# ASPIRE Supplementary Document

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Table 1: Cluster-randomised evaluation: number of practices screened, eligible and randomised (by clinical commissioning group) (WP4a)

| CCG | Screened Practices (n=278) | Eligible Practices (n=243) | Randomised Practices (n=178) |
| --- | --- | --- | --- |
| NHS Airedale, Wharfedale And Craven CCG | 16 (5.76%) | 15 (6.17%) | 8 (4.49%) |
| NHS Bradford City CCG | 28 (10.07%) | 26 (10.70%) | 19 (10.67%) |
| NHS Bradford Districts CCG | 40 (14.39%) | 35 (14.40%) | 28 (15.73%) |
| NHS Calderdale CCG | 22 (7.91%) | 18 (7.41%) | 12 (6.74%) |
| NHS Greater Huddersfield CCG | 24 (8.63%) | 24 (9.88%) | 18 (10.11%) |
| NHS Leeds North CCG | 21 (7.55%) | 14 (5.76%) | 12 (6.74%) |
| NHS Leeds South And East CCG | 39 (14.03%) | 30 (12.35%) | 23 (12.92%) |
| NHS Leeds West CCG | 25 (8.99%) | 24 (9.88%) | 20 (11.24%) |
| NHS North Kirklees CCG | 29 (10.43%) | 27 (11.11%) | 18 (10.11%) |
| NHS Wakefield CCG | 34 (12.23%) | 30 (12.35%) | 20 (11.24%) |
|  |  |  |  |

Table 2: Cluster-randomised evaluation: reasons for practice ineligibility (by clinical commissioning group) (WP4a)

| CCG | Pilot  (n=6) | Process evaluation (n=7) | Safe haven (n=2) | Unable to contact (n=2) | Participated in WP2&3  (n=18) | Total (n=35) |
| --- | --- | --- | --- | --- | --- | --- |
| NHS Airedale, Wharfedale And Craven CCG | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (100.00%) | 1 (100%) |
| NHS Bradford City CCG | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 2 (100.00%) | 2 (100%) |
| NHS Bradford Districts CCG | 2 (40.00%) | 1 (20.00%) | 0 (0.00%) | 0 (0.00%) | 2 (40.00%) | 5 (100%) |
| NHS Calderdale CCG | 1 (25.00%) | 1 (25.00%) | 1 (25.00%) | 0 (0.00%) | 1 (25.00%) | 4 (100%) |
| NHS Leeds North CCG | 0 (0.00%) | 1 (14.29%) | 0 (0.00%) | 1 (14.29%) | 5 (71.43%) | 7 (100%) |
| NHS Leeds South And East CCG | 1 (11.11%) | 2 (22.22%) | 0 (0.00%) | 1 (11.11%) | 5 (55.56%) | 9 (100%) |
| NHS Leeds West CCG | 1 (100.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (100%) |
| NHS North Kirklees CCG | 0 (0.00%) | 0 (0.00%) | 1 (50.00%) | 0 (0.00%) | 1 (50.00%) | 2 (100%) |
| NHS Wakefield CCG | 1 (25.00%) | 2 (50.00%) | 0 (0.00%) | 0 (0.00%) | 1 (25.00%) | 4 (100%) |

Footnote: There were no practices from NHS Greater Huddersfield CCG which were ineligible for trial participation.

Table 3: Cluster-randomised evaluation: reasons for exclusion of practices invited to participate but not randomised (by clinical commissioning group) (WP4a)

| CCG | Closed / merged (n=3) | Opt-out (n=56) | PCT Boundary (n=4) | Proceed as process evaluation site (n=1) | Return to sender (n=1) | Total (n=65) |
| --- | --- | --- | --- | --- | --- | --- |
| NHS Airedale, Wharfedale And Craven CCG | 0 (0.00%) | 3 (42.86%) | 4 (57.14%) | 0 (0.00%) | 0 (0.00%) | 7 (100%) |
| NHS Bradford City CCG | 0 (0.00%) | 7 (100.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 7 (100%) |
| NHS Bradford Districts CCG | 0 (0.00%) | 7 (100.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 7 (100%) |
| NHS Calderdale CCG | 1 (16.67%) | 4 (66.67%) | 0 (0.00%) | 1 (16.67%) | 0 (0.00%) | 6 (100%) |
| NHS Greater Huddersfield CCG | 1 (16.67%) | 5 (83.33%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 6 (100%) |
| NHS Leeds North CCG | 1 (50.00%) | 1 (50.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 2 (100%) |
| NHS Leeds South And East CCG | 0 (0.00%) | 7 (100.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 7 (100%) |
| NHS Leeds West CCG | 0 (0.00%) | 4 (100.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 4 (100%) |
| NHS North Kirklees CCG | 0 (0.00%) | 9 (100.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 9 (100%) |
| NHS Wakefield CCG | 0 (0.00%) | 9 (90.00%) | 0 (0.00%) | 0 (0.00%) | 1 (10.00%) | 10 (100%) |

Table 4: Cluster-randomised evaluation: reasons provided by practices for opting out (WP4a)

| Reason for practice opt-out | Total  (n=56) |
| --- | --- |
| Workload | 13 (23.21%) |
| Practice in process of change | 2 (3.57%) |
| Practice choice/preference | 1 (1.79%) |
| Unknown | 36 (64.29%) |
| Other | 4 (7.14%) |
|  |  |

a Other reasons provided were: ‘Partner retiring’; ‘Insufficient clarity on what we would be expected to do and how it would affect our workload.’; ‘Can't believe no additional work for practices - vague about what non-monetary incentives are/how time consuming they would be. Data extraction/security concerns. How do we know data has not been taken already? Please acknowledge not taken - SAE enclosed.’; ‘At the limit of our resources already with no capacity to take on more even if supported, I am afraid. Also not keen in principle in being involved in something that will happen if we don't opt-out’.

Table 5: Cluster-randomised evaluation: reasons provided by practices for opting out (by clinical commissioning group) (WP4a)

| CCG | Workload  (n=13) | Practice in process of change (n=2) | Practice choice / preference  (n=1) | Unknown (n=36) | Other  (n=4) | Total (n=56) |
| --- | --- | --- | --- | --- | --- | --- |
| NHS Airedale, Wharfedale And Craven CCG | 1 (33.33%) | 0 (0.00%) | 0 (0.00%) | 2 (66.67%) | 0 (0.00%) | 3 (100%) |
| NHS Bradford City CCG | 1 (14.29%) | 0 (0.00%) | 0 (0.00%) | 6 (85.71%) | 0 (0.00%) | 7 (100%) |
| NHS Bradford Districts CCG | 1 (14.29%) | 0 (0.00%) | 0 (0.00%) | 6 (85.71%) | 0 (0.00%) | 7 (100%) |
| NHS Calderdale CCG | 1 (25.00%) | 0 (0.00%) | 0 (0.00%) | 2 (50.00%) | 1 (25.00%) | 4 (100%) |
| NHS Greater Huddersfield CCG | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 3 (60.00%) | 2 (40.00%) | 5 (100%) |
| NHS Leeds North CCG | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (100.00%) | 0 (0.00%) | 1 (100%) |
| NHS Leeds South And East CCG | 4 (57.14%) | 0 (0.00%) | 1 (14.29%) | 1 (14.29%) | 1 (14.29%) | 7 (100%) |
| NHS Leeds West CCG | 2 (50.00%) | 0 (0.00%) | 0 (0.00%) | 2 (50.00%) | 0 (0.00%) | 4 (100%) |
| NHS North Kirklees CCG | 1 (11.11%) | 2 (22.22%) | 0 (0.00%) | 6 (66.67%) | 0 (0.00%) | 9 (100%) |
| NHS Wakefield CCG | 2 (22.22%) | 0 (0.00%) | 0 (0.00%) | 7 (77.78%) | 0 (0.00%) | 9 (100%) |

Table 6: Recruitment of practices to cluster-randomised evaluation (by clinical commissioning group) (WP4a)

| CCG | Trial 1  (n=80) | Trial 2  (n=64) | No intervention (n=34) | Total  (n=178) |
| --- | --- | --- | --- | --- |
| NHS Airedale, Wharfedale and Craven | 3 (37.50%) | 4 (50.00%) | 1 (12.50%) | 8 (100%) |
| NHS Bradford City | 7 (38.89%) | 8 (44.44%) | 3 (16.67%) | 18 (100%) |
| NHS Bradford Districts | 20 (68.97%) | 0 (0.00%)a | 9 (31.03%) | 29 (100%) |
| NHS Calderdale | 5 (41.67%) | 6 (50.00%) | 1 (8.33%) | 12 (100%) |
| NHS Greater Huddersfield | 8 (44.44%) | 7 (38.89%) | 3 (16.67%) | 18 (100%) |
| NHS Leeds North | 5 (41.67%) | 4 (33.33%) | 3 (25.00%) | 12 (100%) |
| NHS Leeds South and East | 9 (40.91%) | 10 (45.45%) | 3 (13.64%) | 22 (100%) |
| NHS Leeds West | 8 (38.10%) | 9 (42.86%) | 4 (19.05%) | 21 (100%) |
| NHS North Kirklees | 7 (38.89%) | 8 (44.44%) | 3 (16.67%) | 18 (100%) |
| NHS Wakefield | 8 (40.00%) | 8 (40.00%) | 4 (20.00%) | 20 (100%) |

a A concurrent externally run trial aimed at improving achievement against Atrial Fibrillation guidelines was ongoing in the Bradford Districts CCG at the time of randomisation. Therefore these practices were prohibited from entry into Trial 2.

Table 7: Cluster-randomised evaluation: distribution of practices to trial arms (by clinical commissioning group) (WP4a)

|  | Trial 1 | | Trial 2 | |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CCG | Diabetes Control (n=40) | Risky Prescribing (n=40) | Blood Pressure Control  (n=32) | Anticoagulation in Atrial Fibrillation (n=32) | No intervention (n=34) | Total (n=178) |
| NHS Airedale, Wharfedale and Craven | 1 (12.50%) | 2 (25.00%) | 2 (25.00%) | 2 (25.00%) | 1 (12.50%) | 8 (100%) |
| NHS Bradford City | 3 (16.67%) | 4 (22.22%) | 3 (16.67%) | 5 (27.78%) | 3 (16.67%) | 18 (100%) |
| NHS Bradford Districts | 10 (34.48%) | 10 (34.48%) | 0 (0.00%)a | 0 (0.00%)a | 9 (31.03%) | 29 (100%) |
| NHS Calderdale | 2 (16.67%) | 3 (25.00%) | 3 (25.00%) | 3 (25.00%) | 1 (8.33%) | 12 (100%) |
| NHS Greater Huddersfield | 4 (22.22%) | 4 (22.22%) | 3 (16.67%) | 4 (22.22%) | 3 (16.67%) | 18 (100%) |
| NHS Leeds North | 4 (33.33%) | 1 (8.33%) | 1 (8.33%) | 3 (25.00%) | 3 (25.00%) | 12 (100%) |
| NHS Leeds South and East | 4 (18.18%) | 5 (22.73%) | 6 (27.27%) | 4 (18.18%) | 3 (13.64%) | 22 (100%) |
| NHS Leeds West | 4 (19.05%) | 4 (19.05%) | 5 (23.81%) | 4 (19.05%) | 4 (19.05%) | 21 (100%) |
| NHS North Kirklees | 4 (22.22%) | 3 (16.67%) | 5 (27.78%) | 3 (16.67%) | 3 (16.67%) | 18 (100%) |
| NHS Wakefield | 4 (20.00%) | 4 (20.00%) | 4 (20.00%) | 4 (20.00%) | 4 (20.00%) | 20 (100%) |

a A concurrent externally run trial aimed at improving achievement against Atrial Fibrillation guidelines was ongoing in the Bradford Districts CCG at the time of randomisation. Therefore these practices were prohibited from entry into Trial 2.

Table 8: Cluster-randomised evaluation: general practice characteristics at baseline by trial (WP4a)

|  | Trial 1 (n=80) | Trial 2 (n=64) | No Intervention (n=34) | Total (n=178) |
| --- | --- | --- | --- | --- |
| List Size |  |  |  |  |
| Mean (SD) | 7130.05 (3797.91) | 7480.11 (4531.96) | 7097.82 (5057.86) | 7249.76 (4306.72) |
| Median (Range) | 6764.50 (1433.00, 14822.00) | 6500.50 (1268.00, 18891.00) | 6074.50 (1723.00, 25495.00) | 6565.50 (1268.00, 25495.00) |
|  |  |  |  |  |
| Overall QOF scorea |  |  |  |  |
| Mean (SD) | 533.23 (32.85) | 530.13 (24.46) | 527.92 (40.34) | 531.11 (31.70) |
| Median (Range) | 542.19 (387.44, 559.00) | 537.28 (447.18, 559.00) | 536.58 (336.07, 559.00) | 539.61 (336.07, 559.00) |
|  |  |  |  |  |
| Pre-intervention achievement |  |  |  |  |
| Diabetes |  |  |  |  |
| Mean (SD) | 33.60% (7.33%) | 32.94% (6.31%) | 33.24% (7.96%) | 33.29% (7.08%) |
|  |  |  |  |  |
| Risky Prescribing |  |  |  |  |
| Mean (SD) | 7.92% (4.41%) | 7.60% (3.13%) | 8.47% (4.82%) | 7.91% (4.07%) |
|  |  |  |  |  |
| Blood Pressure Control |  |  |  |  |
| Mean (SD) | 66.48% (6.68%) | 65.59% (6.87%) | 64.96% (6.32%) | 65.87% (6.67%) |
|  |  |  |  |  |
| Atrial Fibrillation |  |  |  |  |
| Mean (SD) | 66.90% (11.74%) | 66.45% (9.55%) | 64.08% (15.48%) | 66.20% (11.82%) |
|  |  |  |  |  |

a There was one practice with a missing value for overall QOF score in trial 2. The 2014-15 QOF measured achievement against 81 indicators; practices scored points on the basis of achievement against each indicator, up to a maximum of 559.

Table 9: Cluster-randomised evaluation: patient characteristics at baseline by trial arm (population relevant to the diabetes control primary outcome) (WP4a)

|  | Trial 1 | | Trial 2 | |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Diabetes Control (n=13841) | Risky Prescribing (n=16097) | Blood Pressure Control (n=11938) | Anticoagulation in Atrial Fibrillation (n=11524) | No Intervention (n=11869) | Total  (n=65269) |
| Age |  |  |  |  |  |  |
| Mean (SD) | 65.22 (13.87) | 63.88 (14.04) | 65.74 (13.40) | 65.15 (13.59) | 64.27 (13.77) | 64.80 (13.78) |
| Median (Range) | 66.00 (0.00, 101.00) | 64.00 (2.00, 100.00) | 67.00 (9.00, 104.00) | 66.00 (10.00, 103.00) | 65.00 (0.00, 106.00) | 66.00 (0.00, 106.00) |
|  |  |  |  |  |  |  |
| Gender |  |  |  |  |  |  |
| Female | 6352 (45.89%) | 7542 (46.85%) | 5266 (44.11%) | 5213 (45.24%) | 5386 (45.38%) | 29759 (45.59%) |
| Male | 7489 (54.11%) | 8555 (53.15%) | 6672 (55.89%) | 6311 (54.76%) | 6483 (54.62%) | 35510 (54.41%) |
|  |  |  |  |  |  |  |
| Comorbidity |  |  |  |  |  |  |
| 0 | 1038 (7.50%) | 1306 (8.11%) | 927 (7.77%) | 1006 (8.73%) | 985 (8.30%) | 5262 (8.06%) |
| 1 | 325 (2.35%) | 412 (2.56%) | 300 (2.51%) | 306 (2.66%) | 269 (2.27%) | 1612 (2.47%) |
| 2 | 1752 (12.66%) | 2125 (13.20%) | 1474 (12.35%) | 1521 (13.20%) | 1558 (13.13%) | 8430 (12.92%) |
| 3 | 3480 (25.14%) | 3994 (24.81%) | 2955 (24.75%) | 2809 (24.38%) | 3059 (25.77%) | 16297 (24.97%) |
| 4 | 3624 (26.18%) | 4148 (25.77%) | 3103 (25.99%) | 2951 (25.61%) | 2962 (24.96%) | 16788 (25.72%) |
| 5 | 2088 (15.09%) | 2342 (14.55%) | 1812 (15.18%) | 1682 (14.60%) | 1775 (14.95%) | 9699 (14.86%) |
| 6 | 943 (6.81%) | 1087 (6.75%) | 850 (7.12%) | 774 (6.72%) | 813 (6.85%) | 4467 (6.84%) |
| 7 | 411 (2.97%) | 455 (2.83%) | 365 (3.06%) | 340 (2.95%) | 308 (2.59%) | 1879 (2.88%) |
| 8 | 129 (0.93%) | 167 (1.04%) | 109 (0.91%) | 94 (0.82%) | 104 (0.88%) | 603 (0.92%) |
| 9 | 35 (0.25%) | 50 (0.31%) | 36 (0.30%) | 34 (0.30%) | 31 (0.26%) | 186 (0.28%) |
| 10 | 13 (0.09%) | 10 (0.06%) | 7 (0.06%) | 5 (0.04%) | 4 (0.03%) | 39 (0.06%) |
| 11 | 3 (0.02%) | 1 (0.01%) | 0 (0.00%) | 2 (0.02%) | 1 (0.01%) | 7 (0.01%) |
|  |  |  |  |  |  |  |

Table 10: Cluster-randomised evaluation: patient characteristics at baseline by trial arm (population relevant to the risky prescribing primary outcome) (WP4a)

|  | Trial 1 | | Trial 2 | |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Diabetes control (n=16532) | Risky prescribing (n=17454) | Blood pressure control (n=14953) | Anticoagulation in AF (n=14147) | Non-intervention (n=12950) | Total (n=76036) |
| Age |  |  |  |  |  |  |
| Mean (SD) | 72.65 (12.45) | 71.82 (12.63) | 72.53 (12.15) | 72.66 (12.31) | 72.07 (12.50) | 72.34 (12.42) |
| Median (Range) | 74.00 (0.00, 104.00) | 73.00 (0.00, 104.00) | 74.00 (0.00, 105.00) | 74.00 (0.00, 107.00) | 74.00 (0.00, 105.00) | 74.00 (0.00, 107.00) |
|  |  |  |  |  |  |  |
| Gender |  |  |  |  |  |  |
| Female | 9136 (55.26%) | 9611 (55.06%) | 8135 (54.40%) | 7735 (54.68%) | 7044 (54.39%) | 41661 (54.79%) |
| Male | 7396 (44.74%) | 7843 (44.94%) | 6818 (45.60%) | 6412 (45.32%) | 5906 (45.61%) | 34375 (45.21%) |
|  |  |  |  |  |  |  |
| Comorbidity |  |  |  |  |  |  |
| 0 | 1003 (6.07%) | 989 (5.67%) | 972 (6.50%) | 961 (6.79%) | 873 (6.74%) | 4798 (6.31%) |
| 1 | 2886 (17.46%) | 2954 (16.92%) | 2926 (19.57%) | 2404 (16.99%) | 2149 (16.59%) | 13319 (17.52%) |
| 2 | 3371 (20.39%) | 3479 (19.93%) | 3038 (20.32%) | 2901 (20.51%) | 2570 (19.85%) | 15359 (20.20%) |
| 3 | 2773 (16.77%) | 2871 (16.45%) | 2439 (16.31%) | 2352 (16.63%) | 2098 (16.20%) | 12533 (16.48%) |
| 4 | 2756 (16.67%) | 2971 (17.02%) | 2253 (15.07%) | 2358 (16.67%) | 2182 (16.85%) | 12520 (16.47%) |
| 5 | 2004 (12.12%) | 2149 (12.31%) | 1762 (11.78%) | 1696 (11.99%) | 1653 (12.76%) | 9264 (12.18%) |
| 6 | 1035 (6.26%) | 1244 (7.13%) | 955 (6.39%) | 909 (6.43%) | 890 (6.87%) | 5033 (6.62%) |
| 7 | 483 (2.92%) | 536 (3.07%) | 429 (2.87%) | 396 (2.80%) | 353 (2.73%) | 2197 (2.89%) |
| 8 | 162 (0.98%) | 193 (1.11%) | 129 (0.86%) | 121 (0.86%) | 139 (1.07%) | 744 (0.98%) |
| 9 | 42 (0.25%) | 56 (0.32%) | 43 (0.29%) | 40 (0.28%) | 37 (0.29%) | 218 (0.29%) |
| 10 | 14 (0.08%) | 11 (0.06%) | 7 (0.05%) | 6 (0.04%) | 5 (0.04%) | 43 (0.06%) |
| 11 | 3 (0.02%) | 1 (0.01%) | 0 (0.00%) | 3 (0.02%) | 1 (0.01%) | 8 (0.01%) |
|  |  |  |  |  |  |  |

Table 11: Cluster-randomised evaluation: patient characteristics at baseline by trial arm (population relevant to the blood pressure control primary outcome) (WP4a)

| 1 | Trial 1 | | Trial 2 | |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Diabetes control (n=50649) | Risky prescribing (n=53323) | Blood pressure control (n=46811) | Anticoagulation in AF (n=44597) | Non-intervention (n=40950) | Total (n=236330) |
| Age |  |  |  |  |  |  |
| Mean (SD) | 65.87 (13.15) | 65.14 (13.36) | 66.11 (12.81) | 65.96 (12.92) | 65.19 (13.28) | 65.65 (13.11) |
| Median (Range) | 67.00 (0.00, 106.00) | 66.00 (0.00, 105.00) | 67.00 (0.00, 104.00) | 67.00 (0.00, 107.00) | 66.00 (0.00, 108.00) | 67.00 (0.00, 108.00) |
|  |  |  |  |  |  |  |
| Gender |  |  |  |  |  |  |
| Female | 23764 (46.92%) | 25460 (47.75%) | 21658 (46.27%) | 20787 (46.61%) | 19297 (47.12%) | 110966 (46.95%) |
| Male | 26885 (53.08%) | 27863 (52.25%) | 25153 (53.73%) | 23810 (53.39%) | 21653 (52.88%) | 125364 (53.05%) |
|  |  |  |  |  |  |  |
| Comorbidity |  |  |  |  |  |  |
| 0 | 6898 (13.62%) | 7099 (13.31%) | 6562 (14.02%) | 6227 (13.96%) | 5688 (13.89%) | 32474 (13.74%) |
| 1 | 13987 (27.62%) | 13903 (26.07%) | 13819 (29.52%) | 12408 (27.82%) | 11043 (26.97%) | 65160 (27.57%) |
| 2 | 10958 (21.64%) | 11546 (21.65%) | 9883 (21.11%) | 9878 (22.15%) | 8659 (21.15%) | 50924 (21.55%) |
| 3 | 7947 (15.69%) | 8625 (16.18%) | 7112 (15.19%) | 6800 (15.25%) | 6591 (16.10%) | 37075 (15.69%) |
| 4 | 5771 (11.39%) | 6438 (12.07%) | 4979 (10.64%) | 4936 (11.07%) | 4698 (11.47%) | 26822 (11.35%) |
| 5 | 3007 (5.94%) | 3333 (6.25%) | 2652 (5.67%) | 2602 (5.83%) | 2558 (6.25%) | 14152 (5.99%) |
| 6 | 1329 (2.62%) | 1524 (2.86%) | 1158 (2.47%) | 1136 (2.55%) | 1110 (2.71%) | 6257 (2.65%) |
| 7 | 532 (1.05%) | 590 (1.11%) | 460 (0.98%) | 434 (0.97%) | 410 (1.00%) | 2426 (1.03%) |
| 8 | 161 (0.32%) | 198 (0.37%) | 136 (0.29%) | 128 (0.29%) | 149 (0.36%) | 772 (0.33%) |
| 9 | 42 (0.08%) | 55 (0.10%) | 43 (0.09%) | 39 (0.09%) | 37 (0.09%) | 216 (0.09%) |
| 10 | 14 (0.03%) | 11 (0.02%) | 7 (0.01%) | 6 (0.01%) | 6 (0.01%) | 44 (0.02%) |
| 11 | 3 (0.01%) | 1 (0.00%) | 0 (0.00%) | 3 (0.01%) | 1 (0.00%) | 8 (0.00%) |
|  |  |  |  |  |  |  |

Table 12: Cluster-randomised evaluation: patient characteristics at baseline by trial arm (population relevant to the anticoagulation in atrial fibrillation primary outcome) (WP4a)

|  | Trial 1 | | Trial 2 | |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Diabetes control (n=3897) | Risky prescribing (n=3755) | Blood pressure control (n=3654) | Anticoagulation in AF (n=3401) | Non-intervention (n=2820) | Total (n=17527) |
| Age |  |  |  |  |  |  |
| Mean (SD) | 77.38 (10.24) | 76.91 (9.95) | 76.98 (9.77) | 76.69 (10.00) | 76.64 (10.40) | 76.94 (10.06) |
| Median (Range) | 78.00 (0.00, 106.00) | 78.00 (25.00, 101.00) | 78.00 (1.00, 105.00) | 78.00 (0.00, 102.00) | 78.00 (0.00, 102.00) | 78.00 (0.00, 106.00) |
|  |  |  |  |  |  |  |
| Gender |  |  |  |  |  |  |
| Female | 1795 (46.06%) | 1713 (45.62%) | 1682 (46.03%) | 1454 (42.75%) | 1284 (45.53%) | 7928 (45.23%) |
| Male | 2102 (53.94%) | 2042 (54.38%) | 1972 (53.97%) | 1947 (57.25%) | 1536 (54.47%) | 9599 (54.77%) |
|  |  |  |  |  |  |  |
| Comorbidity |  |  |  |  |  |  |
| 0 | 258 (6.62%) | 246 (6.55%) | 224 (6.13%) | 226 (6.65%) | 174 (6.17%) | 1128 (6.44%) |
| 1 | 377 (9.67%) | 338 (9.00%) | 392 (10.73%) | 308 (9.06%) | 281 (9.96%) | 1696 (9.68%) |
| 2 | 640 (16.42%) | 600 (15.98%) | 683 (18.69%) | 580 (17.05%) | 479 (16.99%) | 2982 (17.01%) |
| 3 | 743 (19.07%) | 636 (16.94%) | 647 (17.71%) | 617 (18.14%) | 450 (15.96%) | 3093 (17.65%) |
| 4 | 589 (15.11%) | 645 (17.18%) | 561 (15.35%) | 549 (16.14%) | 444 (15.74%) | 2788 (15.91%) |
| 5 | 562 (14.42%) | 518 (13.79%) | 484 (13.25%) | 479 (14.08%) | 423 (15.00%) | 2466 (14.07%) |
| 6 | 392 (10.06%) | 408 (10.87%) | 357 (9.77%) | 370 (10.88%) | 294 (10.43%) | 1821 (10.39%) |
| 7 | 206 (5.29%) | 224 (5.97%) | 209 (5.72%) | 170 (5.00%) | 161 (5.71%) | 970 (5.53%) |
| 8 | 90 (2.31%) | 96 (2.56%) | 69 (1.89%) | 70 (2.06%) | 87 (3.09%) | 412 (2.35%) |
| 9 | 29 (0.74%) | 36 (0.96%) | 25 (0.68%) | 28 (0.82%) | 23 (0.82%) | 141 (0.80%) |
| 10 | 10 (0.26%) | 7 (0.19%) | 3 (0.08%) | 1 (0.03%) | 4 (0.14%) | 25 (0.14%) |
| 11 | 1 (0.03%) | 1 (0.03%) | 0 (0.00%) | 3 (0.09%) | 0 (0.00%) | 5 (0.03%) |
|  |  |  |  |  |  |  |

Table 13: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes achieving blood pressure below 140/80 mmHg (or 130/80 mmHg if there is kidney, eye or cerebrovascular damage) (WP4) a

| Variable | Comparison | Estimate | SE | Odds Ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | f Statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control implementation package vs. Control (risky prescribing package) | 0.0241 | 0.0862 | 1.0244 | 0.8443 | 1.2428 | 0.08 | 1 | 0.7801 |
| Gender | Female vs. Male | 0.0075 | 0.0233 | 1.0076 | 0.9562 | 1.0617 | 0.10 | 1 | 0.7468 |
| Age |  | 0.0103 | 0.0009 | 1.0104 | 1.0084 | 1.0123 | 142.05 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0002 | 0.0013 | 1.0002 | 0.9972 | 1.0032 | 0.02 | 1 | 0.8862 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.0715 | 0.2424 | 1.0741 | 0.6238 | 1.8493 | 1.24 | 9 | 0.2649 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.3345 | 0.2134 | 1.3973 | 0.8661 | 2.2542 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.3815 | 0.1554 | 1.4644 | 1.0336 | 2.0749 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.2094 | 0.2167 | 1.2330 | 0.7586 | 2.0040 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.0924 | 0.2128 | 1.0968 | 0.6807 | 1.7672 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.5091 | 0.2224 | 1.6638 | 1.0107 | 2.7388 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | 0.2992 | 0.1850 | 1.3488 | 0.8909 | 2.0422 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.3911 | 0.2105 | 1.4786 | 0.9225 | 2.3700 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.2417 | 0.1934 | 1.2734 | 0.8255 | 1.9643 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0129 | 0.0108 | 1.0130 | 0.9888 | 1.0379 | 1.43 | 1 | 0.2316 |
| Pre-intervention achievement for diabetes control |  | 0.0196 | 0.0065 | 1.0198 | 1.0050 | 1.0348 | 9.01 | 1 | 0.0027 |
| Overall QOF score |  | -0.0014 | 0.0017 | 0.9986 | 0.9948 | 1.0024 | 0.72 | 1 | 0.3975 |
| Comorbidity |  | -0.0300 | 0.0539 | 0.9704 | 0.8600 | 1.0951 | 0.31 | 1 | 0.5778 |

a The estimated number needed to treat for one patient with Type 2 diabetes to achieve blood pressure below 140/80 mmHg (or 130/80 mmHg if there is kidney, eye or cerebrovascular damage) is 168

Table 14: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes achieving Haemoglobin A1c value below or equal to 59 mmol/mol (WP4A) a, b

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.0497 | 0.0525 | 1.0510 | 0.9342 | 1.1823 | 0.89 | 1 | 0.3442 |
| Gender | Female vs. Male | 0.1157 | 0.0248 | 1.1227 | 1.0620 | 1.1869 | 21.76 | 1 | <.0001 |
| Age |  | 0.0213 | 0.0009 | 1.0215 | 1.0194 | 1.0236 | 542.23 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0007 | 0.0008 | 1.0007 | 0.9989 | 1.0026 | 0.79 | 1 | 0.3739 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.1943 | 0.1390 | 0.8234 | 0.6030 | 1.1245 | 3.17 | 9 | 0.0008 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.1423 | 0.1312 | 0.8673 | 0.6463 | 1.1640 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.1156 | 0.0930 | 0.8908 | 0.7233 | 1.0972 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.0733 | 0.1298 | 1.0760 | 0.8045 | 1.4393 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.3717 | 0.1334 | 1.4502 | 1.0755 | 1.9555 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.0690 | 0.1354 | 1.0714 | 0.7909 | 1.4513 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.0604 | 0.1122 | 0.9414 | 0.7321 | 1.2105 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.1037 | 0.1304 | 1.1093 | 0.8280 | 1.4860 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.1398 | 0.1161 | 0.8695 | 0.6703 | 1.1279 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0017 | 0.0068 | 1.0017 | 0.9866 | 1.0171 | 0.07 | 1 | 0.7978 |
| Pre-intervention achievement for diabetes control |  | 0.0214 | 0.0039 | 1.0217 | 1.0127 | 1.0307 | 29.57 | 1 | <.0001 |
| Overall QOF score |  | -0.0005 | 0.0011 | 0.9995 | 0.9971 | 1.0020 | 0.18 | 1 | 0.6681 |
| Comorbidity |  | -0.0531 | 0.0340 | 0.9483 | 0.8786 | 1.0234 | 2.44 | 1 | 0.1185 |

a The estimated number needed to treat for one patient with Type 2 diabetes to achieve Haemoglobin A1c value below or equal to 59 mmol/mol is 94

b  Table reproduced from: Glidewell, L., Willis, T.A., Petty, D. *et al.* To what extent can behaviour change techniques be identified within an adaptable implementation package for primary care? A prospective directed content analysis. *Implementation Sci* **13,**32 (2018) doi:10.1186/s13012-017-0704-7

Table 15: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes achieving total serum cholesterol level below or equal to 5.0 mmol/l (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | -0.0825 | 0.0693 | 0.9208 | 0.7884 | 1.0755 | 1.42 | 1 | 0.2339 |
| Gender | Female vs. Male | -0.4097 | 0.0261 | 0.6638 | 0.6261 | 0.7038 | 246.14 | 1 | <.0001 |
| Age |  | 0.0229 | 0.0010 | 1.0231 | 1.0209 | 1.0254 | 563.71 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0003 | 0.0011 | 0.9997 | 0.9973 | 1.0021 | 0.07 | 1 | 0.7973 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.3689 | 0.1886 | 0.6915 | 0.4531 | 1.0553 | 2.17 | 9 | 0.0208 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.0759 | 0.1727 | 1.0788 | 0.7325 | 1.5888 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.0905 | 0.1238 | 0.9135 | 0.6922 | 1.2055 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.2171 | 0.1721 | 0.8049 | 0.5473 | 1.1837 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.2716 | 0.1718 | 0.7621 | 0.5186 | 1.1201 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.1499 | 0.1795 | 1.1617 | 0.7768 | 1.7373 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.1002 | 0.1482 | 0.9046 | 0.6489 | 1.2612 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.0691 | 0.1707 | 0.9333 | 0.6366 | 1.3682 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.2559 | 0.1549 | 1.2917 | 0.9128 | 1.8278 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0046 | 0.0088 | 1.0046 | 0.9850 | 1.0246 | 0.27 | 1 | 0.6048 |
| Pre-intervention achievement for diabetes control |  | 0.0197 | 0.0052 | 1.0199 | 1.0080 | 1.0319 | 14.17 | 1 | 0.0002 |
| Overall QOF score |  | -0.0005 | 0.0014 | 0.9995 | 0.9963 | 1.0026 | 0.14 | 1 | 0.7124 |
| Comorbidity |  | 0.0643 | 0.0440 | 1.0665 | 0.9663 | 1.1770 | 2.14 | 1 | 0.1436 |

a The estimated number needed to treat for one patient with Type 2 diabetes to achieve total serum cholesterol level below or equal to 5.0 mmol/l is -62

Table 16: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes having their blood pressure measured in the previous 12 months (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | -0.0135 | 0.1337 | 0.9866 | 0.7311 | 1.3314 | 0.01 | 1 | 0.9195 |
| Gender | Female vs. Male | 0.0518 | 0.0578 | 1.0532 | 0.9253 | 1.1988 | 0.80 | 1 | 0.3697 |
| Age |  | 0.0358 | 0.0021 | 1.0365 | 1.0317 | 1.0413 | 298.96 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0015 | 0.0021 | 1.0015 | 0.9969 | 1.0061 | 0.54 | 1 | 0.4607 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.3690 | 0.3565 | 0.6914 | 0.3110 | 1.5373 | 2.00 | 9 | 0.0352 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.6813 | 0.3508 | 1.9765 | 0.9003 | 4.3392 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.1244 | 0.2415 | 0.8831 | 0.5139 | 1.5173 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.5062 | 0.3277 | 0.6028 | 0.2891 | 1.2566 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.3430 | 0.3347 | 0.7097 | 0.3352 | 1.5027 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.3688 | 0.3381 | 0.6916 | 0.3241 | 1.4757 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.3577 | 0.2855 | 0.6993 | 0.3688 | 1.3260 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.2200 | 0.3295 | 0.8025 | 0.3834 | 1.6798 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.0158 | 0.2994 | 0.9843 | 0.5031 | 1.9256 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0234 | 0.0168 | 1.0237 | 0.9859 | 1.0630 | 1.94 | 1 | 0.1632 |
| Pre-intervention achievement for diabetes control |  | 0.0312 | 0.0102 | 1.0317 | 1.0084 | 1.0555 | 9.37 | 1 | 0.0022 |
| Overall QOF score |  | 0.0002 | 0.0027 | 1.0002 | 0.9942 | 1.0063 | 0.01 | 1 | 0.9321 |
| Comorbidity |  | -0.0157 | 0.0850 | 0.9844 | 0.8137 | 1.1910 | 0.03 | 1 | 0.8533 |

a The estimated number needed to treat for one patient with Type 2 diabetes to have their blood pressure measured in the previous 12 months is -2174

Table 17: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes having their Haemoglobin A1c levels measured in the previous 12 months (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | -0.0184 | 0.1308 | 0.9818 | 0.7323 | 1.3162 | 0.02 | 1 | 0.8883 |
| Gender | Female vs. Male | -0.0218 | 0.0524 | 0.9784 | 0.8700 | 1.1004 | 0.17 | 1 | 0.6776 |
| Age |  | 0.0236 | 0.0019 | 1.0239 | 1.0195 | 1.0282 | 155.84 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0021 | 0.0020 | 1.0021 | 0.9976 | 1.0066 | 1.10 | 1 | 0.2946 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.1560 | 0.3519 | 0.8556 | 0.3887 | 1.8831 | 2.20 | 9 | 0.0190 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.7331 | 0.3327 | 2.0815 | 0.9874 | 4.3880 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.0974 | 0.2325 | 1.1023 | 0.6546 | 1.8562 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.1868 | 0.3221 | 0.8297 | 0.4031 | 1.7077 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.1896 | 0.3224 | 0.8273 | 0.4016 | 1.7042 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.1484 | 0.3299 | 0.8621 | 0.4115 | 1.8059 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.3728 | 0.2737 | 0.6888 | 0.3730 | 1.2722 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.2244 | 0.3190 | 0.7990 | 0.3908 | 1.6335 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.3304 | 0.2905 | 1.3916 | 0.7257 | 2.6685 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0038 | 0.0164 | 1.0038 | 0.9675 | 1.0415 | 0.05 | 1 | 0.8158 |
| Pre-intervention achievement for diabetes control |  | 0.0413 | 0.0100 | 1.0421 | 1.0191 | 1.0657 | 17.13 | 1 | <.0001 |
| Overall QOF score |  | 0.0006 | 0.0026 | 1.0006 | 0.9948 | 1.0065 | 0.06 | 1 | 0.8037 |
| Comorbidity |  | 0.0330 | 0.0834 | 1.0335 | 0.8573 | 1.2460 | 0.16 | 1 | 0.6924 |

a The estimated number needed to treat for one patient with Type 2 diabetes to have their Haemoglobin A1c levels measured in the previous 12 months is -1283

Table 18: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes having a full lipid profile performed in the previous 12 months (WP4A) a, b

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | -0.0072 | 0.1121 | 0.9928 | 0.7722 | 1.2764 | 0.00 | 1 | 0.9485 |
| Gender | Female vs. Male | -0.1082 | 0.0366 | 0.8974 | 0.8267 | 0.9743 | 8.72 | 1 | 0.0032 |
| Age |  | 0.0128 | 0.0013 | 1.0129 | 1.0099 | 1.0160 | 91.72 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0007 | 0.0017 | 0.9993 | 0.9954 | 1.0032 | 0.17 | 1 | 0.6825 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.3961 | 0.3072 | 0.6729 | 0.3380 | 1.3398 | 3.28 | 9 | 0.0005 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.1002 | 0.2806 | 1.1054 | 0.5893 | 2.0733 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.2358 | 0.2015 | 0.7899 | 0.5029 | 1.2409 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.5531 | 0.2780 | 0.5751 | 0.3085 | 1.0724 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.4029 | 0.2775 | 0.6684 | 0.3588 | 1.2450 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.1877 | 0.2892 | 0.8289 | 0.4335 | 1.5850 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.5311 | 0.2382 | 0.5880 | 0.3448 | 1.0028 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.5084 | 0.2744 | 0.6014 | 0.3251 | 1.1126 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.5743 | 0.2553 | 1.7759 | 1.0022 | 3.1471 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0028 | 0.0142 | 1.0028 | 0.9715 | 1.0352 | 0.04 | 1 | 0.8419 |
| Pre-intervention achievement for diabetes control |  | 0.0327 | 0.0085 | 1.0333 | 1.0138 | 1.0531 | 14.89 | 1 | 0.0001 |
| Overall QOF score |  | -0.0001 | 0.0023 | 0.9999 | 0.9948 | 1.0049 | 0.00 | 1 | 0.9487 |
| Comorbidity |  | 0.1485 | 0.0707 | 1.1601 | 0.9900 | 1.3594 | 4.41 | 1 | 0.0358 |

a The estimated number needed to treat for one patient with Type 2 diabetes to have their full lipid profile performed in the previous 12 months is -1471

b Table modified from: Willis TA, Collinson M, Glidewell L, Farrin A, Holland M, Meads D, et al. An adaptable implementation package targeting evidence-based indicators in primary care: a pragmatic cluster-randomised evaluation. *PLOS Med*. Forthcoming 2020

Table 19: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes having micro-albuminuria testing performed in the previous 12 months (WP4A) a, b

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.2215 | 0.1353 | 1.2480 | 0.9215 | 1.6902 | 2.68 | 1 | 0.1016 |
| Gender | Female vs. Male | -0.2968 | 0.0245 | 0.7432 | 0.7035 | 0.7852 | 146.85 | 1 | <.0001 |
| Age |  | 0.0164 | 0.0009 | 1.0165 | 1.0145 | 1.0186 | 326.06 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0014 | 0.0021 | 1.0014 | 0.9967 | 1.0061 | 0.43 | 1 | 0.5131 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.4196 | 0.3866 | 0.6573 | 0.2763 | 1.5634 | 1.61 | 9 | 0.1053 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.1054 | 0.3319 | 1.1112 | 0.5280 | 2.3384 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.1994 | 0.2450 | 0.8192 | 0.4730 | 1.4189 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.7864 | 0.3418 | 0.4555 | 0.2117 | 0.9798 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.6411 | 0.3318 | 0.5267 | 0.2504 | 1.1081 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.4013 | 0.3483 | 0.6694 | 0.3067 | 1.4613 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.2296 | 0.2899 | 0.7948 | 0.4150 | 1.5223 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.3929 | 0.3279 | 0.6751 | 0.3237 | 1.4078 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.1823 | 0.3048 | 1.2000 | 0.6060 | 2.3764 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.0186 | 0.0166 | 0.9816 | 0.9457 | 1.0189 | 1.25 | 1 | 0.2637 |
| Pre-intervention achievement for diabetes control |  | 0.0058 | 0.0103 | 1.0058 | 0.9830 | 1.0292 | 0.32 | 1 | 0.5713 |
| Overall QOF score |  | 0.0000 | 0.0026 | 1.0000 | 0.9942 | 1.0059 | 0.00 | 1 | 0.9982 |
| Comorbidity |  | 0.0857 | 0.0828 | 1.0895 | 0.9050 | 1.3115 | 1.07 | 1 | 0.3006 |

a The estimated number needed to treat for one patient with Type 2 diabetes to have micro-albuminuria testing performed in the previous 12 months is 20

b Table modified from: Willis TA, Collinson M, Glidewell L, Farrin A, Holland M, Meads D, et al. An adaptable implementation package targeting evidence-based indicators in primary care: a pragmatic cluster-randomised evaluation. *PLOS Med*. Forthcoming 2020

Table 20: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes having estimated glomerular filtration rate (eGFR) / serum creatinine testing performed in the previous 12 months (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.0760 | 0.1273 | 1.0790 | 0.8111 | 1.4353 | 0.36 | 1 | 0.5506 |
| Gender | Female vs. Male | 0.0342 | 0.0444 | 1.0348 | 0.9367 | 1.1431 | 0.59 | 1 | 0.4419 |
| Age |  | 0.0277 | 0.0016 | 1.0281 | 1.0244 | 1.0318 | 297.72 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0008 | 0.0020 | 1.0008 | 0.9964 | 1.0053 | 0.18 | 1 | 0.6723 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.2423 | 0.3490 | 0.7849 | 0.3589 | 1.7162 | 1.74 | 9 | 0.0745 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.2851 | 0.3190 | 1.3299 | 0.6506 | 2.7184 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.2023 | 0.2299 | 0.8168 | 0.4879 | 1.3675 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.2934 | 0.3169 | 0.7457 | 0.3665 | 1.5172 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.4715 | 0.3142 | 0.6241 | 0.3086 | 1.2622 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.0619 | 0.3294 | 0.9400 | 0.4492 | 1.9671 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.2373 | 0.2736 | 0.7888 | 0.4271 | 1.4566 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.2682 | 0.3131 | 0.7648 | 0.3791 | 1.5429 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.4768 | 0.2902 | 1.6110 | 0.8406 | 3.0872 |  |  |  |
| Pre-intervention achievement for risky Prescribing |  | -0.0006 | 0.0159 | 0.9994 | 0.9644 | 1.0357 | 0.00 | 1 | 0.9697 |
| Pre-intervention achievement for diabetes control |  | 0.0337 | 0.0096 | 1.0343 | 1.0122 | 1.0569 | 12.24 | 1 | 0.0005 |
| Overall QOF score |  | -0.0019 | 0.0026 | 0.9981 | 0.9924 | 1.0039 | 0.52 | 1 | 0.4692 |
| Comorbidity |  | 0.0581 | 0.0801 | 1.0598 | 0.8855 | 1.2683 | 0.53 | 1 | 0.4687 |

a The estimated number needed to treat for one patient with Type 2 diabetes to have estimated glomerular filtration rate (eGFR) / serum creatinine testing performed in the previous 12 months is 222

Table 21: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes having a foot care review in the previous 12 months (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.1833 | 0.1525 | 1.2012 | 0.8534 | 1.6906 | 1.45 | 1 | 0.2293 |
| Gender | Female vs. Male | -0.0701 | 0.0298 | 0.9323 | 0.8720 | 0.9967 | 5.54 | 1 | 0.0186 |
| Age |  | 0.0194 | 0.0011 | 1.0196 | 1.0171 | 1.0221 | 315.11 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0001 | 0.0024 | 0.9999 | 0.9946 | 1.0052 | 0.00 | 1 | 0.9642 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.3252 | 0.4325 | 0.7224 | 0.2740 | 1.9043 | 2.73 | 9 | 0.0035 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.1594 | 0.3748 | 1.1728 | 0.5062 | 2.7171 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.7606 | 0.2747 | 0.4674 | 0.2525 | 0.8653 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.7159 | 0.3828 | 0.4888 | 0.2072 | 1.1528 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.0216 | 0.3755 | 0.9786 | 0.4217 | 2.2709 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.3469 | 0.3910 | 0.7069 | 0.2942 | 1.6983 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.0711 | 0.3255 | 0.9314 | 0.4490 | 1.9321 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.0408 | 0.3717 | 1.0416 | 0.4528 | 2.3963 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.1836 | 0.3427 | 1.2015 | 0.5573 | 2.5902 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0266 | 0.0190 | 1.0269 | 0.9842 | 1.0715 | 1.97 | 1 | 0.1609 |
| Pre-intervention achievement for diabetes control |  | 0.0202 | 0.0116 | 1.0204 | 0.9943 | 1.0473 | 3.05 | 1 | 0.0809 |
| Overall QOF score |  | 0.0042 | 0.0029 | 1.0042 | 0.9976 | 1.0108 | 2.05 | 1 | 0.1521 |
| Comorbidity |  | 0.0592 | 0.0934 | 1.0610 | 0.8605 | 1.3083 | 0.40 | 1 | 0.5260 |

a The estimated number needed to treat for one patient with Type 2 diabetes to have a foot care review in the previous 12 months is 41

Table 22: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes having eye screening in the previous 12 months (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.0686 | 0.1669 | 1.0710 | 0.7367 | 1.5571 | 0.17 | 1 | 0.6810 |
| Gender | Female vs. Male | -0.1442 | 0.0279 | 0.8657 | 0.8133 | 0.9215 | 26.79 | 1 | <.0001 |
| Age |  | 0.0078 | 0.0010 | 1.0078 | 1.0055 | 1.0101 | 57.84 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0039 | 0.0026 | 1.0040 | 0.9982 | 1.0098 | 2.34 | 1 | 0.1259 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.5670 | 0.4781 | 0.5672 | 0.1942 | 1.6565 | 3.15 | 9 | 0.0008 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.3765 | 0.4090 | 1.4572 | 0.5827 | 3.6444 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.1747 | 0.3033 | 0.8397 | 0.4255 | 1.6572 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.3308 | 0.4227 | 0.7183 | 0.2785 | 1.8527 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.0043 | 0.4109 | 1.0043 | 0.3998 | 2.5225 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.7248 | 0.4295 | 0.4844 | 0.1850 | 1.2687 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -1.1894 | 0.3588 | 0.3044 | 0.1362 | 0.6803 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.6624 | 0.4034 | 0.5156 | 0.2088 | 1.2734 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.0051 | 0.3770 | 1.0051 | 0.4317 | 2.3401 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0035 | 0.0207 | 1.0035 | 0.9580 | 1.0512 | 0.03 | 1 | 0.8657 |
| Pre-intervention achievement for diabetes control |  | -0.0023 | 0.0127 | 0.9977 | 0.9697 | 1.0266 | 0.03 | 1 | 0.8586 |
| Overall QOF score |  | 0.0145 | 0.0032 | 1.0146 | 1.0072 | 1.0220 | 19.96 | 1 | <.0001 |
| Comorbidity |  | 0.0188 | 0.1014 | 1.0190 | 0.8117 | 1.2791 | 0.03 | 1 | 0.8530 |

a The estimated number needed to treat for one patient with Type 2 diabetes to have an eye screening in the previous 12 months is 82

Table 23: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes having their Body Mass Index (BMI) recorded in the previous 12 months (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.2395 | 0.1893 | 1.2707 | 0.8312 | 1.9424 | 1.60 | 1 | 0.2058 |
| Gender | Female vs. Male | -0.0180 | 0.0326 | 0.9822 | 0.9130 | 1.0566 | 0.30 | 1 | 0.5814 |
| Age |  | 0.0006 | 0.0012 | 1.0006 | 0.9979 | 1.0033 | 0.25 | 1 | 0.6194 |
| Relative to 100 patient increase in list size at baseline |  | 0.0023 | 0.0029 | 1.0023 | 0.9958 | 1.0088 | 0.61 | 1 | 0.4353 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.0192 | 0.5391 | 1.0194 | 0.3044 | 3.4134 | 4.38 | 9 | <.0001 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 1.4410 | 0.4717 | 4.2249 | 1.4677 | 12.1620 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.5858 | 0.3426 | 1.7964 | 0.8335 | 3.8713 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.4408 | 0.4777 | 1.5540 | 0.5326 | 4.5338 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.7076 | 0.4635 | 0.4928 | 0.1744 | 1.3928 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.4207 | 0.4841 | 0.6566 | 0.2218 | 1.9431 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | 0.1154 | 0.4038 | 1.1224 | 0.4539 | 2.7750 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.5733 | 0.4549 | 0.5637 | 0.2033 | 1.5626 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.1722 | 0.4245 | 1.1879 | 0.4587 | 3.0764 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.0308 | 0.0231 | 0.9697 | 0.9207 | 1.0212 | 1.77 | 1 | 0.1828 |
| Pre-intervention achievement for diabetes control |  | 0.0364 | 0.0144 | 1.0371 | 1.0041 | 1.0711 | 6.38 | 1 | 0.0116 |
| Overall QOF score |  | 0.0000 | 0.0037 | 1.0000 | 0.9919 | 1.0082 | 0.00 | 1 | 0.9981 |
| Comorbidity |  | -0.0094 | 0.1156 | 0.9906 | 0.7646 | 1.2835 | 0.01 | 1 | 0.9350 |

a The estimated number needed to treat for one patient with Type 2 diabetes to have their Body Mass Index (BMI) recorded in the previous 12 months is 33

Table 24: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes having their smoking status recorded in the previous 12 months (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.3364 | 0.1778 | 1.3999 | 0.9396 | 2.0855 | 3.58 | 1 | 0.0586 |
| Gender | Female vs. Male | -0.2380 | 0.0323 | 0.7882 | 0.7332 | 0.8474 | 54.31 | 1 | <.0001 |
| Age |  | 0.0016 | 0.0012 | 1.0016 | 0.9990 | 1.0043 | 1.84 | 1 | 0.1747 |
| Relative to 100 patient increase in list size at baseline |  | 0.0038 | 0.0027 | 1.0038 | 0.9976 | 1.0100 | 1.90 | 1 | 0.1679 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -1.2184 | 0.5041 | 0.2957 | 0.0955 | 0.9153 | 3.78 | 9 | <.0001 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 1.1790 | 0.4430 | 3.2512 | 1.2044 | 8.7760 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.2729 | 0.3234 | 1.3137 | 0.6363 | 2.7124 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.1450 | 0.4477 | 0.8651 | 0.3171 | 2.3599 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.0973 | 0.4386 | 0.9073 | 0.3394 | 2.4253 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.5164 | 0.4558 | 0.5967 | 0.2148 | 1.6574 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.1319 | 0.3809 | 0.8765 | 0.3732 | 2.0585 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.3701 | 0.4290 | 0.6907 | 0.2640 | 1.8067 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.5597 | 0.3988 | 0.5714 | 0.2337 | 1.3970 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.0055 | 0.0217 | 0.9945 | 0.9473 | 1.0441 | 0.06 | 1 | 0.7995 |
| Pre-intervention achievement for diabetes control |  | 0.0287 | 0.0135 | 1.0291 | 0.9984 | 1.0607 | 4.50 | 1 | 0.0339 |
| Overall QOF score |  | -0.0001 | 0.0034 | 0.9999 | 0.9923 | 1.0076 | 0.00 | 1 | 0.9757 |
| Comorbidity |  | -0.1770 | 0.1083 | 0.8378 | 0.6572 | 1.0681 | 2.67 | 1 | 0.1024 |

a The estimated number needed to treat for one patient with Type 2 diabetes to have their smoking status recorded in the previous 12 months is 24

Table 25: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes receiving all recommended processes of care in the previous 12 months (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.2313 | 0.1679 | 1.2603 | 0.8651 | 1.8360 | 1.90 | 1 | 0.1682 |
| Gender | Female vs. Male | -0.2700 | 0.0252 | 0.7634 | 0.7215 | 0.8077 | 115.08 | 1 | <.0001 |
| Age |  | 0.0103 | 0.0009 | 1.0103 | 1.0082 | 1.0124 | 120.61 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0030 | 0.0026 | 1.0031 | 0.9972 | 1.0089 | 1.37 | 1 | 0.2412 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.9352 | 0.4820 | 0.3925 | 0.1332 | 1.1565 | 2.41 | 9 | 0.0100 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.3507 | 0.4107 | 1.4201 | 0.5656 | 3.5654 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.4038 | 0.3045 | 0.6678 | 0.3374 | 1.3216 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.7803 | 0.4253 | 0.4583 | 0.1766 | 1.1890 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.9990 | 0.4134 | 0.3683 | 0.1458 | 0.9302 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.8501 | 0.4336 | 0.4274 | 0.1617 | 1.1295 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.5390 | 0.3621 | 0.5834 | 0.2591 | 1.3134 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.7565 | 0.4071 | 0.4693 | 0.1884 | 1.1688 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.0698 | 0.3775 | 0.9326 | 0.4001 | 2.1735 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.0256 | 0.0210 | 0.9747 | 0.9300 | 1.0216 | 1.49 | 1 | 0.2215 |
| Pre-intervention achievement for diabetes control |  | 0.0158 | 0.0128 | 1.0159 | 0.9873 | 1.0454 | 1.53 | 1 | 0.2163 |
| Overall QOF score |  | 0.0103 | 0.0033 | 1.0103 | 1.0028 | 1.0179 | 9.61 | 1 | 0.0019 |
| Comorbidity |  | 0.0922 | 0.1028 | 1.0966 | 0.8708 | 1.3808 | 0.80 | 1 | 0.3700 |

a The estimated number needed to treat for one patient with Type 2 diabetes to receive all recommended processes of care in the previous 12 months is 20

Table 26: Secondary outcome for Trial 1: The proportion of patients with Type 2 diabetes receiving all recommended processes of care (excluding eye screening) in the previous 12 months (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.2807 | 0.1520 | 1.3241 | 0.9417 | 1.8618 | 3.41 | 1 | 0.0649 |
| Gender | Female vs. Male | -0.2656 | 0.0244 | 0.7667 | 0.7259 | 0.8098 | 118.64 | 1 | <.0001 |
| Age |  | 0.0110 | 0.0009 | 1.0111 | 1.0090 | 1.0131 | 148.90 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0014 | 0.0024 | 1.0014 | 0.9962 | 1.0067 | 0.37 | 1 | 0.5408 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.9007 | 0.4365 | 0.4063 | 0.1527 | 1.0808 | 2.52 | 9 | 0.0071 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.1650 | 0.3721 | 1.1793 | 0.5122 | 2.7154 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.4261 | 0.2757 | 0.6531 | 0.3520 | 1.2117 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.7729 | 0.3853 | 0.4617 | 0.1946 | 1.0951 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -1.0585 | 0.3744 | 0.3470 | 0.1499 | 0.8031 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.7132 | 0.3922 | 0.4901 | 0.2035 | 1.1806 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.0344 | 0.3261 | 0.9661 | 0.4651 | 2.0069 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.6219 | 0.3685 | 0.5369 | 0.2351 | 1.2263 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.0503 | 0.3423 | 0.9509 | 0.4415 | 2.0480 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.0267 | 0.0187 | 0.9737 | 0.9337 | 1.0154 | 2.03 | 1 | 0.1543 |
| Pre-intervention achievement for diabetes control |  | 0.0191 | 0.0115 | 1.0193 | 0.9933 | 1.0460 | 2.75 | 1 | 0.0970 |
| Overall QOF score |  | 0.0024 | 0.0029 | 1.0024 | 0.9959 | 1.0089 | 0.66 | 1 | 0.4167 |
| Comorbidity |  | 0.0676 | 0.0929 | 1.0699 | 0.8688 | 1.3176 | 0.53 | 1 | 0.4667 |

The estimated number needed to treat for one patient with Type 2 diabetes to receive all recommended processes of care (excluding eye screening) in the previous 12 months is 15 a

Table 27: Secondary outcome for Trial 1: Prescribing a traditional oral NSAID or low-dose aspirin in patients with a history of peptic ulceration without co-prescription of gastro-protection (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | -0.0480 | 0.2969 | 0.9532 | 0.4880 | 1.8619 | 0.03 | 1 | 0.8718 |
| Gender | Female vs. Male | 0.0776 | 0.2906 | 1.0807 | 0.5612 | 2.0812 | 0.07 | 1 | 0.7896 |
| Age |  | -0.0148 | 0.0104 | 0.9853 | 0.9624 | 1.0088 | 2.01 | 1 | 0.1576 |
| Relative to 100 patient increase in list size at baseline |  | 0.0009 | 0.0051 | 1.0009 | 0.9895 | 1.0124 | 0.03 | 1 | 0.8604 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.3576 | 0.6097 | 0.6994 | 0.1769 | 2.7657 | 1.22 | 9 | 0.2851 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -1.9795 | 1.2474 | 0.1381 | 0.0083 | 2.3012 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.5326 | 0.5000 | 0.5871 | 0.1901 | 1.8128 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.5493 | 0.6688 | 0.5773 | 0.1278 | 2.6085 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -2.5093 | 1.0408 | 0.0813 | 0.0078 | 0.8502 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.1568 | 0.8638 | 1.1697 | 0.1668 | 8.2039 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.6501 | 0.6171 | 0.5220 | 0.1298 | 2.0988 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.0339 | 0.7959 | 1.0345 | 0.1719 | 6.2264 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -1.1459 | 0.6415 | 0.3179 | 0.0748 | 1.3510 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.1332 | 0.0468 | 1.1424 | 1.0281 | 1.2695 | 8.11 | 1 | 0.0048 |
| Pre-intervention achievement for diabetes control |  | -0.0026 | 0.0242 | 0.9974 | 0.9444 | 1.0533 | 0.01 | 1 | 0.9130 |
| Overall QOF score |  | -0.0146 | 0.0079 | 0.9855 | 0.9681 | 1.0032 | 3.42 | 1 | 0.0655 |
| Comorbidity |  | -0.1450 | 0.2247 | 0.8650 | 0.5212 | 1.4357 | 0.42 | 1 | 0.5193 |

a The estimated number needed to treat to prevent one patient being prescribed a traditional oral NSAID or low-dose aspirin in patients with a history of peptic ulceration without co-prescription of gastro-protection is 125

Table 28: Secondary outcome for Trial 1: Prescribing a traditional oral NSAID in patients aged 75 years or over without co-prescription of gastro-protection (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | 0.0723 | 0.2023 | 1.0750 | 0.6827 | 1.6927 | 0.13 | 1 | 0.7207 |
| Gender | Female vs. Male | -0.1311 | 0.1350 | 0.8771 | 0.6479 | 1.1874 | 0.94 | 1 | 0.3315 |
| Age |  | -0.0304 | 0.0154 | 0.9700 | 0.9370 | 1.0042 | 3.89 | 1 | 0.0487 |
| Relative to 100 patient increase in list size at baseline |  | -0.0024 | 0.0034 | 0.9977 | 0.9900 | 1.0053 | 0.47 | 1 | 0.4915 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.1267 | 0.4358 | 1.1351 | 0.4268 | 3.0186 | 0.71 | 9 | 0.6958 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.6362 | 0.5577 | 1.8893 | 0.5403 | 6.6056 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.0288 | 0.3321 | 1.0292 | 0.4884 | 2.1689 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.1369 | 0.4200 | 1.1467 | 0.4467 | 2.9437 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.0840 | 0.4649 | 0.9195 | 0.3239 | 2.6103 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.2397 | 0.5050 | 0.7869 | 0.2533 | 2.4442 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.3695 | 0.4450 | 0.6911 | 0.2545 | 1.8762 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.1299 | 0.5340 | 1.1387 | 0.3435 | 3.7751 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.4781 | 0.4190 | 0.6200 | 0.2421 | 1.5880 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0373 | 0.0257 | 1.0380 | 0.9799 | 1.0995 | 2.11 | 1 | 0.1467 |
| Pre-intervention achievement for diabetes control |  | -0.0277 | 0.0163 | 0.9727 | 0.9377 | 1.0089 | 2.88 | 1 | 0.0898 |
| Overall QOF score |  | 0.0058 | 0.0047 | 1.0059 | 0.9952 | 1.0166 | 1.52 | 1 | 0.2179 |
| Comorbidity |  | 0.1331 | 0.1437 | 1.1424 | 0.8275 | 1.5771 | 0.86 | 1 | 0.3545 |

a The estimated number needed to treat to prevent one patient aged 75 years or over being prescribed a traditional oral NSAID without co-prescription of gastro-protection is -70

Table 29: Secondary outcome for Trial 1: Prescribing of a traditional oral NSAID and aspirin in patients aged 65 years or over without co-prescription of gastro-protection (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | 0.1249 | 0.2857 | 1.1330 | 0.5962 | 2.1532 | 0.19 | 1 | 0.6622 |
| Gender | Female vs. Male | -0.5003 | 0.2093 | 0.6064 | 0.3788 | 0.9706 | 5.71 | 1 | 0.0172 |
| Age |  | -0.0155 | 0.0153 | 0.9847 | 0.9514 | 1.0190 | 1.02 | 1 | 0.3118 |
| Relative to 100 patient increase in list size at baseline |  | -0.0110 | 0.0047 | 0.9890 | 0.9787 | 0.9996 | 5.49 | 1 | 0.0195 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.3703 | 0.6818 | 0.6905 | 0.1492 | 3.1961 | 0.90 | 9 | 0.5279 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.7781 | 0.7065 | 0.4593 | 0.0939 | 2.2472 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.3122 | 0.4526 | 0.7318 | 0.2646 | 2.0239 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.9822 | 0.6012 | 0.3745 | 0.0970 | 1.4460 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -1.1598 | 0.6490 | 0.3136 | 0.0729 | 1.3482 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.5928 | 0.7050 | 0.5528 | 0.1134 | 2.6952 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -1.3458 | 0.6648 | 0.2603 | 0.0584 | 1.1596 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.1301 | 0.7294 | 0.8780 | 0.1704 | 4.5228 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.7373 | 0.5548 | 0.4784 | 0.1375 | 1.6643 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0651 | 0.0338 | 1.0673 | 0.9892 | 1.1516 | 3.71 | 1 | 0.0545 |
| Pre-intervention achievement for diabetes control |  | -0.0175 | 0.0227 | 0.9826 | 0.9337 | 1.0341 | 0.59 | 1 | 0.4408 |
| Overall QOF score |  | 0.0041 | 0.0068 | 1.0041 | 0.9890 | 1.0195 | 0.36 | 1 | 0.5462 |
| Comorbidity |  | 0.2406 | 0.1970 | 1.2720 | 0.8169 | 1.9806 | 1.49 | 1 | 0.2226 |

a The estimated number needed to treat to prevent one patient aged 65 years or over being prescribed a traditional oral NSAID and aspirin without co-prescription of gastro-protection is -51

Table 30: Secondary outcome for Trial 1: Prescribing of aspirin and clopidogrel in patients aged 65 years or over without co-prescription of gastro-protection (WP4A) a

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | -0.4715 | 0.2039 | 0.6241 | 0.3947 | 0.9866 | 5.35 | 1 | 0.0210 |
| Gender | Female vs. Male | -0.0013 | 0.1672 | 0.9987 | 0.6860 | 1.4540 | 0.00 | 1 | 0.9937 |
| Age |  | -0.0108 | 0.0108 | 0.9893 | 0.9654 | 1.0137 | 0.99 | 1 | 0.3198 |
| Relative to 100 patient increase in list size at baseline |  | 0.0017 | 0.0033 | 1.0017 | 0.9943 | 1.0091 | 0.26 | 1 | 0.6121 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.0385 | 0.4556 | 1.0392 | 0.3734 | 2.8921 | 0.45 | 9 | 0.9086 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.4410 | 0.7295 | 0.6434 | 0.1250 | 3.3125 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.0386 | 0.3685 | 1.0393 | 0.4542 | 2.3782 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.1451 | 0.4723 | 0.8649 | 0.2994 | 2.4990 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.3043 | 0.5032 | 1.3557 | 0.4377 | 4.1987 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.6001 | 0.5568 | 0.5488 | 0.1571 | 1.9169 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.2035 | 0.4700 | 0.8158 | 0.2838 | 2.3451 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.0887 | 0.5095 | 0.9152 | 0.2913 | 2.8747 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.1585 | 0.5072 | 1.1717 | 0.3750 | 3.6615 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0086 | 0.0275 | 1.0086 | 0.9482 | 1.0729 | 0.10 | 1 | 0.7554 |
| Pre-intervention achievement for diabetes control |  | 0.0026 | 0.0158 | 1.0026 | 0.9677 | 1.0387 | 0.03 | 1 | 0.8709 |
| Overall QOF score |  | -0.0009 | 0.0050 | 0.9991 | 0.9879 | 1.0103 | 0.04 | 1 | 0.8493 |
| Comorbidity |  | 0.0913 | 0.1526 | 1.0956 | 0.7775 | 1.5437 | 0.36 | 1 | 0.5500 |

a The estimated number needed to treat to prevent one patient aged 65 years or over being prescribed aspirin and clopidogrel without co-prescription of gastro-protection is 11

Table 31: Secondary outcome for Trial 1: Prescribing of warfarin and a traditional oral NSAID (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | -0.1222 | 0.2854 | 0.8850 | 0.4667 | 1.6780 | 0.18 | 1 | 0.6685 |
| Gender | Female vs. Male | -0.2071 | 0.2573 | 0.8130 | 0.4566 | 1.4474 | 0.65 | 1 | 0.4210 |
| Age |  | -0.0206 | 0.0080 | 0.9796 | 0.9622 | 0.9974 | 6.61 | 1 | 0.0101 |
| Relative to 100 patient increase in list size at baseline |  | 0.0040 | 0.0043 | 1.0040 | 0.9944 | 1.0137 | 0.86 | 1 | 0.3543 |
| PCTa | Bradford PCT vs. Wakefield PCT | 0.2802 | 0.3856 | 1.3234 | 0.5575 | 3.1414 | 0.58 | 4 | 0.6766 |
| PCTa | Calderdale PCT vs. Wakefield PCT | -0.0402 | 0.5927 | 0.9606 | 0.2544 | 3.6278 |  |  |  |
| PCTa | Kirklees PCT vs. Wakefield PCT | 0.3504 | 0.4793 | 1.4196 | 0.4847 | 4.1578 |  |  |  |
| PCTa | Leeds PCT vs. Wakefield PCT | -0.2246 | 0.4801 | 0.7989 | 0.2723 | 2.3437 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0904 | 0.0367 | 1.0946 | 1.0082 | 1.1885 | 6.07 | 1 | 0.0137 |
| Pre-intervention achievement for diabetes control |  | -0.0385 | 0.0239 | 0.9622 | 0.9120 | 1.0152 | 2.59 | 1 | 0.1073 |
| Overall QOF score |  | 0.0057 | 0.0084 | 1.0058 | 0.9870 | 1.0248 | 0.47 | 1 | 0.4937 |
| Comorbidity |  | -0.1649 | 0.1895 | 0.8480 | 0.5545 | 1.2970 | 0.76 | 1 | 0.3844 |

a CCGs were grouped into former PCTs to aid model convergence

The estimated number needed to treat to prevent one patient being prescribed warfarin and a traditional oral NSAID is 878

Table 32: Secondary outcome for Trial 1: Prescribing of warfarin and low-dose aspirin or clopidogrel without co-prescription of gastro-protection (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | -0.0531 | 0.3037 | 0.9483 | 0.4783 | 1.8803 | 0.03 | 1 | 0.8614 |
| Gender | Female vs. Male | -0.1072 | 0.2720 | 0.8984 | 0.4866 | 1.6584 | 0.16 | 1 | 0.6938 |
| Age |  | 0.0078 | 0.0103 | 1.0079 | 0.9847 | 1.0315 | 0.58 | 1 | 0.4478 |
| Relative to 100 patient increase in list size at baseline |  | -0.0047 | 0.0045 | 0.9953 | 0.9853 | 1.0055 | 1.07 | 1 | 0.3026 |
| PCTa | Bradford PCT vs. Wakefield PCT | -0.4596 | 0.4598 | 0.6315 | 0.2240 | 1.7802 | 2.34 | 4 | 0.0553 |
| PCTa | Calderdale PCT vs. Wakefield PCT | -1.3355 | 0.6378 | 0.2630 | 0.0625 | 1.1075 |  |  |  |
| PCTa | Kirklees PCT vs. Wakefield PCT | -0.0383 | 0.5571 | 0.9624 | 0.2742 | 3.3785 |  |  |  |
| PCTa | Leeds PCT vs. Wakefield PCT | -1.1563 | 0.5370 | 0.3146 | 0.0938 | 1.0554 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.0201 | 0.0454 | 0.9801 | 0.8848 | 1.0857 | 0.20 | 1 | 0.6583 |
| Pre-intervention achievement for diabetes control |  | 0.0266 | 0.0244 | 1.0270 | 0.9721 | 1.0850 | 1.20 | 1 | 0.2750 |
| Overall QOF score |  | 0.0002 | 0.0086 | 1.0002 | 0.9809 | 1.0198 | 0.00 | 1 | 0.9815 |
| Comorbidity |  | 0.3888 | 0.2086 | 1.4752 | 0.9218 | 2.3609 | 3.47 | 1 | 0.0634 |

a CCGs were grouped into former PCTs to aid model convergence

The estimated number needed to treat to prevent one patient being prescribed warfarin and low-dose aspirin or clopidogrel without co-prescription of gastro-protection was 82

Table 33: Secondary outcome for Trial 1: Prescribing an oral NSAID in patients with heart failure (WP4A)

| Variable | Comparison | Estimate | SE | Odds Ratio (OR) | Lower Limit of 97.5% CI for OR | Upper Limit of 97.5% CI for OR | F Statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | -0.2849 | 0.2495 | 0.7521 | 0.4298 | 1.3160 | 1.30 | 1 | 0.2537 |
| Gender | Female vs. Male | 0.0425 | 0.2049 | 1.0434 | 0.6591 | 1.6517 | 0.04 | 1 | 0.8358 |
| Age |  | -0.0230 | 0.0061 | 0.9773 | 0.9641 | 0.9907 | 14.26 | 1 | 0.0002 |
| Relative to 100 patient increase in list size at baseline |  | -0.0003 | 0.0043 | 0.9997 | 0.9901 | 1.0093 | 0.01 | 1 | 0.9361 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.4112 | 0.5303 | 1.5086 | 0.4594 | 4.9538 | 0.71 | 9 | 0.6964 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.4441 | 0.7348 | 1.5591 | 0.3001 | 8.0991 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.5383 | 0.4300 | 1.7132 | 0.6533 | 4.4926 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.7372 | 0.5457 | 2.0901 | 0.6148 | 7.1053 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.0119 | 0.6706 | 1.0119 | 0.2250 | 4.5515 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.1437 | 0.7494 | 0.8661 | 0.1614 | 4.6482 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | 0.1356 | 0.5753 | 1.1452 | 0.3153 | 4.1599 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.6502 | 0.8735 | 0.5220 | 0.0736 | 3.6999 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.3379 | 0.5244 | 1.4021 | 0.4327 | 4.5436 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.1126 | 0.0315 | 1.1192 | 1.0429 | 1.2010 | 12.78 | 1 | 0.0004 |
| Pre-intervention achievement for diabetes control |  | 0.0038 | 0.0193 | 1.0038 | 0.9613 | 1.0482 | 0.04 | 1 | 0.8438 |
| Overall QOF score |  | 0.0019 | 0.0067 | 1.0019 | 0.9870 | 1.0171 | 0.08 | 1 | 0.7723 |
| Comorbidity |  | -0.2006 | 0.1863 | 0.8183 | 0.5389 | 1.2426 | 1.16 | 1 | 0.2818 |

The estimated number needed to treat to prevent one patient with heart failure being prescribed an oral NSAID is 200

Table 34: Secondary outcome for Trial 1: Prescribing an oral NSAID in patients prescribed both a diuretic and an angiotensin-converting enzyme inhibitor (ACE-I) or angiotensin receptor blocker (ARB)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | -0.2383 | 0.1131 | 0.7880 | 0.6115 | 1.0153 | 4.44 | 1 | 0.0351 |
| Gender | Female vs. Male | 0.1466 | 0.0689 | 1.1579 | 0.9921 | 1.3514 | 4.52 | 1 | 0.0335 |
| Age |  | -0.0309 | 0.0027 | 0.9696 | 0.9636 | 0.9756 | 126.47 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0006 | 0.0018 | 0.9994 | 0.9955 | 1.0034 | 0.10 | 1 | 0.7533 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.1877 | 0.2757 | 1.2064 | 0.6503 | 2.2382 | 1.56 | 9 | 0.1198 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.2046 | 0.2972 | 1.2270 | 0.6302 | 2.3889 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.0692 | 0.1907 | 1.0716 | 0.6990 | 1.6431 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.1531 | 0.2557 | 1.1655 | 0.6570 | 2.0675 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.3368 | 0.2665 | 1.4004 | 0.7706 | 2.5451 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.0786 | 0.2862 | 0.9244 | 0.4867 | 1.7557 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.3741 | 0.2401 | 0.6879 | 0.4016 | 1.1782 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.4396 | 0.2946 | 0.6443 | 0.3329 | 1.2471 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.1762 | 0.2331 | 1.1927 | 0.7073 | 2.0112 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0744 | 0.0140 | 1.0773 | 1.0439 | 1.1117 | 28.14 | 1 | <.0001 |
| Pre-intervention achievement for diabetes control |  | -0.0070 | 0.0088 | 0.9930 | 0.9736 | 1.0128 | 0.64 | 1 | 0.4252 |
| Overall QOF score |  | -0.0009 | 0.0024 | 0.9991 | 0.9938 | 1.0044 | 0.15 | 1 | 0.7007 |
| Comorbidity |  | -0.0614 | 0.0758 | 0.9405 | 0.7935 | 1.1146 | 0.66 | 1 | 0.4180 |

The estimated number needed to treat to prevent one patient prescribed both a diuretic and an angiotensin-converting enzyme inhibitor (ACE-I) or angiotensin receptor blocker (ARB) being prescribed an oral NSAID was 99

Table 35: Secondary outcome for Trial 1: Prescribing an oral NSAID in patients with chronic kidney disease (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | -0.0873 | 0.1216 | 0.9164 | 0.6978 | 1.2035 | 0.52 | 1 | 0.4729 |
| Gender | Female vs. Male | 0.1091 | 0.0897 | 1.1152 | 0.9120 | 1.3637 | 1.48 | 1 | 0.2242 |
| Age |  | -0.0247 | 0.0032 | 0.9756 | 0.9686 | 0.9827 | 58.38 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0005 | 0.0019 | 0.9995 | 0.9952 | 1.0037 | 0.08 | 1 | 0.7822 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.0093 | 0.2740 | 0.9907 | 0.5361 | 1.8311 | 0.55 | 9 | 0.8410 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.3199 | 0.3330 | 0.7262 | 0.3443 | 1.5318 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.1900 | 0.1947 | 0.8269 | 0.5345 | 1.2794 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.1345 | 0.2601 | 0.8742 | 0.4879 | 1.5660 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.1853 | 0.2958 | 0.8309 | 0.4281 | 1.6124 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.2830 | 0.3034 | 0.7535 | 0.3818 | 1.4874 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.0634 | 0.2436 | 0.9386 | 0.5437 | 1.6203 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.6132 | 0.3141 | 0.5416 | 0.2679 | 1.0951 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.0686 | 0.2407 | 0.9337 | 0.5444 | 1.6016 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0903 | 0.0162 | 1.0945 | 1.0554 | 1.1351 | 30.99 | 1 | <.0001 |
| Pre-intervention achievement for diabetes control |  | -0.0058 | 0.0094 | 0.9943 | 0.9735 | 1.0154 | 0.38 | 1 | 0.5396 |
| Overall QOF score |  | 0.0033 | 0.0030 | 1.0033 | 0.9966 | 1.0101 | 1.24 | 1 | 0.2655 |
| Comorbidity |  | 0.1149 | 0.0865 | 1.1217 | 0.9240 | 1.3618 | 1.76 | 1 | 0.1843 |

The estimated number needed to treat to prevent one patient with chronic kidney disease being prescribed an oral NSAID is 415

Table 36: Secondary outcome for Trial 1: Gastro-intestinal risk composite (combination of six risky prescribing indicators concerning potential gastro-intestinal risk)a (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | -0.1707 | 0.1174 | 0.8431 | 0.6480 | 1.0969 | 2.11 | 1 | 0.1460 |
| Gender | Female vs. Male | -0.1200 | 0.0727 | 0.8869 | 0.7534 | 1.0440 | 2.72 | 1 | 0.0990 |
| Age |  | 0.0083 | 0.0032 | 1.0084 | 1.0011 | 1.0157 | 6.68 | 1 | 0.0098 |
| Relative to 100 patient increase in list size at baseline |  | -0.0018 | 0.0019 | 0.9982 | 0.9940 | 1.0024 | 0.94 | 1 | 0.3333 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.2958 | 0.2711 | 1.3442 | 0.7320 | 2.4682 | 2.28 | 9 | 0.0148 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.7052 | 0.3432 | 2.0242 | 0.9379 | 4.3686 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.2487 | 0.1959 | 1.2823 | 0.8265 | 1.9894 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.0993 | 0.2628 | 1.1045 | 0.6128 | 1.9905 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.3077 | 0.2716 | 1.3603 | 0.7400 | 2.5008 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.2724 | 0.2979 | 0.7615 | 0.3905 | 1.4851 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.4555 | 0.2531 | 0.6341 | 0.3596 | 1.1184 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.0798 | 0.2856 | 0.9233 | 0.4867 | 1.7514 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.0724 | 0.2509 | 1.0751 | 0.6126 | 1.8868 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0708 | 0.0151 | 1.0734 | 1.0376 | 1.1104 | 21.96 | 1 | <.0001 |
| Pre-intervention achievement for diabetes control |  | -0.0133 | 0.0093 | 0.9868 | 0.9665 | 1.0076 | 2.04 | 1 | 0.1533 |
| Overall QOF score |  | 0.0001 | 0.0027 | 1.0001 | 0.9941 | 1.0061 | 0.00 | 1 | 0.9792 |
| Comorbidity |  | 0.0846 | 0.0830 | 1.0883 | 0.9036 | 1.3107 | 1.04 | 1 | 0.3078 |

a The proportion of patients achieving at least one of the following indicators: 1) prescribing a traditional oral NSAID or low-dose aspirin in patients with a history of peptic ulceration without co-prescription of gastro-protection; 2) prescribing a traditional oral NSAID in patients aged 75 years or over without co-prescription of gastro-protection; 3) prescribing of a traditional oral NSAID and aspirin in patients aged 65 years or over without co-prescription of gastro-protection; 4) prescribing of aspirin and clopidogrel in patients aged 65 years or over without co-prescription of gastro-protection; 5) prescribing of warfarin and a traditional oral NSAID; 6) prescribing of warfarin and low-dose aspirin or clopidogrel without co-prescription of gastro-protection.

The estimated number needed to treat to prevent one patient achieving the gastro-intestinal risk composite indicator is 65

Table 37: Secondary outcome for Trial 1: Renal risk composite (combination of two risky prescribing indicators concerning potential renal risk)a (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | -0.1948 | 0.1012 | 0.8230 | 0.6559 | 1.0327 | 3.70 | 1 | 0.0544 |
| Gender | Female vs. Male | 0.1029 | 0.0573 | 1.1084 | 0.9748 | 1.2604 | 3.22 | 1 | 0.0726 |
| Age |  | -0.0295 | 0.0021 | 0.9709 | 0.9663 | 0.9755 | 195.58 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0006 | 0.0016 | 0.9994 | 0.9959 | 1.0029 | 0.14 | 1 | 0.7116 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.1391 | 0.2514 | 1.1492 | 0.6542 | 2.0189 | 1.03 | 9 | 0.4121 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.0161 | 0.2629 | 1.0162 | 0.5637 | 1.8319 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.0068 | 0.1707 | 0.9932 | 0.6774 | 1.4562 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.0423 | 0.2325 | 1.0432 | 0.6196 | 1.7566 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.1766 | 0.2405 | 1.1932 | 0.6960 | 2.0457 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.1381 | 0.2575 | 0.8710 | 0.4890 | 1.5514 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.2038 | 0.2112 | 0.8157 | 0.5081 | 1.3094 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.4759 | 0.2597 | 0.6214 | 0.3472 | 1.1121 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.0942 | 0.2101 | 1.0988 | 0.6861 | 1.7597 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.0802 | 0.0128 | 1.0835 | 1.0529 | 1.1150 | 39.37 | 1 | <.0001 |
| Pre-intervention achievement for diabetes control |  | -0.0057 | 0.0078 | 0.9943 | 0.9771 | 1.0119 | 0.53 | 1 | 0.4669 |
| Overall QOF score |  | -0.0001 | 0.0021 | 0.9999 | 0.9951 | 1.0047 | 0.00 | 1 | 0.9492 |
| Comorbidity |  | -0.0333 | 0.0678 | 0.9673 | 0.8309 | 1.1261 | 0.24 | 1 | 0.6238 |

a The proportion of patients achieving at least one of the following indicators: 1) prescribing an oral NSAID in patients prescribed both a diuretic and an angiotensin-converting-enzyme inhibitor (ACE-I) or angiotensin receptor blocker (ARB) and 2) prescribing an oral NSAID in patients with chronic kidney disease (CKD)

The estimated number needed to treat to prevent one patient achieving the renal risk composite risk composite indicator is 142

Table 38: Secondary outcome for Trial 2: Blood pressure below 140/90 mmHg in patients aged under 80 years with hypertension (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control package vs. Control (anticoagulation in AF package) | 0.0785 | 0.0584 | 1.0817 | 0.9489 | 1.2331 | 1.81 | 1 | 0.1790 |
| Gender | Female vs. Male | 0.0563 | 0.0175 | 1.0579 | 1.0172 | 1.1002 | 10.34 | 1 | 0.0013 |
| Age |  | 0.0153 | 0.0008 | 1.0154 | 1.0135 | 1.0173 | 343.67 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0017 | 0.0008 | 0.9983 | 0.9966 | 1.0000 | 4.93 | 1 | 0.0264 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.1311 | 0.1338 | 1.1401 | 0.8447 | 1.5388 | 1.59 | 8 | 0.1230 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.0453 | 0.1179 | 1.0463 | 0.8034 | 1.3628 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.3383 | 0.1305 | 1.4026 | 1.0468 | 1.8793 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.1159 | 0.1219 | 1.1229 | 0.8543 | 1.4759 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.2648 | 0.1446 | 1.3032 | 0.9425 | 1.8019 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | 0.0565 | 0.1130 | 1.0582 | 0.8215 | 1.3631 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.0760 | 0.1120 | 1.0790 | 0.8395 | 1.3868 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.2840 | 0.1157 | 1.3284 | 1.0249 | 1.7218 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.0035 | 0.0035 | 0.9965 | 0.9887 | 1.0044 | 0.97 | 1 | 0.3236 |
| Pre-intervention achievement for blood pressure control |  | 0.0277 | 0.0050 | 1.0281 | 1.0168 | 1.0396 | 31.37 | 1 | <.0001 |
| Overall QOF score |  | 0.0017 | 0.0014 | 1.0017 | 0.9987 | 1.0047 | 1.57 | 1 | 0.2098 |
| Comorbidity |  | -0.0501 | 0.0314 | 0.9511 | 0.8865 | 1.0205 | 2.54 | 1 | 0.1106 |

The estimated number needed to treat for one patient aged under 80 years with hypertension to achieve blood pressure below 140/90 mmHg is 52

Table 39: Secondary outcome for Trial 2: Blood pressure below 150/90 mmHg in patients aged 80 years and over with hypertension (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control package vs. Control (anticoagulation in AF package) | 0.0625 | 0.0787 | 1.0645 | 0.8923 | 1.2699 | 0.63 | 1 | 0.4271 |
| Gender | Female vs. Male | -0.3604 | 0.0472 | 0.6974 | 0.6274 | 0.7752 | 58.33 | 1 | <.0001 |
| Age |  | -0.0197 | 0.0049 | 0.9804 | 0.9698 | 0.9912 | 16.42 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0027 | 0.0011 | 0.9973 | 0.9948 | 0.9997 | 6.16 | 1 | 0.0131 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.0495 | 0.1605 | 1.0507 | 0.7333 | 1.5056 | 4.14 | 8 | <.0001 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.7314 | 0.1689 | 0.4812 | 0.3295 | 0.7028 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.2283 | 0.1715 | 1.2565 | 0.8554 | 1.8455 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.2103 | 0.1589 | 0.8103 | 0.5674 | 1.1571 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.2532 | 0.1746 | 1.2881 | 0.8709 | 1.9053 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.0349 | 0.1523 | 0.9657 | 0.6864 | 1.3585 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.1749 | 0.1464 | 1.1911 | 0.8579 | 1.6538 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.1059 | 0.1508 | 1.1117 | 0.7929 | 1.5588 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | 0.0042 | 0.0051 | 1.0042 | 0.9927 | 1.0158 | 0.66 | 1 | 0.4167 |
| Pre-intervention achievement for blood pressure control |  | 0.0301 | 0.0065 | 1.0306 | 1.0156 | 1.0458 | 21.26 | 1 | <.0001 |
| Overall QOF score |  | 0.0027 | 0.0020 | 1.0027 | 0.9984 | 1.0071 | 1.96 | 1 | 0.1615 |
| Comorbidity |  | -0.0506 | 0.0518 | 0.9507 | 0.8465 | 1.0676 | 0.96 | 1 | 0.3283 |

The estimated number needed to treat for one patient aged 80 years or over with hypertension to achieve blood pressure below 150/90 mmHg is 95

Table 40: Secondary outcome for Trial 2: Blood pressure below 140/80 mmHg in patients aged under 80 years with diabetes, and below 130/80 mmHg if there are complications of diabetes (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control package vs. Control (anticoagulation in AF package) | -0.0185 | 0.0862 | 0.9817 | 0.8092 | 1.1909 | 0.05 | 1 | 0.8300 |
| Gender | Female vs. Male | 0.1313 | 0.0287 | 1.1403 | 1.0691 | 1.2161 | 20.86 | 1 | <.0001 |
| Age |  | 0.0144 | 0.0013 | 1.0145 | 1.0116 | 1.0174 | 125.41 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0014 | 0.0011 | 0.9986 | 0.9960 | 1.0011 | 1.57 | 1 | 0.2102 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.2477 | 0.2013 | 0.7806 | 0.4971 | 1.2258 | 1.05 | 8 | 0.3954 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.1423 | 0.1708 | 0.8673 | 0.5915 | 1.2719 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.3110 | 0.1938 | 1.3648 | 0.8838 | 2.1074 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.0305 | 0.1811 | 0.9700 | 0.6463 | 1.4557 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.0631 | 0.2153 | 0.9388 | 0.5795 | 1.5211 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.0013 | 0.1681 | 0.9987 | 0.6852 | 1.4558 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.0692 | 0.1674 | 0.9331 | 0.6411 | 1.3581 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.0161 | 0.1713 | 0.9840 | 0.6702 | 1.4448 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.0084 | 0.0052 | 0.9916 | 0.9802 | 1.0032 | 2.63 | 1 | 0.1050 |
| Pre-intervention achievement for blood pressure control |  | 0.0266 | 0.0073 | 1.0270 | 1.0103 | 1.0440 | 13.28 | 1 | 0.0003 |
| Overall QOF score |  | -0.0004 | 0.0020 | 0.9996 | 0.9951 | 1.0041 | 0.04 | 1 | 0.8359 |
| Comorbidity |  | 0.0457 | 0.0461 | 1.0467 | 0.9440 | 1.1607 | 0.98 | 1 | 0.3218 |

The estimated number needed to treat for one patient aged under 80 years with diabetes to achieve blood pressure below 140/80 mmHg, and below 130/80 mmHg if there are complications of diabetes is -219

Table 41: Secondary outcome for Trial 2: Blood pressure below 130/80 mmHg in patients aged under 80 years with chronic kidney disease and proteinuria (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control package vs. Control (anticoagulation in AF package) | 0.0333 | 0.1125 | 1.0339 | 0.8033 | 1.3307 | 0.09 | 1 | 0.7672 |
| Gender | Female vs. Male | -0.0584 | 0.0984 | 0.9433 | 0.7565 | 1.1762 | 0.35 | 1 | 0.5528 |
| Age |  | 0.0029 | 0.0045 | 1.0029 | 0.9929 | 1.0130 | 0.41 | 1 | 0.5222 |
| Relative to 100 patient increase in list size at baseline |  | 0.0021 | 0.0016 | 1.0021 | 0.9986 | 1.0057 | 1.83 | 1 | 0.1764 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.3646 | 0.2391 | 0.6945 | 0.4062 | 1.1874 | 0.75 | 8 | 0.6458 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.0743 | 0.2186 | 0.9284 | 0.5685 | 1.5160 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.0942 | 0.2165 | 1.0988 | 0.6760 | 1.7859 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.0592 | 0.2449 | 0.9425 | 0.5441 | 1.6326 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.1026 | 0.2449 | 0.9024 | 0.5211 | 1.5630 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.1422 | 0.2117 | 0.8675 | 0.5396 | 1.3946 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.1139 | 0.2098 | 0.8923 | 0.5573 | 1.4287 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.1397 | 0.1924 | 1.1499 | 0.7469 | 1.7705 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.0028 | 0.0073 | 0.9972 | 0.9811 | 1.0137 | 0.14 | 1 | 0.7044 |
| Pre-intervention achievement for blood pressure control |  | 0.0092 | 0.0096 | 1.0093 | 0.9877 | 1.0313 | 0.92 | 1 | 0.3381 |
| Overall QOF score |  | 0.0006 | 0.0030 | 1.0006 | 0.9940 | 1.0073 | 0.05 | 1 | 0.8281 |
| Comorbidity |  | -0.1246 | 0.0776 | 0.8829 | 0.7418 | 1.0507 | 2.58 | 1 | 0.1085 |

The estimated number needed to treat for one patient aged under 80 years with chronic kidney disease and proteinuria to achieve blood pressure below 130/80 mmHg is 152

Table 42: Secondary outcome for Trial 2: Blood pressure below 140/90 mmHg in patients aged under 80 years with coronary heart disease (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control package vs. Control (anticoagulation in AF package) | 0.0681 | 0.0661 | 1.0704 | 0.9229 | 1.2415 | 1.06 | 1 | 0.3035 |
| Gender | Female vs. Male | -0.1087 | 0.0425 | 0.8970 | 0.8155 | 0.9865 | 6.56 | 1 | 0.0105 |
| Age |  | -0.0037 | 0.0022 | 0.9963 | 0.9913 | 1.0013 | 2.79 | 1 | 0.0947 |
| Relative to 100 patient increase in list size at baseline |  | -0.0013 | 0.0009 | 0.9987 | 0.9967 | 1.0007 | 1.98 | 1 | 0.1595 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.0208 | 0.1406 | 1.0211 | 0.7451 | 1.3993 | 1.76 | 8 | 0.0793 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.0507 | 0.1365 | 0.9506 | 0.7000 | 1.2908 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.2445 | 0.1404 | 1.2770 | 0.9321 | 1.7495 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.1629 | 0.1373 | 1.1769 | 0.8651 | 1.6011 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.2012 | 0.1540 | 1.2229 | 0.8659 | 1.7270 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.0787 | 0.1250 | 0.9243 | 0.6984 | 1.2233 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.0217 | 0.1238 | 0.9785 | 0.7415 | 1.2914 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.2628 | 0.1271 | 1.3006 | 0.9782 | 1.7293 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.0055 | 0.0042 | 0.9945 | 0.9852 | 1.0039 | 1.72 | 1 | 0.1895 |
| Pre-intervention achievement for blood pressure control |  | 0.0302 | 0.0056 | 1.0306 | 1.0177 | 1.0438 | 28.58 | 1 | <.0001 |
| Overall QOF score |  | 0.0017 | 0.0016 | 1.0017 | 0.9981 | 1.0053 | 1.14 | 1 | 0.2853 |
| Comorbidity |  | -0.0704 | 0.0397 | 0.9320 | 0.8527 | 1.0188 | 3.14 | 1 | 0.0763 |

The estimated number needed to treat for one patient aged under 80 years with coronary heart disease to achieve blood pressure below 140/90 mmHg is 69

Table 43: Secondary outcome for Trial 2: Blood pressure below 140/90 mmHg in patients aged under 80 years with peripheral arterial disease (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control package vs. Control (anticoagulation in AF package) | 0.1930 | 0.0941 | 1.2129 | 0.9821 | 1.4979 | 4.21 | 1 | 0.0404 |
| Gender | Female vs. Male | 0.0155 | 0.0885 | 1.0156 | 0.8328 | 1.2385 | 0.03 | 1 | 0.8611 |
| Age |  | 0.0153 | 0.0049 | 1.0154 | 1.0044 | 1.0266 | 9.82 | 1 | 0.0017 |
| Relative to 100 patient increase in list size at baseline |  | -0.0037 | 0.0013 | 0.9963 | 0.9935 | 0.9991 | 8.64 | 1 | 0.0033 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.1947 | 0.1924 | 1.2149 | 0.7892 | 1.8704 | 2.79 | 8 | 0.0045 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.0327 | 0.2275 | 1.0332 | 0.6203 | 1.7210 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.6632 | 0.1942 | 1.9410 | 1.2555 | 3.0007 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.2200 | 0.2175 | 1.2461 | 0.7650 | 2.0297 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.3143 | 0.2169 | 1.3693 | 0.8419 | 2.2270 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.0420 | 0.1723 | 0.9589 | 0.6515 | 1.4112 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.0604 | 0.1688 | 1.0623 | 0.7274 | 1.5513 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.4397 | 0.1773 | 1.5523 | 1.0429 | 2.3105 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.0030 | 0.0063 | 0.9970 | 0.9830 | 1.0112 | 0.23 | 1 | 0.6337 |
| Pre-intervention achievement for blood pressure control |  | 0.0257 | 0.0083 | 1.0261 | 1.0072 | 1.0453 | 9.64 | 1 | 0.0019 |
| Overall QOF score |  | 0.0020 | 0.0024 | 1.0020 | 0.9967 | 1.0074 | 0.74 | 1 | 0.3910 |
| Comorbidity |  | -0.1465 | 0.0603 | 0.8637 | 0.7546 | 0.9887 | 5.91 | 1 | 0.0151 |

The estimated number needed to treat for one patient aged under 80 years with peripheral arterial disease to achieve blood pressure below 140/90 mmHg was 23

Table 44: Secondary outcome for Trial 2: Blood pressure below 140/90 mmHg in patients aged under 80 years with a history of stroke / transient ischemic attack (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control package vs. Control (anticoagulation in AF package) | 0.0114 | 0.0686 | 1.0114 | 0.8673 | 1.1796 | 0.03 | 1 | 0.8683 |
| Gender | Female vs. Male | -0.0223 | 0.0549 | 0.9779 | 0.8647 | 1.1060 | 0.17 | 1 | 0.6843 |
| Age |  | 0.0089 | 0.0024 | 1.0089 | 1.0034 | 1.0144 | 13.33 | 1 | 0.0003 |
| Relative to 100 patient increase in list size at baseline |  | -0.0012 | 0.0009 | 0.9988 | 0.9967 | 1.0009 | 1.55 | 1 | 0.2138 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.0753 | 0.1358 | 0.9275 | 0.6840 | 1.2575 | 1.52 | 8 | 0.1460 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.2065 | 0.1558 | 0.8135 | 0.5736 | 1.1535 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.2052 | 0.1451 | 1.2277 | 0.8869 | 1.6996 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.1005 | 0.1514 | 1.1057 | 0.7875 | 1.5524 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.0352 | 0.1492 | 1.0358 | 0.7413 | 1.4473 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.1477 | 0.1258 | 0.8627 | 0.6506 | 1.1438 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.0699 | 0.1241 | 0.9325 | 0.7060 | 1.2317 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.1333 | 0.1270 | 1.1425 | 0.8594 | 1.5189 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.0035 | 0.0046 | 0.9965 | 0.9863 | 1.0068 | 0.58 | 1 | 0.4448 |
| Pre-intervention achievement for blood pressure control |  | 0.0298 | 0.0060 | 1.0302 | 1.0166 | 1.0441 | 24.94 | 1 | <.0001 |
| Overall QOF score |  | 0.0021 | 0.0018 | 1.0021 | 0.9981 | 1.0061 | 1.34 | 1 | 0.2466 |
| Comorbidity |  | -0.0738 | 0.0438 | 0.9289 | 0.8421 | 1.0246 | 2.84 | 1 | 0.0918 |

The estimated number needed to treat for one patient aged under 80 years with a history of stroke / transient ischemic attack to achieve blood pressure below 140/90 mmHg was 375

Table 45: Secondary outcome for Trial 2: Blood pressure below 140/90 mmHg in patients aged under 80 years with a cardiovascular disease risk of 20% or higher (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control package vs. Control (anticoagulation in AF package) | 0.0955 | 0.0578 | 1.1002 | 0.9665 | 1.2523 | 2.73 | 1 | 0.0985 |
| Gender | Female vs. Male | 0.1200 | 0.0279 | 1.1274 | 1.0591 | 1.2002 | 18.51 | 1 | <.0001 |
| Age |  | 0.0142 | 0.0017 | 1.0143 | 1.0104 | 1.0182 | 69.00 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0020 | 0.0008 | 0.9980 | 0.9963 | 0.9997 | 6.90 | 1 | 0.0086 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.0665 | 0.1281 | 1.0688 | 0.8019 | 1.4244 | 1.66 | 8 | 0.1037 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.0617 | 0.1213 | 1.0636 | 0.8103 | 1.3961 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.2555 | 0.1271 | 1.2911 | 0.9711 | 1.7166 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.0241 | 0.1195 | 0.9762 | 0.7467 | 1.2761 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.2987 | 0.1378 | 1.3480 | 0.9898 | 1.8359 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | 0.1184 | 0.1097 | 1.1257 | 0.8803 | 1.4396 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.0201 | 0.1083 | 1.0203 | 0.8004 | 1.3005 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.2304 | 0.1095 | 1.2591 | 0.9851 | 1.6092 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | 0.0001 | 0.0037 | 1.0001 | 0.9919 | 1.0083 | 0.00 | 1 | 0.9818 |
| Pre-intervention achievement for blood pressure control |  | 0.0220 | 0.0049 | 1.0223 | 1.0110 | 1.0337 | 19.82 | 1 | <.0001 |
| Overall QOF score |  | 0.0013 | 0.0014 | 1.0013 | 0.9982 | 1.0044 | 0.91 | 1 | 0.3396 |
| Comorbidity |  | -0.0338 | 0.0327 | 0.9667 | 0.8984 | 1.0403 | 1.07 | 1 | 0.3008 |

The estimated number needed to treat for one patient aged under 80 years with a cardiovascular disease risk of 20% or higher to achieve blood pressure below 140/90 mmHg is 42

Table 46: Secondary outcome for Trial 2: The proportion of eligible patients with measured blood pressure in the previous 12 months (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control package vs. Control (anticoagulation in AF package) | -0.0925 | 0.1620 | 0.9117 | 0.6341 | 1.3107 | 0.33 | 1 | 0.5680 |
| Gender | Female vs. Male | 0.3864 | 0.0212 | 1.4717 | 1.4033 | 1.5434 | 331.60 | 1 | <.0001 |
| Age |  | 0.0231 | 0.0008 | 1.0234 | 1.0215 | 1.0253 | 812.64 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0008 | 0.0021 | 0.9992 | 0.9945 | 1.0040 | 0.13 | 1 | 0.7192 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.1298 | 0.3842 | 1.1385 | 0.4813 | 2.6935 | 0.79 | 8 | 0.6105 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.3405 | 0.3288 | 1.4057 | 0.6728 | 2.9371 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.4004 | 0.3691 | 1.4925 | 0.6525 | 3.4137 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.1028 | 0.3412 | 1.1082 | 0.5159 | 2.3808 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.0036 | 0.4120 | 1.0036 | 0.3985 | 2.5273 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.2607 | 0.3122 | 0.7705 | 0.3827 | 1.5513 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.1717 | 0.3168 | 1.1873 | 0.5837 | 2.4152 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.2078 | 0.3255 | 1.2310 | 0.5935 | 2.5531 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | 0.0107 | 0.0090 | 1.0107 | 0.9905 | 1.0314 | 1.40 | 1 | 0.2371 |
| Pre-intervention achievement for blood pressure control |  | 0.0243 | 0.0137 | 1.0246 | 0.9936 | 1.0567 | 3.14 | 1 | 0.0763 |
| Overall QOF score |  | -0.0015 | 0.0037 | 0.9985 | 0.9902 | 1.0067 | 0.18 | 1 | 0.6748 |
| Comorbidity |  | -0.0315 | 0.0827 | 0.9690 | 0.8050 | 1.1664 | 0.15 | 1 | 0.7033 |

The estimated number needed to treat for one eligible patient to have their blood pressure measured in the previous 12 months is -112

Table 47: Secondary outcome for Trial 2: The proportion of men with atrial fibrillation and a CHA2DS2-VASc score of 1 prescribed anticoagulation therapy (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Anticoagulation in AF package vs. Control (blood pressure control package) | -0.3973 | 0.2663 | 0.6721 | 0.3694 | 1.2229 | 2.23 | 1 | 0.1363 |
| Age |  | 0.0541 | 0.0114 | 1.0556 | 1.0287 | 1.0831 | 22.30 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0064 | 0.0037 | 0.9937 | 0.9854 | 1.0020 | 2.95 | 1 | 0.0867 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.5634 | 0.4918 | 1.7567 | 0.5816 | 5.3059 | 0.93 | 8 | 0.4937 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.7151 | 0.8097 | 2.0443 | 0.3313 | 12.6157 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 1.0700 | 0.5718 | 2.9154 | 0.8064 | 10.5405 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.0996 | 0.5899 | 0.9052 | 0.2404 | 3.4085 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.3753 | 0.5504 | 1.4555 | 0.4225 | 5.0145 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | 0.7777 | 0.4775 | 2.1765 | 0.7442 | 6.3657 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.7451 | 0.4785 | 2.1065 | 0.7186 | 6.1755 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.8026 | 0.4710 | 2.2313 | 0.7742 | 6.4314 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | 0.0273 | 0.0178 | 1.0277 | 0.9874 | 1.0697 | 2.36 | 1 | 0.1253 |
| Pre-intervention achievement for blood pressure control |  | -0.0286 | 0.0237 | 0.9718 | 0.9214 | 1.0249 | 1.46 | 1 | 0.2273 |
| Overall QOF score |  | 0.0067 | 0.0069 | 1.0067 | 0.9911 | 1.0225 | 0.93 | 1 | 0.3357 |
| Comorbidity |  | 0.0475 | 0.1813 | 1.0486 | 0.6976 | 1.5761 | 0.07 | 1 | 0.7936 |

The estimated number needed to treat for one male patient with atrial fibrillation and a CHA2DS2-VASc score of 1 to be prescribed anticoagulation therapy is -11

Table 48: Secondary outcome for Trial 2: The proportion of all patients with atrial fibrillation and a CHA2DS2-VASc score of 2 or above prescribed anticoagulation therapy (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Anticoagulation in AF package vs. Control (blood pressure control package) | -0.0466 | 0.0860 | 0.9544 | 0.7871 | 1.1574 | 0.29 | 1 | 0.5877 |
| Gender | Female vs. Male | -0.1818 | 0.0595 | 0.8337 | 0.7296 | 0.9528 | 9.33 | 1 | 0.0023 |
| Age |  | -0.0349 | 0.0035 | 0.9657 | 0.9583 | 0.9732 | 101.77 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0005 | 0.0012 | 1.0005 | 0.9978 | 1.0032 | 0.17 | 1 | 0.6770 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.1386 | 0.1629 | 0.8706 | 0.6042 | 1.2543 | 1.08 | 8 | 0.3734 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.5646 | 0.2315 | 0.5686 | 0.3383 | 0.9554 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.0896 | 0.1816 | 0.9143 | 0.6085 | 1.3737 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.0935 | 0.1825 | 0.9107 | 0.6050 | 1.3710 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.1332 | 0.1809 | 1.1424 | 0.7616 | 1.7137 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.1304 | 0.1607 | 0.8778 | 0.6122 | 1.2586 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.0401 | 0.1555 | 0.9607 | 0.6779 | 1.3615 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.0386 | 0.1585 | 0.9621 | 0.6743 | 1.3728 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | 0.0372 | 0.0058 | 1.0379 | 1.0244 | 1.0516 | 40.71 | 1 | <.0001 |
| Pre-intervention achievement for blood pressure control |  | 0.0043 | 0.0073 | 1.0043 | 0.9880 | 1.0209 | 0.34 | 1 | 0.5577 |
| Overall QOF score |  | 0.0021 | 0.0022 | 1.0021 | 0.9971 | 1.0071 | 0.86 | 1 | 0.3533 |
| Comorbidity |  | 0.0311 | 0.0563 | 1.0316 | 0.9091 | 1.1705 | 0.30 | 1 | 0.5815 |

The estimated number needed to treat for one patient with atrial fibrillation and a CHA2DS2-VASc score of 2 or above to be prescribed anticoagulation therapy is -118

Table 49: Secondary outcome for Trial 2: The proportion of men with atrial fibrillation and a CHA2DS2-VASc score of 1 with contraindication for anti-coagulation and prescribed anti-coagulation (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Anticoagulation in AF package vs. Control (blood pressure control package) | -0.3816 | 0.2780 | 0.6827 | 0.3655 | 1.2753 | 1.88 | 1 | 0.1704 |
| Age |  | 0.0558 | 0.0115 | 1.0574 | 1.0304 | 1.0850 | 23.58 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0047 | 0.0038 | 0.9953 | 0.9868 | 1.0039 | 1.51 | 1 | 0.2194 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.7998 | 0.5191 | 2.2251 | 0.6928 | 7.1463 | 0.80 | 8 | 0.6033 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.7167 | 0.8245 | 2.0476 | 0.3209 | 13.0630 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 1.0347 | 0.5931 | 2.8142 | 0.7420 | 10.6738 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.0931 | 0.6145 | 1.0976 | 0.2758 | 4.3674 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.7064 | 0.5810 | 2.0266 | 0.5490 | 7.4806 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | 0.7720 | 0.4972 | 2.1640 | 0.7078 | 6.6165 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.7591 | 0.4981 | 2.1363 | 0.6973 | 6.5448 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.9236 | 0.4915 | 2.5184 | 0.8344 | 7.6008 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | 0.0278 | 0.0185 | 1.0282 | 0.9863 | 1.0719 | 2.25 | 1 | 0.1340 |
| Pre-intervention achievement for blood pressure control |  | -0.0261 | 0.0246 | 0.9742 | 0.9218 | 1.0295 | 1.13 | 1 | 0.2881 |
| Overall QOF score |  | 0.0048 | 0.0072 | 1.0048 | 0.9888 | 1.0212 | 0.45 | 1 | 0.5024 |
| Comorbidity |  | -0.0109 | 0.1869 | 0.9892 | 0.6499 | 1.5055 | 0.00 | 1 | 0.9537 |

The estimated number needed to treat for one male patient with atrial fibrillation and a CHA2DS2-VASc score of 1 with contraindication for anti-coagulation to be prescribed anticoagulation therapy is -12

Table 50: Secondary outcome for Trial 2: The proportion of all patients with atrial fibrillation and a CHA2DS2-VASc score of 2 or above with contraindication for anti-coagulation and prescribed anti-coagulation (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Anticoagulation in AF package vs. Control (blood pressure control package) | -0.1275 | 0.1071 | 0.8803 | 0.6924 | 1.1191 | 1.42 | 1 | 0.2338 |
| Gender | Female vs. Male | -0.1921 | 0.0660 | 0.8252 | 0.7117 | 0.9569 | 8.47 | 1 | 0.0036 |
| Age |  | -0.0233 | 0.0038 | 0.9769 | 0.9687 | 0.9852 | 38.25 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0017 | 0.0015 | 1.0017 | 0.9984 | 1.0050 | 1.29 | 1 | 0.2566 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.0047 | 0.2085 | 0.9953 | 0.6237 | 1.5885 | 2.14 | 8 | 0.0292 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.5122 | 0.2656 | 0.5992 | 0.3304 | 1.0868 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.1129 | 0.2248 | 0.8933 | 0.5397 | 1.4786 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.2592 | 0.2173 | 0.7717 | 0.4741 | 1.2560 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.5859 | 0.2394 | 1.7966 | 1.0505 | 3.0726 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.1526 | 0.1990 | 0.8585 | 0.5495 | 1.3412 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.0002 | 0.1927 | 1.0002 | 0.6494 | 1.5405 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.1092 | 0.1963 | 0.8966 | 0.5774 | 1.3921 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | 0.0186 | 0.0071 | 1.0188 | 1.0026 | 1.0352 | 6.80 | 1 | 0.0091 |
| Pre-intervention achievement for blood pressure control |  | 0.0033 | 0.0089 | 1.0033 | 0.9834 | 1.0236 | 0.13 | 1 | 0.7141 |
| Overall QOF score |  | 0.0026 | 0.0027 | 1.0026 | 0.9966 | 1.0087 | 0.95 | 1 | 0.3304 |
| Comorbidity |  | -0.0528 | 0.0670 | 0.9485 | 0.8162 | 1.1024 | 0.62 | 1 | 0.4306 |

The estimated number needed to treat for one patient with atrial fibrillation and a CHA2DS2-VASc score of 2 or above with contraindication for anti-coagulation to be prescribed anticoagulation therapy is -53

Table 51: Secondary outcome for Trial 2: The proportion of patients achieving the two indicators related to contraindication for anti-coagulation (WP4A)

| Variable | Comparison | Estimate | SE | Odds ratio (OR) | Lower limit of 97.5% CI for OR | Upper limit of 97.5% CI for OR | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Anticoagulation in AF package vs. Control (blood pressure control package) | -0.1766 | 0.1056 | 0.8381 | 0.6614 | 1.0621 | 2.79 | 1 | 0.0947 |
| Gender | Female vs. Male | -0.0465 | 0.0623 | 0.9546 | 0.8302 | 1.0977 | 0.56 | 1 | 0.4558 |
| Age |  | 0.0017 | 0.0031 | 1.0017 | 0.9947 | 1.0087 | 0.29 | 1 | 0.5918 |
| Relative to 100 patient increase in list size at baseline |  | 0.0004 | 0.0014 | 1.0004 | 0.9972 | 1.0037 | 0.08 | 1 | 0.7765 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.0940 | 0.2077 | 1.0985 | 0.6896 | 1.7499 | 1.59 | 8 | 0.1235 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.3442 | 0.2589 | 0.7088 | 0.3967 | 1.2666 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.0470 | 0.2236 | 1.0481 | 0.6348 | 1.7303 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.2184 | 0.2145 | 0.8038 | 0.4969 | 1.3000 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.5763 | 0.2368 | 1.7794 | 1.0464 | 3.0258 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.0285 | 0.1963 | 0.9719 | 0.6259 | 1.5091 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.0870 | 0.1902 | 1.0909 | 0.7121 | 1.6710 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.0112 | 0.1935 | 1.0112 | 0.6552 | 1.5606 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | 0.0216 | 0.0070 | 1.0219 | 1.0059 | 1.0380 | 9.54 | 1 | 0.0020 |
| Pre-intervention achievement for blood pressure control |  | 0.0007 | 0.0089 | 1.0007 | 0.9811 | 1.0208 | 0.01 | 1 | 0.9326 |
| Overall QOF score |  | 0.0031 | 0.0026 | 1.0031 | 0.9972 | 1.0090 | 1.36 | 1 | 0.2432 |
| Comorbidity |  | -0.0477 | 0.0656 | 0.9534 | 0.8230 | 1.1046 | 0.53 | 1 | 0.4675 |

The estimated number needed to treat for one patient to achieve at least one of the indicators relating to contraindication for anti-coagulation is -36

Table 52: Secondary outcome for Trial 1: Mean diastolic blood pressure in diabetes trial population (i.e. diabetes control arm vs risky prescribing arm) (WP4A)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control implementation package vs. Control (risky prescribing package) | -0.2473 | 0.4520 | -1.2606 | 0.7660 | 0.30 | 1 | 0.5843 |
| Gender | Female vs. Male | -0.0442 | 0.1040 | -0.2774 | 0.1889 | 0.18 | 1 | 0.6705 |
| Age |  | -0.2064 | 0.0039 | -0.2152 | -0.1977 | 2826.53 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0052 | 0.0068 | -0.0205 | 0.0101 | 0.58 | 1 | 0.4469 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.0802 | 1.2494 | -2.7205 | 2.8808 | 1.28 | 9 | 0.2406 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -1.7128 | 1.0856 | -4.1463 | 0.7206 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.8784 | 0.7961 | -2.6629 | 0.9060 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.1744 | 1.1112 | -2.6653 | 2.3164 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.9016 | 1.0856 | -1.5319 | 3.3350 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -1.4128 | 1.2225 | -4.1530 | 1.3275 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -1.2090 | 0.9459 | -3.3292 | 0.9112 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -1.4812 | 1.0732 | -3.8869 | 0.9245 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.2175 | 0.9901 | -2.4369 | 2.0019 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.0179 | 0.0548 | -0.1408 | 0.1049 | 0.11 | 1 | 0.7436 |
| Pre-intervention achievement for diabetes control |  | -0.0575 | 0.0339 | -0.1335 | 0.0186 | 2.87 | 1 | 0.0902 |
| Overall QOF score |  | -0.0009 | 0.0086 | -0.0201 | 0.0183 | 0.01 | 1 | 0.9182 |
| Comorbidity |  | 0.1933 | 0.2730 | -0.4186 | 0.8051 | 0.50 | 1 | 0.4789 |

Table 53: Secondary outcome for Trial 1: Mean systolic blood pressure in diabetes trial population (i.e. diabetes control arm vs risky prescribing arm) (WP4A)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control implementation package vs. Control (risky prescribing package) | -0.0361 | 0.6486 | -1.4900 | 1.4178 | 0.00 | 1 | 0.9556 |
| Gender | Female vs. Male | 0.5034 | 0.1679 | 0.1270 | 0.8798 | 8.99 | 1 | 0.0027 |
| Age |  | 0.1147 | 0.0063 | 0.1007 | 0.1288 | 334.91 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.0113 | 0.0098 | -0.0333 | 0.0107 | 1.32 | 1 | 0.2505 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 1.4850 | 1.7812 | -2.5075 | 5.4776 | 0.72 | 9 | 0.6874 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.6727 | 1.5614 | -4.1726 | 2.8272 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -1.3201 | 1.1399 | -3.8751 | 1.2349 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.6920 | 1.5904 | -2.8729 | 4.2570 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.3334 | 1.5596 | -3.1624 | 3.8293 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -1.8836 | 1.7545 | -5.8163 | 2.0491 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.6526 | 1.3570 | -3.6944 | 2.3892 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.3393 | 1.5429 | -3.7977 | 3.1191 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -1.1683 | 1.4188 | -4.3486 | 2.0120 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.0079 | 0.0791 | -0.1851 | 0.1694 | 0.01 | 1 | 0.9205 |
| Pre-intervention achievement for diabetes control |  | -0.0922 | 0.0486 | -0.2012 | 0.0167 | 3.60 | 1 | 0.0578 |
| Overall QOF score |  | -0.0017 | 0.0124 | -0.0295 | 0.0261 | 0.02 | 1 | 0.8902 |
| Comorbidity |  | -0.1415 | 0.3940 | -1.0246 | 0.7417 | 0.13 | 1 | 0.7196 |

Table 54: Secondary outcome for Trial 1: Mean total serum cholesterol (log scale) in diabetes trial population (i.e. diabetes control arm vs risky prescribing arm) (WP4A)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control implementation package vs. Control (risky prescribing package) | 0.00918 | 0.0070 | -0.0066 | 0.0250 | 1.70 | 1 | 0.1926 |
| Gender | Female vs. Male | 0.09336 | 0.0029 | 0.0868 | 0.0999 | 1018.57 | 1 | <.0001 |
| Age |  | -0.00351 | 0.0001 | -0.0038 | -0.0033 | 1017.60 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.00001 | 0.0001 | -0.0002 | 0.0003 | 0.02 | 1 | 0.8922 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.02200 | 0.0185 | -0.0195 | 0.0635 | 3.79 | 9 | <.0001 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.03656 | 0.0172 | -0.0751 | 0.0020 | . | . | . |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.02843 | 0.0122 | -0.0558 | -0.0010 | . | . | . |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.02541 | 0.0170 | -0.0636 | 0.0128 | . | . | . |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.01387 | 0.0171 | -0.0245 | 0.0522 | . | . | . |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.04530 | 0.0190 | -0.0880 | -0.0026 | . | . | . |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.04246 | 0.0148 | -0.0755 | -0.0094 | . | . | . |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.02465 | 0.0170 | -0.0627 | 0.0134 | . | . | . |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.00501 | 0.0153 | -0.0292 | 0.0392 | . | . | . |
| Pre-intervention achievement for risky prescribing |  | 0.00022 | 0.0009 | -0.0018 | 0.0022 | 0.06 | 1 | 0.8040 |
| Pre-intervention achievement for diabetes control |  | -0.00037 | 0.0005 | -0.0015 | 0.0008 | 0.50 | 1 | 0.4815 |
| Overall QOF score |  | 0.00005 | 0.0001 | -0.0003 | 0.0004 | 0.14 | 1 | 0.7125 |

Table 55: Secondary outcome for Trial 1: Mean Haemoglobin A1c (log scale) in diabetes trial population (i.e. diabetes arm vs risky prescribing arm) (WP4A)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control implementation package vs. Control (risky prescribing package) | -0.00308 | 0.0069 | -0.0185 | 0.0124 | 0.20 | 1 | 0.6545 |
| Gender | Female vs. Male | -0.01643 | 0.0029 | -0.0230 | -0.0099 | 31.73 | 1 | <.0001 |
| Age |  | -0.00325 | 0.0001 | -0.0035 | -0.0030 | 892.63 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | -0.00012 | 0.0001 | -0.0003 | 0.0001 | 1.24 | 1 | 0.2662 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.02086 | 0.0180 | -0.0195 | 0.0612 | 2.89 | 9 | 0.0020 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.01734 | 0.0168 | -0.0204 | 0.0551 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.01617 | 0.0119 | -0.0105 | 0.0429 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.01574 | 0.0166 | -0.0529 | 0.0215 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.03522 | 0.0167 | -0.0728 | 0.0023 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.02072 | 0.0186 | -0.0625 | 0.0210 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | 0.01367 | 0.0144 | -0.0186 | 0.0459 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.00162 | 0.0166 | -0.0387 | 0.0355 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.02622 | 0.0149 | -0.0072 | 0.0597 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.00014 | 0.0009 | -0.0018 | 0.0021 | 0.03 | 1 | 0.8678 |
| Pre-intervention achievement for diabetes control |  | -0.00281 | 0.0005 | -0.0040 | -0.0017 | 29.98 | 1 | <.0001 |
| Overall QOF score |  | 0.00002 | 0.0001 | -0.0003 | 0.0003 | 0.01 | 1 | 0.9047 |
| Comorbidity |  | 0.00540 | 0.0043 | -0.0043 | 0.0151 | 1.57 | 1 | 0.2109 |

Table 56: Secondary outcome for Trial 2: Mean diastolic blood pressure in blood pressure trial population (i.e. blood pressure control arm vs atrial fibrillation arm)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control implementation package vs. Control (Anticoagulation in AF package) | -0.2028 | 0.4585 | -1.2304 | 0.8249 | 0.20 | 1 | 0.6583 |
| Gender | Female vs. Male | -0.0331 | 0.0671 | -0.1836 | 0.1174 | 0.24 | 1 | 0.6220 |
| Age |  | -0.2461 | 0.0027 | -0.2522 | -0.2401 | 8418.62 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0099 | 0.0061 | -0.0037 | 0.0235 | 2.66 | 1 | 0.1029 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 1.0228 | 1.0795 | -1.3968 | 3.4424 | 0.42 | 8 | 0.9104 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.4864 | 0.9224 | -1.5812 | 2.5539 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.5556 | 1.0374 | -1.7696 | 2.8809 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 1.0412 | 0.9617 | -1.1144 | 3.1968 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.3148 | 1.1582 | -2.9108 | 2.2812 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | 0.1983 | 0.8897 | -1.7958 | 2.1924 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.1313 | 0.8905 | -2.1272 | 1.8647 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.5968 | 0.9170 | -1.4587 | 2.6523 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.0012 | 0.0266 | -0.0609 | 0.0585 | 0.00 | 1 | 0.9639 |
| Pre-intervention achievement for blood pressure control |  | -0.0895 | 0.0387 | -0.1762 | -0.0027 | 5.34 | 1 | 0.0208 |
| Overall QOF score |  | 0.0032 | 0.0105 | -0.0204 | 0.0267 | 0.09 | 1 | 0.7636 |
| Comorbidity |  | -0.1346 | 0.2349 | -0.6612 | 0.3920 | 0.33 | 1 | 0.5667 |

Table 57: Secondary outcome for Trial 2: Mean systolic blood pressure in blood pressure trial population (i.e. blood pressure control arm vs atrial fibrillation arm)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control implementation package vs. Control (Anticoagulation in AF package) | 0.2743 | 0.5353 | -0.9255 | 1.4741 | 0.26 | 1 | 0.6084 |
| Gender | Female vs. Male | 0.4450 | 0.1043 | 0.2113 | 0.6786 | 18.22 | 1 | <.0001 |
| Age |  | 0.0501 | 0.0042 | 0.0408 | 0.0594 | 144.76 | 1 | <.0001 |
| Relative to 100 patient increase in list size at baseline |  | 0.0083 | 0.0071 | -0.0076 | 0.0241 | 1.36 | 1 | 0.2444 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.7537 | 1.2509 | -3.5575 | 2.0502 | 0.99 | 8 | 0.4423 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -1.3776 | 1.0764 | -3.7902 | 1.0351 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -1.9035 | 1.2060 | -4.6068 | 0.7997 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -1.5021 | 1.1200 | -4.0126 | 1.0084 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -2.4692 | 1.3441 | -5.4819 | 0.5436 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -1.3379 | 1.0392 | -3.6671 | 0.9914 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.2641 | 1.0355 | -2.5851 | 2.0570 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -2.0676 | 1.0667 | -4.4585 | 0.3233 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.0535 | 0.0316 | -0.1243 | 0.0173 | 2.86 | 1 | 0.0906 |
| Pre-intervention achievement for blood pressure control |  | -0.1293 | 0.0452 | -0.2307 | -0.0280 | 8.18 | 1 | 0.0042 |
| Overall QOF score |  | 0.0016 | 0.0123 | -0.0260 | 0.0291 | 0.02 | 1 | 0.8990 |
| Comorbidity |  | 0.0873 | 0.2776 | -0.5350 | 0.7096 | 0.10 | 1 | 0.7531 |

Table 58: Secondary outcome for Trial 1: Summary of practice level adherence to QOF indicators related to the diabetes control indicators (WP4a)

|  |  |  |
| --- | --- | --- |
| QOF indicator | Diabetes control package (n=40) | Control (risky prescribing package) (n=40) |
| The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less (DM002) |  |  |
| Mean (SD) | 91.54% (5.05%) | 91.33% (4.71%) |
| Median (Range) | 93.18% (77.81%, 98.00%) | 92.88% (79.06%, 100.00%) |
|  |  |  |
| The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 140/80 mmHg or less (DM003) |  |  |
| Mean (SD) | 77.25% (11.02%) | 76.73% (9.63%) |
| Median (Range) | 79.73% (33.33%, 92.00%) | 75.73% (54.39%, 98.67%) |
|  |  |  |
| The percentage of patients with diabetes, on the register, whose last measured total serum cholesterol (measured in the preceding 12 months) is 5 mmol/mol or less (DM004) |  |  |
| Mean (SD) | 79.54% (6.74%) | 79.30% (7.98%) |
| Median (Range) | 80.83% (60.94%, 93.60%) | 80.00% (56.93%, 96.09%) |
|  |  |  |
| The percentage of patients with diabetes, on the register, with a diagnosis of nephropathy (clinical proteinuria) or micro-albuminuria who are currently treated with an ACE-I (or ARBs) (DM006) |  |  |
| Mean (SD) | 94.38% (6.58%) | 89.94% (8.08%) |
| Median (Range) | 97.25% (78.13%, 100.00%) | 91.84% (70.83%, 100.00%) |
|  |  |  |
| The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c is 59 mmol/mol or less in the preceding 12 months (DM007) |  |  |
| Mean (SD) | 69.93% (9.20%) | 68.06% (9.88%) |
| Median (Range) | 70.20% (46.58%, 96.19%) | 68.31% (39.80%, 89.06%) |
|  |  |  |
| The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c is 64 mmol/mol or less in the preceding 12 months (DM008) |  |  |
| Mean (SD) | 78.00% (8.11%) | 76.67% (9.29%) |
| Median (Range) | 77.21% (55.10%, 96.92%) | 80.00% (49.25%, 92.14%) |
|  |  |  |
| The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c is 75 mmol/mol or less in the preceding 12 months (DM009) |  |  |
| Mean (SD) | 88.07% (6.81%) | 87.24% (7.93%) |
| Median (Range) | 88.78% (68.00%, 100.00%) | 90.00% (61.27%, 98.83%) |
|  |  |  |
| The percentage of patients with diabetes, on the register, with a record of a foot examination and risk classification within the preceding 12 months (DM012) |  |  |
| Mean (SD) | 85.88% (10.35%) | 83.51% (10.50%) |
| Median (Range) | 90.36% (59.76%, 98.28%) | 83.64% (54.82%, 98.91%) |
|  |  |  |
| The percentage of patients newly diagnosed with diabetes, on the register, in the preceding 1 April to 31 March who have a record of being referred to a structured education programme within 9 months after entry on to the diabetes register (DM014) |  |  |
| Mean (SD) | 92.33% (18.93%) | 91.78% (14.26%) |
| Median (Range) | 100.00% (0.00%, 100.00%) | 96.67% (32.14%, 100.00%) |
|  |  |  |
| The percentage of patients with diabetes, on the register, who have had influenza immunisation in the preceding 1 August to 31 March (DM018) |  |  |
| Mean (SD) | 95.79% (4.97%) | 96.28% (3.29%) |
| Median (Range) | 97.57% (76.67%, 100.00%) | 97.00% (86.24%, 100.00%) |

Footnote 1: Modelling assumptions were violated for indicators DM006, DM014 and DM018, further statistical comparisons were not made for these indicators

Footnote 2: One practice in the control (risky prescribing) arm had missing data for all QOF indicators

Table 59: Secondary outcome for Trial 2: Summary of practice level adherence to QOF indicators related to the blood pressure control indicators (WP4a)

|  |  |  |
| --- | --- | --- |
| QOF indicator | Blood pressure control package (n=32) | Control (anticoagulation in atrial fibrillation package) (n=32) |
| The percentage of patients with coronary heart disease in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less (CHD002) |  |  |
| Mean (SD) | 90.65% (5.24%) | 91.60% (3.82%) |
| Median (Range) | 92.57% (73.48%, 96.38%) | 92.13% (84.38%, 97.50%) |
|  |  |  |
| The percentage of patients with hypertension in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less (HYP006) |  |  |
| Mean (SD) | 83.05% (5.33%) | 81.70% (4.37%) |
| Median (Range) | 84.53% (66.43%, 90.45%) | 82.07% (73.78%, 92.66%) |
|  |  |  |
| The percentage of patients with a history of stroke or transient ischemic attack in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less (STIA003) |  |  |
| Mean (SD) | 87.75% (5.60%) | 87.73% (5.97%) |
| Median (Range) | 88.61% (71.26%, 96.03%) | 87.20% (76.00%, 100.00%) |
|  |  |  |

Footnote: Two practices in the blood pressure control intervention arm had missing data for all QOF indicators

Table 60: Secondary outcome for Trial 2: Summary of practice level adherence to QOF indicators related to the anticoagulation in atrial fibrillation indicators (WP4a)

|  |  |  |
| --- | --- | --- |
| QOF indicator | Anticoagulation in atrial fibrillation package (n=32) | Control (blood pressure control package) (n=32) |
| The percentage of patients with atrial fibrillation in whom stroke risk has been assessed using the CHA2DS2-VASc score risk stratification scoring system in the preceding 3 years (excluding those patients with a previous CHADS2 or CHA2DS2-VASc score of 2 or more) (AF006) |  |  |
| Mean (SD) | 97.05% (3.91%) | 96.88% (3.38%) |
| Median (Range) | 99.18% (85.47%, 100.00%) | 98.40% (87.68%, 100.00%) |
|  |  |  |
| In those patients with atrial fibrillation with a record of CHA2DS2-VASc score of 2 or more, the percentage of patients who are currently treated with anticoagulation drug therapy (AF007) |  |  |
| Mean (SD) | 87.32% (9.89%) | 86.21% (6.90%) |
| Median (Range) | 88.55% (70.31%, 100.00%) | 86.65% (72.73%, 100.00%) |

Footnote 1: Modelling assumptions were violated for indicators AF006 and AF007, further statistical comparisons were not made for these indicators

Footnote 2: Two practices in the blood pressure control implementation package arm had missing data for all QOF indicators

Table 61: Summary of practice-level adherence to non-trial related QOF indicators (WP4a)

| QOF indicator | Diabetes control package (n=40) | Risky prescribing package (n=40) | Blood pressure control package (n=32) | Anticoagulation in atrial fibrillation package (n=32) |
| --- | --- | --- | --- | --- |
| The percentage of patients with asthma, on the register, who have had an asthma review in the preceding 12 months that includes an assessment of asthma control using the 3 RCP questions (AST003) |  |  |  |  |
| Mean (SD) | 77.41% (7.62%) | 76.19% (7.64%) | 77.04% (8.95%) | 77.46% (7.81%) |
| Median (Range) | 77.56% (48.20%, 93.15%) | 74.84% (54.78%, 97.90%) | 76.89% (49.33%, 99.51%) | 75.73% (64.62%, 98.89%) |
|  |  |  |  |  |
| The percentage of patients with coronary heart disease with a record in the preceding 12 months that aspirin, an alternative anti-platelet therapy, or an anti-coagulant is being taken (CHD005) |  |  |  |  |
| Mean (SD) | 96.08% (4.06%) | 94.91% (3.55%) | 93.68% (4.76%) | 95.06% (4.02%) |
| Median (Range) | 96.94% (80.00%, 100.00%) | 96.08% (84.56%, 100.00%) | 94.54% (79.13%, 100.00%) | 96.11% (84.39%, 100.00%) |
|  |  |  |  |  |
| The percentage of patients with coronary heart disease who have had influenza immunisation in the preceding 1 August to 31 March (CHD007) |  |  |  |  |
| Mean (SD) | 95.73% (6.76%) | 96.82% (3.65%) | 94.26% (5.85%) | 96.74% (3.89%) |
| Median (Range) | 97.52% (60.00%, 100.00%) | 97.67% (84.42%, 100.00%) | 96.71% (76.36%, 100.00%) | 97.77% (82.33%, 100.00%) |
|  |  |  |  |  |
| The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses who have a comprehensive care plan documented in the record (in the preceding 12 months) agreed between individuals, their family and/or carers as appropriate (MH002) |  |  |  |  |
| Mean (SD) | 93.89% (5.44%) | 87.08% (18.09%) | 87.47% (16.69%) | 89.92% (14.81%) |
| Median (Range) | 93.87% (80.00%, 100.00%) | 92.86% (20.00%, 100.00%) | 92.76% (13.79%, 100.00%) | 93.44% (19.44%, 100.00%) |
|  |  |  |  |  |
| The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses who have a record of blood pressure in the preceding 12 months (MH003) |  |  |  |  |
| Mean (SD) | 92.13% (7.76%) | 92.68% (5.92%) | 90.04% (9.58%) | 89.83% (7.30%) |
| Median (Range) | 93.84% (69.57%, 100.00%) | 93.55% (69.81%, 100.00%) | 92.21% (65.52%, 100.00%) | 91.61% (72.97%, 100.00%) |
|  |  |  |  |  |
| The percentage of patients with any or any combination of the following conditions: CHD, PAD, stroke or TIA, hypertension, diabetes, COPD, CKD, asthma, schizophrenia, bipolar affective disorder or other psychoses whose notes record smoking status in the preceding 12 months (SMOK002) |  |  |  |  |
| Mean (SD) | 95.54% (3.16%) | 96.46% (2.12%) | 95.45% (2.73%) | 95.74% (2.80%) |
| Median (Range) | 96.40% (81.53%, 100.00%) | 97.01% (91.96%, 100.00%) | 95.91% (88.28%, 100.00%) | 96.23% (90.68%, 100.00%) |
|  |  |  |  |  |
| The percentage of patients aged 15 or over who are recorded as current smokers who have a record of an offer of support and treatment within the preceding 24 months (SMOK004) |  |  |  |  |
| Mean (SD) | 90.71% (9.85%) | 90.10% (8.33%) | 89.15% (9.28%) | 89.49% (10.66%) |
| Median (Range) | 92.22% (54.60%, 100.00%) | 91.75% (65.59%, 100.00%) | 90.99% (66.16%, 100.00%) | 92.18% (62.05%, 100.00%) |
|  |  |  |  |  |
| The percentage of patients with any or any combination of the following conditions: CHD, PAD, stroke or TIA, hypertension, diabetes, COPD, CKD, asthma, schizophrenia, bipolar affective disorder or other psychoses who are recorded as current smokers who have a record of an offer of support and treatment within the preceding 12 months (SMOK005) |  |  |  |  |
| Mean (SD) | 97.42% (3.17%) | 97.25% (4.06%) | 97.40% (3.28%) | 96.79% (4.65%) |
| Median (Range) | 98.05% (85.92%, 100.00%) | 98.40% (82.50%, 100.00%) | 98.45% (84.62%, 100.00%) | 98.40% (81.52%, 100.00%) |
|  |  |  |  |  |

Footnote 1: Modelling assumptions were violated for indicators CHD005, CHD007, MH002, MH003, SMOK004 and SMOK005, further statistical comparisons were not made for these indicators

Footnote 2: One practice in the risky prescribing implementation package arm and two practices in the blood pressure control implementation package arm had missing data for all QOF indicator

Table 62: Secondary outcome for Trial 1. Achievement of QOF indicator, ‘The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less’ (DM002; WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. control (risky prescribing package) | 0.001109 | 0.0109 | -0.0239 | 0.0261 | 0.01 | 1 | 0.9193 |
| Relative to 100 patient increase in list size at baseline |  | 0.000052 | 0.0002 | -0.0003 | 0.0004 | 0.09 | 1 | 0.7651 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.005415 | 0.0323 | -0.0796 | 0.0688 | 1.23 | 9 | 0.2909 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.039720 | 0.0260 | -0.0199 | 0.0994 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.009339 | 0.0202 | -0.0371 | 0.0558 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.031388 | 0.0272 | -0.0939 | 0.0311 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.007506 | 0.0254 | -0.0658 | 0.0508 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.004627 | 0.0279 | -0.0593 | 0.0686 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.011024 | 0.0239 | -0.0659 | 0.0438 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.009086 | 0.0247 | -0.0477 | 0.0659 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.035433 | 0.0252 | -0.0224 | 0.0933 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.000080 | 0.0013 | -0.0031 | 0.0030 | 0.00 | 1 | 0.9521 |
| Pre-intervention achievement for diabetes control |  | 0.001289 | 0.0009 | -0.0007 | 0.0033 | 2.28 | 1 | 0.1361 |
| Overall QOF score |  | 0.000323 | 0.0002 | -0.0001 | 0.0007 | 3.02 | 1 | 0.0871 |

Table 63: Secondary outcome for Trial 1. Achievement of QOF indicator, ‘The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 140/80 mmHg or less’ (DM003; WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.000630 | 0.0231 | -0.0525 | 0.0537 | 0.00 | 1 | 0.9784 |
| Relative to 100 patient increase in list size at baseline |  | 0.000186 | 0.0004 | -0.0007 | 0.0010 | 0.26 | 1 | 0.6134 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.044025 | 0.0686 | -0.2015 | 0.1135 | 0.96 | 9 | 0.4793 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.049570 | 0.0551 | -0.0770 | 0.1761 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.022605 | 0.0429 | -0.0759 | 0.1211 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.052645 | 0.0578 | -0.1852 | 0.0800 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.045333 | 0.0539 | -0.1691 | 0.0784 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.005583 | 0.0591 | -0.1302 | 0.1413 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.023108 | 0.0507 | -0.1395 | 0.0933 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.027589 | 0.0525 | -0.0929 | 0.1480 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.049946 | 0.0535 | -0.0728 | 0.1727 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.003622 | 0.0028 | -0.0028 | 0.0101 | 1.66 | 1 | 0.2020 |
| Pre-intervention achievement for diabetes control |  | 0.002017 | 0.0018 | -0.0021 | 0.0062 | 1.24 | 1 | 0.2699 |
| Overall QOF score |  | 0.000862 | 0.0004 | -0.0000 | 0.0018 | 4.79 | 1 | 0.0324 |

Table 64: Secondary outcome for Trial 1. Achievement of QOF indicator, ‘The percentage of patients with diabetes, on the register, whose last total cholesterol (measured within the preceding 12 months) is 5 mmol/l or less’ (DM004) (WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | -0.001213 | 0.0168 | -0.0397 | 0.0373 | 0.01 | 1 | 0.9426 |
| Relative to 100 patient increase in list size at baseline |  | 0.000113 | 0.0003 | -0.0005 | 0.0007 | 0.18 | 1 | 0.6724 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.010602 | 0.0498 | -0.1037 | 0.1249 | 1.11 | 9 | 0.3667 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.020530 | 0.0400 | -0.0713 | 0.1123 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.049608 | 0.0311 | -0.0219 | 0.1211 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.006959 | 0.0419 | -0.1031 | 0.0892 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | 0.011337 | 0.0391 | -0.0784 | 0.1011 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.071185 | 0.0429 | -0.0273 | 0.1696 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | 0.018214 | 0.0368 | -0.0662 | 0.1026 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.006330 | 0.0381 | -0.0810 | 0.0937 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.076993 | 0.0388 | -0.0121 | 0.1660 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.002202 | 0.0020 | -0.0069 | 0.0025 | 1.17 | 1 | 0.2841 |
| Pre-intervention achievement for diabetes control |  | 0.002001 | 0.0013 | -0.0010 | 0.0050 | 2.32 | 1 | 0.1329 |
| Overall QOF score |  | 0.000003 | 0.0003 | -0.0007 | 0.0007 | 0.00 | 1 | 0.9918 |

Table 65: Secondary outcome for Trial 1. Achievement of QOF indicator, ‘The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c (measured within the preceding 12 months) is 59 mmol/mol or less’ (DM007) (WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.012716 | 0.0207 | -0.0348 | 0.0602 | 0.38 | 1 | 0.5413 |
| Relative to 100 patient increase in list size at baseline |  | -0.000034 | 0.0003 | -0.0008 | 0.0007 | 0.01 | 1 | 0.9175 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.025327 | 0.0614 | -0.1663 | 0.1157 | 0.59 | 9 | 0.7981 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.045005 | 0.0494 | -0.1583 | 0.0683 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.027141 | 0.0384 | -0.1154 | 0.0611 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.074287 | 0.0517 | -0.1930 | 0.0444 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.009151 | 0.0483 | -0.1199 | 0.1016 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.031775 | 0.0529 | -0.1533 | 0.0897 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.062293 | 0.0454 | -0.1665 | 0.0419 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.023044 | 0.0470 | -0.1309 | 0.0848 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.012975 | 0.0479 | -0.0969 | 0.1229 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.002281 | 0.0025 | -0.0081 | 0.0035 | 0.82 | 1 | 0.3680 |
| Pre-intervention achievement for diabetes control |  | 0.001415 | 0.0016 | -0.0023 | 0.0051 | 0.76 | 1 | 0.3866 |
| Overall QOF score |  | 0.001016 | 0.0004 | 0.0002 | 0.0018 | 8.30 | 1 | 0.0054 |

Table 66: Secondary outcome for Trial 1. Achievement of QOF indicator, ‘The percentage of patients with diabetes, on the register, in whom the last measured IFCC-HbA1c (measured within the preceding 12 months) is 64 mmol/mol or less’ (DM008) (WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.007058 | 0.0185 | -0.0353 | 0.0494 | 0.15 | 1 | 0.7036 |
| Relative to 100 patient increase in list size at baseline |  | 0.000054 | 0.0003 | -0.0006 | 0.0007 | 0.03 | 1 | 0.8542 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.031049 | 0.0548 | -0.1568 | 0.0947 | 0.56 | 9 | 0.8282 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.029990 | 0.0440 | -0.1310 | 0.0711 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.017126 | 0.0343 | -0.0958 | 0.0615 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.057935 | 0.0461 | -0.1638 | 0.0479 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.019538 | 0.0430 | -0.1183 | 0.0792 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.033815 | 0.0472 | -0.1422 | 0.0745 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.061480 | 0.0405 | -0.1544 | 0.0314 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.025139 | 0.0419 | -0.1213 | 0.0710 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.010542 | 0.0427 | -0.0875 | 0.1086 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.001605 | 0.0022 | -0.0068 | 0.0035 | 0.51 | 1 | 0.4769 |
| Pre-intervention achievement for diabetes control |  | 0.000916 | 0.0014 | -0.0024 | 0.0042 | 0.40 | 1 | 0.5290 |
| Overall QOF score |  | 0.001086 | 0.0003 | 0.0004 | 0.0018 | 11.92 | 1 | 0.0010 |

Table 67: Secondary outcome for Trial 1. Achievement of QOF indicator, ‘The percentage of patients with diabetes, on the register, in whom the last measured IFCC-HbA1c (measured within the preceding 12 months) is 75 mmol/mol or less’ (DM009) (WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.003232 | 0.0156 | -0.0326 | 0.0391 | 0.04 | 1 | 0.8367 |
| Relative to 100 patient increase in list size at baseline |  | -0.000052 | 0.0002 | -0.0006 | 0.0005 | 0.04 | 1 | 0.8343 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.033800 | 0.0463 | -0.1401 | 0.0725 | 0.85 | 9 | 0.5775 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.032885 | 0.0372 | -0.1183 | 0.0526 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.022686 | 0.0290 | -0.0892 | 0.0438 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.056924 | 0.0390 | -0.1464 | 0.0326 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.040652 | 0.0364 | -0.1242 | 0.0429 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.033863 | 0.0399 | -0.1255 | 0.0578 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.070295 | 0.0342 | -0.1489 | 0.0083 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.045196 | 0.0354 | -0.1265 | 0.0361 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.004457 | 0.0361 | -0.0784 | 0.0873 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | -0.003161 | 0.0019 | -0.0075 | 0.0012 | 2.78 | 1 | 0.1005 |
| Pre-intervention achievement for diabetes control |  | 0.000968 | 0.0012 | -0.0018 | 0.0038 | 0.63 | 1 | 0.4318 |
| Overall QOF score |  | 0.000770 | 0.0003 | 0.0002 | 0.0014 | 8.37 | 1 | 0.0052 |

Table 68: Secondary outcome for Trial 1. Achievement of QOF indicator, ‘The percentage of patients with diabetes, on the register, with a record of a foot examination and risk classification within the preceding 12 months’ (DM0012) (WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Diabetes control package vs. Control (risky prescribing package) | 0.021947 | 0.0209 | -0.0260 | 0.0699 | 1.10 | 1 | 0.2972 |
| Relative to 100 patient increase in list size at baseline |  | -0.000310 | 0.0003 | -0.0011 | 0.0005 | 0.87 | 1 | 0.3533 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.001890 | 0.0620 | -0.1403 | 0.1441 | 2.65 | 9 | 0.0112 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.011116 | 0.0498 | -0.1032 | 0.1254 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.094205 | 0.0388 | -0.1832 | -0.0053 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.114650 | 0.0522 | -0.2344 | 0.0051 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.003300 | 0.0487 | -0.1150 | 0.1084 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.004302 | 0.0534 | -0.1182 | 0.1268 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | 0.004042 | 0.0458 | -0.1010 | 0.1091 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.002417 | 0.0474 | -0.1112 | 0.1063 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.052753 | 0.0483 | -0.0581 | 0.1636 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.003269 | 0.0025 | -0.0026 | 0.0091 | 1.66 | 1 | 0.2022 |
| Pre-intervention achievement for diabetes control |  | 0.003154 | 0.0016 | -0.0006 | 0.0069 | 3.71 | 1 | 0.0584 |
| Overall QOF score |  | 0.000805 | 0.0004 | -0.0000 | 0.0016 | 5.13 | 1 | 0.0269 |

Table 69: Secondary outcome for Trial 2. Achievement of QOF indicator, ‘The percentage of patients with coronary heart disease in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less’ (CHD002) (WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control package vs. Control (anticoagulation in AF package) | -0.008936 | 0.0096 | -0.0312 | 0.0134 | 0.86 | 1 | 0.3588 |
| Relative to 100 patient increase in list size at baseline |  | -0.000308 | 0.0001 | -0.0006 | -0.0000 | 5.81 | 1 | 0.0198 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.015443 | 0.0228 | -0.0681 | 0.0372 | 3.08 | 8 | 0.0070 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.043146 | 0.0192 | -0.0877 | 0.0014 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.013920 | 0.0209 | -0.0343 | 0.0622 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.037412 | 0.0198 | -0.0833 | 0.0085 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.026322 | 0.0239 | -0.0290 | 0.0817 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.030597 | 0.0189 | -0.0743 | 0.0131 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.028446 | 0.0186 | -0.0146 | 0.0715 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.011808 | 0.0190 | -0.0321 | 0.0557 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.000744 | 0.0006 | -0.0021 | 0.0006 | 1.54 | 1 | 0.2214 |
| Pre-intervention achievement for blood pressure control |  | 0.002767 | 0.0008 | 0.0009 | 0.0046 | 12.18 | 1 | 0.0010 |
| Overall QOF score |  | 0.000866 | 0.0002 | 0.0004 | 0.0014 | 15.72 | 1 | 0.0002 |

Table 70: Secondary outcome for Trial 2. Achievement of QOF indicator, ‘The percentage of patients with hypertension in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less’ (HYP006) (WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control package vs. Control (anticoagulation in AF package) | 0.008873 | 0.0108 | -0.0162 | 0.0339 | 0.67 | 1 | 0.4162 |
| Relative to 100 patient increase in list size at baseline |  | -0.000337 | 0.0001 | -0.0007 | -0.0000 | 5.53 | 1 | 0.0229 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.013038 | 0.0255 | -0.0460 | 0.0721 | 3.35 | 8 | 0.0040 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.065845 | 0.0216 | -0.1158 | -0.0159 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.031625 | 0.0234 | -0.0225 | 0.0858 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.028702 | 0.0222 | -0.0802 | 0.0228 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.025128 | 0.0268 | -0.0370 | 0.0872 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.004342 | 0.0212 | -0.0534 | 0.0447 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.024442 | 0.0209 | -0.0239 | 0.0727 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.028543 | 0.0213 | -0.0207 | 0.0778 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.000039 | 0.0007 | -0.0016 | 0.0015 | 0.00 | 1 | 0.9536 |
| Pre-intervention achievement for blood pressure control |  | 0.003437 | 0.0009 | 0.0014 | 0.0055 | 14.93 | 1 | 0.0003 |
| Overall QOF score |  | 0.000495 | 0.0002 | -0.0001 | 0.0011 | 4.08 | 1 | 0.0490 |

Table 71: Secondary outcome for Trial 2. Achievement of QOF indicator, ‘The percentage of patients with a history of stroke or transient ischemic attack in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less’ (STIA003) (WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Blood pressure control package vs. Control (anticoagulation in AF package) | -0.001690 | 0.0149 | -0.0362 | 0.0329 | 0.01 | 1 | 0.9103 |
| Relative to 100 patient increase in list size at baseline |  | -0.000227 | 0.0002 | -0.0007 | 0.0002 | 1.32 | 1 | 0.2566 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.036618 | 0.0352 | -0.1182 | 0.0449 | 1.00 | 8 | 0.4470 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | -0.074081 | 0.0298 | -0.1430 | -0.0051 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | -0.018254 | 0.0323 | -0.0930 | 0.0565 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.045913 | 0.0307 | -0.1170 | 0.0251 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.021238 | 0.0370 | -0.1069 | 0.0645 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.037418 | 0.0292 | -0.1051 | 0.0302 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.012343 | 0.0288 | -0.0790 | 0.0543 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | -0.012853 | 0.0294 | -0.0809 | 0.0552 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.000793 | 0.0009 | -0.0029 | 0.0014 | 0.73 | 1 | 0.3979 |
| Pre-intervention achievement for blood pressure control |  | 0.002331 | 0.0012 | -0.0005 | 0.0052 | 3.60 | 1 | 0.0636 |
| Overall QOF score |  | 0.000616 | 0.0003 | -0.0002 | 0.0014 | 3.32 | 1 | 0.0746 |

Table 72: Trial 1 practices comparison. Achievement of QOF indicator, ‘The percentage of patients with any or any combination of the following conditions: CHD, PAD, stroke or TIA, hypertension, diabetes, COPD, CKD, asthma, schizophrenia, bipolar affective disorder or other psychoses whose notes record smoking status in the preceding 12 months’ (SMOK002) (WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | 0.010086 | 0.0060 | -0.0036 | 0.0238 | 2.86 | 1 | 0.0955 |
| Relative to 100 patient increase in list size at baseline |  | -0.000111 | 0.0001 | -0.0003 | 0.0001 | 1.37 | 1 | 0.2464 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.007446 | 0.0177 | -0.0331 | 0.0480 | 1.05 | 9 | 0.4150 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.024762 | 0.0142 | -0.0079 | 0.0574 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | 0.013304 | 0.0111 | -0.0121 | 0.0387 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.009568 | 0.0149 | -0.0246 | 0.0437 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.009449 | 0.0139 | -0.0413 | 0.0224 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.017449 | 0.0152 | -0.0175 | 0.0524 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | 0.008056 | 0.0131 | -0.0219 | 0.0381 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.007469 | 0.0135 | -0.0236 | 0.0385 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.018540 | 0.0138 | -0.0131 | 0.0502 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.001490 | 0.0007 | -0.0002 | 0.0032 | 4.23 | 1 | 0.0438 |
| Pre-intervention achievement for diabetes control |  | 0.000503 | 0.0005 | -0.0006 | 0.0016 | 1.16 | 1 | 0.2854 |
| Overall QOF score |  | 0.000179 | 0.0001 | -0.0001 | 0.0004 | 3.11 | 1 | 0.0826 |

Table 73: Trial 2 practices comparison. Achievement of QOF indicator, ‘The percentage of patients with any or any combination of the following conditions: CHD, PAD, stroke or TIA, hypertension, diabetes, COPD, CKD, asthma, schizophrenia, bipolar affective disorder or other psychoses whose notes record smoking status in the preceding 12 months’ (SMOK002) (WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Anticoagulation in AF package vs. Control (blood pressure control package) | 0.000901 | 0.0058 | -0.0126 | 0.0144 | 0.02 | 1 | 0.8781 |
| Relative to 100 patient increase in list size at baseline |  | -0.000285 | 0.0001 | -0.0005 | -0.0001 | 13.51 | 1 | 0.0006 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.018527 | 0.0138 | -0.0504 | 0.0134 | 2.39 | 8 | 0.0294 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.000847 | 0.0117 | -0.0262 | 0.0278 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.005877 | 0.0126 | -0.0234 | 0.0351 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.018769 | 0.0120 | -0.0466 | 0.0090 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | 0.028661 | 0.0145 | -0.0049 | 0.0622 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.001779 | 0.0114 | -0.0283 | 0.0247 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.003714 | 0.0113 | -0.0298 | 0.0224 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.016976 | 0.0115 | -0.0096 | 0.0436 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.000171 | 0.0004 | -0.0010 | 0.0007 | 0.22 | 1 | 0.6416 |
| Pre-intervention achievement for blood pressure control |  | 0.001777 | 0.0005 | 0.0007 | 0.0029 | 13.67 | 1 | 0.0006 |
| Overall QOF score |  | 0.000316 | 0.0001 | 0.0000 | 0.0006 | 5.70 | 1 | 0.0209 |

a Patients with any or any combination of the following conditions: coronary heart disease (CHD), peripheral arterial disease (PAD), stroke or transient ischemic attack (TIA), hypertension, diabetes, chronic obstructive pulmonary disease (COPD), chronic kidney disease (CKD), asthma, schizophrenia, bipolar affective disorder or other psychoses whose notes record smoking status in the preceding 12 months

Table 74: Trial 1 practices comparison. Achievement of QOF indicator, ‘The percentage of patients with asthma, on the register, who have had an asthma review in the preceding 12 months that includes an assessment of asthma control using the 3 RCP questions’ (AST003) (WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Risky prescribing package vs. Control (diabetes control package) | -0.010773 | 0.0182 | -0.0524 | 0.0309 | 0.35 | 1 | 0.5550 |
| Relative to 100 patient increase in list size at baseline |  | -0.000301 | 0.0003 | -0.0010 | 0.0004 | 1.09 | 1 | 0.3000 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | -0.040515 | 0.0539 | -0.1641 | 0.0831 | 0.64 | 9 | 0.7582 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.003639 | 0.0433 | -0.0957 | 0.1030 |  |  |  |
| CCG | NHS Bradford Districts CCG vs. NHS Wakefield CCG | -0.014268 | 0.0337 | -0.0916 | 0.0631 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.025611 | 0.0453 | -0.0785 | 0.1297 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.018621 | 0.0423 | -0.1157 | 0.0785 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.002724 | 0.0464 | -0.1092 | 0.1038 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.022319 | 0.0398 | -0.1137 | 0.0690 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | 0.000675 | 0.0412 | -0.0939 | 0.0952 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.051508 | 0.0420 | -0.0448 | 0.1479 |  |  |  |
| Pre-intervention achievement for risky prescribing |  | 0.001068 | 0.0022 | -0.0040 | 0.0061 | 0.23 | 1 | 0.6299 |
| Pre-intervention achievement for diabetes control |  | 0.000388 | 0.0014 | -0.0029 | 0.0037 | 0.07 | 1 | 0.7859 |
| Overall QOF score |  | -0.000009 | 0.0003 | -0.0007 | 0.0007 | 0.00 | 1 | 0.9773 |

Table 75: Trial 2 practices comparison Achievement of QOF indicator, ‘The percentage of patients with asthma, on the register, who have had an asthma review in the preceding 12 months that includes an assessment of asthma control using the 3 RCP questions’ (AST003) (WP4a)

| Variable | Comparison | Estimate | SE | Lower limit of 97.5% CI | Upper limit of 97.5% CI | F statistic | DF | P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allocation | Anticoagulation in AF package vs. Control (blood pressure control package) | -0.002341 | 0.0194 | -0.0472 | 0.0425 | 0.01 | 1 | 0.9044 |
| Relative to 100 patient increase in list size at baseline |  | -0.000876 | 0.0003 | -0.0015 | -0.0003 | 11.64 | 1 | 0.0013 |
| CCG | NHS Airedale, Wharfedale and Craven CCG vs. NHS Wakefield CCG | 0.016605 | 0.0458 | -0.0893 | 0.1225 | 1.82 | 8 | 0.0961 |
| CCG | NHS Bradford City CCG vs. NHS Wakefield CCG | 0.040053 | 0.0387 | -0.0495 | 0.1296 |  |  |  |
| CCG | NHS Calderdale CCG vs. NHS Wakefield CCG | 0.040386 | 0.0419 | -0.0567 | 0.1374 |  |  |  |
| CCG | NHS Greater Huddersfield CCG vs. NHS Wakefield CCG | -0.086561 | 0.0399 | -0.1788 | 0.0057 |  |  |  |
| CCG | NHS Leeds North CCG vs. NHS Wakefield CCG | -0.013829 | 0.0481 | -0.1251 | 0.0974 |  |  |  |
| CCG | NHS Leeds South and East CCG vs. NHS Wakefield CCG | -0.014699 | 0.0380 | -0.1026 | 0.0732 |  |  |  |
| CCG | NHS Leeds West CCG vs. NHS Wakefield CCG | -0.016537 | 0.0374 | -0.1031 | 0.0701 |  |  |  |
| CCG | NHS North Kirklees CCG vs. NHS Wakefield CCG | 0.009131 | 0.0382 | -0.0792 | 0.0974 |  |  |  |
| Pre-intervention achievement for anticoagulation in AF |  | -0.001464 | 0.0012 | -0.0043 | 0.0013 | 1.47 | 1 | 0.2313 |
| Pre-intervention achievement for blood pressure control |  | 0.001283 | 0.0016 | -0.0024 | 0.0050 | 0.65 | 1 | 0.4250 |
| Overall QOF score |  | 0.000753 | 0.0004 | -0.0003 | 0.0018 | 2.94 | 1 | 0.0930 |

Table 76: Reasons given by practices for declining an outreach visit (by trial arm) (WP5)

| Reason for declining outreach | Diabetes control (n=20) | Risky prescribing (n=15) | Blood pressure control (n=21) | Anticoagulation in AF (n=21) | Total  (n=77) |
| --- | --- | --- | --- | --- | --- |
| Not interested | 5 (25.00%) | 1 (6.67%) | 4 (19.05%) | 1 (4.76%) | 11 (14.29%) |
| Too busy / no time, worried about work duplication | 3 (15.00%) | 3 (20.00%) | 3 (14.29%) | 2 (9.52%) | 11 (14.29%) |
| Doing well, don't need it | 0 (0.00%) | 1 (6.67%) | 0 (0.00%) | 1 (4.76%) | 2 (2.60%) |
| Permanent closure | 0 (0.00%) | 0 (0.00%) | 1 (4.76%) | 0 (0.00%) | 1 (1.30%) |
| No reason given | 12 (60.00%) | 10 (66.67%) | 13 (61.90%) | 17 (80.95%) | 52 (67.53%) |
|  |  |  |  |  |  |

Table 77: Length of outreach visits (by trial arm) (WP5)

| Duration of meeting (minutes) | Diabetes control (n=22) | Risky prescribing (n=28) | Blood pressure control  (n=12) | Anticoagulation in AF (n=13) | Total (n=75) |
| --- | --- | --- | --- | --- | --- |
| Mean (SD) | 42.50 (26.73) | 32.71 (6.25) | 32.50 (8.66) | 34.00 (9.94) | 35.83 (16.40) |
| Median (Range) | 30.00 (20.00, 135.00) | 30.00 (25.00, 50.00) | 30.00 (30.00, 60.00) | 30.00 (25.00, 60.00) | 30.00 (20.00, 135.00) |
| Missing | 2 | 4 | 0 | 3 | 9 |
|  |  |  |  |  |  |

Table 78: Number of practice staff attending outreach visits (by trial arm) (WP5)

| Number of staff in attendance | Diabetes control (n=22) | Risky prescribing (n=28) | Blood pressure control  (n=12) | Anticoagulation in AF (n=13) | Total  (n=75) |
| --- | --- | --- | --- | --- | --- |
| Mean (SD) | 5.36 (3.74) | 3.75 (2.52) | 5.92 (4.08) | 5.08 (3.45) | 4.80 (3.38) |
| Median (Range) | 4.50 (1.00, 15.00) | 3.00 (1.00, 10.00) | 5.50 (2.00, 14.00) | 4.00 (1.00, 13.00) | 4.00 (1.00, 15.00) |
|  |  |  |  |  |  |

Table 79: Number of practices with clinical topic key leaders present at outreach visit 1 (by trial arm) (WP5)

| Key leaders present | Diabetes control (n=20) | Risky prescribing (n=25) | Blood pressure control (n=11) | Anticoagulation in AF (n=11) | Total  (n=67) |
| --- | --- | --- | --- | --- | --- |
| Yes | 17 (85.00%) | 25 (100.00%) | 9 (81.82%) | 11 (100.00%) | 62 (92.54%) |
| No | 3 (15.00%) | 0 (0.00%) | 2 (18.18%) | 0 (0.00%) | 5 (7.46%) |
|  |  |  |  |  |  |

Table 80: Number of practices with clinical topic key leaders present at outreach visit 2 (by trial arm) (WP5)

| Key leaders present | Diabetes control (n=2) | Risky prescribing (n=3) | Blood pressure control (n=1) | | Anticoagulation in AF  (n=2) | Total  (n=8) |
| --- | --- | --- | --- | --- | --- | --- |
| Yes | 2 (100.00%) | 2 (66.67%) | | 1 (100.00%) | 2 (100.00%) | 7 (87.50%) |
| No | 0 (0.00%) | 1 (33.33%) | | 0 (0.00%) | 0 (0.00%) | 1 (12.50%) |
|  |  |  | |  |  |  |

Table 81: Number of practices developing action plans following receipt of outreach visit 2 (by trial arm) (WP5)

| Action plan developed and received | Diabetes control  (n=2) | Risky prescribing (n=3) | Blood pressure control  (n=1) | Anticoagulation in AF (n=2) | Total  (n=8) |
| --- | --- | --- | --- | --- | --- |
| Yes | 1 (50.00%) | 2 (66.67%) | 1 (100.00%) | 0 (0.00%) | 4 (50.00%) |
| No | 1 (50.00%) | 1 (33.33%) | 0 (0.00%) | 2 (100.00%) | 4 (50.00%) |
|  |  |  |  |  |  |

Table 82: Number of practices that joined the organisational groups (by trial arm) (WP5)

| Joined organisational groups | Diabetes control  (n=40) | Risky prescribing (n=40) | Blood pressure control  (n=32) | Anticoagulation in AF (n=32) | Total  (n=144) |
| --- | --- | --- | --- | --- | --- |
| Yes | 38 (95.00%) | 40 (100.00%) | 23 (71.88%) | 25 (78.13%) | 126 (87.50%) |
| No | 2 (5.00%) | 0 (0.00%) | 8 (25.00%) | 5 (15.63%) | 15 (10.42%) |
| Missing | 0 (0.00%) | 0 (0.00%) | 1 (3.13%) | 2 (6.25%) | 3 (2.08%) |
|  |  |  |  |  |  |

Table 83: Number of practices participating in other quality improvement initiatives (by trial arm) (WP5)

| Practices participating in other quality improvement initiatives | Diabetes control (n=20) | Risky prescribing (n=25) | Blood pressure control (n=11) | Anticoagulation in AF (n=11) | Total  (n=67) |
| --- | --- | --- | --- | --- | --- |
| Yes | 14 (70.00%) | 14 (56.00%) | 7 (63.64%) | 9 (81.82%) | 44 (65.67%) |
| No | 6 (30.00%) | 11 (44.00%) | 4 (36.36%) | 2 (18.18%) | 23 (34.33%) |
|  |  |  |  |  |  |

Table 84: Other quality improvement initiatives identified by participating practices (WP5)

| Variable | Diabetes control (n=19) | Risky prescribing (n=19) | Blood pressure control (n=7) | Anticoagulation in AF (n=12) | Total (n=57) |
| --- | --- | --- | --- | --- | --- |
| Quality improvement initiative |  |  |  |  |  |
| Year of Care | 2 (10.53%) | 4 (21.05%) | 1 (14.29%) | 3 (25.00%) | 10 (17.54%) |
| GRASP-AF | 2 (10.53%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 2 (3.51%) |
| Bradford Beating Diabetes | 2 (10.53%) | 5 (26.32%) | 3 (42.86%) | 3 (25.00%) | 13 (22.81%) |
|  |  |  | ) |  |  |
| Other | 13 (68.42%) | 10 (52.63%) | 3 (42.86%) | 6 (50.00%) | 32 (56.14%) |
|  |  |  |  |  |  |

NB: Some practices have provided more than one response for participation in other quality improvement initiatives, all responses are included above. In total, 44 practices provided 57 responses.

Table 85: Characteristics of process evaluation practices by trial (WP5)

|  | Trial 1 (n=4) | Trial 2 (n=4) | Total (n=8) |
| --- | --- | --- | --- |
| List size |  |  |  |
| Mean (SD) | 7660.50 (2262.68) | 9516.25 (3612.47) | 8588.38 (2961.58) |
| Median (Range) | 8597.00 (4334.00, 9114.00) | 9318.00 (5330.00, 14099.00) | 8927.50 (4334.00, 14099.00) |
|  |  |  |  |
| Overall QOF scorea |  |  |  |
| Mean (SD) | 538.97 (9.54) | 529.16 (21.43) | 534.07 (16.23) |
| Median (Range) | 539.41 (527.80, 549.28) | 532.32 (500.73, 551.27) | 536.32 (500.73, 551.27) |
|  |  |  |  |
| Pre-intervention achievement |  |  |  |
| Diabetes control |  |  |  |
| Mean (SD) | 32.28% (3.19%) | 33.97% (7.66%) | 33.12% (5.51%) |
|  |  |  |  |
| Risky prescribing |  |  |  |
| Mean (SD) | 9.73% (5.32%) | 4.70% (1.68%) | 7.22% (4.53%) |
|  |  |  |  |
| Blood pressure control |  |  |  |
| Mean (SD) | 62.83% (7.85%) | 65.47% (8.22%) | 64.15% (7.57%) |
|  |  |  |  |
| Anticoagulation in AF |  |  |  |
| Mean (SD) | 67.72% (9.42%) | 64.95% (5.10%) | 66.33% (7.17%) |
|  |  |  |  |

a The 2014-15 QOF measured achievement against 81 indicators; practices scored points on the basis of achievement against each indicator, up to a maximum of 559.

Table 86: Characteristics of process evaluation practices by indicator (WP5)

|  | Trial 1 | | Trial 2 | |  |
| --- | --- | --- | --- | --- | --- |
|  | Diabetes control (n=2) | Risky prescribing (n=2) | Blood pressure control (n=2) | Anticoagulation in AF (n=2) | Total (n=8) |
| List Size |  |  |  |  |  |
| Mean (SD) | 8597.00 (653.37) | 6724.00 (3379.97) | 7585.00 (3189.05) | 11447.50 (3749.79) | 8588.38 (2961.58) |
| Median (Range) | 8597.00 (8135.00, 9059.00) | 6724.00 (4334.00, 9114.00) | 7585.00 (5330.00, 9840.00) | 11447.50 (8796.00, 14099.00) | 8927.50 (4334.00, 14099.00) |
|  |  |  |  |  |  |
| Overall QOF scorea |  |  |  |  |  |
| Mean (SD) | 539.41 (6.46) | 538.54 (15.19) | 526.00 (35.74) | 532.32 (7.75) | 534.07 (16.23) |
| Median (Range) | 539.41 (534.84, 543.97) | 538.54 (527.80, 549.28) | 526.00 (500.73, 551.27) | 532.32 (526.84, 537.80) | 536.32 (500.73, 551.27) |
|  |  |  |  |  |  |
| Pre-intervention achievement |  |  |  |  |  |
| Diabetes control |  |  |  |  |  |
| Mean (SD) | 34.26% (1.13%) | 30.29% (3.69%) | 35.20% (2.01%) | 32.74% (12.89%) | 33.12% (5.51%) |
|  |  |  |  |  |  |
| Risky prescribing |  |  |  |  |  |
| Mean (SD) | 6.50% (2.52%) | 12.97% (6.04%) | 4.29% (0.58%) | 5.12% (2.73%) | 7.22% (4.53%) |
|  |  |  |  |  |  |
| Blood pressure control |  |  |  |  |  |
| Mean (SD) | 60.07% (4.43%) | 65.59% (11.61%) | 67.56% (0.70%) | 63.38% (13.59%) | 64.15% (7.57%) |
|  |  |  |  |  |  |
| Anticoagulation in AF |  |  |  |  |  |
| Mean (SD) | 68.28% (14.20%) | 67.16% (7.96%) | 66.94% (3.67%) | 62.95% (6.97%) | 66.33% (7.17%) |
|  |  |  |  |  |  |

a The 2014-15 QOF measured achievement against 81 indicators; practices scored points on the basis of achievement against each indicator, up to a maximum of 559.

Table 87: Baseline risks associated with NSAIDs (risky prescribing model) (WP4b)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | GI symptoms | Symptomatic ulcer | Complicated GI | MI | Stroke | HF | Source |
|  |  |  |  |  |  |  | All from NICE CG1771 – Adjusted doses |
| No treatment | 0.0752 | 0.0004 | 0.0002 | 0.0006 | 0.0003 | 0.0001 |  |
| Paracetamol | 0.0940 | 0.0004 | 0.0002 | 0.0006 | 0.0003 | 0.0001 |  |
| Diclofenac | 0.1635 | 0.0007 | 0.0004 | 0.0009 | 0.0004 | 0.0002 |  |
| Naproxen | 0.2551 | 0.0008 | 0.0003 | 0.0007 | 0.0003 | 0.0002 |  |
| Ibuprofen | 0.0945 | 0.0004 | 0.0003 | 0.0007 | 0.0003 | 0.0002 |  |
| Risk reductions with co-prescription of a PPI | 0.43 (0.24-0.76) | 0.37 (0.30-0.46) | 0.46 (0.07-2.92) | N/A | N/A | N/A | Brown *et al*. (2006)2 |

Table 88: Risky prescribing model - risks ratios of adverse events

|  |  |  |  |
| --- | --- | --- | --- |
| Indicator number and adverse event | Mean risk ratio | 95% CI | Source |
| *Risks ratios for Ulcer and GI bleed associated with NSAID prescription combined with specific drugs without co-prescription of a PPI* | | | |
| Indicator 1 - Ulcer risk  NSAID use with history of ulcer | 5.9 | 5.2-6.7 | Hernandez-diaz and Rodrigues (2000)3 |
| Indicator 2- GI risk  traditional NSAID use in over 75s | 3.5 | None\* | Laine *et al*. (2004)4 |
| Indicator 3 - Ulcer risk  aspirin use in over 65s | 1.7 | 1.41-2.08 | McQuaid and Laine (2006)5 |
| Indicator 4- Ulcer risk  aspirin and clopidogrel use in over 65s | 7.4 | 3.5-15 | Hallas *et al.* (2006)6 |
| Indicator 5- GI risk  warfarin and NSAID use | 4.60 | 2.77-7.64 | Delaney *et al*. (2007)7 |
| Indicator 7 - GI Risk  7a- warfarin and clopidrogel  7b- warfarin and low dose aspirin use | 6.25  11.016 | 2.0 -14  6.0 -20.5 | Delaney *et al*. (2007)7 and McQuaid and Laine (2006)5 using indirect treatment comparison |
| *Risks associated with NSAID prescription* | | | |
| Indicator 14 - Heart Failure Risk  NSAID use in patients with HF | 9.9 | 1.7-57 | Feenstra *et al*. (2002)8 |
| Indicator 11 – Acute Kidney Injury (see Table 92) | | | |

\*When no standard errors around risk estimates were reported, we assumed it equalled half the mean to construct confidence intervals; \*\* For evaluating indicator 7 it was assumed patients were equally split between 7a and 7b

Table 89: Risky prescribing model - effectiveness parameters

|  |  |  |
| --- | --- | --- |
| Indicators | Proportion achieved\* | |
| Trial arm | |
| Control | Risky prescribing |
| Indicator 12\_1: Prescribing a traditional oral NSAID or low-dose aspirin in patients with a history of peptic ulceration without co-prescription of gastro-protection | 0.216 | 0.208 |
| Indicator 12\_11: Prescribing an oral NSAID in patients with chronic kidney disease | 0.030 | 0.027 |
| Indicator 12\_14: prescribing an oral NSAID in patients with heart failure | 0.021 | 0.016 |
| Indicator 12\_2: Prescribing a traditional oral NSAID and aspirin in patients aged 75 years or over without co-prescription of gastro protection | 0.269 | 0.284 |
| Indicator 12\_3: Prescribing of a traditional oral NSAID and aspirin in patients aged 65 years or over without co-prescription of gastro-protection | 0.188 | 0.208 |
| Indicator 12\_4: Prescribing of aspirin and clopidogrel in patients aged 65 years of over without co-prescription of gastro-protection | 0.352 | 0.253 |
| Indicator 12\_5: prescribing of warfarin and a traditional oral NSAID | 0.010 | 0.009 |
| Indicator 12\_7: Prescribing of warfarin and low-dose aspirin or clopidogrel without co-prescription of gastro-protection | 0.364 | 0.366 |

\*Confidence intervals not shown

Table 90: Risky prescribing model - three month costs

|  |  |  |
| --- | --- | --- |
|  | Mean Cost\* | Source |
| Medication costs per 3-month cycle (dose per day) |  | Drug costs from BNF. AE costs from NICE CG177 1  inflated to 2017 prices |
| Gastro protector (PPI) | £14.84 |
| Paracetamol (3000mg) | £10.64 |
| Diclofenac (100mg) | £4.35 |
| Naproxen (750mg) | £8.58 |
| Ibuprofen (1200mg) | £8.01 |
| Adverse event costs |  |
| Dyspepsia | £45.00 |
| Symptomatic ulcer | £689.00 |
| Complicated GI | £3075.00 |
| MI | £1542.00 |
| Stroke | £2434.00 |
| HF | £1,900.00 |
| Post symptomatic ulcer | £20.00 |
| Post complicated GI | £20.00 |
| Post MI | £144.00 |
| Post stroke | £467.00 |
| Post HF | £144.00 |

\*A variation of +/- 10% around mean estimates was applied in probabilistic evaluation.

Table 91: Risky prescribing model – Utility parameter multipliers

|  |  |  |
| --- | --- | --- |
| Adverse event | Utility multiplier | Source |
| Dyspepsia | 0.73 | All CG1771 |
| Symptomatic ulcer | 0.55 |  |
| Complicated GI | 0.46 |  |
| MI | 0.37 |  |
| Stroke | 0.35 |  |
| HF | 0.71 |  |
| Post symptomatic ulcer | 0.98 |  |
| Post complicated GI | 0.98 |  |
| Post MI | 0.88 |  |
| Post stroke | 0.71 |  |
| Post HF | 1 |  |

Table 92: Risky prescribing CKD model – probabilities and risk parameters

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | Value | Distribution | Alpha | Beta | Source |
| *Transition probabilities per cycle (%)* | | | | | |
| CKD stage 3-4 to 5 (<69) | 0.018 | Beta | 5.5 | 3041.5 | All values taken from NICE CG1699 |
| CKD stage 3-4 to 5 (70-79) | 0.10 | Beta | 3.1 | 3043.9 |  |
| CKD stage 3-4 to 5 (>79) | 0.08 | Beta | 2.3 | 3044.7 |  |
| AKI stage 1 to CKD 5 | 1.5 | Beta | 24.8 | 1585 |  |
| AKI stage 2-3 to CKD 5 | 10.9 | Beta | 36.8 | 302 |  |
| Proportion AKI stage 1 | 83 |  |  |  |  |
| Proportion AKI stage 2-3 | 17 |  |  |  |  |
| CKD stage 3 to AKI | 0.037 |  |  |  |  |
| CKD stage 4 to AKI | 0.215 |  |  |  |  |
| *Relative Risk associated with NSAID use* | | | | | |
| Increased risk of CKD stage 3-4 to 5 | 1.29 |  | Lower CI = 1.02 | Upper CI = 1.63 | Gooch *et al*. (2007)10 |
| Increased risk of AKI | 1.63 |  | Lower CI = 1.22 | Upper CI = 2.19 | Zhang *et al*. (2017)11 |
| *Mortality rates* | | | | | |
| AKI stage 1 to death | 13.6 | Beta | 220 | 1405 | All values taken from NICE CG1699 |
| AKI stage 2-3 to death | 37.8 | Beta | 144 | 237 |  |
| CKD stage 3-4 (<69 years) to death |  |  |  |  |  |
| Male | 3.6 |  | SMR x age dependent MR UK |  |  |
| Female | 2.7 |  | As above |  |  |
| CKD stage 3-4 (70-79 years) to death |  |  | As above |  |  |
| Male | 2.4 |  | As above |  |  |
| Female | 1.8 |  | As above |  |  |
| CKD stage 3-4 (>79 years) to death |  |  |  |  |  |
| Male | 2.3 |  | As above |  |  |
| Female | 2.1 |  | As above |  |  |
| CKD stage 5 to death (<65) |  |  |  |  | Based on own calculations using Villar *et al*. (2007) 12 |
| Male | 8.65 | 0.1896 |  |  |  |
| Female | 13.41 | 0.2883 |  |  |  |
| CKD stage 5 to death (>65) |  |  |  |  | Based on own calculations using Villar *et al*. (2007)12 |
| Male | 4.867 | 0.1036 |  |  |  |
| Female | 7.7345 | 0.1259 |  |  |  |

Table 93: Risky prescribing - CKD sub-model three month costs

|  |  |
| --- | --- |
| Parameter | Cost |
| CKD stage 3-4 | £199.00 |
| CKD stage 5 cycle 1 | £12,329.00 |
| CKD stage 5 cycle 2 | £11,109.00 |
| AKI | £2,271.00 |

Table 94: CKD sub-model utility values

|  |  |  |  |
| --- | --- | --- | --- |
| Health state | Utility Value | SE | Source |
| Stage 3-4 CKD | 0.672 | 0.027 | All values taken from NICE CG1699 |
| Stage 5 CKD | 0.622 | 0.021 |  |
| AKI | 0.525 | 0.033 |  |

Table 95: Risky prescribing model – proportions of patients eligible for each sub-indicator

|  |  |  |
| --- | --- | --- |
|  | Mean | SD |
| Indicator 1 | 0.0006 | 0.0004 |
| Indicator 11 | 0.0299 | 0.0129 |
| Indicator 14 | 0.0071 | 0.0024 |
| Indicator 2 | 0.0024 | 0.0019 |
| Indicator 3 | 0.0014 | 0.0013 |
| Indicator 4 | 0.0013 | 0.0007 |
| Indicator 5 | 0.0001 | 0.0002 |
| Indicator 7 | 0.0006 | 0.0004 |

Table 96: Blood pressure control model - effectiveness parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Indicators | Mean blood pressure | | | |
| Intervention | 95% CI | Control | 95% CI |
| Indicator 5\_5: BP< 140/90 in patients age under 80 years with hypertension | 135.56 | 135.36-135.75 | 136.01 | 135.80-136.22 |
| Indicator 5\_6: BP<150/90 in patients aged 80 years and over with hypertension | 135.25 | 134.80-135.69 | 136.48 | 135.99-136.96 |
| Indicator 9\_10: BP<140/80 in patients aged under 80 years with diabetes and <130/80 if there are complications of diabetes | 131.90 | 131.58-132.22 | 131.33 | 130.99-131.67 |
| Indicator 9\_5: BP <130/80 in patients aged under 80 years with chronic kidney disease and proteinuria | 133.26 | 132.08-134.44 | 135.09 | 133.82-136.36 |
| Indicator 9\_6: BP<140/90 in patients aged under 80 years with coronary disease | 129.73 | 129.30-130.16 | 130.04 | 129.57-130.50 |
| Indicator 9\_7: BP <140/90 in patients aged under 80 years with peripheral arterial disease | 132.98 | 132.00-133.96 | 133.82 | 132.73-134.91 |
| Indicator 9\_1: BP<140 in patients aged under 80 years with a history of stroke/TIA | 131.73 | 131.11-132.35 | 131.41 | 130.74-132.08 |
| Indicator 9\_2: BP<140/90 in patients aged under 80 years with a cardiovascular disease risk of 20% or higher | 135.20 | 134.89-135.51 | 135.85 | 135.53-136.17 |

Table 97: Blood pressure control model - transition probabilities

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Mean | CI/SD | Comment/Source |
| *Event risks* | | | |
| *Coronary Heart Disease* |  |  | Values from NICE Clinical Guidelines, No. 127.13 |
| 5\_5 | Men:  65-74y: 0.62%;  75+: 0.67%  Women:  65-74y: 0.28%;  75+: 0.24% | Men:  65-74y: 0.0006  75+:0.0007  Women:  65-74y: 0.00029  75+:0.00029 | Population average age of the patients 66. Values adjusted to three monthly rates from the 10 years risk rate. |
| 5\_6 | Men: 0.67%  Women:0.24% | Men:  0.00075  Women:  0.0003 | Assumed 75+ age group. Values adjusted to three monthly rates from the 10 years risk rate. |
| 9\_1 | Men & Women: 0.31% | 0.00078 | Assumed 66+ age group adjusted to three monthly rates from Ward *et al*.14 who estimated a 3.1 years risk rate. |
| 9\_10 | Men:  65-74y: 0.76%  75+: 0.83%  Women:  65-74y: 0.50%  75+: 0.43% | Men:  65-74y: 0.002  75+: 0.0021  Women:  65-74y: 0.0012  75+: 0.0011 | Population average age of the patients 66. Values adjusted to three monthly rates from the 10 years risk rate for patients with diabetes. |
| 9\_2 | Men & Women: 0.35% | 0.0009 | Population average age of the patients 66. Values adjusted to three monthly rates from the 10 years risk rate estimated in QRISK (Hippisley-Cox *et al*. 2017).15 |
| 9\_5 | Men: 0.40%  Women: 0.21% | Men: 0.001  Women: 0.0005 | Population average age of the patients 66. Values adjusted to three monthly rates from the 10 years risk rate estimated in QRISK (Hippisley-Cox *et al*. 2017).15 |
| 9\_6 | Men & Women: 0.53% | 0.0013 | Population average age of the patients 66. Values adjusted to three monthly rates from the 10 years risk rate reported in Ward *et al*. |
| 9\_7 | Men & Women:  0.61% | 0.0015 | Average age 66 years old. Values adjusted to three monthly risk from Data based on composite CVD outcomes (Myocardial infraction, ischaemic stroke or cardiovascular related death) per 1,000 persons years from Soriano C *et al*. (2017).16 |
| *Stroke* |  |  |  |
| 5\_5 | Men:  65-74y: 0.23%  75y: 0.30%  Women:  65-74y: 0.18%  75y: 0.23% | Men: 0.001  Women: 0.0004 | Population average age of the patients 66. Values adjusted to three monthly rates from the 10 years risk rate. |
| 5\_6 | Men: 0.30%  Women: 0.23% | Men: 0.001  Women: 0.0005 | Assumed that of the 75+ age group. Values adjusted to three monthly rates from the 10 years risk rate. |
| 9\_1 | Men & Women  0.96% | 0.0023 | Assumed that of the 66+ age group adjusted to three monthly rates from Ward *et al*. who estimated a 3.1 years risk rate. |
| 9\_10 | Men:  65-74y: 0.34%  0.45%  Women:  65-74y: 0.38%  65-74y: 0.48% | Men:  65-74y: 0.008  75+: 0.0011  Women:  65-74y: 0.009  75+: 0.0012 | Population average age of the patients 66. Values adjusted to three monthly rates from the 10 years risk rate for patients with diabetes. |
| 9\_2 | Men & Women: 0.20% | 0.0005 | Population average age of the patients 66. Values adjusted to three monthly rates from the 10 years risk rate estimated in QRISK3 (Hippisley-Cox *et al*. 2017).15 |
| 9\_5 | Men: 0.23%  Women: 0.23% | Men: 0.0006  Women:0.0006 | Population average age of the patients 66. Values adjusted to three monthly rates from the 10 years risk rate estimated in QRISK (Hippisley-Cox *et al*. 2017).15 |
| 9\_6 | Men & Women:  0.17% | 0.0004 | Average age of the patients 66. Values adjusted to three monthly rates from 10 years risk rate reported in Ward *et al*.14 |
| 9\_7 | Men & Women:  0.34% | 0.00086 | Average age 66 years old. Values adjusted to three monthly risk from Data based on composite CVD outcomes (Myocardial infraction, ischaemic stroke or cardiovascular related death) per 1,000 persons years from Soriano C *et al*. (2017).16 |
| *Distribution of health events* | | | |
| Myocardial infarction | 14.3%-37.8% | Fixed | (age and gender dependent) |
| Unstable angina | 10.4%-20.9% | Fixed | (age and gender dependent) |
| Stable angina | 37.7%-62.9% | Fixed | (age and gender dependent) |
|  |  |  |  |
| Stroke | 51.7%-70.1% | Fixed | (age and gender dependent) |
| TIA | 13.4%-36.1% | Fixed | (age and gender dependent) |
| *Mortality risks* | | | |
| Immediate CHD death | 6.6%-17.8% |  | (age and gender dependent) |
| Immediate stroke death | 12.2%-16.5% |  | (age and gender dependent) |
| Mortality rate – post MI | 2.68 | (95% CI: 2.48, 2.91) | Bronnum-Hansen *et al*.17 |
| Mortality rate – post UA | 2.19 | (95% CI: 2.05, 2.33) | UA/NSTEMI NICE guideline 42318 |
| Mortality rate – post SA | 1.95 | (95% CI: 1.65, 2.31) | Rosengren *et al*.19 |
| Mortality rate – post stroke | 2.72 | (95% CI: 2.59, 2.85) | Bronnum-Hansen *et al.*20 |
| Mortality rate – post TIA | 1.4 | (95% CI: 1.1, 1.8) | Oxfordshire Community Stroke Project21 |
| Background mortality | Not shown | Not shown | UK life tables |
|  |  |  |  |
| *Risk reduction/increase due to treatment/no treatment* | | | |
| CHD risk reduction | *If aged:*  60-69y: 0.998  70-79y: 0.996  80+: 0.999  *If aged:*  60-69y: -0.031  70-79y: -0.026  80+: -0.02 | N/A | Estimated from risk reduction data based on reduction in systolic BP reported in Law MR *et al* (2009).22 The estimation was made via an exponential approximation using the stated formula based on age. RBP refers to reduction in systolic BP |
| Stroke risk reduction | *If aged:*  60-69y: 1.002  70-79y: 0.998  80+: 0.999  *if aged:*  60-69y: -0.043  70-79y: -0.035  80+: -0.02 | N/A |

\*Unless stated otherwise, SD assumed as a quarter of the mean

Table 98: Blood pressure control model - costs

|  |  |  |
| --- | --- | --- |
| Parameter | Mean Cost\* | Source |
| Intervention costs | £0.28 | Practice cost (£1,973)/practice n (=7,130) |
| One-off costs |  |  |
| Blood test for those increasing anti-hypertensives if on ACE inhibitors | £27.30 | Assumes practice nurse cost (£41.37) X proportion on ACE-I (66%) taken from NICE CG127 |
| Additional GP consultations for those on ACE inhibitors in 1st year | £51.98 | Assumes £45 visit. 50% = 1 visit, 25% = 2 visits, 25% = 3 visits (weight = 1.75 ) = £78.75 X proportion on ACE-I (66%) taken from NICE CG127 |
| Cost per patient | £2.77 | Sum of £27.30 and £51.98 multiplied by % change in practice. Assumed equal to OR for BP control achieved (5.33%) |
| On-going costs |  |  |
| Annual blood pressure medication costs | £64.57 | Average taken from NICE CG127 across medication types. |
| Blood pressure monitoring (every 12 months) | £45.00 | GP visit |
| Cost per patient per year | £2.40 | Sum of £64.57 and £45.00 multiplied by % change in practice. Assumed equal to OR for BP control achieved (5.33%) |
| Health event costs  (3 month costs unless otherwise stated) |  | NICE CG12713 |
| Initial MI cost | £5,831.00 |
| Post MI cost | £172.00 |
| Initial UA cost | £3,498.00 |
| Post UA cost | £103.00 |
| Initial SA cost | £487.00 |
| Post SA cost | £7 |
| Initial stroke cost | £11,718.00 |
| Post stroke cost | £680.00 |
| Initial TIA cost | £1,207.00 |
| Post TIA cost | £32.00 |

Table 99: Blood pressure control model - utility values

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Mean | SD/SE | Source |
| No CV event utility | Men  65-74y: 0.804  75y+: 0.751  Women  65-74y: 0.780  75y+: 0.704 | Men  65-74y: 0.011  75y+: 0.013  Women  65-74y: 0.010  75y+:0.011 | General population utilities from analysis of EQ5D from HSE 2006422 13 |
| Stroke utility | 0.629 | 0.04 | Ward *et al*.14 2007  Applied multiplicatively to general population age and gender dependant utilities |
| TIA utility | 1 | Fixed |
| MI utility | 0.760 | 0.018 |
| UA utility | 0.770 | 0.038 |
| SA utility | 0.808 | 0.038 | Ward *et al*. 2007. Applied multiplicatively to general population age and gender dependant utilities. SE: Assumed equal to UA. |

Table 100: Blood pressure control model – Proportions of patients eligible for each indicator

|  |  |  |
| --- | --- | --- |
| Indicator | Mean practice proportion eligible | SD Practice proportion eligible |
| 5\_5 | 0.107 | 0.027 |
| 5\_6 | 0.023 | 0.011 |
| 9\_1 | 0.011 | 0.004 |
| 9\_10 | 0.045 | 0.017 |
| 9\_2 | 0.048 | 0.023 |
| 9\_5 | 005 | 0.002 |
| 9\_6 | 0.025 | 0.006 |
| 9\_7 | 0.005 | 0.002 |

Table 101: Diabetes control model - UKPDS input variables

|  |  |  |
| --- | --- | --- |
| Variable | Input | Source/Notes |
| Demographics |  |  |
| Ethnicity\* | White = 77.39%  Asian = 13.11%  Black/African-Caribbean = 9.5% | Ethnicity proportions based on 2011 UK census data, adjusted to reflect higher incidence in Asian/black groups (15.2%) vs. white groups (8%)23 Randomised at individual level |
| Gender | Male = 54%  Female = 46% | % from ASPIRE trial. Randomised at individual level |
| Age | 65.2 (SD=13.9) | Mean from ASPIRE trial. Randomised at individual level and made probabilistic using gamma distribution |
| Duration of T2DM\* | 5.4 years | Fixed mean based on UK study24 |
| Weight (kg)\* | Male=96.98  Female=82.72 | Fixed mean for males and females based on UK study in diabetes25 |
| Height (meters)\* | Male=1.750  Female =1.619 | Fixed mean for males and females based on Health Survey for England26 |
| Risk factor values |  |  |
| Atrial fibrillation (AF)\* | 3.92% | Prevalence from UK cohort study.27 Randomised at individual level |
| Peripheral vascular disease (PVD)\* | 5.3% | Average for males and females from UK study.25 Randomised at individual level |
| Current smoker\* | 16.7% | Prevalence from UK cohort study.27 Randomised at individual level |
| Micro/macroalbuminuria (albuminuria)\* | 19.4% | Prevalence from a UK trial.28 Randomised at individual level |
| HDL cholesterol (mmol/l) | ASPIRE = 1.3  Usual care = 1.3 | Fixed based on data from UK trial matching ASPIRE population28 |
| LDL cholesterol (mmol/l) | ASPIRE = 2.13  Usual care = 2.09 | Calculated using the Friedewald approach: LDL cholesterol = Total cholesterol – HDL cholesterol – (Total triglyceride ÷ 2.19). Total cholesterol based on trial results (ASPIRE = 4.162, SD = 0.023; Usual care = 4.124, SD = 0.021) and total triglyceride based on UK trial data (1.6).28 Randomised at individual level and made probabilistic using normal distribution. |
| Systolic blood pressure (mmHg) | ASPIRE = 131.68 (SD=0.507)  Usual care = 131.72 (SD=0.489) | Adjusted follow-up values from ASPIRE trial. Randomised at individual level and made probabilistic using normal distribution |
| HbA1c (mmol/mol) | ASPIRE = 55.97 (SD=0.298)  Usual care = 56.14 (SD=0.286) | Adjusted follow-up values from ASPIRE trial. Converted to % using the following formula29: % = (mmol/10.929)+2.15  Randomised at individual level and made probabilistic using normal distribution |
| Heart rate (bpm)\* | 74 | Based on large international trial of similar population.30 Fixed value |
| White blood cell count (WBC) (x 10-6 ml)\* | 6.51 | Based on large UK cohort study.31 Fixed value |
| Haemoglobin (g/dl)\* | 12.8 | Mean of values for males and females.32 Fixed value |
| Glomerular filtration rate (eGFR)\* (ml/min/1.73m2) | 81.3 | Fixed value based on data from UK trial matching ASPIRE population28 |
| Pre-existing events\* |  | Data were not available and hence these parameters were not populated in the model |
| History of ischemic heart disease | Null | N/A |
| History of congestive heart failure | Null | N/A |
| History of amputation | Null | N/A |
| History of blindness in one eye | Null | N/A |
| History of stroke | Null | N/A |
| History of myocardial infarction | Null | N/A |
| History of ulcer | Null | N/A |
| Discounting start year | 0 | N/A |

\*Not available from ASPIRE

Table 102: Number of practices developing action plans following receipt of outreach visit 1 (by trial arm) (WP5)

| Action plan developed and received | Diabetes control  (n=20) | Risky prescribing (n=25) | Blood pressure control  (n=11) | Anticoagulation in AF (n=11) | Total  (n=67) |
| --- | --- | --- | --- | --- | --- |
| Yes | 19 (95.00%) | 24 (96.00%) | 10 (90.91%) | 10 (90.91%) | 63 (94.03%) |
| No | 1 (5.00%) | 1 (4.00%) | 1 (9.09%) | 1 (9.09%) | 4 (5.97%) |
|  |  |  |  |  |  |

Table 103: Number of practices in the risky prescribing implementation arm receiving an outreach visit that had computerised prompts set up (WP5)

| Computerised prompts set upa | Risky prescribing (n=25) |
| --- | --- |
| Yes | 8 (32.00%) |
| No | 17 (68.00%) |
|  |  |

a Set-up of prompts does not necessarily imply usage.

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