# Appendix 1 – Read codes

Table 1a. Ethnicity Read codes extracted from the EMIS Web™ electronic primary care health records.

|  |  |
| --- | --- |
| Read code | Code term |
| 9S… | Ethnic groups (census) |
| 9S1.. | White |
| 9S10. | White British |
| 9S11. | White Irish |
| 9S12. | Other white ethnic group |
| 9S2.. | Black Caribbean |
| 9S3.. | Black African |
| 9S4.. | Black, other, non-mixed origin |
| 9S41. | Black British |
| 9S42. | Black Caribbean/W.I./Guyana |
| 9S42-1 | Black Caribbean |
| 9S6.. | Indian |
| 9S7.. | Pakistani |
| 9S8.. | Bangladeshi |
| 9S9.. | Chinese |
| 9SA5. | Other African countries (NMO) |
| 9SAA. | Greek/Greek Cypriot (NMO) |
| 9SAB. | Turkish/Turkish Cypriot (NMO) |
| 9SC.. | Vietnamese |
| 9SE.. | Ethnic group not recorded |
| 9SG.. | Other black ethnic group |
| 9SH.. | Other Asian ethnic group |
| 9SJ.. | Other ethnic group |
| 9SZ.. | Ethnic groups (census) NOS |
| 9i… | Ethnic category - 2001 census |
| 9i0.. | British or mixed British - ethnic category 2001 census |
| 9i00. | White British - ethnic category 2001 census |
| 9i1.. | Irish - ethnic category 2001 census |
| 9i10. | White Irish - ethnic category 2001 census |
| 9i2.. | Other White background - ethnic category 2001 census |
| 9i20. | English - ethnic category 2001 census |
| 9i21. | Scottish - ethnic category 2001 census |
| 9i22. | Welsh - ethnic category 2001 census |
| 9i24. | Northern Irish - ethnic category 2001 census |
| 9i26. | Cypriot (part not stated) - ethnic category 2001 census |
| 9i27. | Greek - ethnic category 2001 census |

Table 1b. Ethnicity Read codes extracted from the EMIS Web™ electronic primary care health records.

|  |  |
| --- | --- |
| Read code | Code term |
| 9i28. | Greek Cypriot - ethnic category 2001 census |
| 9i29. | Turkish - ethnic category 2001 census |
| 9i2A. | Turkish Cypriot - ethnic category 2001 census |
| 9i2B. | Italian - ethnic category 2001 census |
| 9i2C. | Irish Traveller - ethnic category 2001 census |
| 9i2D. | Traveller - ethnic category 2001 census |
| 9i2E. | Gypsy/Romany - ethnic category 2001 census |
| 9i2F. | Polish - ethnic category 2001 census |
| 9i2G. | Baltic States (Estonian or Latvian or Lithuanian) - ethnic category 2001 census |
| 9i2H. | Commonwealth of (Russian) Independent States - ethnic category 2001 census |
| 9i2J. | Kosovan - ethnic category 2001 census |
| 9i2K. | Albanian - ethnic category 2001 census |
| 9i2L. | Bosnian - ethnic category 2001 census |
| 9i2N. | Serbian - ethnic category 2001 census |
| 9i2P. | Other republics which made up the former Yugoslavia - ethnic category 2001 census |
| 9i2Q. | Mixed Irish and other White - ethnic category 2001 census |
| 9i2R. | Other White European or European unspecified or Mixed European - ethnic category 2001 census |
| 9i2S. | Other mixed White - ethnic category 2001 census |
| 9i2T. | Other White or White unspecified - ethnic category 2001 census |
| 9i3.. | White and Black Caribbean - ethnic category 2001 census |
| 9i4.. | White and Black African - ethnic category 2001 census |
| 9i5.. | White and Asian - ethnic category 2001 census |
| 9i6.. | Other Mixed background - ethnic category 2001 census |
| 9i60. | Black and Asian - ethnic category 2001 census |
| 9i60. | Black and Asian - ethnic category 2001 census |
| 9i64. | Asian and Chinese - ethnic category 2001 census |
| 9i65. | Other Mixed or Mixed unspecified - ethnic category 2001 census |
| 9i7.. | Indian or British Indian - ethnic category 2001 census |
| 9i8.. | Pakistani or British Pakistani - ethnic category 2001 census |
| 9i9.. | Bangladeshi or British Bangladeshi - ethnic category 2001 census |
| 9iA.. | Other Asian background - ethnic category 2001 census |
| 9iA1. | Punjabi - ethnic category 2001 census |
| 9iA2. | Kashmiri - ethnic category 2001 census |
| 9iA3. | East African Asian - ethnic category 2001 census |
| 9iA4. | Sri Lankan - ethnic category 2001 census |
| 9iA5. | Tamil - ethnic category 2001 census |
| 9iA6. | Sinhalese - ethnic category 2001 census |
| 9iA7. | Caribbean Asian - ethnic category 2001 census |

Table 1c. Ethnicity Read codes extracted from the EMIS Web™ electronic primary care health records.

|  |  |
| --- | --- |
| Read code | Code term |
| 9iA8. | British Asian - ethnic category 2001 census |
| 9iA9. | Mixed Asian - ethnic category 2001 census |
| 9iAA. | Other Asian or Asian unspecified - ethnic category 2001 census |
| 9iB.. | Caribbean - ethnic category 2001 census |
| 9iC.. | African - ethnic category 2001 census |
| 9iD.. | Other Black background - ethnic category 2001 census |
| 9iD0. | Somali - ethnic category 2001 census |
| 9iD1. | Nigerian - ethnic category 2001 census |
| 9iD2. | Black British - ethnic category 2001 census |
| 9iD3. | Mixed Black - ethnic category 2001 census |
| 9iD4. | Other Black or Black unspecified - ethnic category 2001 census |
| 9iE.. | Chinese - ethnic category 2001 census |
| 9iF.. | Other - ethnic category 2001 census |
| 9iF0. | Vietnamese - ethnic category 2001 census |
| 9iF1. | Japanese - ethnic category 2001 census |
| 9iF2. | Filipino - ethnic category 2001 census |
| 9iF3. | Malaysian - ethnic category 2001 census |
| 9iF6. | Jewish - ethnic category 2001 census |
| 9iF7. | Muslim - ethnic category 2001 census |
| 9iF8. | Sikh - ethnic category 2001 census |
| 9iF9. | Arab - ethnic category 2001 census |
| 9iFA. | North African - ethnic category 2001 census |
| 9iFB. | Middle Eastern (excluding Israeli, Iranian and Arab) - ethnic category 2001 census |
| 9iFC. | Israeli - ethnic category 2001 census |
| 9iFD. | Iranian - ethnic category 2001 census |
| 9iFE. | Kurdish - ethnic category 2001 census |
| 9iFF. | Moroccan - ethnic category 2001 census |
| 9iFG. | Latin American - ethnic category 2001 census |
| 9iFH. | South and Central American - ethnic category 2001 census |
| 9iFJ. | Multi-ethnic islands: Mauritian or Seychellois or Maldivian or St Helena - ethnic category 2001 census |
| 9iFK. | Any other group - ethnic category 2001 census |
| 9iG.. | Ethnic category not stated - 2001 census |

Table 2. Other Read codes extracted from the EMIS Web™ electronic primary care health records.

|  |  |
| --- | --- |
| Term | Code |
| Type 2 Diabetes Mellitus | C10F. (excluding C10F8), C109K, EMISNQME2 |
| Hypoglycaemia | C110.,C112., C116., C11y1, JHCCH5 |
| Blood glucose | 44T.., 44f.., 44g.., EMISNQBR26 |
| Haemoglobin A1c level | 42W5., 42W4. |
| *Exclusions* |  |
| Cancer | B0... to B2…, B3–0 - B32.., B34.. to B36, B3y, B3z, B4… to B5…, B60.. to B67.. (excluding B677.), Byu.., Byu0. to Byu3., Byu40, Byu41, Byu5. to Byu9., ByuA. to ByuE., K1323, K01w1, 68W24, C184. |
|  |  |
| Palliative care | 1Z01., 2JE..,8BA2., 8BAP., 8BAS., 8BAT., 8BAe., 8BJ1., 8CM1.% (excluding 8CM15) 8CM4., 8CME., 8H6A. 8H7L., 8H7g., EMISNQRES80, 8HH7., 8IEE., 9EB5., 9Ng7. ZV57C, 8CMQ., 9NgD. 9G8., 9c0P., 9c0N., 8CMW3, 9K9.., 9367., 9c0L0, 9c0M., 9NNd., 8CMb., 8B2a., 9NNf0, 38QH., 38QK. |
| *Medications – British National Formulary groups* |  |
| Insulins | Short-acting insulins  Intermediate- and long-acting insulins  Biphasic insulins |
| Sulphonylureas | Sulphonylurea and related drugs |
| *Registration terms* | Age, Townsend deprivation score, Left, Deceased |

# Appendix 2 – Variable definitions

Table 1: Ethnicity categories of study mapped to 16 groups of ethnicities in 2001 UK Census

|  |  |
| --- | --- |
| **16 groups** | **4 Categories (White, Black, South Asian, Other)** |
| 1 British | **1.White** |
| 2 Irish | **2. Other White ethnicities** |
| 3 Any other White background (write in) | **2. Other White ethnicities** |
| 4 White and Black Caribbean | **10. Other ethnicities** |
| 5 White and Black African | **10. Other ethnicities** |
| 6 White and Asian | **10. Other ethnicities** |
| 7 Any other mixed background (write in) | **10. Other ethnicities** |
| 8 Indian | **3. Indian** |
| 9 Pakistani | **4. Pakistani** |
| 10 Bangladeshi | **5. Bangladeshi** |
| 11 Any other Asian background (write in) | **6. Other Asian** |
| 12 Caribbean | **7. Caribbean** |
| 13 African | **8. African** |
| 14 Any other Black background (write in) | **9. Other Black ethnicities** |
| 15 Chinese | **10. Other ethnicities** |
| 16 Any other ethnic group (write in) | **10. Other ethnicities** |

Quantitative variables

Age was treated as a continuous variable in the multivariable model.

Townsend derivation index scores[[1]](#footnote-1) were grouped into quintiles:

* Quintiles of the Townsend scores in the study group were also generated due to higher levels of deprivation in east London than the national average and skewed distribution of participants Townsend scores according to the national quintiles, shown below:
  + - 1. Quintile 1 (most affluent): -6.61 to -3.01[[2]](#footnote-2)
      2. Quintile 2: -3.00 to -1.32
      3. Quintile 3: -1.31 to 0.95
      4. Quintile 4: 0.96 to 3.73
      5. Quintile 5 (most deprived): 3.74 to 11.06

# Appendix 3 – Results tables

Table 1. Distribution of age, gender and socioeconomic status by the major ethnic groups for participants in both the insulin and sulphonylurea cohorts at the onset of the study.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Insulins | | | Sulphonylureas | | |
|  | Age  Mean  (SD) | Townsend  Mean  (SD) | Female  N  (%) | Age  Mean  (SD) | Townsend  Mean  (SD) | Female  N  (%) |
| White British | 69.48  (12.6) | 4.79  (1.48) | 656  (47.3) | 71.30  (12.6) | 4.85  (1.48) | 826  (40.6) |
| Other White | 65.92  (12.7) | 5.17  (1.52) | 240  (43.0) | 67.81  (12.6) | 5.16  (1.41) | 350  (42.2) |
| Indian | 67.23  (13.1) | 3.88  (1.63) | 344  (47.3) | 65.71  (12.9) | 3.74  (1.61) | 547  (38.8) |
| Pakistani | 64.34  (12.5) | 3.87  (1.52) | 228  (48.3) | 63.36  (12.0) | 3.85  (1.53) | 346  (40.2) |
| Bangladeshi | 64.66  (13.6) | 5.15  (1.37) | 898  (51.9) | 62.23  (13.5) | 5.21  (1.25) | 1,635  (47.9) |
| Other Asian | 64.64  (13.0) | 4.08  (1.84) | 103  (45.6) | 63.38  (12.9) | 3.65  (1.88) | 218  (42.0) |
| Caribbean | 73.53  (12.2) | 4.89  (1.33) | 507  (59.4) | 72.90  (12.4) | 4.86  (1.49) | 596  (55.4) |
| African | 61.28  (11.4) | 5.13  (1.33) | 275  (47.5) | 61.99  (10.6) | 5.085  (1.40) | 434  (39.1) |
| Other Black | 61.03  (13.5) | 4.96  (1.54) | 132  (51.0) | 63.41  (13.8) | 5.09  (1.48) | 216  (50.1) |
| Total | 66.69  (13.3) | 4.78  (1.54) | 3,624  (49.9) | 65.76  (13.3) | 4.75  (1.56) | 5,566  (44.5) |

Table 2. Distribution of baseline characteristics in each Clinical Commissioning Group at the onset of the study

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | City & Hackney | Newham | Tower Hamlets | Total |
|  | N  (%) | N  (%) | N  (%) | N  (%) |
| Total | 5407  (100.0) | 8490  (100.0) | 5874  (100.0) | 19771  (100.0) |
| White British | 888  (16.4) | 1381  (16.3) | 1155  (19.7) | 3424  (17.3) |
| Other White | 911  (16.8) | 273  (3.2) | 203  (3.5) | 1387  (7.0) |
| Indian | 390  (7.2) | 1650  (19.4) | 97  (1.7) | 2137  (10.8) |
| Pakistani | 114  (2.1) | 1150  (13.5) | 69  (1.2) | 1333  (6.7) |
| Bangladeshi | 273  (5.0) | 1279  (15.1) | 3595  (61.2) | 5147  (26.0) |
| Other Asian | 128  (2.4) | 572  (6.7) | 45  (0.8) | 745  (3.8) |
| Caribbean | 1011  (18.7) | 712  (8.4) | 206  (3.5) | 1929  (9.8) |
| African | 737  (13.6) | 787  (9.3) | 164  (2.8) | 1688  (8.5) |
| Other Black | 302  (5.6) | 246  (2.9) | 142  (2.4) | 690  (3.5) |
| Other ethnicities | 581  (10.7) | 410  (4.8) | 175  (3.0) | 1166  (5.9) |
| Not recorded | 72  (1.3) | 30  (0.4) | 23  (0.4) | 125  (0.6) |
| Female | 2565  (47.4) | 3795  (44.7) | 2830  (48.2) | 9190  (46.5) |
|  | Mean (SD) | Mean (SD) | Mean (SD) | Mean (SD) |
| Age | 67.5  (12.9) | 65.9  (13.3) | 65.4  (13.7) | 66.19  (13.32) |
| Townsend | 5.27  (1.42) | 3.91  (1.50) | 5.51  (1.05) | 4.755  (1.548) |

Table 3. Incident rates, unadjusted and adjusted incidence rate ratios of hypoglycaemia by ethnicity in insulin and sulphonylurea cohorts and of insulin-use versus sulphonlyureas in combined cohort model. Adjusting variables: age, gender and socioeconomic status and clustering within Clinical Commissioning Groups using random effects Poisson regression. Number hypoglycaemia events: insulin cohort, n=979; sulphonylurea cohort, n=712.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Insulin | | | Sulphonylureas | | | Insulin-use††  (Sulphonylurea= Reference) | Effect of ethnicity on insulin-use IRR |
|  | IR per 1,000 PY  [95% CI] | Unadj IRR  [95% CI] | Adj IRR  [95% CI] | IR per 1,000 PY  [95% CI] | Unadj IRR  [95% CI] | Adj IRR  [95% CI] | Adj IRR  [95% CI] | Ratio of Insulin-use IRR  [95% CI] |
| White British | 56.2  [49.1,64.4] | 1.00 [Reference] | 1.00 [Reference] | 23.2  [19.2,28.1] | 1.00 [Reference] | 1.00 [Reference] | 2.66\*\*\* [2.01,3.52] | 1.00 [Reference] |
| Other White | 39.4  [30.8,50.4] | 0.70\* [0.49,0.98] | 0.75 [0.53,1.06] | 21.4  [15.7,29] | 0.91 [0.59,1.39] | 1.08 [0.70,1.65] | 1.99\*\* [1.25,3.15] | 0.75 [0.44,1.28] |
| Indian | 55.3  [46.1,66.3] | 0.98 [0.73,1.31] | 1.02 [0.76,1.37] | 39.2  [33.0,46.4] | 1.68\*\* [1.22,2.32] | 1.93\*\*\* [1.39,2.69] | 1.38\* [1.01,1.91] | 0.52\*\* [0.34,0.80] |
| Pakistani | 48.3  [37.9,61.4] | 0.83 [0.59,1.18] | 0.94 [0.66,1.34] | 24.0  [18.2,31.8] | 1.00 [0.67,1.51] | 1.26 [0.83,1.91] | 1.98\*\* [1.26,3.09] | 0.74 [0.44,1.26] |
| Bangladeshi | 24.8  [20.8,29.5] | 0.43\*\*\* [0.33,0.56] | 0.49\*\*\* [0.38,0.64] | 17.2  [14.7,20.3] | 0.73\* [0.55,0.99] | 1.02 [0.76,1.38] | 1.40\* [1.06,1.83] | 0.52\*\* [0.36,0.78] |
| Other South Asian | 72.6  [54.2,97.2] | 1.27 [0.82,1.96] | 1.45 [0.94,2.24] | 30.6  [22.3,41.9] | 1.30 [0.82,2.05] | 1.73\* [1.09,2.77] | 2.32\*\* [1.33,4.05] | 0.87 [0.47,1.63] |
| Caribbean | 95.2  [83.8,108.3] | 1.71\*\*\* [1.32,2.20] | 1.56\*\*\* [1.21,2.01] | 39.1  [32.2,47.4] | 1.69\*\* [1.20,2.38] | 1.63\*\* [1.15,2.29] | 2.54\*\*\* [1.87,3.44] | 0.95 [0.63,1.44] |
| African | 52.6  [42.6,64.9] | 0.90 [0.66,1.24] | 1.10 [0.80,1.52] | 28.8  [23.1,36.1] | 1.23 [0.86,1.77] | 1.90\*\*\* [1.32,2.75] | 1.77\*\* [1.21,2.58] | 0.66 [0.41,1.06] |
| Other Black ethnicities | 44.5  [31.5,63.0] | 0.76 [0.48,1.21] | 0.94 [0.59,1.49] | 18.2  [11.5,28.8] | 0.76 [0.42,1.36] | 1.06 [0.59,1.92] | 2.51\*\* [1.27,4.94] | 0.94 [0.45,1.96] |

Exponentiated coefficients; 95% confidence intervals in brackets

\* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001 † Ethnicity and Insulin-use interaction Likelihood Ratio Test p = 0.01

Table 4. Full adjusted random effects Poisson regression model of hypoglycaemia in the insulin and sulphonylurea cohorts, adjusting for clustering within Clinical Commissioning Groups

|  |  |  |
| --- | --- | --- |
|  | Insulin | Sulphonylureas |
|  | Adj IRR  [95% CI] | Adj IRR  [95% CI] |
| Ethnicity |  |  |
| White British | 1.00 [Reference] | 1.00 [Reference] |
| Other White | 0.75 [0.53,1.06] | 1.08 [0.70,1.65] |
| Indian | 1.02 [0.76,1.37] | 1.93\*\*\* [1.39,2.69] |
| Pakistani | 0.94 [0.66,1.34] | 1.26 [0.83,1.91] |
| Bangladeshi | 0.49\*\*\* [0.38,0.64] | 1.02 [0.76,1.38] |
| Other South Asian | 1.45 [0.94,2.24] | 1.73\* [1.09,2.77] |
| Caribbean | 1.56\*\*\* [1.21,2.01] | 1.63\*\* [1.15,2.29] |
| African | 1.10 [0.80,1.52] | 1.90\*\*\* [1.32,2.75] |
| Other Black ethnicities | 0.94 [0.59,1.49] | 1.06 [0.59,1.92] |
|  |  |  |
| Age | 1.03\*\*\* [1.02,1.03] | 1.04\*\*\* [1.03,1.05] |
| Gender |  |  |
| 1. Female | 1.00 [Reference] | 1.00 [Reference] |
| 2. Male | 1.04 [0.89,1.23] | 0.98 [0.81,1.18] |
| Townsend quintiles |  |  |
| 1. -5.65 to 3.43 | 1.00 [Reference] | 1.00 [Reference] |
| 2. 3.44 to 4.56 | 1.29\* [1.00,1.65] | 1.14 [0.87,1.50] |
| 3. 4.57 to 5.42 | 0.94 [0.72,1.23] | 0.86 [0.65,1.16] |
| 4. 5.43 to 6.06 | 1.14 [0.87,1.48] | 0.85 [0.63,1.15] |
| 5. 6.07 to 8.99 | 1.06 [0.81,1.39] | 0.72\* [0.53,0.97] |

Exponentiated coefficients; 95% confidence intervals in brackets

\* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

**Sensitivity analysis of severities of hypoglycaemia by blood glucose recordings**

Table 5. Adjusted incidence rate ratios of all (blood glucose <3.9 mmol/L and Read code for hypoglycaemia), moderate-severe (blood glucose <3.5 mmol/L and Read code for hypoglycaemia) and severe (blood glucose <3.0 mmol/L and Read code for hypoglycaemia) hypoglycaemia by ethnicity in insulin and sulphonylurea cohorts, adjusting for age, gender, socioeconomic status and clustering within Clinical Commissioning Groups. D = number of hypoglycaemia events

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Insulin | | | Sulphonylureas | | |
|  | All hypoglycaemia | Moderate-severe hypoglycaemia | Severe hypoglycaemia | All hypoglycaemia | Moderate-severe hypoglycaemia | Severe hypoglycaemia |
|  | Adj. IRR  [95% CI] | Adj. IRR  [95% CI] | Adj. IRR  [95% CI] | Adj. IRR  [95% CI] | Adj. IRR  [95% CI] | Adj. IRR  [95% CI] |
| Ethnic group | D = 969 | D = 792 | D = 649 | D = 712 | D = 499 | D = 346 |
| White British | 1.00 [Reference] | 1.00 [Reference] | 1.00 [Reference] | 1.00 [Reference] | 1.00 [Reference] | 1.00 [Reference] |
| Other White | 0.75 [0.53,1.06] | 0.78 [0.54,1.14] | 0.82 [0.54,1.23] | 1.08 [0.70,1.65] | 1.21 [0.74,1.98] | 1.46 [0.83,2.57] |
| Indian | 1.02 [0.76,1.37] | 0.91 [0.65,1.28] | 0.81 [0.56,1.19] | 1.93\*\*\* [1.39,2.69] | 2.02\*\*\* [1.35,3.00] | 1.67\* [1.02,2.73] |
| Pakistani | 0.94 [0.66,1.34] | 0.81 [0.54,1.21] | 0.67 [0.42,1.08] | 1.26 [0.83,1.91] | 1.31 [0.79,2.17] | 1.17 [0.62,2.19] |
| Bangladeshi | 0.49\*\*\* [0.38,0.64] | 0.49\*\*\* [0.36,0.65] | 0.50\*\*\* [0.37,0.69] | 1.02 [0.76,1.38] | 1.12 [0.78,1.59] | 1.38 [0.91,2.08] |
| Other South Asian | 1.45 [0.94,2.24] | 1.10 [0.66,1.83] | 0.81 [0.43,1.50] | 1.73\* [1.09,2.77] | 1.44 [0.79,2.64] | 0.90 [0.40,2.05] |
| Caribbean | 1.56\*\*\* [1.21,2.01] | 1.53\*\* [1.16,2.03] | 1.46\* [1.07,2.00] | 1.63\*\* [1.15,2.29] | 1.56\* [1.04,2.34] | 1.54 [0.95,2.50] |
| African | 1.10 [0.80,1.52] | 0.91 [0.63,1.31] | 0.76 [0.49,1.16] | 1.90\*\*\* [1.32,2.75] | 1.96\*\* [1.26,3.04] | 1.59 [0.91,2.78] |
| Other Black ethnicities | 0.94 [0.59,1.49] | 0.69 [0.39,1.20] | 0.54 [0.28,1.04] | 1.06 [0.59,1.92] | 0.91 [0.44,1.91] | 0.75 [0.29,1.96] |

Exponentiated coefficients; 95% confidence intervals in brackets

\* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

Table 6. Distribution of ethnicities among participants who died, left the CCG practice register or received no prescription of either insulins or sulphonylureas for 6 months or more. Insulin cohort (n=7,269), sulphonlyurea cohort (n=12,502).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Insulins | | | Sulphonlyureas | | |
|  | Total | Died | Left | Total | Died | Left |
|  | N(%) | N(%) | N(%) | N(%) | N(%) | N(%) |
| White British | 1387  (19.1) | 193  (32.5) | 289  (19.9) | 2037  (16.3) | 167  (29.2) | 535  (17.9) |
| Other White | 558  (7.7) | 45  (7.6) | 111  (7.6) | 829  (6.6) | 58  (10.1) | 199  (6.7) |
| Indian | 728  (10.0) | 53  (8.9) | 130  (8.9) | 1409  (11.3) | 64  (11.2) | 332  (11.1) |
| Pakistani | 472  (6.5) | 24  (4.0) | 113  (7.8) | 861  (6.9) | 24  (4.2) | 199  (6.7) |
| Bangladeshi | 1732  (23.8) | 124  (20.9) | 322  (22.1) | 3415  (27.3) | 106  (18.5) | 702  (23.5) |
| Other Asian | 226  (3.1) | 17  (2.9) | 41  (2.8) | 519  (4.2) | 13  (2.3) | 138  (4.6) |
| Caribbean | 853  (11.7) | 69  (11.6) | 139  (9.6) | 1076  (8.6) | 50  (8.7) | 233  (7.8) |
| African | 579  (8.0) | 17  (2.9) | 134  (9.2) | 1109  (8.9) | 36  (6.3) | 296  (9.9) |
| Other Black | 259  (3.6) | 10  (1.7) | 69  (4.7) | 431  (3.4) | 9  (1.6) | 125  (4.2) |
| Other ethnicities | 428  (5.9) | 36  (6.1) | 92  (6.3) | 738  (5.9) | 39  (6.8) | 191  (6.4) |
| Not recorded | 47  (0.6) | 5  (0.8) | 14  (1.0) | 78  (0.6) | 6  (1.0) | 31  (1.0) |
| Total | 7269 | 593 | 1454 | 12502 | 572 | 2981 |
|  | (100.0) | (100.0) | (100.0) | (100.0) | (100.0) | (100.0) |

Table 9: Numbers of participants who switched cohorts during the study period by ethnicity

|  |  |  |
| --- | --- | --- |
|  | Sulphonylureas to Insulins | Insulins to Sulphonylureas |
| N  (%) | N  (%) |
| White British | 240  (16.8) | 39  (22.5) |
| Other White | 125  (8.8) | 11  (6.4) |
| Indian | 149  (10.4) | 14  (8.1) |
| Pakistani | 124  (8.7) | 10  (5.8) |
| Bangladeshi | 425  (29.8) | 45  (26.0) |
| Other Asian | 38  (2.7) | 6  (3.5) |
| Caribbean | 156  (10.9) | 23  (13.3) |
| African | 118  (8.3) | 19  (11.0) |
| Other Black | 52  (3.6) | 6  (3.5) |
| Total | 1427  (100.0) | 173  (100.0) |

1. Townsend Material Deprivation scores, which are calculated at district level from data from the 2001 UK Census on percentages of (i) homes that are not owner-occupied, (ii) economically active residents who are unemployed, (iii) households with access to a car and (iv) households with more than one resident per room. Each area-level score is linked to each subject in their primary care health record using their registered postcode. [↑](#footnote-ref-1)
2. Used as reference category in multivariable model to show impact of increasing deprivation [↑](#footnote-ref-2)