unit

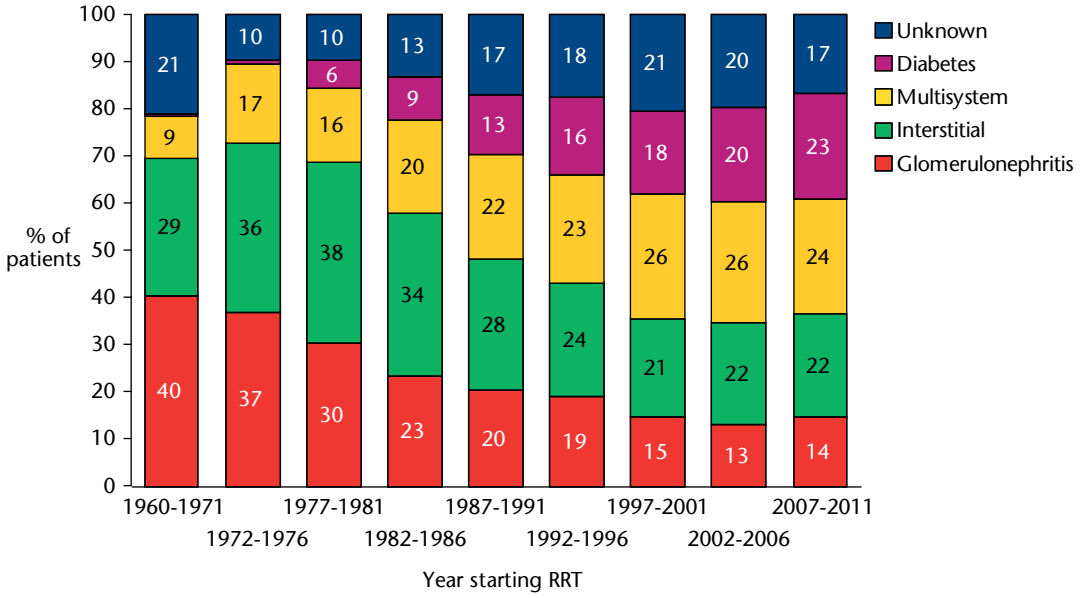
| Renal unit | Number starting RRT 2007-2011 | Median age 2007-2011 | Number starting RRT 2011 | Median age 2011 |
|---|---|---|---|---|
| ARI | 267 | 60 | 50 | 64 |
| XH | 183 | 65 | 32 | 67 |
| DGRI | 78 | 67 | 11 | 64 |
| GLAS | 849 | 63 | 171 | 66 |
| MONK | 236 | 61 | 47 | 59 |
| NINE | 301 | 70 | 59 | 72 |
| RAIG | 109 | 65 | 11 | 71 |
| RHSC | 50 | 12 | 10 | 12 |
| RIE | 434 | 60 | 73 | 60 |
| VHK | 196 | 67 | 43 | 64 |
| **TOTAL** | **2703** | **64** | **507** | **64** |

| A3.4 | Number of patients in each age group and median age when starting RRT 2007-2011 by NHS Board area of residence | | | | | | |
|---|---|---|---|---|---|---|---|
| | <20 | 20-44 | 45-64 | 65-74 | ≥75 | Number starting RRT 2007-2011 | Median age |
| A&A | 3 | 24 | 72 | 44 | 55 | 198 | 65 |
| BORD | 1 | 7 | 26 | 20 | 8 | 62 | 63 |
| D&G | 2 | 6 | 30 | 19 | 23 | 80 | 66 |
| FIFE | 4 | 38 | 62 | 60 | 68 | 232 | 66 |
| FV | 8 | 24 | 50 | 46 | 38 | 166 | 65 |
| GG&C | 15 | 105 | 211 | 156 | 135 | 622 | 62 |
| GRAM | 12 | 57 | 91 | 61 | 49 | 270 | 59 |
| HIGH | 5 | 21 | 51 | 34 | 31 | 142 | 63 |
| LAN | 8 | 57 | 94 | 64 | 44 | 267 | 60 |
| LOTH | 7 | 66 | 125 | 80 | 68 | 346 | 61 |
| ORKN | 1 | 0 | 2 | 6 | 1 | 10 | 68 |
| SHET | 1 | 3 | 1 | 4 | 0 | 9 | 59 |
| TAY | 4 | 32 | 68 | 72 | 100 | 276 | 69 |
| WI | 0 | 4 | 3 | 4 | 5 | 16 | 67 |

## A4 Primary renal diagnosis of patients starting RRT

ERA-EDTA Primary Renal Diagnoses (PRD) codes and groupings used in SRR reports are available on the SRR website: http://www.srr.scot.nhs.uk/Projects/Methods.html.

### A4.1 Percentage of patients in each diagnosis group starting RRT 1960-2011




### A4.2 Number of patients in each diagnosis group starting RRT 1960-2011

| Year starting RRT | Glomerulo-nephritis | Interstitial | Multisystem | Diabetes | Unknown | Missing |
|---|---|---|---|---|---|---|
| 1960-1971 | 87 | 63 | 19 | 1 | 46 | 2 |
| 1972-1976 | 139 | 135 | 64 | 3 | 37 | 0 |
| 1977-1981 | 185 | 236 | 96 | 35 | 61 | 1 |
| 1982-1986 | 220 | 326 | 188 | 86 | 127 | 6 |
| 1987-1991 | 299 | 416 | 330 | 188 | 254 | 5 |
| 1992-1996 | 382 | 487 | 465 | 331 | 359 | 5 |
| 1997-2001 | 394 | 556 | 707 | 477 | 552 | 3 |
| 2002-2006 | 380 | 638 | 762 | 590 | 583 | 6 |
| 2007-2011 | 390 | 593 | 654 | 610 | 454 | 2 |
| **TOTAL** | **2476** | **3450** | **3285** | **2321** | **2473** | **30** |

Please see primary renal diagnosis section on page ix for details of the missing diagnoses.

## A4.3 Primary renal diagnosis of patients aged less than 45 years starting RRT 1960-2011

| Year starting RRT | Glomerulo-nephritis | Interstitial | Multisystem | Diabetes | Unknown | Total |
|---|---|---|---|---|---|---|
| | n (%) | n (%) | n (%) | n (%) | n (%) | n |
| 1960-1971 | 77 (41%) | 60 (32%) | 15 (8%) | 1 (1%) | 37 (18%) | 190 |
| 1972-1976 | 112 (42%) | 97 (36%) | 37 (14%) | 1 (0%) | 21 (8%) | 268 |
| 1977-1981 | 108 (32%) | 140 (42%) | 41 (12%) | 16 (5%) | 32 (9%) | 337 |
| 1982-1986 | 107 (27%) | 147 (36%) | 63 (16%) | 40 (10%) | 46 (11%) | 403 |
| 1987-1991 | 130 (26%) | 176 (35%) | 68 (14%) | 60 (12%) | 62 (13%) | 496 |
| 1992-1996 | 128 (24%) | 191 (36%) | 64 (12%) | 90 (17%) | 60 (11%) | 533 |
| 1997-2001 | 109 (21%) | 166 (33%) | 64 (13%) | 90 (18%) | 81 (16%) | 510 |
| 2002-2006 | 114 (21%) | 187 (34%) | 62 (11%) | 115 (21%) | 71 (13%) | 549 |
| 2007-2011 | 94 (18%) | 184 (36%) | 58 (11%) | 116 (22%) | 64 (12%) | 516 |

There are three patients with a missing PRD code.

## A4.4 Primary renal diagnosis of patients aged 75 years and older starting RRT 1982-2011

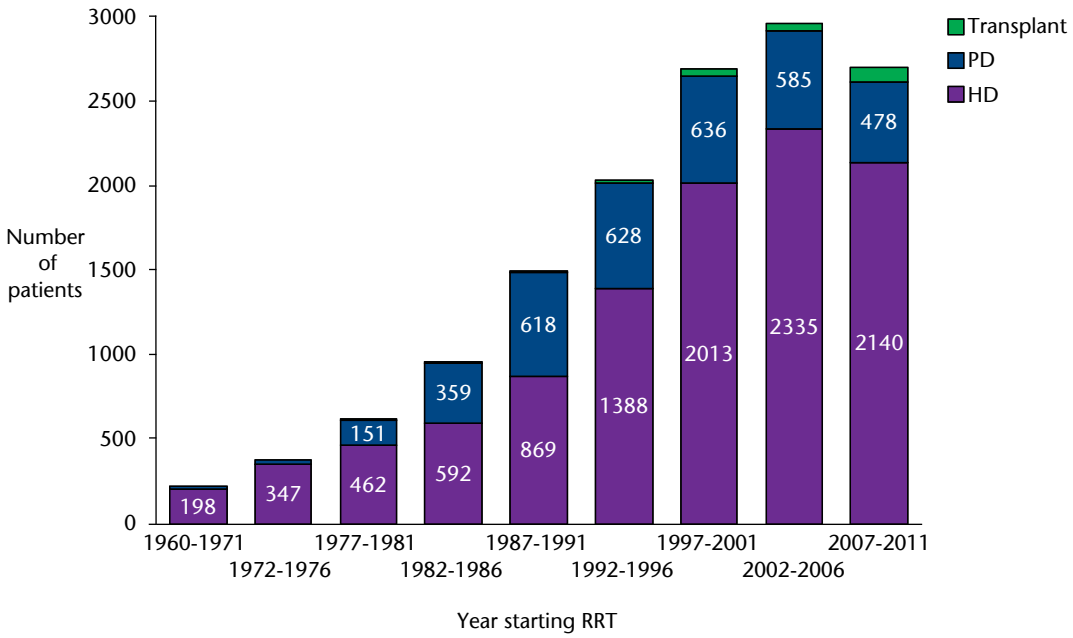
| Year starting RRT | Glomerulo-nephritis | Interstitial | Multisystem | Diabetes | Unknown | Total |
|---|---|---|---|---|---|---|
| | n (%) | n (%) | n (%) | n (%) | n (%) | n |
| 1982-1986 | 1 (10%) | 1 (10%) | 2 (20%) | 1 (10%) | 5 (50%) | 10 |
| 1987-1991 | 6 (10%) | 9 (15%) | 17 (27%) | 1 (2%) | 29 (47%) | 62 |
| 1992-1996 | 19 (9%) | 32 (16%) | 58 (29%) | 15 (7%) | 78 (39%) | 202 |
| 1997-2001 | 52 (11%) | 70 (14%) | 154 (32%) | 50 (10%) | 162 (33%) | 488 |
| 2002-2006 | 54 (8%) | 84 (12%) | 265 (37%) | 83 (12%) | 225 (32%) | 711 |
| 2007-2011 | 59 (9%) | 79 (13%) | 221 (35%) | 85 (14%) | 180 (29%) | 624 |

There are seven patients with a missing PRD code.

## A5 Modality of RRT

There are three principal types of RRT: Haemodialysis (HD) is normally performed in a hospital but can be undertaken in a patient's home. Peritoneal dialysis (PD) is performed by the patient in their home either using the technique of continuous ambulatory peritoneal dialysis (CAPD) or the dialysate exchanges can be performed semi automatically by a machine, known as automated peritoneal dialysis (APD). Renal transplants are normally donated from a deceased donor, but can also be donated by a living person. In total 185 patients have received a transplant as their first mode of RRT (a pre-emptive transplant) in Scotland by the end of 2011.

### A5.1 Mode of first RRT 1960-2011



## A5.2 Mode of first RRT 1960-2011

| Year starting RRT | HD | PD | Transplant | Total |
|---|---|---|---|---|
| 1960-1971 | 198 | 20 | 0 | 218 |
| 1972-1981 | 809 | 182 | 1 | 992 |
| 1982-1991 | 1461 | 977 | 7 | 2445 |
| 1992-1996 | 1388 | 628 | 13 | 2029 |
| 1997-2001 | 2013 | 636 | 40 | 2689 |
| 2002 | 436 | 106 | 9 | 551 |
| 2003 | 492 | 110 | 6 | 608 |
| 2004 | 451 | 122 | 6 | 579 |
| 2005 | 493 | 126 | 9 | 628 |
| 2006 | 463 | 121 | 9 | 593 |
| 2007 | 432 | 123 | 20 | 575 |
| 2008 | 437 | 94 | 20 | 551 |
| 2009 | 454 | 83 | 14 | 551 |
| 2010 | 419 | 88 | 12 | 519 |
| 2011 | 398 | 90 | 19 | 507 |

## A5.3 Number of patients on each mode of RRT after one, five and ten years by mode of first RRT for patients starting RRT in 2000

| Mode of first RRT 2000 | Number of patients | Subsequent RRT mode | 1 year | | 5 years | | 10 years | |
|---|---|---|---|---|---|---|---|---|
| | | | n | (%) | n | (%) | n | (%) |
| HD | 403 | HD | 234 | (58%) | 77 | (19%) | 12 | (3%) |
| | | PD | 32 | (8%) | 9 | (2%) | 1 | (0%) |
| | | Tx | 10 | (2%) | 41 | (10%) | 49 | (12%) |
| | | Deceased | 119 | (30%) | 266 | (66%) | 330 | (82%) |
| | | Other* | 8 | (2%) | 10 | (3%) | 11 | (3%) |
| PD | 145 | HD | 11 | (8%) | 24 | (17%) | 8 | (5%) |
| | | PD | 109 | (75%) | 19 | (13%) | 1 | (1%) |
| | | Tx | 12 | (8%) | 41 | (28%) | 48 | (33%) |
| | | Deceased | 12 | (8%) | 59 | (41%) | 85 | (59%) |
| | | Other* | 1 | (1%) | 2 | (1%) | 3 | (2%) |
| Tx | 11 | HD | 0 | | 0 | | 0 | |
| | | PD | 0 | | 0 | | 0 | |
| | | Tx | 11 | (100%) | 9 | (82%) | 8 | (73%) |
| | | Deceased | 0 | | 2 | (18%) | 3 | (27%) |

* This category includes other outcomes such as lost to follow up and renal recovery.

The percentage of patients receiving each mode of RRT is given at exactly one, five and ten years after the date of first RRT for each individual, according to their first mode of RRT. Changes in RRT modality between the reported time points are not shown.