Natural England Commissioned Report NECR098

Walking for Health Attendance Study

An analysis of attendance patterns of Walking for Health participants

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Foreword

Natural England commission a range of reports from external contractors to provide evidence and advice to assist us in delivering our duties. The views in this report are those of the authors and do not necessarily represent those of Natural England.

Background

When Walking for Health was launched in 2000 walking was not considered a serious form of exercise. Now the health benefits of short, regular, brisk walks are widely understood, and such walks are seen by many as a way to increase people's levels of physical activity and improve their health.

In 2007, Department of Health and Natural England – working in partnership with local statutory and voluntary organisations – invested in an expansion of Walking for Health as part of a package of public health initiatives aimed at getting people more active in order to benefit their health. As part of this expansion Natural England produced a comprehensive evaluation programme to measure the health and environmental outcomes of Walking for Health.

This report – carried out by the Sports Industries Research Centre (SIRC) –presents research examining the attendance patterns of Walking for Health participants, using data recorded on an online database.

A key aim of the Walking for Health expansion was to increase the physical activity levels of sedentary / inactive people. Factors such as drop-out, retention, and attendance frequency complement the existing physical activity research carried out, and paint a valuable picture of the participation patterns of walkers, and therefore the impact on their overall physical activity levels.

The findings will be of use to local organisations delivering led-walk interventions, and policy-makers looking for evidence of the impact of large-scale physical activity interventions.

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Further information
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Summary

The Sport Industry Research Centre at Sheffield Hallam University was appointed by Natural England to undertake the analysis and reporting on patterns of attendance amongst Walking for Health (WfH) participants. The WfH programme is one of the largest public health interventions to encourage physical activity in the UK. In trying to encourage people to introduce walking into their daily lives and to interact with the natural environment, WfH involves the operation of organised walks, with walk leaders, in local areas across England.

This research report examines walking behaviour based on the walk-history data from more than 79,000 participants held on the WfH Database, covering 1.49m person-walks in the two-year period from 1st April 2009 to 31st March 2011. The research investigates: walking trends; walker adherence; walker retention/drop-off and the likelihood of returning to organised walks after a period of absence. In addition, various factors underpinning walking participation are considered (e.g. gender, age, region, pre-WfH physical activity levels and referrals by a General Practitioner).

For each week under investigation after the registration date of a particular person, if that person walked (at least once) on a given week this was signified by a '1' in the database, if they did not walk on a particular week an entry of '0' was recorded. Further to the analysis of the 79,000+ records on the WfH database the key points emerging are summarised below:

The aims of this evaluation were to specifically investigate changes in the number of people who:

- According to the sample demographics for the two-year period, those registered on the WfH database were predominantly female (72%) and aged 55 and over. The majority had chosen to join the programme without being referred by their GP (93%). Slightly more than half (54%) had undertaken at least 30 minutes of physical activity on three or more days in the week prior to their WfH registration and there was a reasonable spread across the English regions, with the South East accounting for 20% of those registered.
- Registrations on WfH increase disproportionately to the number of walkers each week because of sporadic attendance and the fact that once registered there is no mechanism to remove people from the database even after a prolonged absence. Over the two-year period there was a five-fold increase in registrations, compared with a two-fold increase in the number of walkers between weeks 1 and 104.
- More women than men walk each week because there are more women on the database than men; however, proportionately a greater percentage of men walk each week than women. Moreover, according to the weighted average of walks across eight quarters, men walk on 5.5 weeks of every 13 weeks and women 5.1 weeks compared with the sample average of 5.2 weeks. Perhaps such apparently sporadic attendance is one of the attractions associated with walking, as it is relatively straightforward to return and get back into the habit after a period of absence.
- Of all those who walk at least once during a quarter, only a small minority of less than 1.5% walk at least once each week.
- The highest number of walkers who were active at least once on a given week was 14,660 in early February 2011, whilst the smallest number was 1,988 during Christmas week 2009. A pre-Christmas 'dip' in participation was observed in (both 2009 and) 2010, which coincides with the half-life where 50% of those who were walking at the start of 2010 did not walk during the pre Christmas period. It is not

clear whether this is a result of competing demand and less time to walk, reduced daylight and worsening weather, or perhaps fewer available walks as they close for the festive season.

- The half-life for the sample overall based on consecutive four-week periods commencing with those who walked at least once in period one (P1 from 4 January 2010) occurred at period 13 (P13). Isolating those who walked for the first time in January 2010, the half-life for new walkers occurred in P4 which is perhaps a better measure of adherence. For both men and women the percentage of new walkers still walking falls below 50% during P4. Whilst the half-life for new walkers is much shorter than for existing walkers, once new walkers get over the initial period when they are the most likely to drop out, more than one in five are still walking one year after their first walk.
- Those aged 55+ appear to be more likely to adhere to walking than their younger peers, whilst the half lives of walkers from the North East and West Midlands stretched into P8 and P6 respectively.
- The absence analysis revealed that people who had been absent for at least three weeks were less likely to return than those who had missed only one or two weeks of walking. In addition, the analysis across the five time periods throughout the year revealed some seasonal differences in the propensity of people to return to walking after a period of absence, with the pre Christmas period once again showing much lower return rates.
- The tendency to return to walking is similar amongst men and women, although as with the adherence analysis the likelihood of a return to walking after an absence increases with age. Whether or not someone was referred by a GP or had been active prior to registering had no impact upon return rates after an absence.
- CHAID (Chi-squared Automatic Interaction Detector) analysis examined the intensity of walking participation within the WfH database. Participants were divided into categories of walking behaviour (dependent variables) and CHAID analysis (in SPSS) using an array of independent variables identified the most important factors associated with the examined walking behaviour. The analysis revealed that the age of walkers was a key determinant of their walking intensity, with older people, especially around retirement age the most likely (regular) participants. Other key factors which impacted upon walking participation across the various age groups included physical activity levels prior to joining WfH (based on a proxy measure from the OHQ), and the sex of those on the database.

Whilst this report has attempted to provide a coherent picture of the behaviours exhibited by people registered on the WfH programme; it is worth stressing that there is a limit to the information a database can provide if it is not designed for a specific purpose. Our experiences with the WfH dataset have shown that analysis of this kind to try and 'eek out' information (linked to often abstract concepts is both time consuming and complex, and – as with any database – relies on the completeness and accuracy of the data itself. However, we believe the information contained herein provides a realistic overview of the characteristics exhibited by walkers on the WfH programme in the two-year period under investigation.

Acknowledgements

SIRC and Natural England would like to acknowledge and thank all the Walking for Health participants who completed an Outdoor Health Questionnaire, and all the local schemes who used the Walking for Health database to enter and maintain information about their walkers and walks. Without them this research would not have been possible.

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1 Introduction

1.1 The Sport Industry Research Centre within the Faculty of Health and Wellbeing at Sheffield Hallam University was appointed by Natural England to undertake the analysis and reporting on patterns of attendance amongst Walking for Health (WfH) participants. The WfH programme is one of the largest public health interventions to encourage physical activity in the UK and transferred its ownership to Natural England in 2006 after being set up originally by the Countryside Agency. In trying to encourage people to introduce walking into their daily lives and to interact with the natural environment, WfH involves the running of organised walks, with walk leaders, in local areas across England.

1.2 This research report examines walking behaviour based on the walk-history data from more than 79,000 participants held on the WfH Database. This database contains records from an Outdoor Health Questionnaire (OHQ) and from individual walk registers which generate the walk histories upon which this research is based. The OHQ records demographic information as well as current levels of physical activity which provides a baseline from which to work as people are encouraged to increase their levels of activity. The two-year period under investigation from 1st April 2009 to 31st March 2011 coincides with the start of the WfH Expansion Programme co-ordinated by Natural England and the Department of Health, designed to create a fourfold increase in walking participation. Natural England estimates that the database holds data from up to 60% of walk schemes operating under the Walking for Health umbrella over this period, and a similar percentage of walkers. The database has been used previously to produce detailed demographic reports and monitoring information to inform future programme delivery. With this in mind for the purposes of the current evaluation, the key areas under scrutiny are:

- Analyse data overall according to:
  - Trends and walking patterns across each week of the 2 years and quarterly;
  - Adherence to walking;
  - Drop-off, retention and turnover of walkers; and
  - Likelihood of returning after a period of absence.
- Sub-divide the overall data according to the independent variables of:
  - Gender (male/female);
  - Age group (16-24 through to 85+);
  - GP referrals to walking;
  - Activity levels prior to registration on the WfH database; and
  - Region.

1.3 The report attempts to provide a coherent picture of the behaviours exhibited by people registered on the WfH programme. Ultimately, such information could be used to inform the delivery of future 'led' walk interventions or the extension of WfH by a new delivery partner (other than Natural England early in 2012). Notwithstanding this point, it is important to stress that there is a limit to the information a database can provide if it is not designed for a specific purpose. Our experiences with the WfH dataset have shown that analysis of this kind to try and 'eek out' information (linked to abstract concepts like adherence and turnover) is both time consuming and complex, and – as with any database – relies on the completeness and accuracy of the data itself. However, we believe the information contained herein provides a realistic overview of the characteristics exhibited by walkers on the WfH programme in the two-year period under investigation.

2 Methodology

2.1 The SIRC team was presented with three text files of walking behaviour by the organisation responsible for managing the database in Northern Ireland. These were merged in to one file in Microsoft Excel according to unique identifiers' for each individual walker who had been recorded as registered on an organised 'led' walk on the WfH programme, in the two-year period under investigation. The data was cleaned in order to create a manageable dataset upon which to base the analysis necessary to achieve the research objectives; details of the cleaning using Microsoft Access are presented in Appendix A.

2.2 For each week under investigation after the registration date of a particular person, if that person walked (at least once) on a given week this was signified by a ‘1’ in the database, if they did not walk on a particular week an entry of ‘0’ was recorded. The final dataset upon which the analysis is based comprises information from 79,038 walkers and 1.49 million person-walks. All the findings presented herein have been anonymised and all those registered on WfH gave consent to those maintaining the database for their details to be held in this way.

3 Results

Sample demographics

3.1 The analysis of the 79,038 walkers over the two-year period revealed the information presented in Figure 1. The sample was predominantly female (72%) and aged 55+ (72%). In addition, 7% of walkers had been referred to a WfH programme by their Doctor; whilst 24% were active for at least half an hour on at least five days in the week prior to completing their OHQ. The region with the most people registered on the WfH programme was the South East (20%), with the London region accounting for the smallest proportion of walkers (5%).

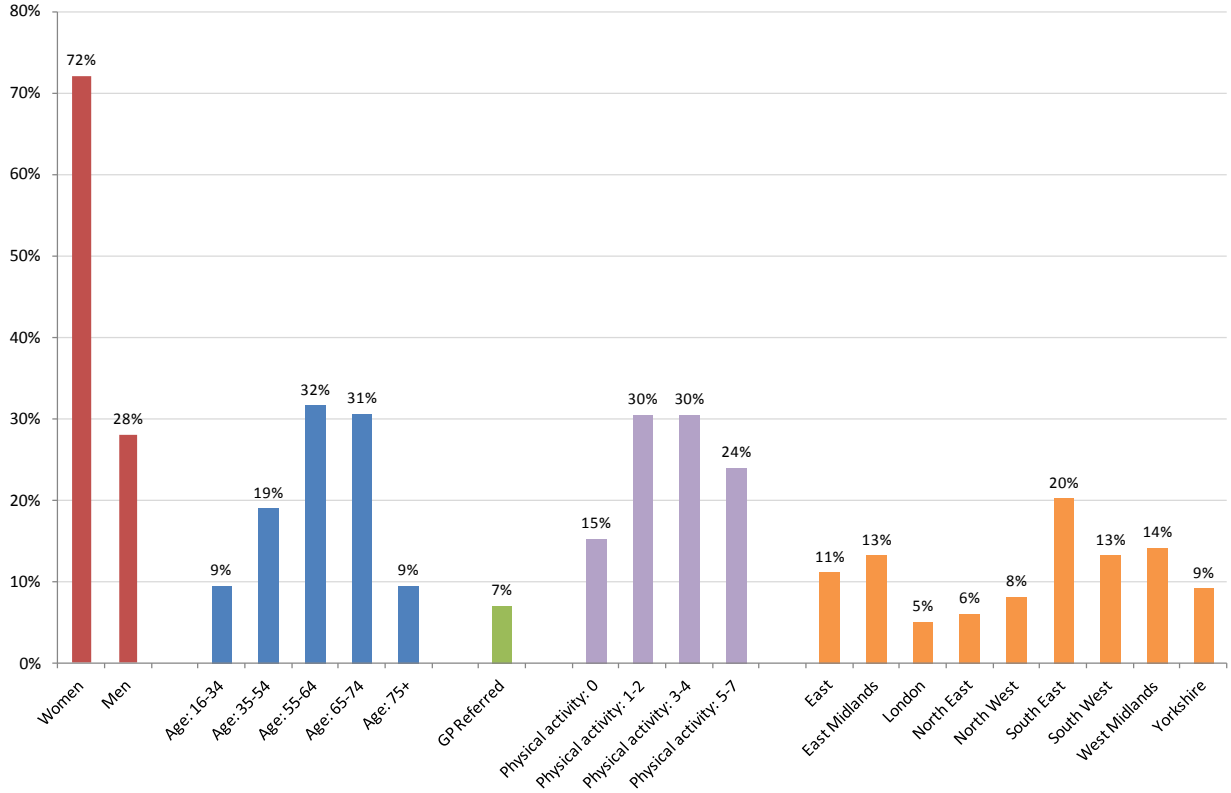

Figure 1 Sample demographics

3.2 In addition to the data presented in Figure 1, 91% of the sample (who stated ethnicity) was white British, which together with white Irish/other and traveller increased to 95%. Walkers who reported being Asian/Asian British and Black/Black British accounted for 3% and 1% of the sample respectively; with walkers from other ethnic groups responsible for the remaining 1%.

Walks by registered walkers

3.3 In order to assess trends of attendance on the WfH programme we have divided the two-year period under scrutiny into 104 weeks. In Figure 2 the absolute number of people on the WfH database shows a steady increase (the red line) over the two-year period, though it is likely this is as much due to increasing numbers of walk schemes using the database as it is to new people joining the programme. Over the same period the increase in the number of people walking each week is less marked possibly as a

result of seasonal differences and more specifically their sporadic attendance. Note also the declines in the pre-Christmas period in 2009 and 2010 illustrated by the marked 'dips' on the blue line representing decreased numbers of walkers, coupled with a levelling off on the red line as the number of new walkers registering did not increase at the same rate as previously.

3.4 In Figure 3, the proportion of those on the database who walked at least once during each given week is presented and this shows a declining trend in the proportion walking as the numbers registered increase at a greater rate than the number of walkers. Note that the declining trend is a result of new people joining the programme each week, coupled with the intermittent attendance of those already on the WfH database and possibly some issues about the recording of walks each week. Moreover, once people are registered on the WfH database there is currently no formal mechanism to remove them, even if they have not walked for a prolonged period of time.

3.5 Also in Figure 3, note the more marked declines in the pre-Christmas period each year, which were more prolonged in 2010 (than in 2009) due to the unusually high levels of snowfall and freezing temperatures in parts of England in November and early December. Also of note is the increasing trend in walking participation in the immediate post-Christmas period as people perhaps attempt to walk off the excesses of the festive break or return to their normal routines.

3.6 The percentage of male walkers who are active at least once on any given week exceeds the percentage of females undertaking at least one walk, although in absolute terms because there are more women on the database, more women walk than men each week as illustrated in Figure 4. The highest number of walkers undertaking at least one walk in a given week was 14,660 (from 31 Jan - 5 February 2011); of which 4,426 were male walkers and 10,234 female walkers. The lowest number walking at least once on a given week was 1,988 (706 male and 1,282 female) from 21 - 27 December 2009.

3.7 Regionally there is a steady increase in the absolute numbers registered on the WfH database as people complete their OHQs. The absolute number of registered walkers was greatest in the South East (see Figure 5) where it peaked at 15,922 in the final week (104) of the two-year period; however, the peak number of walkers on any given week was 3,046 at week 97. This finding reemphasises the point that increases in the number of registrations does not always result in an increase in the absolute number of walkers, because people do not necessarily walk every week.

3.8 To further illustrate the previous point, Figure 6 compares weeks 1 and 104 by reporting the percentage increase in those registered on the WfH database over the two years. Overall by week 104 there had been a five-fold increase in the total number of people registered on the database; but only a two-fold increase over the same period in the number of walkers (in week 104 compared to week 1). The regional differences presented in Figure 6 reveal that the percentage change in the number of participants who were active on week 104 exceeds the change in the overall sample in the East, London, West Midlands and Yorkshire regions. These variations across region are emphasised further when considering the strength of the correlations between the numbers of people registered on WfH and those walking on any given week.

3.9 In order to assess the relationship between the absolute number of WfH registrations and the numbers who walk each week, we present in Figure 7 the correlation coefficients (r) overall and by region. The value of r varies from -1 (a perfect negative relationship) to +1 (a perfect positive relationship) with values around zero indicating a lack of association between two variables. Overall, there is a reasonably strong positive relationship between the numbers registered and the number of walkers each week (r =

0.6); in other words as the number of registrations has increased over time so too has the number of walkers as one might expect. At regional level the strongest positive relationship between those on the WfH database and those walking on a given week can be found in the London and East regions ($r > 0.7$) with reasonably strong correlations (in social science terms). The relatively weak relationship in the North West ($r < 0.2$) perhaps exposes some issues around the recording of the numbers who actually walk each week.

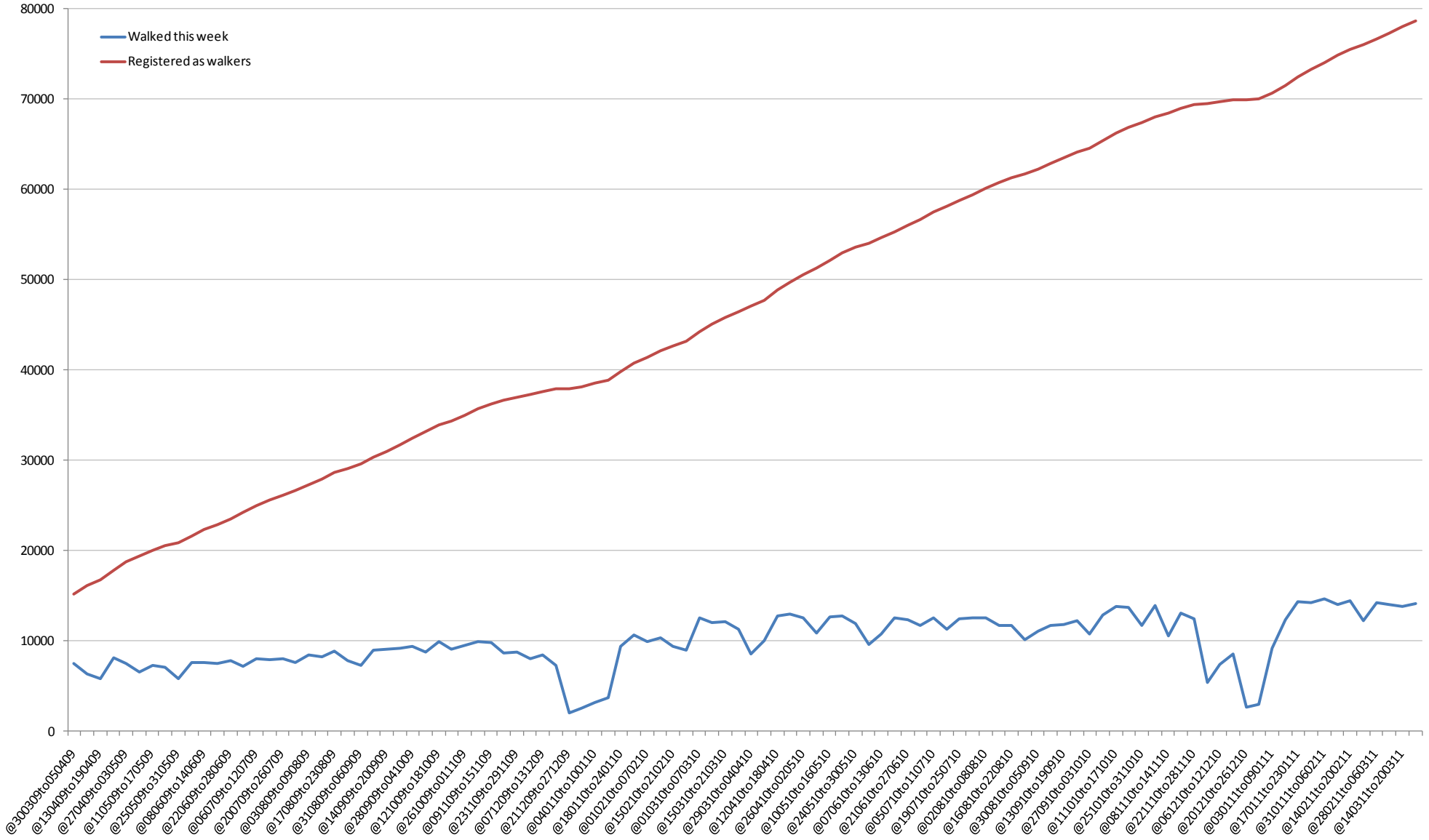

Figure 2 Walk history - Comparison of registered walkers and those walking at least once each week of the 2-year period

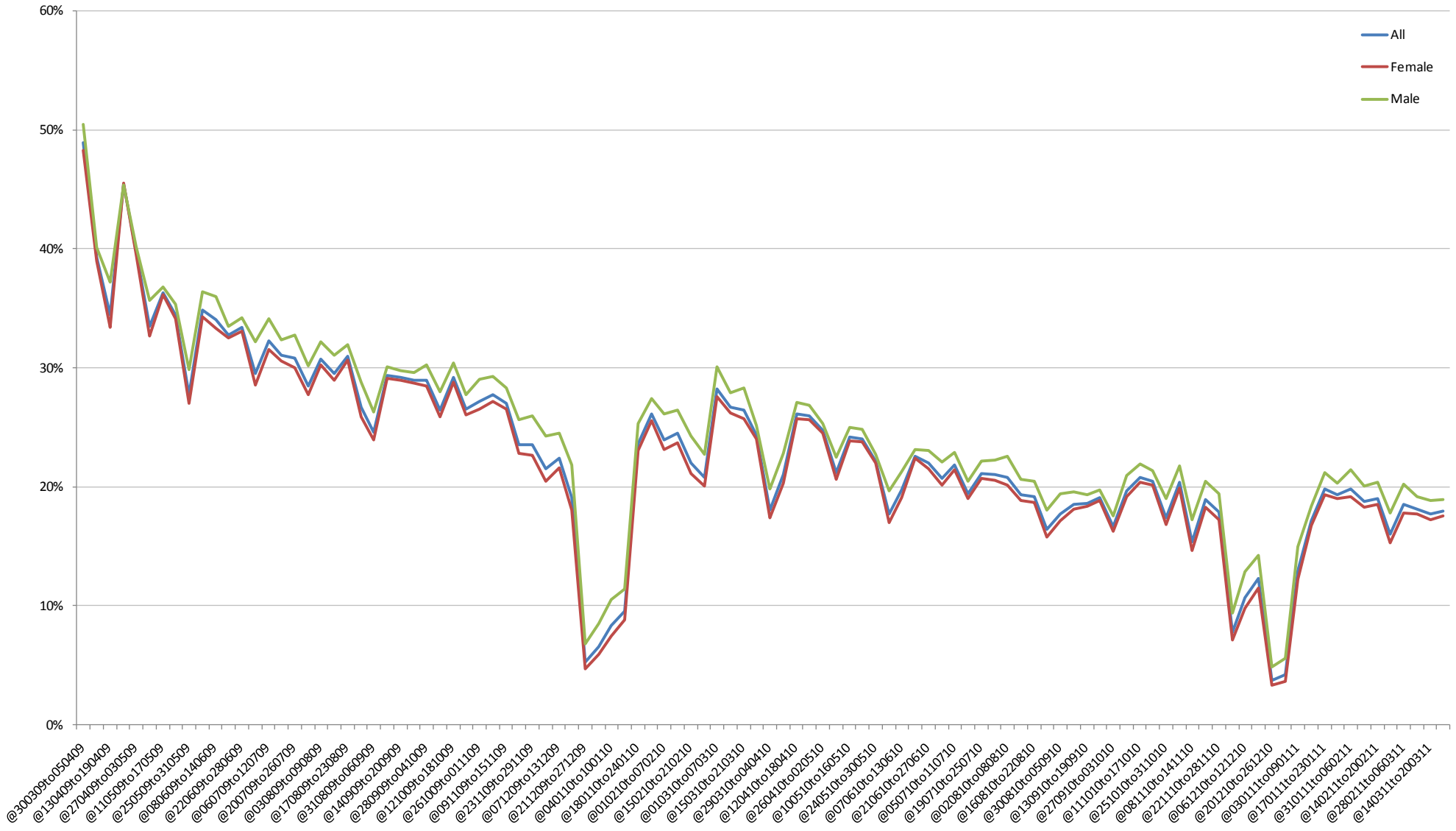

Figure 3 Walk history - Proportion of registered walkers walking on each week of the 2-year period

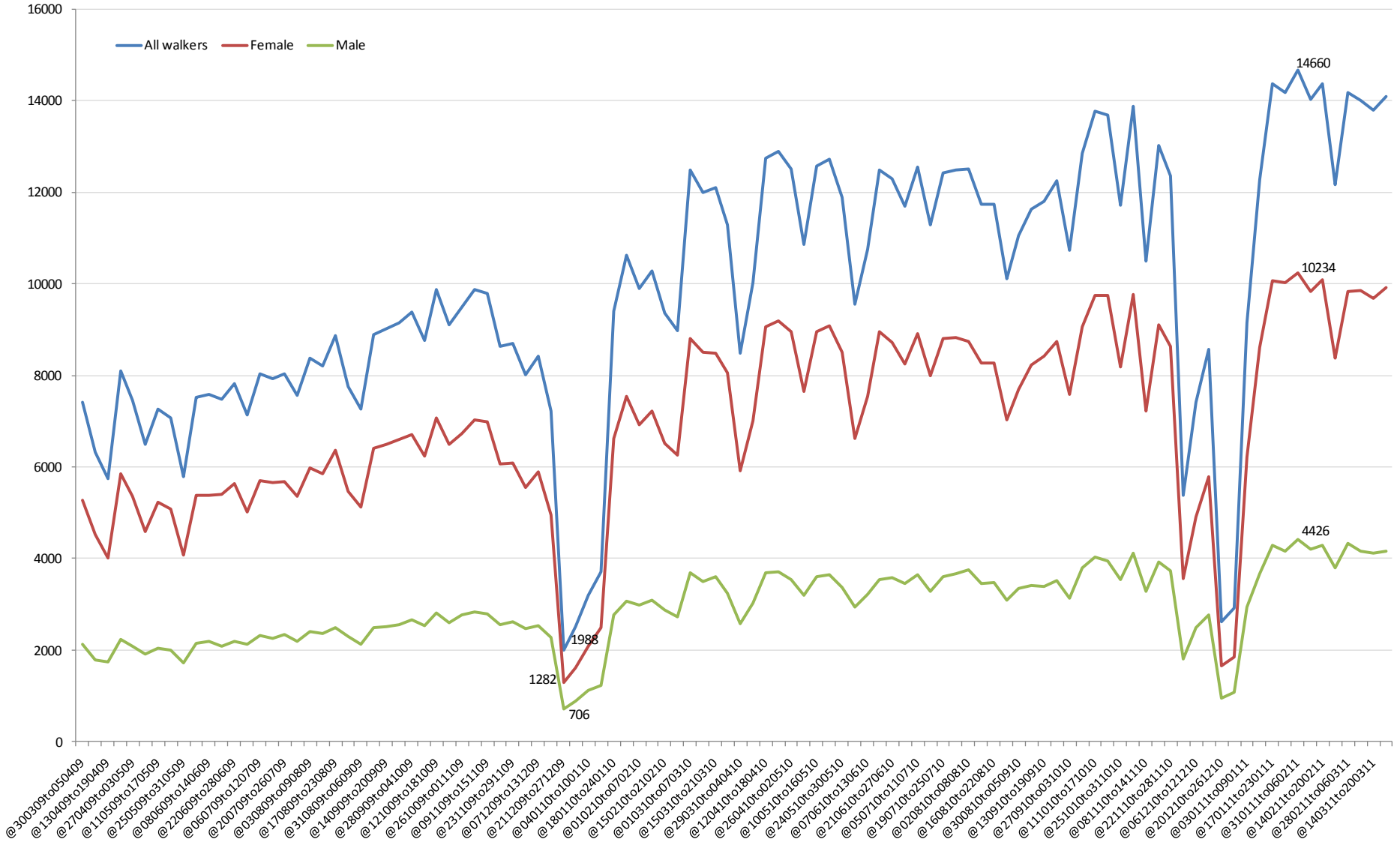

Figure 4 Walk history - Absolute number of people walking each week of the 2-year period

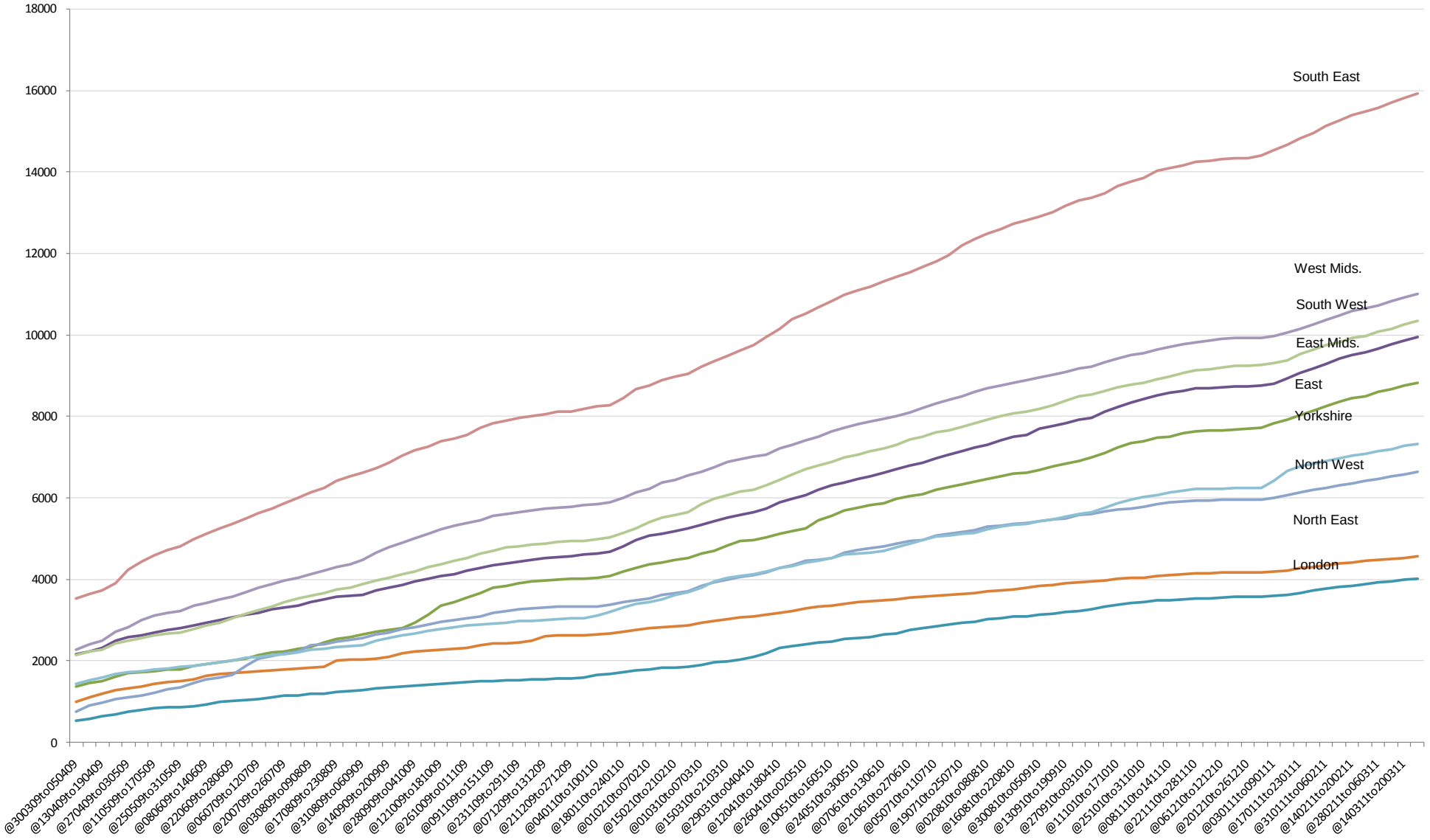

Figure 5 Walk history - Absolute number of people on WfH database each week by region over the 2-year period

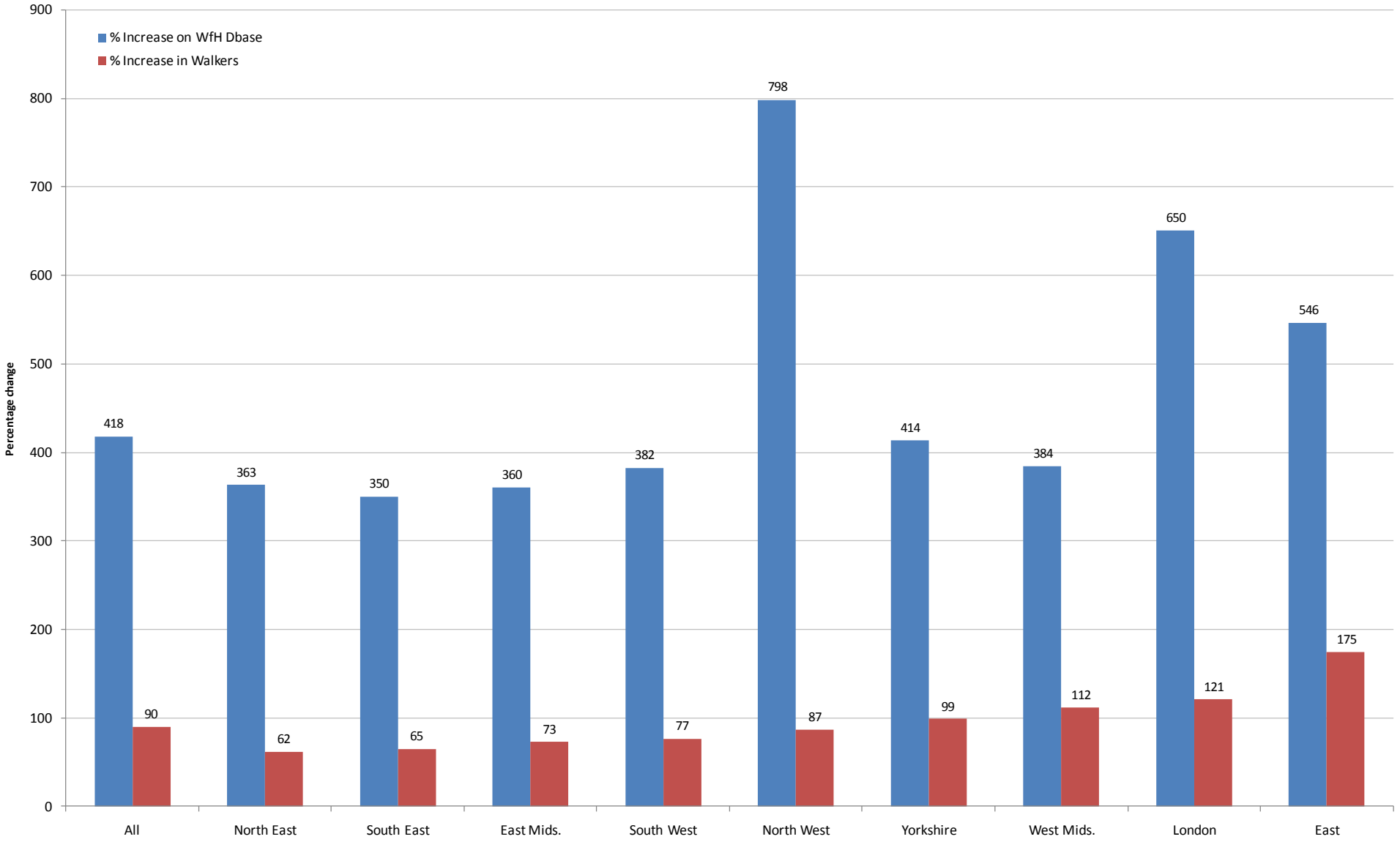

Figure 6 Walk history - Comparison of percentage increases from week 1 - 104 by region

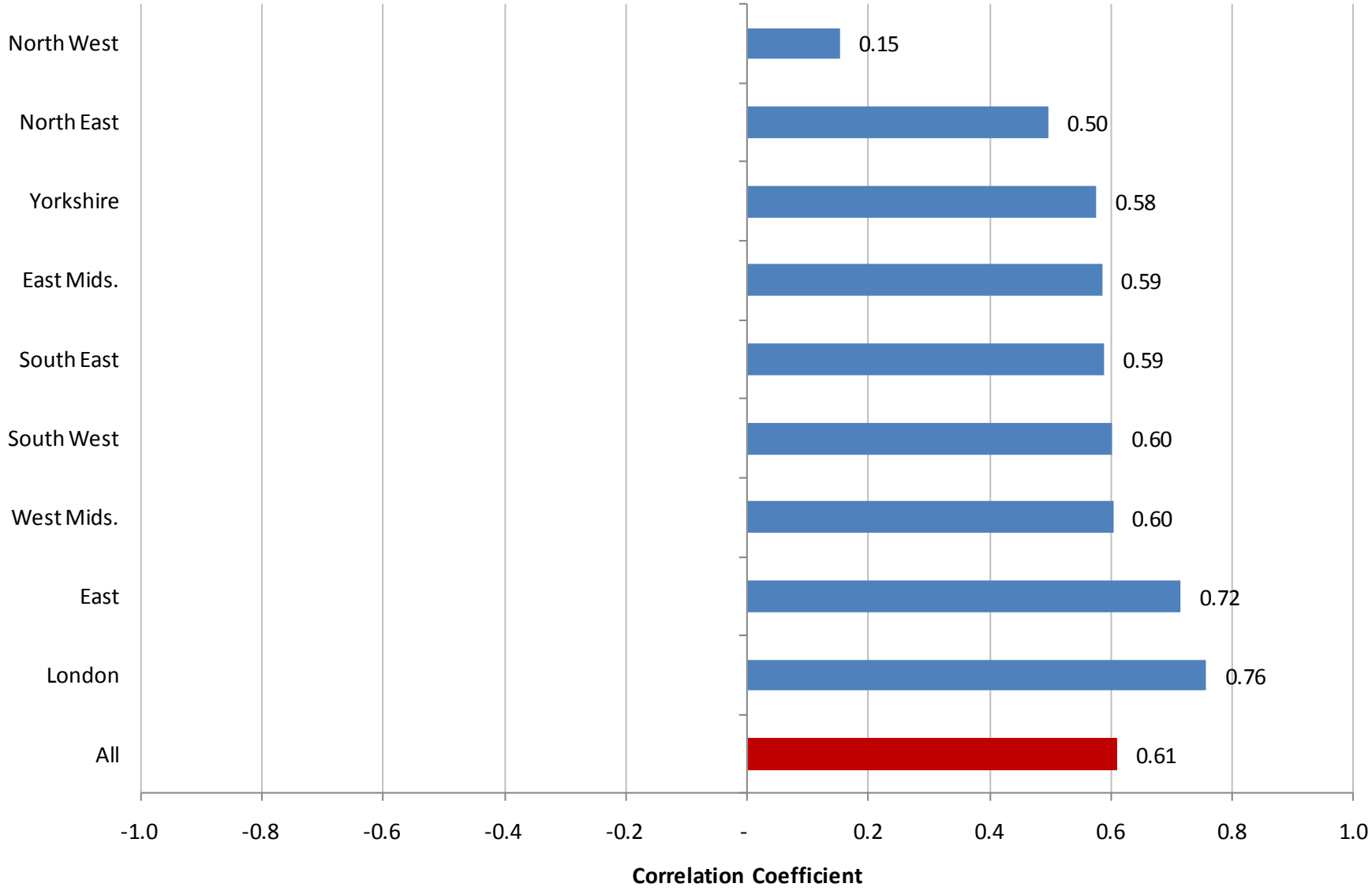

Figure 7 Walk history - Comparison of relationships between WfH registrations and walkers each week by region

Quarterly analysis

3.10 In order to provide additional detail about the walking behaviour of people on the WfH database, the report now presents the findings from analysis undertaken on a quarterly basis. The quarters correspond to the dates below:

Quarter	From	To
1	30 March '09	28 June '09
2	29 June '09	27 September '09
3	28 September '09	27 December '09
4	28 December '09	28 March '10
5	29 March '10	27 June '10
6	28 June '10	26 September '10
7	27 September '10	26 December '10
8	27 December '10	27 March '11

3.11 The quarterly analysis enables the derivation of the average number of weeks upon which someone on the WfH database walks out of a maximum 13. In addition, it provides an indication of those people registered who did not walk during specific quarters.

3.12 The information in Figure 8 provides the breakdown of the number of registered people on the WfH database by quarter, alongside the number who had walked on at least one week of the quarter under scrutiny. Once again it is immediately apparent that those registered on the database increase disproportionately to those walking during any given quarter, because after their registration on the database there is no mechanism to remove people who no longer take part.

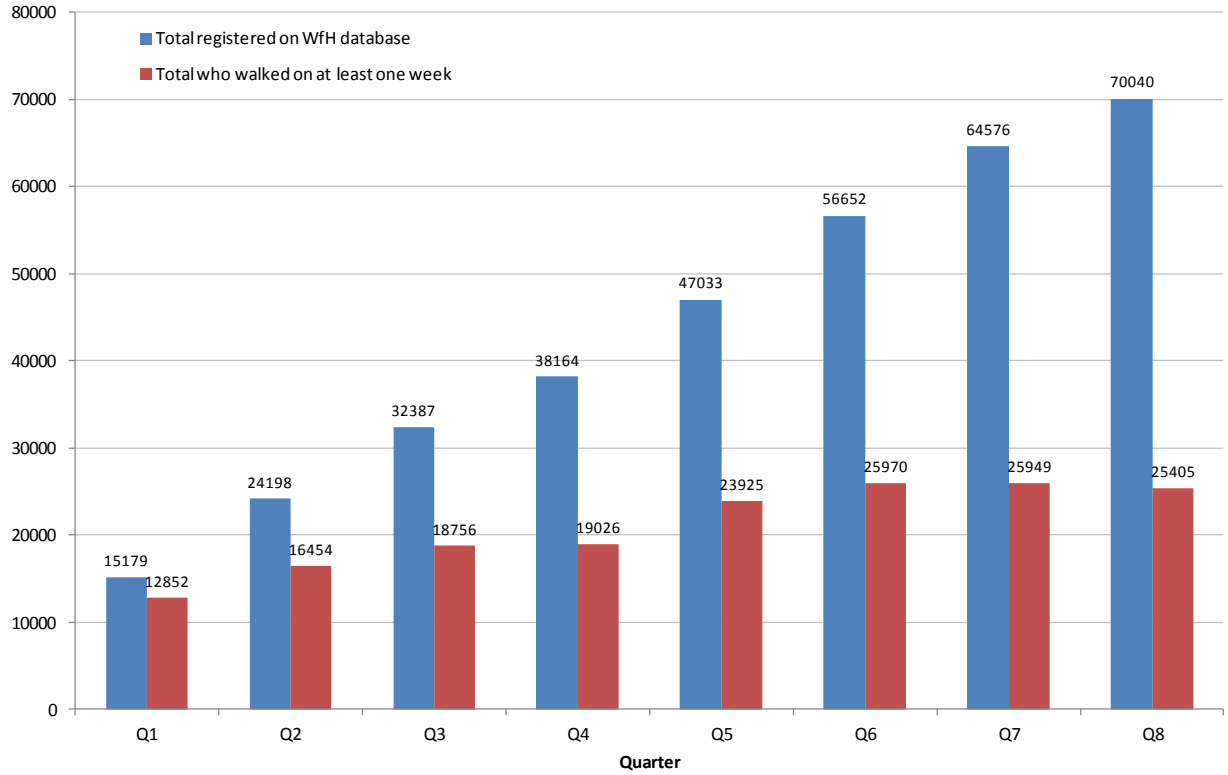

Figure 8 Numbers on the WfH database and those who walked each quarter

3.13 In order to provide another measure of the variations in walking participation by quarter, in Figure 9 we present the average number of weeks upon which people walked. The first series of average scores is based on the total number of walks divided by those registered on the WfH database each quarter. The second series of scores is based only on those people who walked in a given quarter. Once again because of the disproportionate increase in those registered on WfH compared with the increase in those walking each quarter, the average number of weeks for all those registered declines from almost five weeks to around two weeks by quarter 8; the weighted average across the eight quarters being 2.5 weeks. In contrast the average number of weeks by those who walked at least once on a given week is around five for the entire eight quarters of the two-year period and the weighted average is walking on 5.2 weeks. This suggests that the frequency with which participants took part in WfH did not change over this two-year period.

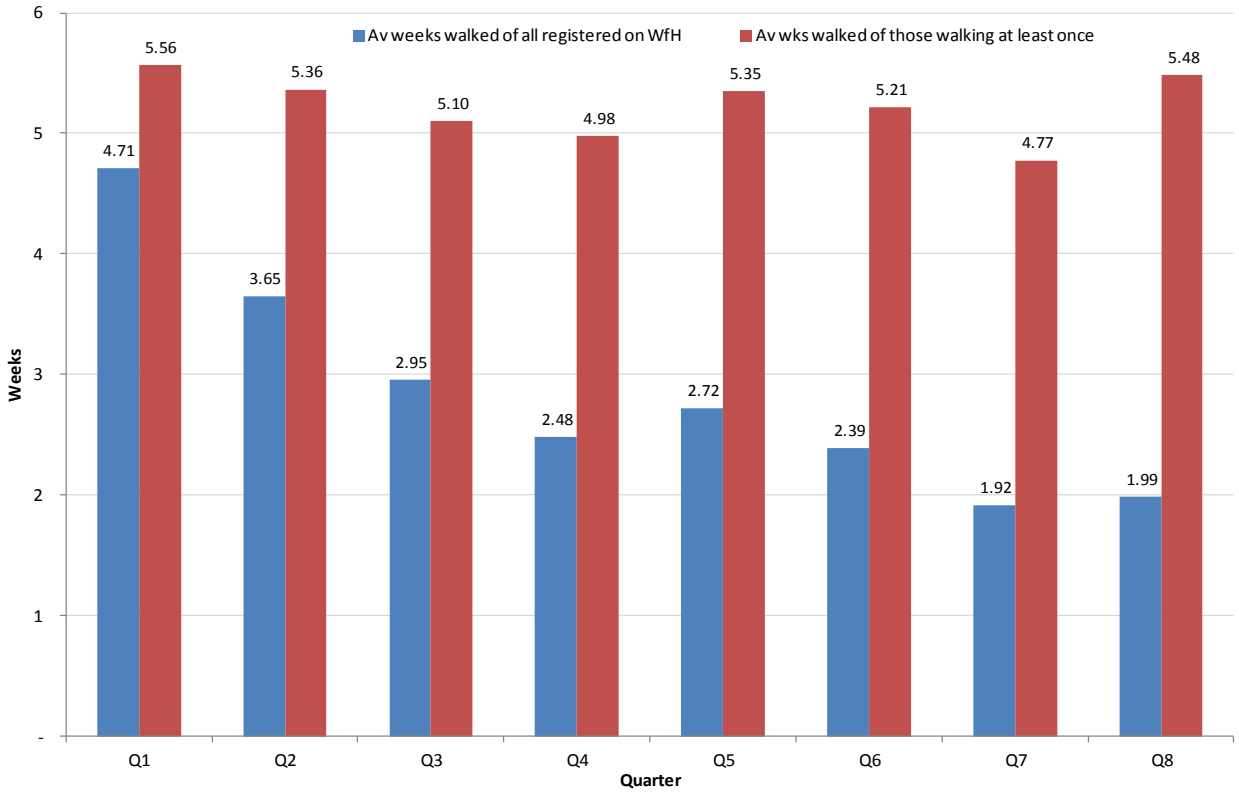

Figure 9 Average number of weeks walked per quarter

3.14 Having identified that the average number of walking weeks per person per quarter is a little over five, Figure 10 provides the weighted average of the weeks walked per quarter broken down by various independent variables. The findings indicate that males, people aged 55+ and those referred to a walking programme by their GP all exceeded the sample average of 5.2 weeks. The younger age groups are characterised by less frequent walking than those aged 55+, with walkers aged 44 and under likely to go for a walk on less than four of the 13 weeks per quarter. Moreover, the most active people in the week prior to registration on the WfH database (i.e. active on all seven days and usually associated with young people) appear to be less likely to walk than those people who were slightly less active (i.e. on 4-6 days). The significance of this finding and the results in Figure 10 are especially prominent in the CHAID analysis (see section 3.6), where the variation in walking participation is associated with the most important characteristics of the participant. Note however, that in the context of this paragraph we are referring to the population of organised walkers on the WfH database rather than a

sampling distribution which makes our statements points of fact rather than sampling estimates.

3.15 To complete this section Figure 11 presents the proportion of people who walk at least once per quarter for certain pre-defined frequencies; this graphic emphasises the relatively small proportion of walkers who walked at least once per week, every week, of a 13-week quarter.

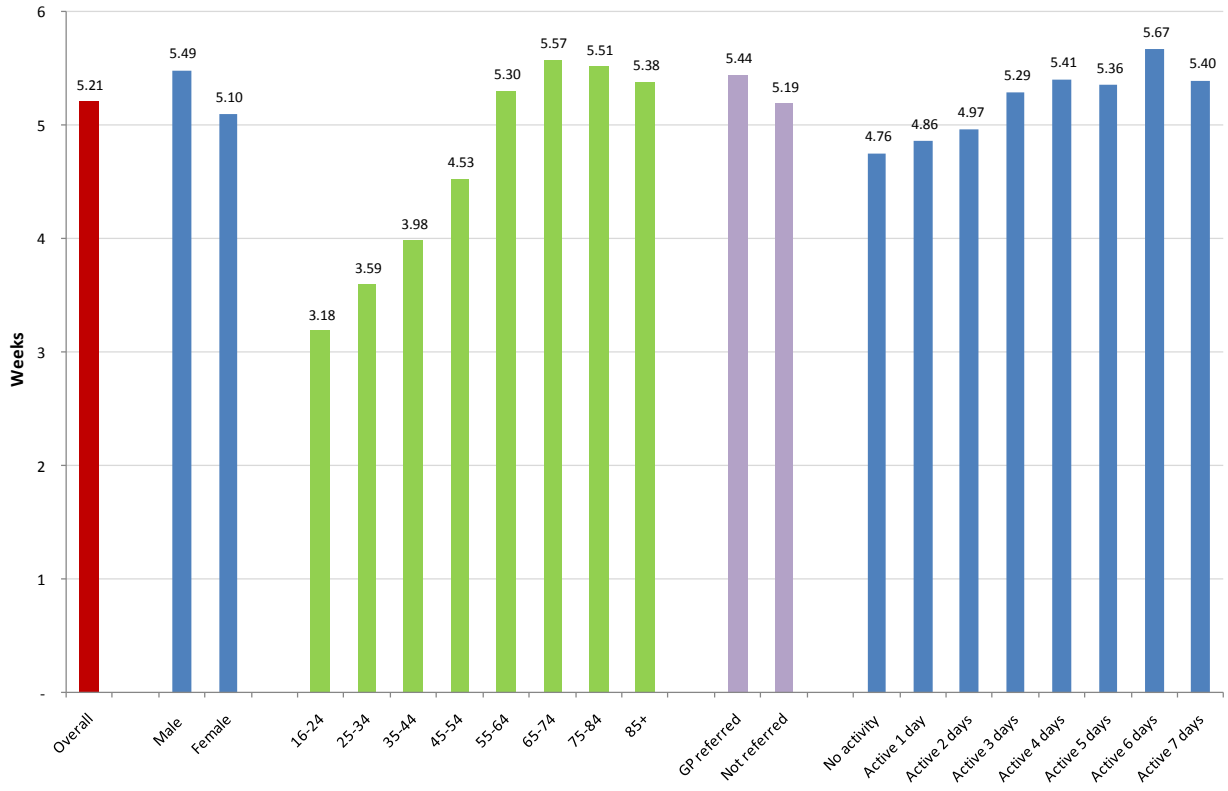

Figure 10 Comparison of the weighted average of weeks walked per quarter

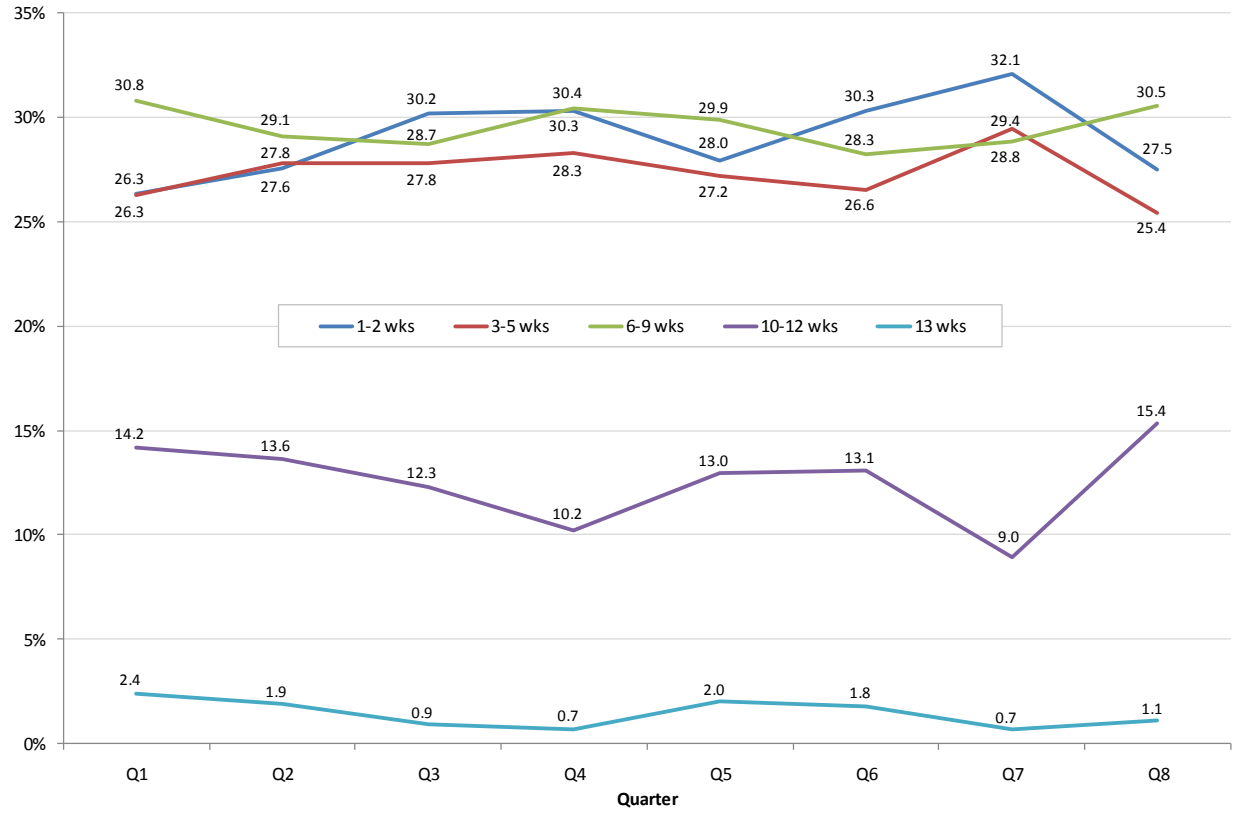

Figure 11 Walking frequency by week across the eight quarters (excludes non-walkers by quarter)

Adherence – 50% of available walking weeks

3.16 The previous analysis (in section 3.2) relates to the entire 104 weeks under investigation or analysis by the eight quarters. In order to look in more detail at adherence to walking we now continue the analysis of the WfH programme over the two-year period. For the purpose of this analysis we consider registered walkers who had walked during at least 50% of the weeks available to them; this includes walkers who started walking prior to 30 March 2009 and those who had walked at least once prior to the 79th week. Those who started in the last six months (quarters 7 and 8) of the two-year period are excluded on the basis that their scores would skew the findings given that they had not been registered on the WfH programme for long enough to add meaningful data to the analysis, especially as WfH attempts to foster a sustained change in physical activity behaviour.

3.17 As shown in Figure 12, for the aforementioned dataset (representing more than 90% of the population), 13.4% of people walked on at least 50% of the weeks available to them, with men (15.3%) being more likely to do so than women (12.6%). People aged 55+ were more likely to walk than those of a younger age with the 65-74 group the most likely to have walked on at least half of the weeks available to them (18.9%). People who were already physically active were more likely to walk on 50% of the weeks than the sample overall, as were people in the North East, South East and West Midlands regions. Those referred by a GP (13.8%) were slightly more likely to walk on at least 50% of the available weeks than non-referrals (13.4%).

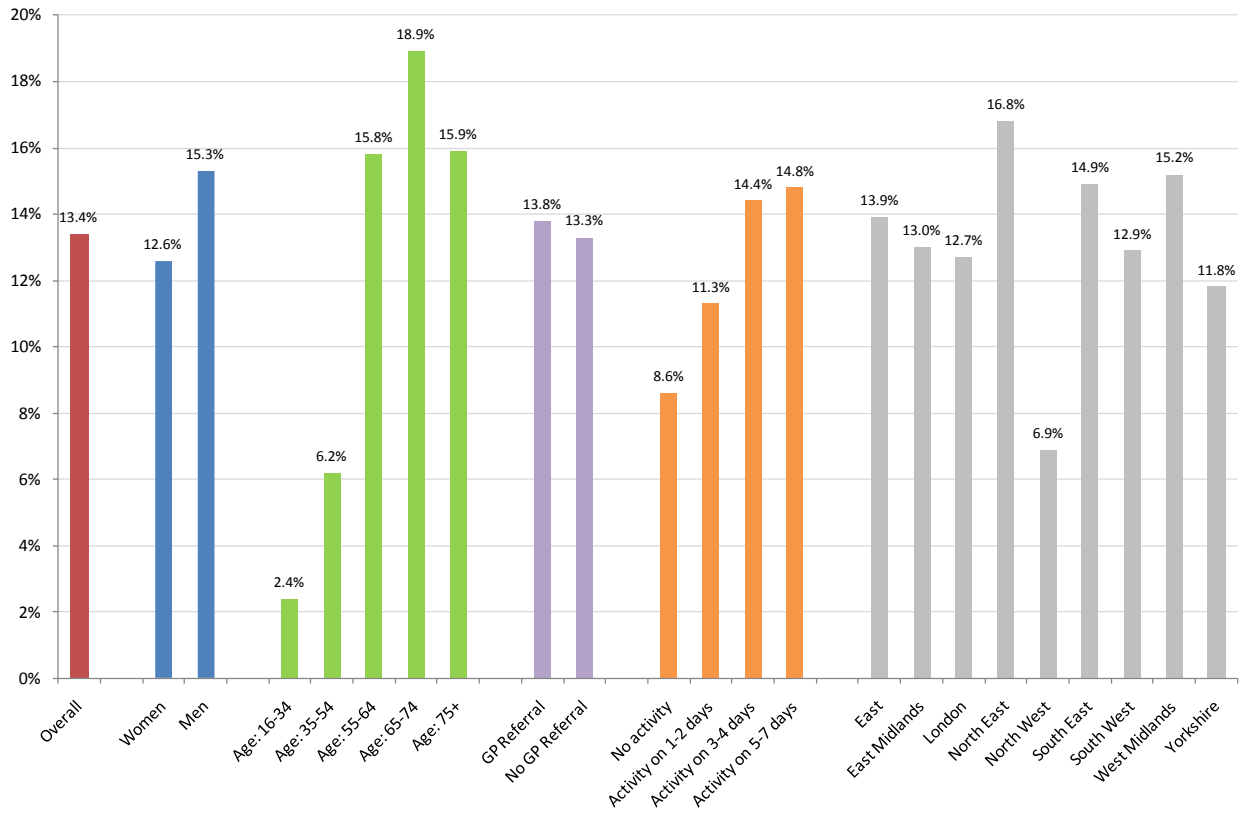

Figure 12 Walked on 50% of the available weeks by independent variables

3.18 An alternative approach to adherence is presented in section 3.4 which considers walking behaviour over 16 four-week periods (P1 – P16) from the beginning of January 2010 until the end of March 2011. The data was collapsed according to these four-week periods to cover a calendar year in equal segments (P1 – P13) in order to allow seasonal differences to be explored as the research attempts to estimate the time it takes for half of the walkers on a given four-week period to disengage with the WfH programme, this is the so-called 'half-life'. The additional three periods (P14 – P16) were included in order to gauge whether or not patterns emerged year on year, for example the pre Christmas 'dip' and the recovery in participation in January.

Adherence – Investigation of 'half-life'

3.19 The following tables in Figure 13 are based on 16 four-week periods starting from week commencing 4 January (period 1 (P1)), including w/c 27 December (period 12 (P12)) and ending w/c 27 March 2011 (period 16 (P16)). The time frame chosen to estimate 'half-life' begins immediately after the Christmas decline in participation (as illustrated previously in Figures 2, 3 and 4).

3.20 In Figure 13 the base at period 1 is 15,303 people who walked (at least once); of these 11,981 also walked in P2 and the decline continued to 11,900 in P3. By P12 c. 56% (8,495 of 15,303) were still walking, the corresponding figure for P13 (coinciding with the Christmas period) was 41%, though there was an increase to pre Christmas levels in P14 to P16. The P2 base of 18,035 includes some of the walkers in P1 plus new walkers and returners who perhaps did not walk in P1, and of the 18,035 c. 80% (14,390) also walked in P3. According to the data presented in Figure 13, the half-life is always around the Christmas period (P13) as one might reasonably expect with competing attractions and the festive break. However, it is encouraging to note that

people appear to return to pre-Christmas levels of walking in early January (see P12 and P14).

3.21 Please note that the first row of the following tables is the most complete for analysis purposes covering the entire (16) four-week periods. Subsequent rows will reduce the period under investigation by four week increments.

3.22 Whilst the data in Figure 13 is useful in its own right, it does not differentiate the behaviour of people new to the WfH programme. To address this issue, Figure 14 details the behaviour of people who had not walked on the WfH Programme prior to a given four-week period, in order to assess how sustained the participation of new walkers is once they have undertaken their first walk. The data indicates that the 'half-life' is shorter than that suggested of all walkers, with a much faster turnover of new starters which occurs sometime during P4 (8-12 weeks after the first walk) where less than 50% of those from the original baseline position continued to walk. For example, from a base of 2,554 new walkers at P1 some 1,187 (46%) also walked during P4; the corresponding figure in P13 was 548 (21%) who continued to walk. This is a particularly noteworthy finding as more than one in five people continue to walk at least once every four weeks, one year after their first walk. This figure increases to better than one in four in the post Christmas period. Despite the relatively high turnover of new walkers, it is true to say that existing walkers *were* new walkers once and those that 'survive' (the initial period when walking attrition is most likely), go on to have a strong connection with WfH, as evidenced by the much longer half-life of the overall sample of walkers under scrutiny.

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	15,303	11,981	11,900	11,010	10,855	10,223	10,161	9,820	9,238	9,407	9,433	8,495	6,328	8,724	8,698	8,341
2		18,035	14,390	12,850	12,557	11,806	11,641	11,238	10,608	10,672	10,754	9,612	6,915	9,805	9,858	9,419
3			21,409	15,273	14,806	13,547	13,430	12,863	11,975	12,028	12,163	10,736	7,663	10,814	10,938	10,545
4				21,465	16,322	14,804	14,385	13,800	12,915	12,802	12,837	11,323	8,050	11,288	11,400	10,968
5					23,088	16,654	15,830	14,948	13,833	13,780	13,823	12,097	8,507	12,076	12,143	11,783
6						21,813	16,517	15,317	14,140	13,962	13,976	12,187	8,558	12,102	12,229	11,749
7							22,940	16,883	15,251	14,964	14,902	13,023	9,043	12,797	12,918	12,429
8								22,959	16,669	15,717	15,519	13,515	9,359	13,232	13,310	12,779
9									21,794	16,197	15,614	13,598	9,423	13,213	13,312	12,805
10										22,948	17,540	14,984	10,130	14,323	14,304	13,777
11											24,194	16,827	11,002	15,662	15,632	14,957
12												20,730	11,081	15,187	14,916	14,270

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	100	78	78	72	71	67	66	64	60	61	62	56	41	57	57	55
2		100	80	71	70	65	65	62	59	59	60	53	38	54	55	52
3			100	71	69	63	63	60	56	56	57	50	36	51	51	49
4				100	76	69	67	64	60	60	60	53	38	53	53	51
5					100	72	69	65	60	60	60	52	37	52	53	51
6						100	76	70	65	64	64	56	39	55	56	54
7							100	74	66	65	65	57	39	56	56	54
8								100	73	68	68	59	41	58	58	56
9									100	74	72	62	43	61	61	59
10										100	76	65	44	62	62	60
11											100	70	45	65	65	62
12												100	53	73	72	69

Figure 13 Absolute number and percentage drop off of walkers across16 four-week periods

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	2,554	1,447	1,391	1,187	1,125	1,007	982	916	844	906	905	786	548	753	772	712
2		2,436	1,310	978	885	774	770	721	612	661	646	551	328	575	569	520
3			3,333	1,487	1,347	1,059	1,059	950	861	835	880	706	418	656	688	681
4				3,230	1,692	1,373	1,317	1,158	1,071	1,074	1,032	883	549	840	848	792
5					3,259	1,503	1,235	1,027	920	901	893	707	458	689	688	649
6						2,315	1,065	866	733	714	679	551	324	530	528	515
7							2,794	1,310	1,049	930	889	698	398	649	659	639
8								2,638	1,200	959	857	703	382	621	611	613
9									2,096	887	715	546	298	478	493	466
10										2,586	1,325	960	497	818	790	756
11											2,663	1,155	587	893	888	835
12												1,430	394	577	567	517

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	100	57	54	46	44	39	38	36	33	35	35	31	21	29	30	28
2		100	54	40	36	32	32	30	25	27	27	23	13	24	23	21
3			100	45	40	32	32	29	26	25	26	21	13	20	21	20
4				100	52	43	41	36	33	33	32	27	17	26	26	25
5					100	46	38	32	28	28	27	22	14	21	21	20
6						100	46	37	32	31	29	24	14	23	23	22
7							100	47	38	33	32	25	14	23	24	23
8								100	45	36	32	27	14	24	23	23
9									100	42	34	26	14	23	24	22
10										100	51	37	19	32	31	29
11											100	43	22	34	33	31
12												100	28	40	40	36

Figure 14 Absolute number and percentage drop off of NEW walkers across 16 four-week periods

3.23 Over the course of 2010, the highest number of new walkers recorded on the WfH database occurred in the third four-week period (P3), followed closely by P5 and P4. New walkers consistently exceeded 2,000 for each period across the year apart from in P12 where 1,430 walked for the first time.

3.24 The half-life analysis divided by the various independent variables is presented in the Appendices and revealed the following key findings:

- Half-life for both males and females for the sample overall occurs in P13 (see Appendix B), and for new walkers this occurs in P4, at which point drop off is slightly less marked amongst new male walkers (24% still walking compared with 20% of females).
- Apart from there being far more walkers in the older age groups, those new walkers aged 55+ appear to be more likely than their younger peers to adhere to walking (see Appendix C for all walkers and new walkers). The percentages of older people still walking at least once in the four weeks covered by P13 consistently exceed those associated with younger walkers.
- People who were undertaking at least 3-4 sessions of physical activity in the week prior to registration appear to be more likely to adhere for longer than inactive or less active people (see Appendix D). This may be because they had already incorporated a degree of regular activity into their lives and as a result it was less of a 'culture change' to walk at least once a week.
- There appears to be no pattern emerging from the half-life analysis according to whether people were referred to WfH by a General Practitioner (GP). In fact, if anything, those not part of a GP referral programme appear to adhere for longer than those who were referred (see Appendix E). This may be a result of fluctuations in health linked to a pre-existing medical condition and might appear to contradict the results in Figures 10 and 12 which indicate that those referred by a GP walk more often, however the half-life measure is different in the sense that people only needed to have walked once in a four week period, which does not account for the intensity of their participation.
- New walkers in the North East and West Midlands regions exhibited the highest retention rates (see Appendix F) with half-lives stretching to P8 and P6 respectively. Moreover at P13 in the two regions the percentage of new walkers who continued to walk once a month was 31% and 30% respectively.

3.25 Beyond the ‘half-life’ analysis the research also analysed the WfH data according to participation across five specific weeks during the year to examine in detail the behaviour of walkers who had been absent for ‘one’ or ‘some’ weeks as presented in the next section.

Absence Analysis – Week to week analysis

3.26 The so-called ‘absence analysis’ is based on examining walking behaviour across specific weeks of the year. The five weeks selected were chosen to provide a seasonal spread to the subsequent analysis; this involved calculating the adjusted number of registered walkers (i.e. who had walked at least once before) who were absent during a specific week, relative to their accompanying walking behaviour in the preceding four, and subsequent, five weeks. Unlike the ‘adherence analysis’ from section 3.4 this involved starting from a base of absentees in order to assess for how long they might be absent and their propensity to return to a programme.

3.27 The tables presented in this section should be interpreted according to the convention explained in this example (Figure 15) from week commencing 1 February 2010. Each table includes five rows of data and six columns representing different points in time (i.e. week 0). If we move horizontally across the rows, the various cells imply the following:

Absence	Attendance (only given week)				
WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
31486	**3561**	**3238**	**3146**	**4493**	**4429**
WEEK -1					
26970	**1649**	**1697**	**1486**	**2561**	**2435**
WEEK -2					
24948	**1141**	**1118**	**1051**	**1877**	**1823**
WEEK -3					
24430	**1043**	**1045**	**960**	**1760**	**1705**
WEEK -4					
24004	**1001**	**989**	**908**	**1683**	**1651**
Week 0:	**@010210to070210**				

Absence	Attendance (only given week)				
WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
100	**11**	**10**	**10**	**14**	**14**
WEEK -1					
100	**6**	**6**	**6**	**9**	**9**
WEEK -2					
100	**5**	**4**	**4**	**8**	**7**
WEEK -3					
100	**4**	**4**	**4**	**7**	**7**
WEEK -4					
100	**4**	**4**	**4**	**7**	**7**
Week 0:	**@010210to070210**				

Figure 15 Absence analysis w/c 1 Feb. '10

Row 1/Week 0: walkers absent in week 0 only (31,486).
Row 1/Week +1: absent in wk 0 who walked in wk +1 (3,561).
Row 1/Week +2: absent in wk 0 who walked in wk +2 (3,238); etc.
Row 3/Week 0: absent from wk-2 to wk 0 (24,948).
Row 5/Week 0: absent from wk -4 to wk 0 (24,004).
Row 5/Week +1: absent from wk -4 to wk 0 & walked in wk +1 (1,001).
Row 5/Week +2: absent from wk -4 to wk 0 who walked in wk +2 (989).

In this example from w/c 1 Feb. 2010; 31,486 did not walk and of these 3,561 walked the following week (wk +1); 3,238 the next week and 3,146 three weeks later (wk +3) etc. Of the 26,970 who had not walked for 2 weeks (i.e. wk 0 and wk -1) 1,649 walked w/c 8 Feb. (wk +1), 1,697 w/c 15 Feb. (wk +2) etc. Similarly of 24,004 people who had not walked w/c 1 Feb. and the preceding 4 weeks some 1,001 walked during w/c 8 Feb. (wk +1), 989 w/c 15 Feb. (wk +2) etc.

3.28 The second table in Figure 15 provides the percentages of the first table and indicates that between 11% and 14% of those absent for one week will walk again over the next five weeks. Of those people absent for five weeks at week zero, between 4% and 7% will walk again in the next five weeks. Those who have been absent for three or more weeks appear to be less likely to return than those who have been absent for a shorter period of time. Increased percentages at weeks +4 and +5 may be linked to improving weather as March arrives.

3.29 We have undertaken similar analysis during weeks commencing: 5 April; 7 June; 30 August and 1 November to provide a seasonal spread across the year. Selected tables are provided overleaf in Figure 16 which exemplifies some of the seasonal differences across the entire WfH programme. The patterns emerging mirror the findings from February where walkers who have been absent for one or two weeks are much more likely to return to a WfH programme in the subsequent five weeks than those who have not walked for three to five weeks. This finding implies that future walk schemes should do everything possible to encourage regular participation in order to boost long-term adherence to walking.

Absence	Attendance (only given week)				
WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
37725	**5459**	**5494**	**5561**	**3974**	**5331**
WEEK -1					
33739	**3482**	**3639**	**3647**	**2725**	**3549**
WEEK -2					
29910	**2168**	**2215**	**2282**	**1748**	**2300**
WEEK -3					
27198	**1448**	**1538**	**1561**	**1267**	**1642**
WEEK -4					
25329	**1110**	**1193**	**1228**	**997**	**1322**
Week 0:	**@050410to110410**				

Absence	Attendance (only given week)				
WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
43857	**5353**	**5141**	**4976**	**5186**	**4532**
WEEK -1					
39436	**3410**	**3388**	**3188**	**3474**	**2970**
WEEK -2					
35601	**2123**	**2025**	**1965**	**2133**	**1886**
WEEK -3					
32636	**1348**	**1348**	**1329**	**1446**	**1291**
WEEK -4					
30612	**1008**	**988**	**1004**	**1054**	**997**
Week 0:	**@070610to130610**				

Absence	Attendance (only given week)				
WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
100	**14**	**15**	**15**	**11**	**14**
WEEK -1					
100	**10**	**11**	**11**	**8**	**11**
WEEK -2					
100	**7**	**7**	**8**	**6**	**8**
WEEK -3					
100	**5**	**6**	**6**	**5**	**6**
WEEK -4					
100	**4**	**5**	**5**	**4**	**5**
Week 0:	**@050410to110410**				

Absence	Attendance (only given week)				
WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
100	**12**	**12**	**11**	**12**	**10**
WEEK -1					
100	**9**	**9**	**8**	**9**	**8**
WEEK -2					
100	**6**	**6**	**6**	**6**	**5**
WEEK -3					
100	**4**	**4**	**4**	**4**	**4**
WEEK -4					
100	**3**	**3**	**3**	**3**	**3**
Week 0:	**@070610to130610**				

Absence	Attendance (only given week)				
WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
51209	**5110**	**5083**	**5481**	**4677**	**5732**
WEEK -1					
46557	**3098**	**3189**	**3451**	**2966**	**3753**
WEEK -2					
43039	**2014**	**2106**	**2418**	**2010**	**2620**
WEEK -3					
40607	**1405**	**1607**	**1780**	**1531**	**2049**
WEEK -4					
38689	**1088**	**1273**	**1430**	**1225**	**1657**
Week 0:	**@300810to050910**				

Absence	Attendance (only given week)				
WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
54178	**3393**	**4216**	**4203**	**1600**	**2395**
WEEK -1					
49619	**1901**	**2527**	**2435**	**945**	**1408**
WEEK -2					
46313	**1200**	**1555**	**1551**	**627**	**888**
WEEK -3					
43874	**817**	**1069**	**1094**	**479**	**652**
WEEK -4					
42172	**641**	**826**	**875**	**394**	**513**
Week 0:	**@011110to071110**				

Absence	Attendance (only given week)				
WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
100	**10**	**10**	**11**	**9**	**11**
WEEK -1					
100	**7**	**7**	**7**	**6**	**8**
WEEK -2					
100	**5**	**5**	**6**	**5**	**6**
WEEK -3					
100	**3**	**4**	**4**	**4**	**5**
WEEK -4					
100	**3**	**3**	**4**	**3**	**4**
Week 0:	**@300810to050910**				

Absence	Attendance (only given week)				
WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
100	**6**	**8**	**8**	**3**	**4**
WEEK -1					
100	**4**	**5**	**5**	**2**	**3**
WEEK -2					
100	**3**	**3**	**3**	**1**	**2**
WEEK -3					
100	**2**	**2**	**2**	**1**	**1**
WEEK -4					
100	**2**	**2**	**2**	**1**	**1**
Week 0:	**@011110to071110**				

Figure 16 Absence analysis across all walkers for weeks commencing 5 Apr., 7 June, 30 Aug., and 1 Nov. 2010

3.30 Return rates based on the April data varied between 10% and 15% in the subsequent five weeks for those walkers who had been absent for one or two weeks, compared with 4% to 8% for those absent for three to five weeks. Using the June data, the corresponding figures were 8-12% for those absent for two weeks or less, and 3-6% for those absent for longer. Based on the August data, the ranges had changed to 6-11% and 3-6% respectively. The November analysis revealed return to walking rates over the subsequent five weeks for short absenteeism of 2-8% and 1-3% for those absent for longer. The November findings once again demonstrated the influence exerted by the countdown to the Christmas period and also the extreme snowfall across the country.

3.31 Apart from the overall absence analysis, the data has once again been cut by the independent variables of: sex; age group; GP referral and previous levels of physical activity. The key points emerging are summarised as follows:

- The tendency to return to walks after a period of absence is broadly similar amongst men and women with longer absences resulting in a decreasing likelihood of returning to walking in the subsequent few weeks (see Appendix G). There was no difference in the percentage return to walking using the February and August data analysis and minimal difference between men and women in April, June and November.
- People aged 55+ are more likely to return to a walk after a period of absence than those aged 16-54 as shown by the yellow cells in Figure 17. However, there appear to be seasonal differences in return rates to walking as illustrated by the two examples from February and August in Figure 17, or perhaps more people who had once been involved in walking earlier in the year but who now no longer walk remain on the WfH database.
- Whether people are referred by a GP or not makes little or no difference to return rates (see Appendix H) with no discernible patterns emerging. However, in the February data, people referred by their GP who had been absent for more than one week appear to be more likely to return to walking than those who walk of their own volition in week 5+ (the 5th week after the absence). This finding is not repeated across the other four periods under investigation; which suggests that other factors are at work in making the decision to walk or not; in this instance perhaps the time of year plays a part.
- Unlike the findings presented in the adherence analysis in section 3.4 the amount of physical activity undertaken in the week prior to registration on WfH does not appear to be a factor in determining the likelihood of walkers who have been absent for a period of time, returning to a WfH walk in the future. Regardless of previous physical activity levels, the longer the absence the less likely people are to return, although according (once again) to the February data, the percentage returning increases on the 4th and 5th week after the reported absence (see Appendix I).

3.32 Having undertaken the absence analysis, after Figure 17 the report explores the role of some of the independent variables (and their interactions) on the propensity of people to engage with organised health walks under the WfH banner using CHAID analysis.

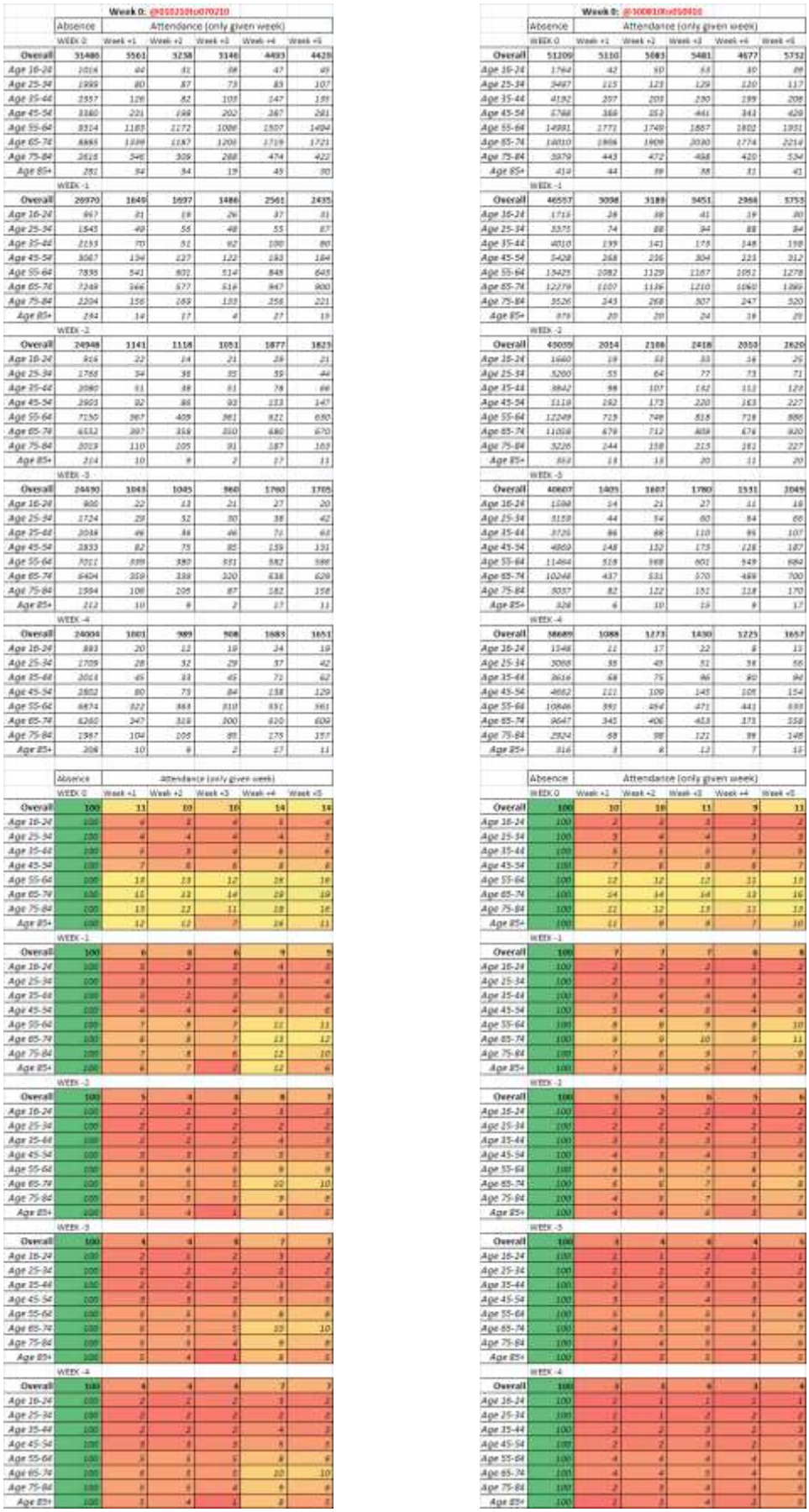

Figure 17 Absence analysis by age for weeks commencing 1 February and 30 August 2010

CHAID (Chi-squared Automatic Interaction Detector) analysis

3.33 This section examines the intensity of walking participation within the WfH database. The walking participants have been divided into categories (dependent variables) of walking behaviour and we then use CHAID analysis (in SPSS) to determine the most important factors associated with the examined walking behaviour. Tree diagrams are produced that segment the sample according to the independent variables that best predict behaviour in the specific group (see Figures 18-25 that follow).

3.34 This analysis can be used to illustrate directions for further research as we have included all of the variables from the OHQ survey, without imposing any restriction upon them regarding our perception of their importance. The list of independent variables considered includes: sex; disability; GP referrals; age group; numerous medical conditions (including heart disease; high blood pressure; Chronic Obstructive Pulmonary Disease (COPD); diabetes and asthma); white British, region, and physical activity levels prior to registration on the WfH database (the latter being determined by the variable simdays1 of the OHQ survey).

3.35 As dependent variables we consider two separate cases of participation:

a) Participating in more than 32 weeks (out of 104), as this corresponds to the top 25% of participants (in terms of their frequency).
b) The level of intensity of participation where:

- 1 = Not walked or walked for no more than 3weeks
- 2 = Walked on 4 - 9 weeks
- 3 = Walked on 10 - 32 weeks
- 4 = Walked on 33 or more weeks

These cutting points are roughly determined by the quartile sections of the distributions.

3.36 In CHAID analysis, the first step is to determine the strongest predictor of walking participation and to split the population into relevant categories accordingly (this is illustrated in the analysis below). Then each of the resultant groups is split further according to the strongest statistical predictor in each case; continuing to the fourth level of analysis. The minimum group size is specified by the analysis; we have used the default SPSS size of 200 because predictions for a smaller size are unlikely to be reliable or stable.

3.37 Note that as in some previous analysis participants were 'homogenised' to reflect their walking behaviour over the two-year period. In this way, the walking pattern of someone who only registered at the beginning of the second year is extended over the full 104 weeks. To avoid bias in the results we ignored new participants in the second half of the second year. We consider the two models (as dictated by the two dependent variables above) separately. Note that in both cases the independent variables that enter the CHAID analysis remain the same.

3.38 In addition, note that in the following examples of the CHAID analysis undertaken, in the interests of clarity and brevity the discussions focus predominantly on levels one and two; though some of the tree diagrams present additional levels of analysis as the independent variables are subjected to further scrutiny.

Model 1: Participation in more than 32 weeks

3.39 The first model considers whether or not a person walked on more than 32 weeks (from the available 104). It corresponds with the top 25% of walking participants and the CHAID analysis reveals the most important factors relating to walking participation at this level of intensity.

Model 1 - Level 1

3.40 Model 1 indicates that from a population of 64,993, some 24.8% participate for more than 32 weeks. The most important factor associated with this level of participation is revealed as age, according to eight groups, from 16-24 through to 85+ (see Figure 18).

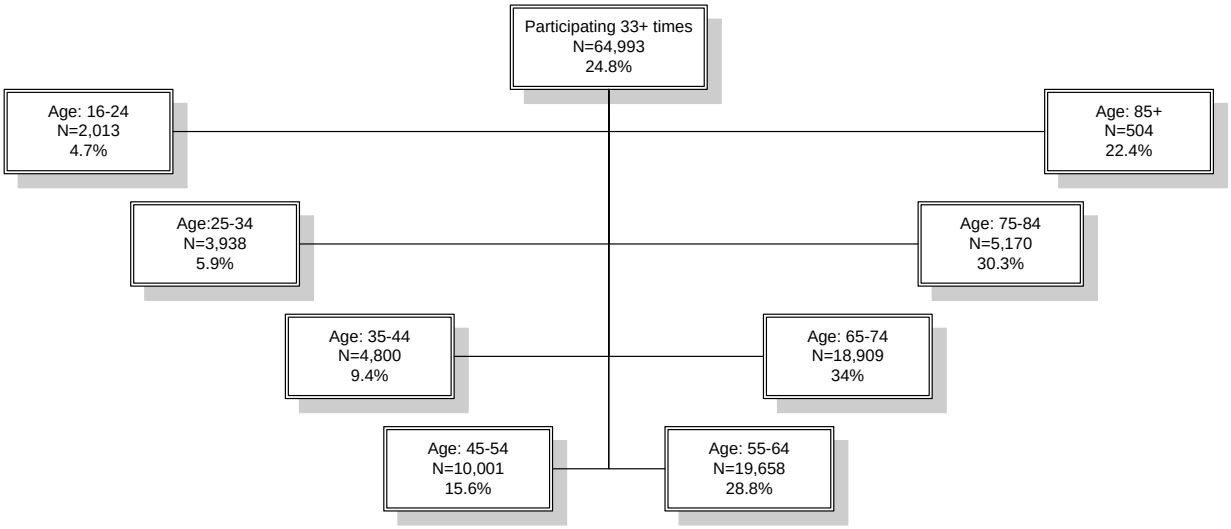

Figure 18 CHAID tree showing participation of more than 32 weeks by age group

3.41 As is the case throughout this report, organised walking behaviour defies the general trend in other 'sports' where participation tends to decline with age. The lowest proportion of walking participants was recorded in the youngest group, where 5% of those aged 16-24 walked at least once on more than 32 weeks. Thereafter participation appears to increase with age, reaching its peak amongst those aged 65-74 (34%, who walked at least once on at least 33 weeks). A slight decline in the 75-84 and 85+ age groups is apparent with the proportion of walking participants at 30% and 22% respectively. Compared with the overall position where 25% walk on at least 33 weeks, there appear to be positive influences on participation for those aged 55-84 and negative effects for those under 55 and aged 85+. It appears that organised walking is more appreciated as people get older with a particular boost around retirement age.

Model 1 - Level 2

3.42 Below the first level, the second level of CHAID analysis reveals further sub-groups for each age group. Three groups (45-54, 55-64 and 75-84) are broken up by the pre-registration levels of physical activity (revealed by the OHQ); two groups (16-24 and 35-44) are divided by disability, while the groups 65-74 and 25-34 are divided by region and sex respectively. No further sub-groupings for the 85+ group were revealed.

3.43 Examining the 45-54, 55-64 and 75-84 groups associated with existing levels of physical activity, the inference is a generally positive relationship between pre-registration (on WfH) physical activity levels and organised walking. Low indices of 'active' days (0-2) are always associated with negative effects on walking (i.e. the percentage of walkers is

less than the age-group total). Positive effects are apparent for the more active amongst those registered (i.e. indices 4-6); however the most frequent levels of physical activity (on all 7 days) can actually have a negative influence on walking as exemplified in the 55-64 age group (see Figure 19). For example, 29% of this group walk on 33 weeks or more, but when sub-divided according to the physical activity index (active on 0 to 7 days) into five new groups; the first of which, group zero (people who were inactive for the entire week before registration), indicates that 20% walked on at least 33 weeks, which suggests a negative effect has occurred (when compared with 29% overall in the 55-64 age category). Physical activity prior to registration on 2 and 7 days amongst 55-64 year olds results in 27% walking for at least 33 weeks (a negative effect compared with the original 29% for the age group as a whole). Pre-registration activity on 4, 5 or 6 days has the maximum positive effect with 33% walking on at least 33 weeks, whilst those active for 3 days prior to registration account for the remaining 30% who walked on 33 or more weeks. Hence within the 55-64 age group negative influences are evident from categories 0, 1, and 2; positive influences for physical activity indices 3 to 6 and then negative effects for the most intensive category (active on the 7 days prior to WfH registration).

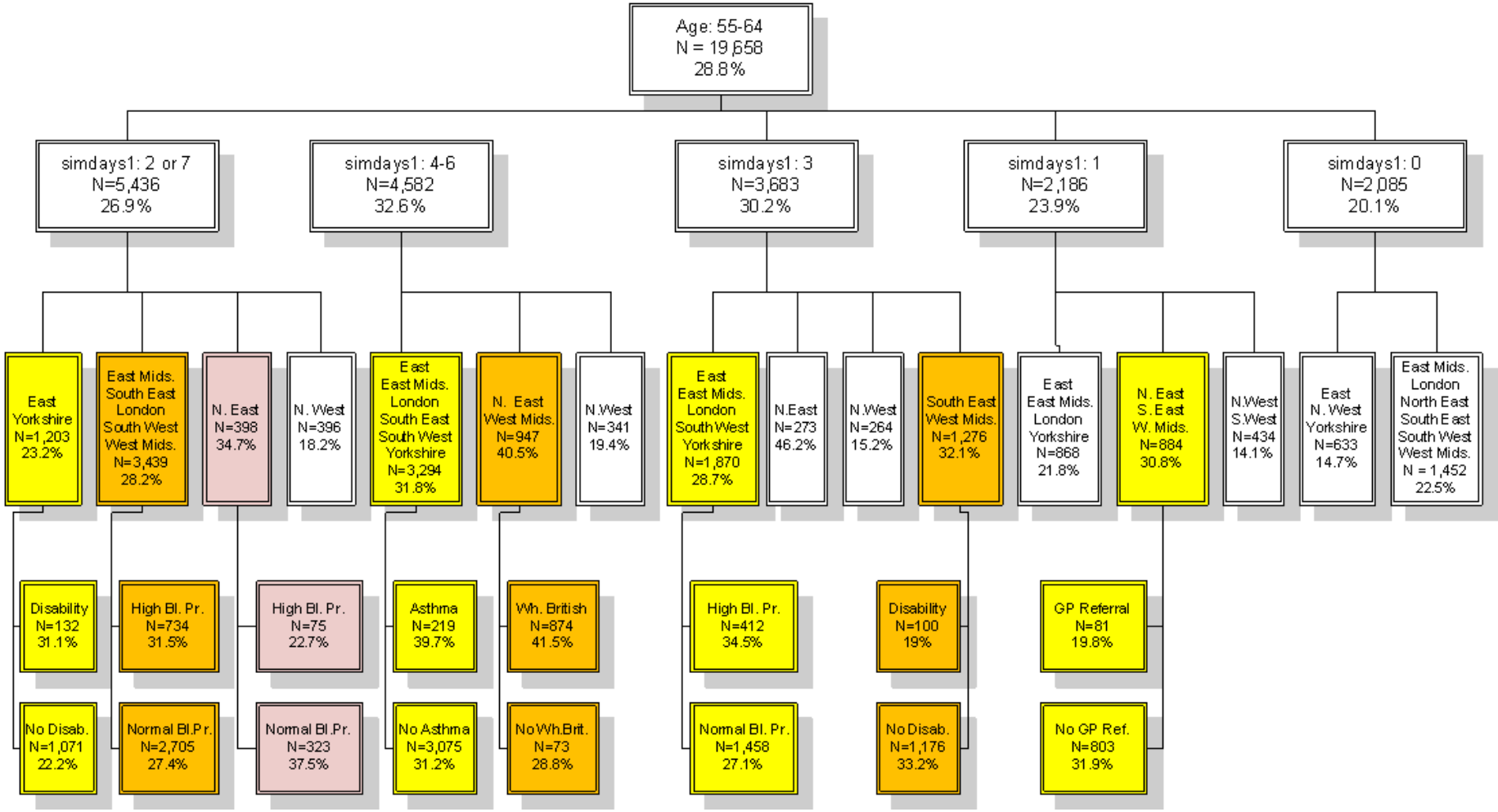

Figure 19 CHAID tree of walking on 33+ weeks by age 55-64, pre WfH activity levels and region

3.44 The Disability factor is most important in the age groups 16-24 and 35-44. In both cases, the result is counterintuitive, as it shows that disability is a positive factor for organised walking participation. For example, 9.4% of those aged 35-44 walked on 33 or more weeks. Dividing this group further, resulted in 556 people with a disability, of which 15.6% walked for at least 33 weeks, while for non-disabled people aged 35-44 the percentage fell slightly to 8.6%.

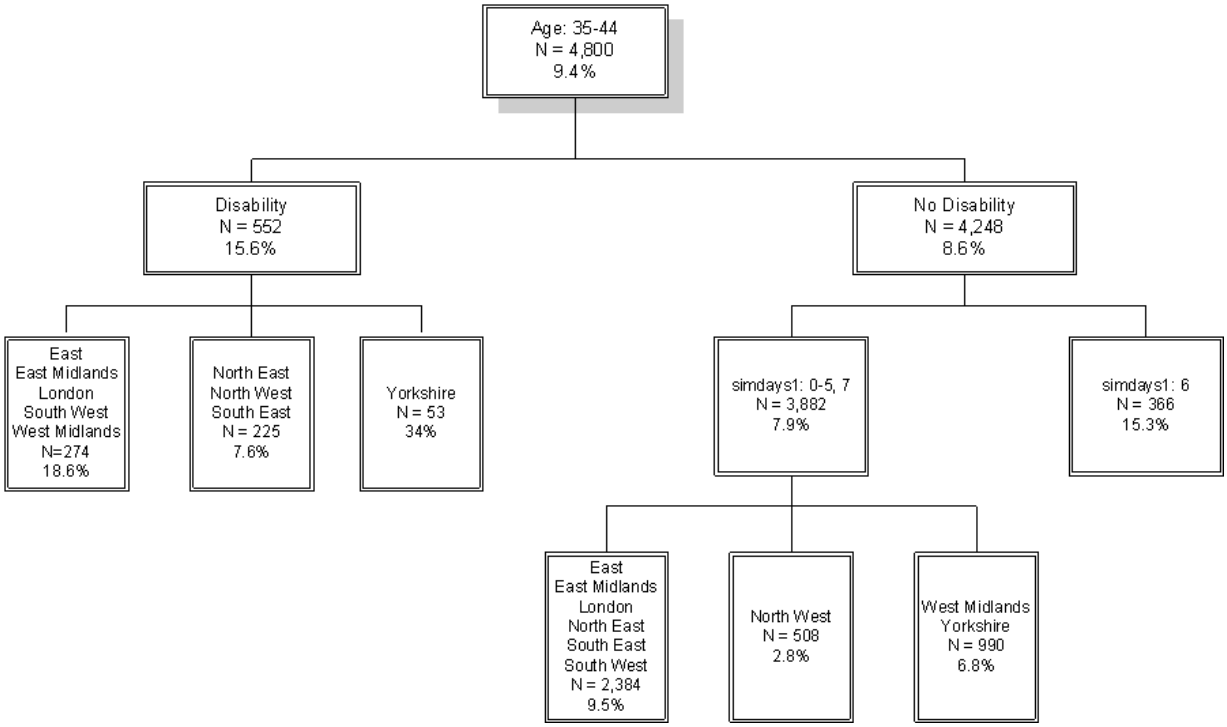

Figure 20 CHAID tree of walking 33+ weeks by age 35-44, disability & other independent variables

3.45 A similar pattern was evident amongst those aged 16-24 and the inference might be that the relatively low impact nature of walking makes it attractive to people with disabilities that may be less able to pursue more intensive physical activity. Alternatively the organised, more structured nature of health walks is perhaps more tailored towards the needs of disabled people or those with limiting long standing illness.

3.46 Amongst 25-34 year olds, sex was the most important influence. With only around 6% of those registered walking on 33 or more weeks, when sub-divided this rate increased to 10% for men and decreased in the case of women to less than 5% (see Figure 21). Consistent with previous comments, women are stronger in numbers; however men are the most consistent participants.

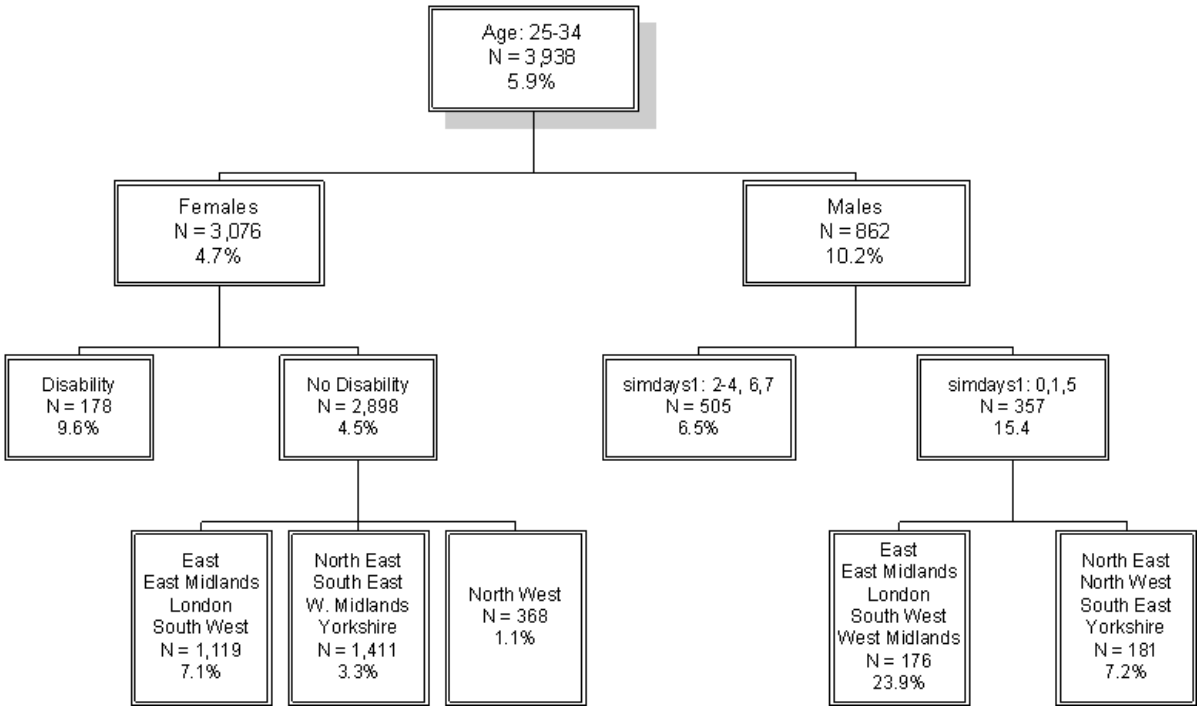

Figure 21 CHAID tree of walking 33+ weeks by age 25-34, sex and other independent variables

3.47 Finally, the 65-74 age group appears to be subjected to a regional influence (see Figure 22). The initial 34% who walked on at least 33 weeks increased in the cases of the East Midlands, South East, West Midlands and North East regions, whilst it decreased elsewhere. The strongest positive influence (within this age group) occurred in the North East (44%) and the strongest negative impact was in the North West (22% compared to the initial 34%).

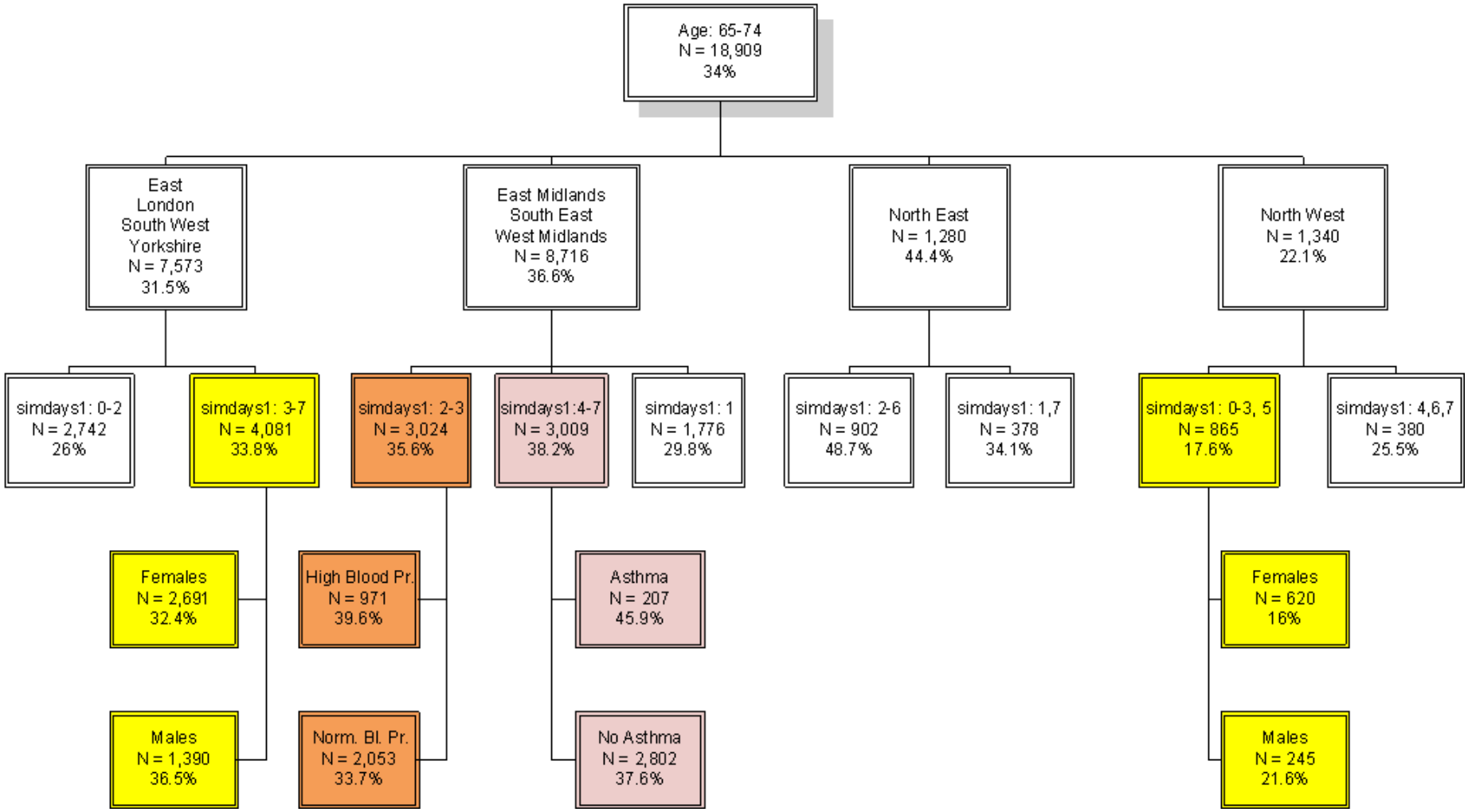

Figure 22 CHAID tree of walking 33+ weeks by age 65-74, region and pre-WfH activity levels

Model 2: Intensity of participation

3.48 The second model utilises an index relating to 'intensity of participation' which takes the values: 1 for 0-3 weeks of participation; 2 for 4-9 weeks; 3 for 10-32 weeks; and 4 for 33+ weeks. Each group represents roughly 25% of the frequency distribution. As the index increases from 1 to 4, intuitively there is a move to more intensive forms of participation. Taking the population of 64,993 as a whole using the four indices under consideration the average intensity index is 2.48 (from a maximum of 4).

Model 2 - Level 1

3.49 Once again (as in model 1) the most important predictor is age, with people aged 55 and over forming the main body of walking participants in the dataset. Young people, although consistently physically active, participate in organised walks only sporadically as part of their activity regime. The intensity tends to increase in the age groups of 55-64, 65-74, 75-84, and reduces (compared to the average index score of 2.5) in other age groups. The highest intensity index occurred in those aged 65-74 (2.8) and the lowest (1.8) in the 16-24 age group.

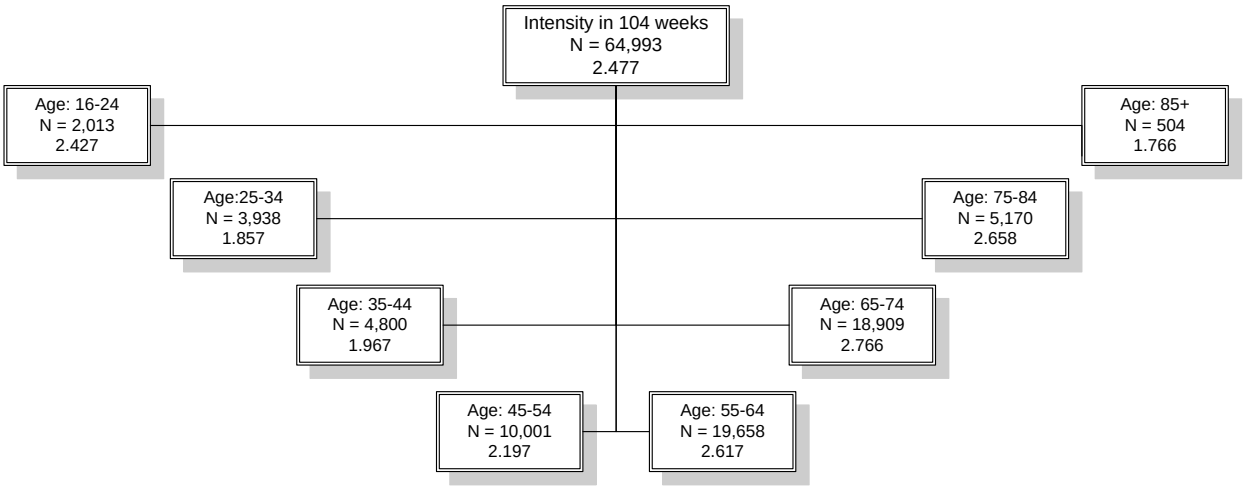

Figure 23 CHAID tree showing intensity of participation index scores by age group

Model 2 - Level 2 onwards

3.50 At the next level of analysis, amongst the 55-64 age group the most important determinant is again pre-registration levels of physical activity (see Figure 24). Walking intensity increased for people who were active for between 3 and 6 days (peaking at 4 and 5 days) during the week prior to WfH registration (i.e. scores exceeded the age average index score); whilst intensity decreased (compared to the age average) for those who were least active and the most active (which is again consistent with model 1 findings). Sub-dividing those people who reported being active on 3 to 6 days prior to registration, revealed regional influences with the highest intensity index scores in the North East and the lowest in the North West. Those active on 1 or 7 days prior to registration (within the 55-64 age group) are mainly determined by COPD, whilst those people totally inactive pre-registration are mainly influenced by disability.

3.51 Amongst those aged 35-44, the most important determinant of walking intensity is region. The initial index score (2) for those aged 35-44, decreased to 1.8 in the North East and North West but increased in the other regions (see Figure 25). Further levels of analysis of the 35-44 age group in the NE and NW revealed that being female

reduced intensity still further compared with males. This suggests that to improve participation within the 35-44 age group in the North, one should focus on alleviating factors that prevent women participating.

3.52 Similarly, walking intensity of those aged 85+ is mainly determined by sex and increased intensity in the case of men; whilst the walking intensity of those aged 25-34 is determined mainly by region, with increased intensity identified in the East and South West regions, and decreased intensity elsewhere.

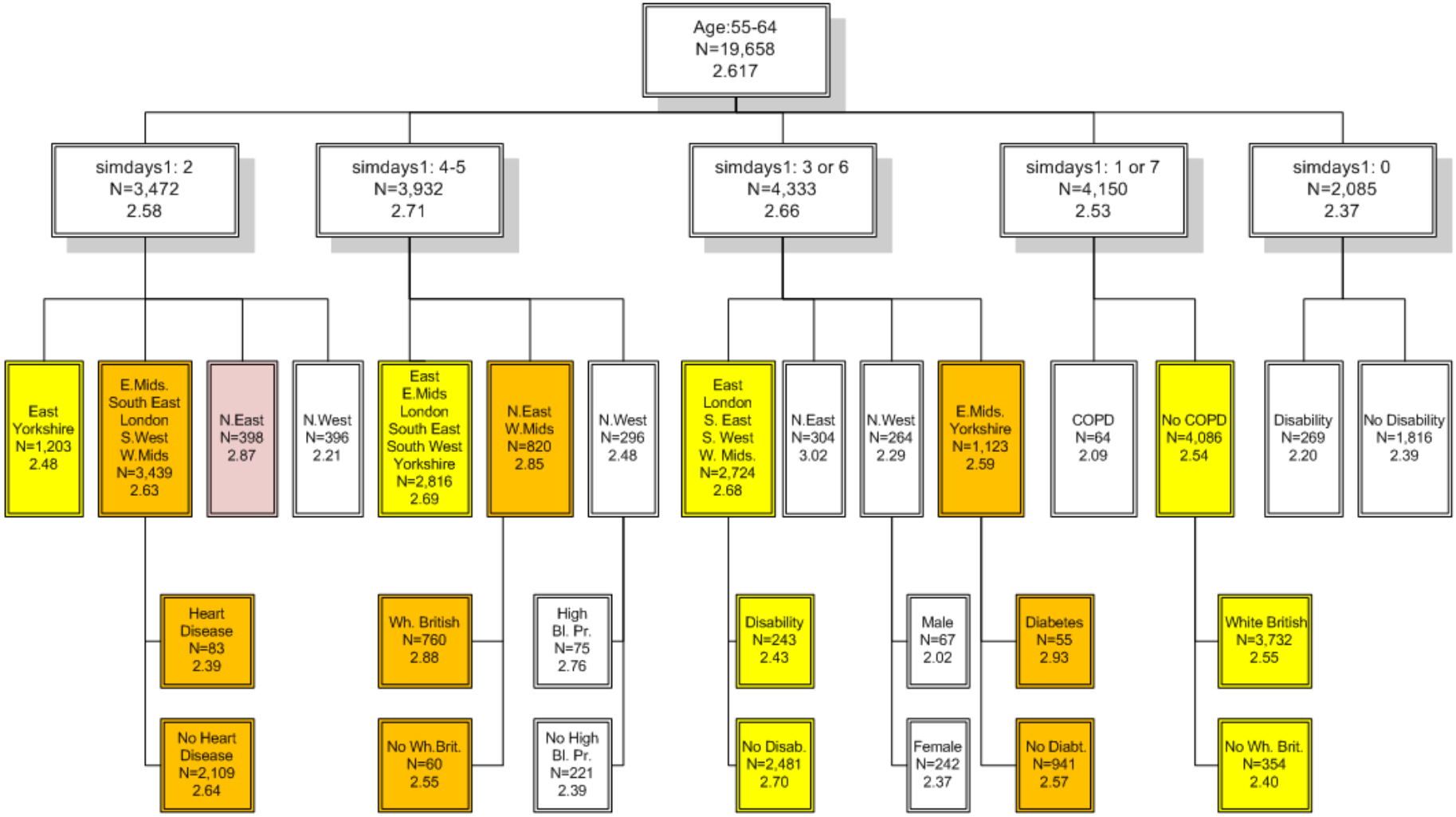

Figure 24 Participation index scores of 55-64 age group by pre-WfH activity & region

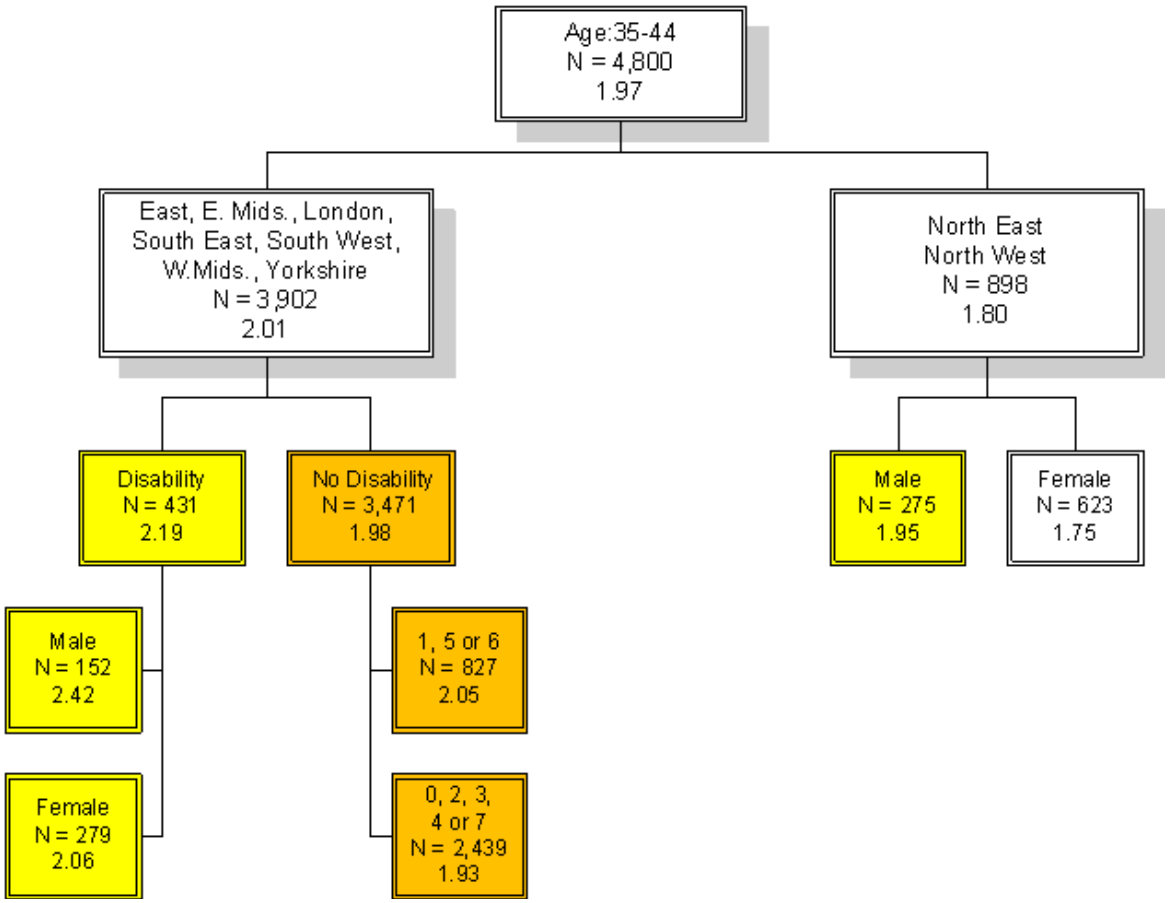

Figure 25 Participation index scores of 35-44 age group by region, disability and sex

3.53 Overall, the most important factor that explains variations in the intensity of walking participation is age, followed by general levels of physical activity as evidenced in the week prior to registration on WfH. Walking is most prevalent amongst those aged 55 and over and least prevalent in the youngest groups, even if they were regularly active before WfH. There is no linear relationship between physical activity and walking participation. The latter tends to increase when pre-registration activity levels reach 4 and 5 and falls after that. Hence, very intensive physical activity (usually amongst young people) does not favour regular walking.

CHAID Summary

3.54 The detailed CHAID analysis confirms that the power base of the WfH community lies within the older age groups (aged 55 and over), with particularly strong participation around the retirement age. This finding provides invaluable information upon which to base policy decisions, as those around retirement age, apart from having a tendency to walk more, are also reasonably active anyway (according to the information on the OHQ). The older age group, whilst rich in time, are arguably comfortable and enjoying retirement which provides fertile ground for further growth in the WfH programme. Once such people habitually walk, is it unreasonable to use family friendly schemes to motivate younger age groups to register and walk on a regular basis? This may be one approach to tackling the difficult challenge of attracting and encouraging sustained participation amongst younger people. This could be undertaken in the (apparently) quiet Christmas period or in regions where shortfalls in participation exist compared with other areas. Other factors to consider might be the walking inequalities between the sexes whereby initiatives are considered to increase the number of male walkers and perhaps more significantly the frequency of WfH participation amongst females.

4 Conclusions

4.1 Further to the analysis of the 79,000+ records on the WfH database for the period 1 April 2009 until 31 March 2011, the key points emerging are summarised below:

- According to the sample demographics for the two-year period, those registered on the WfH database were predominantly female (72%) and aged 55 and over. The majority had chosen to join the programme without being referred by their GP (93%). Slightly more than half (54%) had undertaken at least 30 minutes of physical activity on three or more days in the week prior to their WfH registration and there was a reasonable spread across the English regions, with the South East accounting for 20% of those registered.
- Over the period registrations increase disproportionately to the number of walkers each week because of sporadic attendance and the fact that once registered there is no mechanism to remove people from the database even after a prolonged absence. Over the two-year period there was a five-fold increase in registrations, compared with a two-fold increase in the number of walkers between weeks 1 and 104.
- More women than men walk each week because there are more women on the database than men; however, proportionately a greater percentage of men walk each week than women. Moreover, according to the weighted average of walks across eight quarters, men walk on 5.5 weeks of every 13 weeks and women 5.1 weeks compared with the sample average of 5.2 weeks. Perhaps such apparently sporadic attendance is one of the attractions associated with walking, as it is relatively straightforward to return and get back into the habit after a period of absence.
- Of all those who walk at least once during a quarter, only a small minority of less than 1.5% walk at least once each week.
- The highest number of walkers active at least once on a given week was 14,660 in early February 2011, whilst the smallest number was 1,988 on Christmas week 2009. A pre Christmas 'dip' in participation was observed in (both 2009 and) 2010, which coincides with the half-life where 50% of those who were walking at the start of 2010 did not walk during the pre Christmas period. It is not clear whether this is a result of competing demand and less time to walk, reduced daylight and worsening weather, or perhaps fewer available walks as they close for the festive season.
- The half-life for the sample overall based on consecutive four-week periods commencing with those who walked at least once in period one (P1 from 4 January 2010) occurred at period 13 (P13). Isolating those who walked for the first time in January 2010, the half-life for new walkers occurred in P4 which is perhaps a better measure of adherence. For both men and women the percentage of new walkers still walking falls below 50% during P4. Whilst the half-life for new walkers is much shorter than for existing walkers, once new walkers get over the initial period when they are the most likely to drop out more than one in five are still walking one year after their first walk.
- Those aged 55+ appear to be more likely to adhere to walking than their younger peers, whilst the half lives of walkers from the North East and West Midlands stretched into P8 and P6 respectively.
- The absence analysis revealed that people who had been absent for at least three weeks were less likely to return than those who had missed only one or two weeks of walking. In addition, the analysis across the five time periods throughout the year revealed some seasonal differences in the propensity of people to return to walking after a period of absence, with the pre Christmas period once again showing much lower return rates.

- The tendency to return to walking is similar amongst men and women, although as with the adherence analysis the likelihood of a return to walking after an absence increases with age. Whether or not someone was referred by a GP or had been active prior to registering had no impact upon return rates after an absence.

4.2 CHAID analysis revealed that the age of walkers was a key determinant of their walking intensity, with older people, especially around retirement age the most likely (regular) participants. Other key factors which impacted upon walking participation across the various age groups included physical activity levels prior to joining WfH (based on a proxy measure from the OHQ) and the sex of those on the database.

Appendix A Data cleaning

Data format

We assumed all dates are in yyyy-mm-dd format

Data volumes in original text files

79,038 walkers

1,502,129 walks

Data errors

15 SIM (Single Item Metric – the OHQ question on physical activity levels) records had date 0000-00-00 so records removed. One SIM record (member se~1273574254.9178052) with a date of 10/12/1009 was changed manually to 2009.

These two SIM records did not have matching walkers, so records were removed

	SIM date	days
nw~1296470978.3098301	31/01/2011	7
wm~1296470966.535382	31/01/2011	3

These 27 walks did not have matching walkers, so walk records were removed

walker	walk date	walker	walk date
nw~1296470978.3098301	29/10/2010	wm~1242997325.8476198	29/05/2009
nw~1296470978.3098301	15/04/2011	wm~1261134366.5910281	07/12/2009
nw~1296470978.3098301	08/04/2011	wm~1261134366.5910281	25/01/2010
nw~1296470978.3098301	25/02/2011	wm~1261134366.5910281	18/01/2010
nw~1296470978.3098301	08/10/2010	wm~1261134366.5910281	14/12/2009
nw~1296470978.3098301	01/10/2010	wm~1261134366.5910281	30/11/2009
nw~1296470978.3098301	24/09/2010	wm~1261134366.5910281	28/11/2009
nw~1296470978.3098301	17/09/2010	wm~1261134366.5910281	09/11/2009
nw~1296470978.3098301	11/03/2011	wm~1261134366.5910281	16/10/2009
nw~1296470978.3098301	22/10/2010	wm~1261134366.5910281	02/11/2009
sw~1237802015.617686	21/09/2009	wm~1296470966.535382	01/02/2011
sw~1238751195.8151665	28/01/2009		
sw~1238751195.8151665	12/10/2009		
sw~1238751195.8151665	07/01/2009		
sw~1238751195.8151665	07/01/2009		
sw~1238751195.8151665	07/01/2009		

Data filtered

We agreed to only consider walks AFTER the first walker's '*date OHQ entered*' date. This date was 08/05/2008. This was a Thursday, so the first week block was considered to start on the previous Monday 05/05/2008. There were 13,426 walks before 05/05/2008 so these were removed.

Data volumes after removals

79,038 walkers

1,488,676 walks

Appendix B Walking drop off by sex

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	4,437	3,533	3,497	3,226	3,170	2,990	2,969	2,879	2,735	2,728	2,750	2,516	1,986	2,551	2,570	2,490
2		5,227	4,214	3,746	3,676	3,442	3,386	3,267	3,117	3,084	3,101	2,816	2,173	2,844	2,898	2,773
3			6,129	4,381	4,279	3,933	3,884	3,725	3,509	3,457	3,479	3,148	2,381	3,149	3,211	3,090
4				6,062	4,640	4,254	4,134	3,953	3,742	3,669	3,668	3,308	2,516	3,284	3,343	3,185
5					6,447	4,753	4,536	4,302	4,022	3,953	3,942	3,533	2,670	3,495	3,550	3,431
6						6,156	4,749	4,430	4,129	4,019	4,007	3,549	2,684	3,527	3,610	3,448
7							6,534	4,897	4,455	4,313	4,275	3,822	2,864	3,745	3,814	3,665
8								6,547	4,845	4,564	4,491	4,002	2,946	3,870	3,949	3,775
9									6,258	4,706	4,547	4,055	3,007	3,880	3,943	3,787
10										6,468	4,999	4,401	3,202	4,166	4,200	4,016
11											6,907	4,968	3,469	4,549	4,594	4,387
12												6,113	3,568	4,511	4,479	4,291

Figure B1 Walking drop off by sex: Male - Overall

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	10,859	8,444	8,398	7,780	7,681	7,230	7,188	6,937	6,502	6,675	6,679	5,976	4,340	6,170	6,125	5,848
2		12,804	10,172	9,101	8,878	8,362	8,252	7,968	7,490	7,585	7,650	6,793	4,740	6,958	6,957	6,643
3			15,275	10,889	10,524	9,612	9,543	9,135	8,465	8,568	8,654	7,585	5,280	7,662	7,724	7,452
4				15,399	11,678	10,547	10,247	9,843	9,172	9,129	9,166	8,012	5,532	8,001	8,054	7,780
5					16,636	11,898	11,290	10,642	9,810	9,823	9,878	8,561	5,835	8,578	8,590	8,349
6						15,654	11,765	10,884	10,011	9,940	9,967	8,636	5,873	8,573	8,617	8,299
7							16,402	11,982	10,795	10,647	10,624	9,198	6,177	9,049	9,101	8,761
8								16,408	11,823	11,149	11,025	9,510	6,411	9,359	9,358	9,001
9									15,535	11,490	11,066	9,542	6,415	9,332	9,368	9,017
10										16,475	12,537	10,579	6,925	10,153	10,100	9,757
11											17,282	11,855	7,530	11,109	11,034	10,566
12												14,613	7,510	10,672	10,433	9,975

Figure B2 Walking drop off by sex: Female - Overall

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	
	100	78	78	72	71	67	66	64	60	61	62	56	41	57	57	55	Overall
1	100	80	79	73	71	67	67	65	62	61	62	57	45	57	58	56	Male
	100	78	77	72	71	67	66	64	60	61	62	55	40	57	56	54	Female
		100	80	71	70	65	65	62	59	59	60	53	38	54	55	52	Overall
2		100	81	72	70	66	65	63	60	59	59	54	42	54	55	53	Male
		100	79	71	69	65	64	62	58	59	60	53	37	54	54	52	Female
			100	71	69	63	63	60	56	56	57	50	36	51	51	49	Overall
3			100	71	70	64	63	61	57	56	57	51	39	51	52	50	Male
			100	71	69	63	62	60	55	56	57	50	35	50	51	49	Female
				100	76	69	67	64	60	60	60	53	38	53	53	51	Overall
4				100	77	70	68	65	62	61	61	55	42	54	55	53	Male
				100	76	68	67	64	60	59	60	52	36	52	52	51	Female
					100	72	69	65	60	60	60	52	37	52	53	51	Overall
5					100	74	70	67	62	61	61	55	41	54	55	53	Male
					100	72	68	64	59	59	59	51	35	52	52	50	Female
						100	76	70	65	64	64	56	39	55	56	54	Overall
6						100	77	72	67	65	65	58	44	57	59	56	Male
						100	75	70	64	63	64	55	38	55	55	53	Female
							100	74	66	65	65	57	39	56	56	54	Overall
7							100	75	68	66	65	58	44	57	58	56	Male
							100	73	66	65	65	56	38	55	55	53	Female
								100	73	68	68	59	41	58	58	56	Overall
8								100	74	70	69	61	45	59	60	58	Male
								100	72	68	67	58	39	57	57	55	Female
									100	74	72	62	43	61	61	59	Overall
9									100	75	73	65	48	62	63	61	Male
									100	74	71	61	41	60	60	58	Female
										100	76	65	44	62	62	60	Overall
10										100	77	68	50	64	65	62	Male
										100	76	64	42	62	61	59	Female
											100	70	45	65	65	62	Overall
11											100	72	50	66	67	64	Male
											100	69	44	64	64	61	Female
												100	53	73	72	69	Overall
12												100	58	74	73	70	Male
												100	51	73	71	68	Female

Figure B3 Walking drop off by sex: Percentage drop off comparison

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	746	446	421	364	337	311	293	278	271	276	265	239	179	214	231	200
2		728	393	281	253	230	225	212	178	187	179	158	111	172	174	154
3			958	392	360	302	312	274	265	253	257	216	137	207	219	199
4				893	444	381	358	315	287	296	293	249	174	243	249	218
5					868	410	352	305	263	266	260	212	155	214	215	198
6						619	297	250	212	198	200	170	107	152	154	148
7							790	386	320	269	256	208	134	192	203	206
8								744	324	277	259	232	122	187	192	173
9									588	250	208	164	107	147	137	128
10										690	353	289	164	233	232	222
11											795	357	194	264	278	260
12												438	161	196	193	191

Figure B4 Walking drop off by sex: Male - New walkers

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	1,808	1,001	970	823	788	696	689	638	573	630	640	547	369	539	541	512
2		1,708	917	697	632	544	545	509	434	474	467	393	217	403	395	366
3			2,375	1,095	987	757	747	676	596	582	623	490	281	449	469	482
4				2,337	1,248	992	959	843	784	778	739	634	375	597	599	574
5					2,391	1,093	883	722	657	635	633	495	303	475	473	451
6						1,696	768	616	521	516	479	381	217	378	374	367
7							2,004	924	729	661	633	490	264	457	456	433
8								1,894	876	682	598	471	260	434	419	440
9									1,508	637	507	382	191	331	356	338
10										1,895	971	670	332	584	557	533
11											1,868	798	393	629	610	575
12												992	233	381	374	326

Figure B5 Walking drop off by sex: Female - New walkers

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	
	100	57	54	46	44	39	38	36	33	35	35	31	21	29	30	28	Overall
1	100	60	56	49	45	42	39	37	36	37	36	32	24	29	31	27	Male
	100	55	54	46	44	38	38	35	32	35	35	30	20	30	30	28	Female
		100	54	40	36	32	32	30	25	27	27	23	13	24	23	21	Overall
2		100	54	39	35	32	31	29	24	26	25	22	15	24	24	21	Male
		100	54	41	37	32	32	30	25	28	27	23	13	24	23	21	Female
			100	45	40	32	32	29	26	25	26	21	13	20	21	20	Overall
3			100	41	38	32	33	29	28	26	27	23	14	22	23	21	Male
			100	46	42	32	31	28	25	25	26	21	12	19	20	20	Female
				100	52	43	41	36	33	33	32	27	17	26	26	25	Overall
4				100	50	43	40	35	32	33	33	28	19	27	28	24	Male
				100	53	42	41	36	34	33	32	27	16	26	26	25	Female
					100	46	38	32	28	28	27	22	14	21	21	20	Overall
5					100	47	41	35	30	31	30	24	18	25	25	23	Male
					100	46	37	30	27	27	26	21	13	20	20	19	Female
						100	46	37	32	31	29	24	14	23	23	22	Overall
6						100	48	40	34	32	32	27	17	25	25	24	Male
						100	45	36	31	30	28	22	13	22	22	22	Female
							100	47	38	33	32	25	14	23	24	23	Overall
7							100	49	41	34	32	26	17	24	26	26	Male
							100	46	36	33	32	24	13	23	23	22	Female
								100	45	36	32	27	14	24	23	23	Overall
8								100	44	37	35	31	16	25	26	23	Male
								100	46	36	32	25	14	23	22	23	Female
									100	42	34	26	14	23	24	22	Overall
9									100	43	35	28	18	25	23	22	Male
									100	42	34	25	13	22	24	22	Female
										100	51	37	19	32	31	29	Overall
10										100	51	42	24	34	34	32	Male
										100	51	35	18	31	29	28	Female
											100	43	22	34	33	31	Overall
11											100	45	24	33	35	33	Male
											100	43	21	34	33	31	Female
												100	28	40	40	36	Overall
12												100	37	45	44	44	Male
												100	23	38	38	33	Female

Figure B6 Walking drop off by sex: Percentage drop off comparison of new walkers

Appendix C Walking drop off (all walkers) by age group

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	169	86	80	75	68	58	61	49	47	50	50	36	24	34	34	34
2		225	119	97	88	79	82	73	67	68	62	51	33	51	48	50
3			323	145	125	103	104	80	75	73	64	52	39	56	54	57
4				331	173	139	139	105	97	93	83	66	49	68	70	72
5					368	188	166	116	98	102	96	71	43	65	69	70
6						320	174	122	97	99	88	67	40	59	65	66
7							355	164	121	110	101	82	49	70	70	71
8								341	144	126	108	85	49	73	65	73
9									292	138	121	85	47	74	71	77
10										268	148	101	58	89	85	82
11											308	124	56	91	93	81
12												189	66	92	84	79

Figure C1 Walking drop off (all walkers) by age group - Age 16-24 (absolute)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	414	226	206	195	191	170	159	135	109	116	113	93	67	90	93	89
2		496	272	242	230	204	194	153	136	141	131	100	72	97	95	94
3			593	305	286	241	232	189	158	158	136	113	72	112	115	112
4				679	403	337	286	226	206	200	169	146	95	136	133	131
5					822	457	362	276	223	236	196	158	98	146	145	143
6						764	430	317	255	260	213	171	107	148	160	154
7							783	376	286	283	241	199	119	184	185	178
8								678	346	286	261	214	131	197	185	176
9									572	302	264	217	139	190	182	183
10										646	346	261	155	222	215	199
11											627	304	176	243	232	217
12												496	193	259	243	212

Figure C2 Walking drop off (all walkers) by age group - Age 25-34 (absolute)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	568	351	339	298	294	273	263	229	202	203	188	171	101	176	171	167
2		713	443	371	353	307	299	259	229	247	225	197	122	194	206	187
3			914	488	451	397	393	315	288	308	296	245	147	247	241	236
4				916	580	507	454	375	333	339	306	273	156	263	257	257
5					1,056	608	554	437	387	392	358	314	170	299	291	279
6						1,007	614	458	415	398	368	308	170	294	296	286
7							1,079	578	484	482	445	360	193	326	331	317
8								958	522	477	434	347	185	324	325	310
9									871	517	437	368	197	327	335	318
10										960	562	449	254	403	408	397
11											958	505	253	431	423	397
12												768	276	439	422	401

Figure C3 Walking drop off (all walkers) by age group - Age 35-44 (absolute)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1,100	765	747	692	691	641	632	597	543	568	556	508	361	504	516	504
2		1,300	926	823	802	731	716	681	637	649	661	585	401	593	596	575
3			1,621	1,036	989	878	885	813	741	763	737	676	461	664	676	664
4				1,706	1,184	1,032	981	945	865	861	837	757	511	730	731	703
5					1,900	1,215	1,123	1,042	928	925	903	808	545	790	800	780
6						1,818	1,195	1,096	990	970	948	831	572	805	826	810
7							1,876	1,238	1,081	1,054	1,021	890	606	853	878	844
8								1,931	1,234	1,127	1,080	917	621	876	882	854
9									1,785	1,183	1,080	931	643	900	898	862
10										1,880	1,253	1,072	712	983	997	966
11											1,939	1,221	768	1,097	1,098	1,038
12												1,650	782	1,076	1,053	1,015

Figure C4 Walking drop off (all walkers) by age group - Age 45-54 (absolute)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	5,237	4,229	4,200	3,887	3,801	3,606	3,570	3,489	3,323	3,398	3,410	3,088	2,415	3,251	3,200	3,063
2		6,174	5,062	4,524	4,409	4,167	4,088	4,002	3,806	3,822	3,874	3,505	2,623	3,622	3,603	3,427
3			7,294	5,321	5,145	4,745	4,667	4,589	4,313	4,329	4,421	3,934	2,915	3,998	4,034	3,853
4				7,160	5,515	5,040	4,895	4,804	4,512	4,479	4,572	4,022	2,997	4,069	4,105	3,917
5					7,660	5,631	5,377	5,194	4,857	4,838	4,933	4,304	3,195	4,358	4,379	4,205
6						7,257	5,599	5,334	4,946	4,918	4,981	4,388	3,208	4,416	4,445	4,236
7							7,568	5,772	5,286	5,193	5,249	4,614	3,334	4,623	4,612	4,427
8								7,733	5,773	5,511	5,508	4,830	3,491	4,822	4,800	4,586
9									7,481	5,686	5,562	4,869	3,523	4,827	4,845	4,602
10										7,834	6,192	5,318	3,758	5,191	5,148	4,916
11											8,358	5,947	4,063	5,665	5,658	5,381
12												7,190	4,081	5,404	5,320	5,074

Figure C5 Walking drop off (all walkers) by age group - Age 55-64 (absolute)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	5,732	4,702	4,695	4,373	4,323	4,068	4,115	4,002	3,788	3,844	3,881	3,493	2,602	3,592	3,570	3,421
2		6,672	5,597	5,024	4,957	4,673	4,684	4,544	4,300	4,330	4,373	3,935	2,817	4,022	4,023	3,859
3			7,788	5,883	5,763	5,300	5,331	5,153	4,790	4,818	4,889	4,335	3,104	4,380	4,404	4,258
4				7,752	6,227	5,676	5,640	5,461	5,138	5,104	5,141	4,579	3,251	4,572	4,598	4,463
5					8,163	6,216	6,076	5,843	5,442	5,426	5,483	4,846	3,409	4,866	4,869	4,756
6						7,680	6,225	5,894	5,487	5,440	5,495	4,824	3,403	4,804	4,828	4,659
7							8,199	6,476	5,928	5,856	5,867	5,186	3,636	5,120	5,159	4,977
8								8,258	6,398	6,127	6,089	5,381	3,768	5,273	5,347	5,145
9									7,920	6,260	6,099	5,376	3,735	5,238	5,283	5,135
10										8,347	6,732	5,842	3,975	5,615	5,595	5,448
11											8,873	6,552	4,360	6,170	6,134	5,930
12												7,801	4,357	5,992	5,893	5,646

Figure C6 Walking drop off (all walkers) by age group - Age 65-74 (absolute)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1,347	1,084	1,108	1,005	1,011	951	927	885	833	839	874	774	514	757	776	745
2		1,598	1,326	1,179	1,152	1,099	1,072	1,029	970	975	1,006	857	575	853	883	852
3			1,901	1,412	1,384	1,280	1,242	1,183	1,116	1,095	1,134	967	643	945	985	957
4				1,900	1,512	1,391	1,360	1,274	1,214	1,202	1,219	1,046	681	1,023	1,062	1,008
5					2,037	1,571	1,484	1,384	1,311	1,293	1,310	1,127	718	1,100	1,128	1,093
6						1,926	1,545	1,423	1,336	1,310	1,328	1,130	735	1,113	1,142	1,085
7							2,029	1,546	1,447	1,406	1,408	1,209	769	1,157	1,202	1,152
8								1,997	1,556	1,442	1,440	1,240	782	1,178	1,205	1,151
9									1,925	1,475	1,462	1,244	797	1,180	1,215	1,160
10										2,041	1,629	1,370	853	1,291	1,325	1,259
11											2,164	1,541	933	1,401	1,428	1,366
12												1,841	918	1,353	1,356	1,308

Figure C7 Walking drop off (all walkers) by age group Age 75-84 (absolute)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	126	95	90	77	79	72	74	69	69	73	65	61	38	65	63	62
2		138	117	101	97	95	89	89	85	84	77	69	45	76	76	73
3			161	112	111	106	98	96	91	90	84	77	47	81	81	79
4				149	123	115	103	102	98	98	91	80	52	86	82	81
5					167	126	116	108	102	106	98	80	54	88	86	84
6						161	122	120	114	115	100	88	57	96	90	90
7							184	138	119	113	105	93	59	97	93	94
8								180	132	119	110	94	57	102	92	93
9									155	122	109	96	54	97	90	93
10										168	132	111	65	110	109	105
11											164	118	67	110	107	106
12												135	65	104	97	97

Figure C8 Walking drop off (all walkers) by age group Age 85+ (absolute)

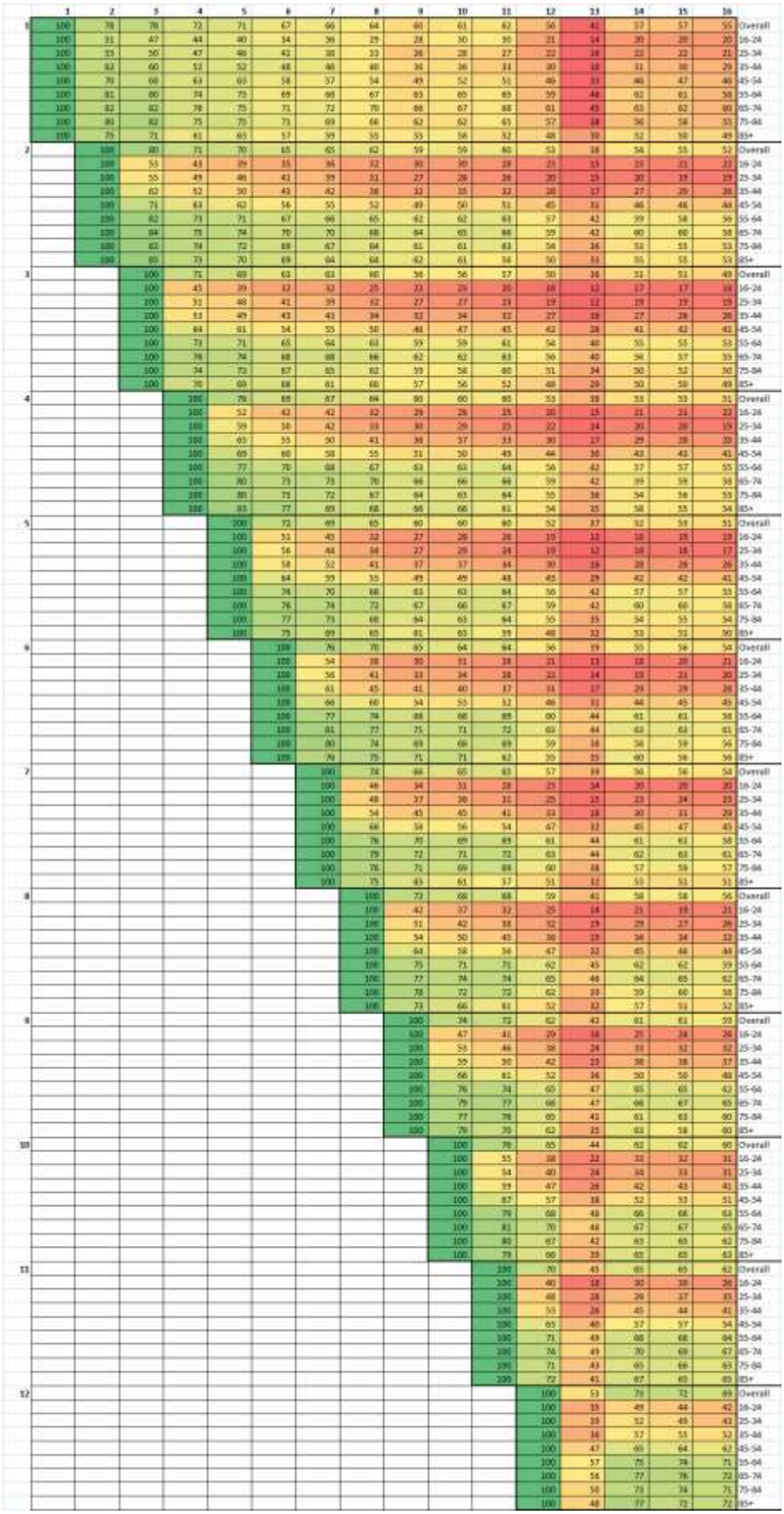

Figure C9 Percentage drop off of all walkers by age group

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	57	20	18	19	11	11	11	10	6	8	8	5	3	3	3	3
2		78	24	24	16	14	13	14	11	10	6	6	6	9	9	11
3			142	37	37	25	24	12	10	11	10	8	5	10	9	11
4				123	44	36	31	21	17	15	14	11	6	8	7	11
5					119	49	34	19	13	16	12	8	4	4	8	6
6						80	23	17	9	7	6	6	1	5	5	4
7							101	31	17	10	8	7	1	4	3	3
8								119	33	18	15	10	6	8	6	7
9									90	29	25	9	4	5	4	6
10										62	21	11	6	9	8	6
11											105	17	5	9	11	4
12												30	4	4	5	5

Figure C10 Drop off of new walkers by age group Age 16-24 (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	145	53	51	39	38	30	29	24	18	15	19	12	8	11	13	14
2		163	57	45	37	33	27	19	17	26	18	11	5	10	9	10
3			215	75	73	46	41	31	21	23	17	13	2	14	13	16
4				233	97	66	55	38	37	35	28	28	15	19	21	20
5					270	118	76	53	36	41	37	27	12	19	20	17
6						205	74	48	35	31	24	25	12	12	19	17
7							220	75	42	36	33	18	11	21	15	19
8								174	50	33	30	23	13	17	17	19
9									140	34	28	18	8	10	12	13
10										185	64	36	19	27	24	20
11											161	30	20	26	24	21
12												116	20	26	25	19

Figure C11 Drop off of new walkers by age group Age 25-34 (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	165	63	65	49	51	45	38	37	31	27	25	18	13	26	23	19
2		202	72	48	39	30	27	24	21	23	27	13	10	17	22	17
3			296	91	77	57	58	38	37	43	45	29	13	31	25	31
4				243	111	84	64	41	45	40	33	29	11	21	18	22
5					305	111	80	50	47	38	36	24	15	27	25	20
6						254	94	59	54	50	40	29	13	26	27	32
7							278	110	64	57	54	38	20	27	33	35
8								227	78	57	53	36	18	24	29	30
9									173	56	36	27	10	20	22	20
10										221	81	58	28	47	47	45
11											215	61	26	45	38	27
12												131	24	34	34	31

Figure C12 Drop off of new walkers by age group Age 35-44 (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	247	122	112	94	90	78	75	72	65	64	63	66	45	55	57	57
2		258	123	81	71	55	60	49	39	49	49	43	27	42	45	43
3			360	143	132	93	103	94	84	75	78	64	39	57	61	60
4				380	169	134	128	113	102	100	94	79	51	78	75	69
5					421	166	132	108	81	78	80	67	49	69	68	66
6						329	125	104	96	88	86	59	42	67	61	66
7							338	138	99	94	87	66	40	57	64	50
8								369	144	105	86	61	31	56	47	54
9									266	94	68	52	34	42	47	46
10										322	127	82	47	70	77	72
11											308	110	52	78	71	66
12												194	39	64	68	51

Figure C13 Drop off of new walkers by age group Age 45-54 (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	828	507	481	404	380	342	334	314	296	319	315	277	214	280	281	269
2		716	425	331	304	257	263	257	217	223	230	208	126	218	206	188
3			1,034	485	439	371	363	347	324	315	332	270	155	256	278	266
4				920	478	395	385	354	317	332	324	269	171	251	268	240
5					948	456	395	351	336	315	319	244	176	246	244	235
6						640	318	262	229	237	231	199	118	195	193	186
7							758	371	315	276	268	215	124	220	210	197
8								765	382	322	292	243	136	230	213	210
9									646	292	245	186	114	170	185	173
10										749	421	319	167	277	268	252
11											817	371	192	312	311	304
12												396	124	184	170	154

Figure C14 Drop off of new walkers by age group Age 55-64 (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	781	500	496	438	402	361	367	344	317	354	355	311	213	292	297	270
2		734	450	328	308	285	289	273	224	246	235	211	125	221	212	194
3			892	467	426	335	345	317	290	277	297	242	153	219	219	224
4				919	570	472	466	428	403	392	384	346	214	337	330	314
5					770	394	342	308	271	271	276	229	133	219	229	210
6						537	299	273	220	220	213	173	107	170	165	155
7							739	411	361	327	318	268	162	240	247	243
8								635	359	304	273	241	145	209	224	223
9									549	282	238	196	93	177	173	160
10										723	441	331	173	285	266	265
11											750	413	218	327	338	311
12												411	136	195	190	184

Figure C15 Drop off of new walkers by age group Age 65-74 (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	190	113	108	94	95	92	83	76	67	76	86	68	36	59	66	52
2		161	90	66	63	58	53	48	45	55	49	36	20	39	38	35
3			243	125	113	94	83	80	70	68	76	65	42	52	65	56
4				244	153	123	129	107	99	112	101	84	57	91	91	83
5					242	127	108	84	92	90	84	70	39	62	64	59
6						138	77	67	57	56	52	41	23	36	37	33
7							210	114	109	93	89	62	32	60	67	72
8								195	108	80	76	70	26	57	56	49
9									130	72	58	46	27	44	40	39
10										198	113	80	35	69	72	66
11											193	109	56	73	70	75
12												97	29	47	47	52

Figure C16 Drop off of new walkers by age group Age 75-84 (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	24	11	8	8	12	6	10	8	7	11	9	6	2	9	10	9
2		15	11	8	7	6	4	6	5	4	5	1	1	3	5	3
3			18	11	10	8	8	6	4	4	5	3	1	3	2	1
4				16	11	10	8	7	8	10	8	7	7	7	7	6
5					21	11	11	9	6	7	6	2	2	5	2	4
6						17	13	9	7	8	7	7	3	6	6	7
7							35	21	15	8	8	8	2	7	6	7
8								20	7	5	6	3	1	3	1	2
9									7	4	4	2	-	-	-	1
10										17	9	7	2	3	3	3
11											13	9	3	5	3	4
12												3	-	1	2	2

Figure C17 Drop off of new walkers by age group Age 85+ (absolute)

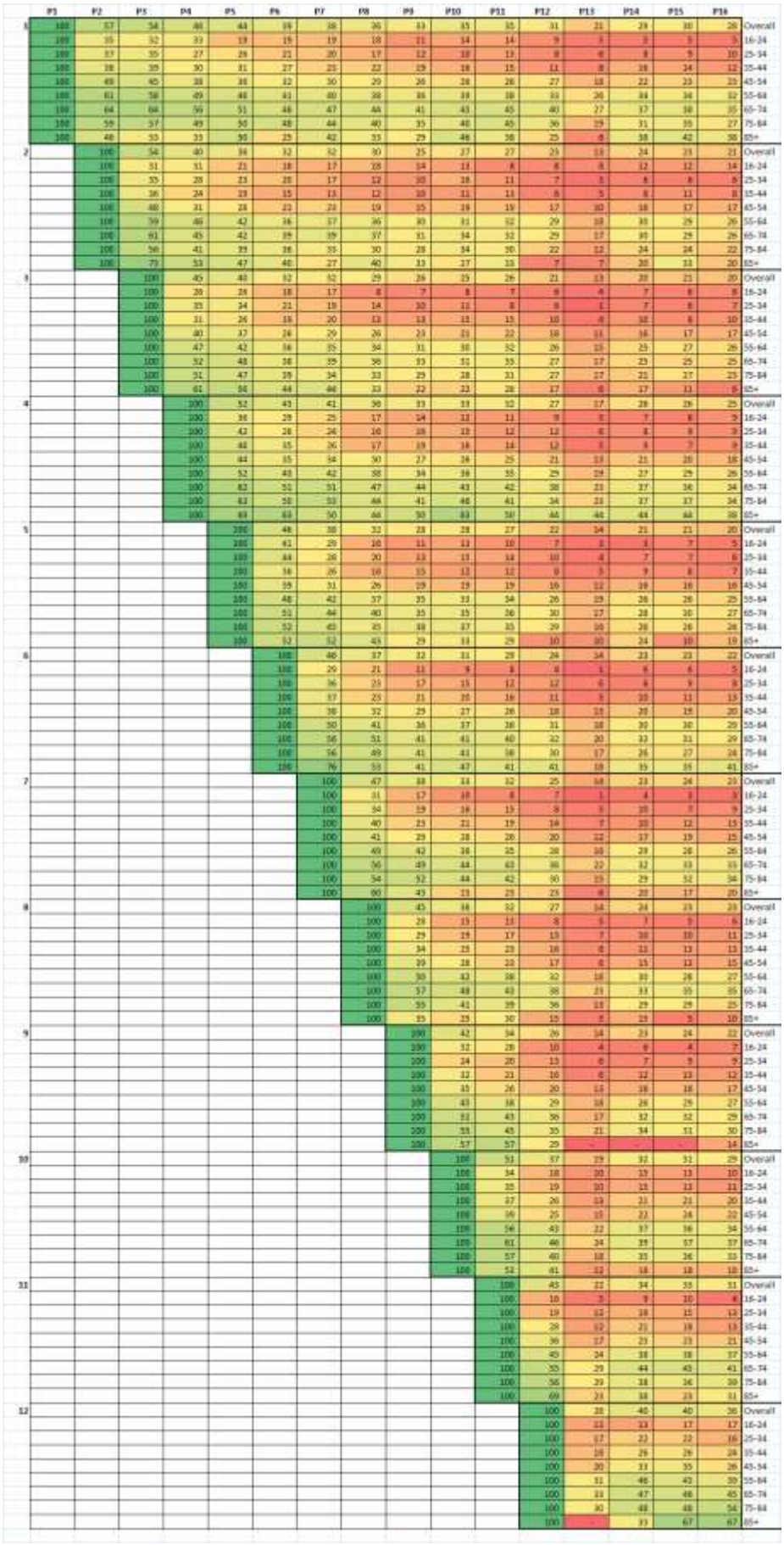

Figure C18 Percentage drop off of <u>new</u> walkers by age group

Appendix D Percentage drop off by activity levels

Figure D1 Percentage drop off by activity levels - All walkers

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1	100	57	54	46	44	39	38	36	33	35	35	31	21	29	30	28	Overall
	100	48	44	33	36	30	28	22	16	21	22	20	16	19	19	18	0 days of 30 mins physical activity
	100	56	53	45	41	36	36	34	33	36	35	30	22	31	33	29	1-2 days of 30 mins physical activity
	100	59	57	50	47	43	41	39	37	37	37	34	23	32	32	30	3-4 days of 30 mins physical activity
	100	61	58	46	47	41	42	41	36	37	38	34	23	31	30	29	5-7 days of 30 mins physical activity
2		100	54	40	36	32	32	30	25	27	27	23	13	24	23	21	Overall
		100	51	34	30	24	26	22	22	21	20	17	9	15	17	16	0 days of 30 mins physical activity
		100	51	37	34	30	30	27	22	26	25	23	13	22	22	20	1-2 days of 30 mins physical activity
		100	55	40	37	33	33	32	28	29	29	22	14	26	25	22	3-4 days of 30 mins physical activity
		100	55	43	39	33	32	32	27	29	27	24	16	26	25	23	5-7 days of 30 mins physical activity
3			100	45	40	32	32	29	26	25	26	21	13	20	21	20	Overall
			100	38	39	27	28	22	20	18	21	19	10	15	17	14	0 days of 30 mins physical activity
			100	47	42	32	32	30	26	26	26	20	11	17	19	20	1-2 days of 30 mins physical activity
			100	46	41	32	32	30	27	27	28	23	14	22	21	23	3-4 days of 30 mins physical activity
			100	44	40	34	33	29	28	26	27	23	14	23	23	22	5-7 days of 30 mins physical activity
4				100	52	43	41	36	33	33	32	27	17	26	26	25	Overall
				100	45	37	35	26	23	23	21	16	10	15	17	13	0 days of 30 mins physical activity
				100	50	38	35	32	29	28	27	23	13	22	21	21	1-2 days of 30 mins physical activity
				100	53	42	42	36	35	33	32	29	18	28	29	26	3-4 days of 30 mins physical activity
				100	54	46	41	37	33	33	32	28	19	28	27	23	5-7 days of 30 mins physical activity
5					100	46	38	32	28	28	27	22	14	21	21	20	Overall
					100	45	36	30	25	22	22	16	9	15	14	15	0 days of 30 mins physical activity
					100	48	38	30	27	24	25	19	12	20	19	18	1-2 days of 30 mins physical activity
					100	47	42	36	32	32	30	24	15	23	25	23	3-4 days of 30 mins physical activity
					100	41	35	28	27	29	28	24	16	23	22	21	5-7 days of 30 mins physical activity
6						100	46	37	32	31	29	24	14	23	23	22	Overall
						100	37	31	23	23	23	18	9	19	15	15	0 days of 30 mins physical activity
						100	47	37	31	33	30	22	11	20	22	22	1-2 days of 30 mins physical activity
						100	49	39	35	32	30	26	15	25	27	25	3-4 days of 30 mins physical activity
						100	47	40	33	32	31	27	19	26	24	23	5-7 days of 30 mins physical activity
7							100	47	38	33	32	25	14	23	24	23	Overall
							100	42	30	26	25	18	11	18	19	18	0 days of 30 mins physical activity
							100	47	38	30	29	23	13	19	20	20	1-2 days of 30 mins physical activity
							100	46	36	33	32	24	12	22	23	22	3-4 days of 30 mins physical activity
							100	44	38	33	31	26	16	25	24	24	5-7 days of 30 mins physical activity
8								100	45	36	32	27	14	24	23	23	Overall
								100	39	28	24	19	9	16	18	15	0 days of 30 mins physical activity
								100	47	38	34	28	13	26	26	24	1-2 days of 30 mins physical activity
								100	47	35	32	24	13	22	21	21	3-4 days of 30 mins physical activity
								100	39	33	29	25	13	21	19	21	5-7 days of 30 mins physical activity
9									100	42	34	26	14	23	24	22	Overall
									100	35	28	22	9	18	20	17	0 days of 30 mins physical activity
									100	46	37	26	16	23	24	26	1-2 days of 30 mins physical activity
									100	43	36	28	15	26	25	25	3-4 days of 30 mins physical activity
									100	42	31	26	14	22	23	20	5-7 days of 30 mins physical activity
10										100	51	37	19	32	31	29	Overall
										100	46	34	18	29	28	27	0 days of 30 mins physical activity
										100	54	37	17	32	31	27	1-2 days of 30 mins physical activity
										100	52	40	20	33	33	34	3-4 days of 30 mins physical activity
										100	51	36	23	31	31	31	5-7 days of 30 mins physical activity
11											100	43	22	34	33	31	Overall
											100	41	20	26	29	28	0 days of 30 mins physical activity
											100	44	22	34	33	32	1-2 days of 30 mins physical activity
											100	45	24	39	37	33	3-4 days of 30 mins physical activity
											100	44	24	32	34	33	5-7 days of 30 mins physical activity
12												100	28	40	40	38	Overall
												100	20	31	33	28	0 days of 30 mins physical activity
												100	30	41	41	36	1-2 days of 30 mins physical activity
												100	28	46	43	40	3-4 days of 30 mins physical activity
												100	29	41	40	38	5-7 days of 30 mins physical activity

Figure D2 Percentage drop off by activity levels - New walkers

Appendix E Percentage drop off by GP referral

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1	100	78	78	72	71	67	66	64	60	61	62	56	41	57	57	55	Overall
	100	79	80	72	71	67	67	64	60	60	60	53	38	54	53	53	GP referral
	100	78	78	72	71	67	66	64	60	62	62	56	42	57	57	55	Not referred
2		100	80	71	70	65	65	62	59	59	60	53	38	54	55	52	Overall
		100	81	72	71	67	66	63	58	58	59	51	35	52	51	50	GP referral
		100	80	71	70	65	64	62	59	59	60	53	39	55	55	52	Not referred
3			100	71	69	63	63	60	56	56	57	50	36	51	51	49	Overall
			100	72	69	63	63	59	53	55	54	47	32	47	46	46	GP referral
			100	71	69	63	63	60	56	56	57	50	36	51	51	49	Not referred
4				100	76	69	67	64	60	60	60	53	38	53	53	51	Overall
				100	77	69	67	64	58	59	59	51	34	50	49	48	GP referral
				100	76	69	67	64	60	60	60	53	38	53	53	51	Not referred
5					100	72	69	65	60	60	60	52	37	52	53	51	Overall
					100	75	70	64	57	60	60	50	34	50	50	50	GP referral
					100	72	68	65	60	60	60	53	37	52	53	51	Not referred
6						100	76	70	65	64	64	56	39	55	56	54	Overall
						100	78	70	63	64	63	52	35	52	52	52	GP referral
						100	76	70	65	64	64	56	40	56	56	54	Not referred
7							100	74	66	65	65	57	39	56	56	54	Overall
							100	75	66	66	65	54	36	53	52	52	GP referral
							100	74	67	65	65	57	40	56	57	54	Not referred
8								100	73	68	68	59	41	58	58	56	Overall
								100	74	71	69	57	37	55	55	54	GP referral
								100	73	68	68	59	41	58	58	56	Not referred
9									100	74	72	62	43	61	61	59	Overall
									100	77	74	62	41	60	59	59	GP referral
									100	74	72	62	43	61	61	59	Not referred
10										100	76	65	44	62	62	60	Overall
										100	79	65	42	61	59	58	GP referral
										100	76	65	44	63	63	60	Not referred
11											100	70	45	65	65	62	Overall
											100	68	43	62	61	59	GP referral
											100	70	46	65	65	62	Not referred
12												100	53	73	72	69	Overall
												100	52	71	70	67	GP referral
												100	54	73	72	69	Not referred

Figure E1 Percentage drop off by GP referral - All walkers

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1	100	57	54	46	44	39	38	36	33	35	35	31	21	29	30	28	Overall
	100	59	58	51	49	42	40	38	35	38	32	31	19	26	26	26	GP referral
	100	56	54	46	44	39	38	36	33	35	36	31	22	30	31	28	Not referred
2		100	54	40	36	32	32	30	25	27	27	23	13	24	23	21	Overall
		100	56	41	38	34	34	29	25	28	25	22	11	22	19	17	GP referral
		100	54	40	36	32	31	30	25	27	27	23	14	24	24	22	Not referred
3			100	45	40	32	32	29	26	25	26	21	13	20	21	20	Overall
			100	50	40	32	29	30	22	26	25	19	11	18	17	18	GP referral
			100	44	40	32	32	28	26	25	27	21	13	20	21	21	Not referred
4				100	52	43	41	36	33	33	32	27	17	26	26	25	Overall
				100	55	48	39	35	33	30	31	21	11	22	22	17	GP referral
				100	52	42	41	36	33	33	32	28	17	26	27	25	Not referred
5					100	46	38	32	28	28	27	22	14	21	21	20	Overall
					100	58	47	35	31	34	34	26	19	26	27	31	GP referral
					100	45	37	31	28	27	27	21	14	21	21	19	Not referred
6						100	46	37	32	31	29	24	14	23	23	22	Overall
						100	57	47	37	35	31	22	12	24	20	25	GP referral
						100	45	37	31	31	29	24	14	23	23	22	Not referred
7							100	47	38	33	32	25	14	23	24	23	Overall
							100	57	42	41	37	31	18	25	25	27	GP referral
							100	46	37	33	31	25	14	23	24	23	Not referred
8								100	45	36	32	27	14	24	23	23	Overall
								100	59	42	40	33	14	25	28	26	GP referral
								100	45	36	32	26	15	23	23	23	Not referred
9									100	42	34	26	14	23	24	22	Overall
									100	49	45	31	17	30	31	28	GP referral
									100	42	34	26	14	22	23	22	Not referred
10										100	51	37	19	32	31	29	Overall
										100	60	39	24	36	30	28	GP referral
										100	51	37	19	31	31	29	Not referred
11											100	43	22	34	33	31	Overall
											100	47	21	30	29	28	GP referral
											100	43	22	34	34	32	Not referred
12												100	28	40	40	36	Overall
												100	33	40	50	36	GP referral
												100	27	40	39	36	Not referred

Figure E2 Percentage drop off by GP referral - New walkers

Appendix F Drop off of new walkers by region

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	257	122	111	95	93	80	77	68	75	89	93	71	52	72	68	59
2		249	133	82	80	75	75	68	60	65	69	61	33	53	63	61
3			405	182	161	148	140	124	112	111	117	73	46	64	66	61
4				255	131	93	89	73	69	64	56	49	45	42	48	48
5					502	247	225	206	188	183	195	152	102	140	137	130
6						279	134	108	78	84	98	59	34	67	64	57
7							296	124	108	116	119	97	55	85	77	69
8								272	112	100	102	73	39	66	58	53
9									225	95	83	65	39	50	50	54
10										344	204	151	73	112	101	101
11											364	151	87	122	122	109
12												180	48	69	56	40

Figure F1 Drop off of new walkers by region - East (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	369	219	215	172	172	154	135	135	130	110	136	124	74	116	120	115
2		276	156	128	106	107	106	108	88	95	76	70	39	87	81	64
3			330	148	135	112	121	105	113	101	95	87	28	71	80	81
4				403	204	174	157	163	160	134	156	121	76	119	117	63
5					391	155	125	100	93	78	76	61	37	60	66	58
6						332	132	119	113	117	90	70	49	68	70	64
7							353	168	164	121	92	80	45	74	77	67
8								361	177	128	87	77	40	86	89	80
9									347	99	84	65	26	46	59	45
10										346	160	117	40	105	115	108
11											399	205	91	166	170	159
12												192	47	90	89	78

Figure F2 Drop off of new walkers by region - East Midlands (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	175	72	71	90	56	54	63	48	37	61	68	45	36	41	43	44
2		94	43	25	27	27	20	16	16	17	20	18	7	12	12	13
3			159	56	61	47	43	36	40	43	40	31	25	38	35	38
4				345	158	146	150	128	109	141	134	89	36	65	69	69
5					164	96	71	54	46	44	36	28	20	26	25	28
6						152	68	56	49	50	50	39	21	37	41	35
7							212	108	70	73	78	39	25	33	40	34
8								152	63	68	67	34	23	39	42	49
9									108	55	37	31	17	22	21	23
10										170	80	43	25	28	30	26
11											160	53	25	28	30	30
12												49	16	12	19	26

Figure F3 Drop off of <u>new</u> walkers by region - London (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	149	84	93	82	85	81	77	72	74	73	73	59	46	68	70	60
2		109	76	63	54	48	42	38	38	38	36	25	15	37	34	33
3			190	114	90	75	77	67	67	54	74	59	29	53	62	55
4				164	95	74	84	64	58	56	49	48	15	48	54	49
5					178	83	69	56	57	48	53	43	25	47	44	44
6						106	51	42	46	36	35	34	20	27	33	37
7							102	48	43	39	37	25	5	20	26	23
8								120	73	58	52	50	15	37	37	46
9									128	85	66	53	26	59	61	53
10										112	72	61	17	54	52	54
11											110	49	11	35	31	35
12												60	15	27	29	29

Figure F4 Drop off of <u>new</u> walkers by region - North East (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	151	90	83	74	63	56	54	52	46	48	51	38	28	38	44	43
2		227	106	86	83	62	73	60	42	53	43	43	17	38	45	33
3			359	141	119	75	81	57	45	43	47	39	24	30	19	22
4				288	119	69	63	33	25	36	29	31	15	26	21	19
5					312	100	77	42	34	44	42	34	19	28	35	35
6						216	82	40	19	21	17	14	4	10	15	10
7							244	112	93	78	66	44	26	32	48	42
8								196	58	46	34	27	11	18	21	26
9									150	59	51	28	12	28	22	25
10										201	80	43	20	43	37	40
11											176	57	24	35	29	30
12												96	16	18	12	14

Figure F5 Drop off of <u>new</u> walkers by region - North West (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	481	226	235	198	199	170	147	160	147	149	140	132	99	139	145	124
2		381	224	180	154	123	122	123	106	105	100	86	64	81	90	74
3			578	275	243	165	165	159	128	141	140	112	67	96	110	112
4				757	441	378	345	314	294	295	291	258	190	252	253	267
5					604	293	227	207	161	164	152	114	88	111	111	108
6						446	209	193	158	156	145	121	86	116	111	114
7							530	272	226	217	213	187	135	175	178	162
8								634	291	236	222	194	128	156	159	151
9									422	185	119	98	66	87	90	94
10										462	255	177	116	154	148	144
11											542	212	132	172	178	161
12												251	88	108	106	94

Figure F6 Drop off of <u>new</u> walkers by region - South East (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	298	191	157	142	141	118	126	107	100	104	84	90	60	84	84	75
2		407	204	154	144	128	106	105	96	101	108	90	62	99	86	88
3			503	261	233	188	200	194	175	168	175	146	103	145	136	145
4				418	220	180	178	159	152	149	137	119	85	128	125	123
5					424	203	174	149	158	145	143	117	82	123	116	104
6						315	166	149	130	110	102	87	49	84	72	76
7							357	160	128	91	85	68	33	73	53	72
8								343	152	115	91	77	36	70	56	62
9									270	132	112	82	49	77	78	63
10										353	162	124	74	102	97	93
11											287	146	93	114	102	95
12												230	71	93	93	83

Figure F7 Drop off of <u>new</u> walkers by region - South West (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	318	217	207	178	164	144	143	138	125	130	132	120	95	127	131	137
2		401	199	155	145	125	127	122	96	105	101	96	64	104	99	100
3			414	172	173	143	133	122	111	100	108	94	67	93	112	103
4				353	187	140	143	135	110	110	122	100	58	97	98	97
5					413	195	137	116	94	108	111	81	52	86	86	83
6						279	144	97	96	89	96	89	48	86	92	87
7							410	203	134	119	120	93	46	93	86	97
8								355	172	135	127	114	66	96	92	96
9									256	124	104	90	49	77	76	74
10										317	181	139	78	119	110	115
11											303	151	72	114	113	121
12												224	62	104	105	104

Figure F8 Drop off of <u>new</u> walkers by region - West Midlands (absolute)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
1	355	226	219	156	151	150	160	136	110	142	128	107	58	68	67	55
2		289	169	105	92	79	99	81	70	82	93	62	27	64	59	54
3			394	138	131	105	99	86	70	74	84	64	29	66	68	64
4				246	137	119	108	89	94	89	58	68	29	63	63	57
5					269	131	129	97	89	87	85	77	33	68	68	59
6						189	79	62	44	51	46	38	13	35	30	35
7							289	115	83	76	79	65	28	64	74	73
8								205	102	73	75	57	24	53	57	50
9									189	53	59	34	14	32	36	35
10										280	131	105	54	101	100	75
11											322	131	52	107	113	95
12												143	31	56	58	49

Figure F9 Drop off of <u>new</u> walkers by region - Yorkshire & The Humber (absolute)

Figure F10 Percentage drop off of new walkers by region

Appendix G Absence by sex (absolute & percentage)

Week 0: 010210 to 070210	Absence	Attendance (only given week)					
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	31486	3561	3238	3146	4493	4429
Male	8451	972	897	859	1290	1180
Female	23028	2587	2339	2287	3232	3248
WEEK -1						
Overall	26970	1649	1697	1486	2561	2435
Male	7254	454	476	419	752	662
Female	19713	1195	1221	1067	1809	1773
WEEK -2						
Overall	24948	1141	1118	1051	1877	1823
Male	6691	311	305	285	546	492
Female	18255	830	813	766	1331	1331
WEEK -3						
Overall	24430	1043	1045	960	1760	1705
Male	6546	282	288	259	510	463
Female	17882	761	757	701	1250	1242
WEEK -4						
Overall	24004	1001	989	908	1683	1651
Male	6405	268	269	259	485	442
Female	17597	735	720	669	1200	1209
	Absence	Attendance (only given week)					
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	100	11	10	10	14	14
Male	100	12	11	10	15	14
Female	100	11	10	10	14	14
WEEK -1						
Overall	100	6	6	6	9	9
Male	100	6	7	6	10	9
Female	100	6	6	5	8	8
WEEK -2						
Overall	100	5	4	4	8	7
Male	100	5	5	4	8	7
Female	100	5	4	4	7	7
WEEK -3						
Overall	100	4	4	4	7	7
Male	100	4	4	4	8	7
Female	100	4	4	4	7	7
WEEK -4						
Overall	100	4	4	4	7	7
Male	100	4	4	4	8	7
Female	100	4	4	4	7	7

Week 0: 050410 to 110410	Absence	Attendance (only given week)					
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	37725	5459	5486	5561	3674	5331
Male	10240	1482	1430	1471	1118	1397
Female	27476	4024	4062	4088	2856	3931
WEEK -1						
Overall	33739	5482	5659	5647	2725	5549
Male	9133	889	925	944	744	901
Female	24599	2591	2713	2702	1981	2646
WEEK -2						
Overall	29910	2568	2215	2282	1748	2300
Male	8145	991	581	603	466	593
Female	21760	1577	1634	1678	1282	1707
WEEK -3						
Overall	27188	1448	1538	1561	1267	1642
Male	7353	382	392	380	349	411
Female	19840	1066	1146	1180	918	1231
WEEK -4						
Overall	25429	1110	1193	1228	997	1322
Male	6848	301	306	312	274	342
Female	18477	809	887	915	723	980
	Absence	Attendance (only given week)					
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	100	14	15	15	11	14
Male	100	14	14	14	11	14
Female	100	15	15	15	10	14
WEEK -1						
Overall	100	10	11	11	8	11
Male	100	10	10	10	8	10
Female	100	11	11	11	8	11
WEEK -2						
Overall	100	7	7	8	6	8
Male	100	7	7	7	6	7
Female	100	7	8	8	6	8
WEEK -3						
Overall	100	5	6	6	5	6
Male	100	5	5	5	5	6
Female	100	5	6	6	5	6
WEEK -4						
Overall	100	4	5	5	4	5
Male	100	4	4	5	4	5
Female	100	4	5	5	4	5

Week 0: 070610 to 130610	Absence	Attendance (only given week)					
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	43857	5353	5141	4976	5186	4532
Male	11908	1423	1407	1390	1411	1266
Female	31942	3930	3733	3584	3774	3266
WEEK -1						
Overall	39436	3410	3588	3188	3474	2970
Male	10641	886	882	860	919	796
Female	28786	2544	2686	2326	2554	2174
WEEK -2						
Overall	35601	2123	2025	1965	2133	1886
Male	9679	547	542	555	578	509
Female	25918	1576	1483	1409	1554	1381
WEEK -3						
Overall	32636	1548	1548	1329	1646	1291
Male	8906	333	364	368	401	332
Female	23724	1015	983	960	1044	959
WEEK -4						
Overall	30612	1008	984	1004	1054	997
Male	8367	255	274	288	295	254
Female	22240	753	714	718	759	743
	Absence	Attendance (only given week)					
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	100	12	12	11	12	10
Male	100	12	12	12	12	11
Female	100	12	12	11	12	10
WEEK -1						
Overall	100	9	9	8	9	8
Male	100	8	8	8	9	7
Female	100	9	9	8	9	8
WEEK -2						
Overall	100	6	6	6	6	5
Male	100	6	6	6	6	5
Female	100	6	6	5	6	5
WEEK -3						
Overall	100	4	4	4	4	4
Male	100	4	4	4	5	4
Female	100	4	4	4	4	4
WEEK -4						
Overall	100	3	3	3	3	3
Male	100	3	3	3	4	3
Female	100	3	3	3	3	3

Week 0: 300810 to 050910	Absence	Attendance (only given week)					
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	51209	5110	5083	5481	4677	5732
Male	13915	1377	1329	1419	1291	1562
Female	37285	3732	3757	4065	3413	4248
WEEK -1						
Overall	46557	5098	5189	5451	2986	5755
Male	12619	803	783	854	768	990
Female	33929	2294	2406	2596	2198	2761
WEEK -2						
Overall	43039	2014	2106	2458	2010	2620
Male	11683	511	515	593	511	695
Female	31367	1502	1590	1824	1496	1923
WEEK -3						
Overall	40037	1405	1607	1780	1551	2049
Male	11010	346	381	414	374	528
Female	29588	1098	1225	1366	1254	1519
WEEK -4						
Overall	38689	1088	1276	1430	1225	1657
Male	10479	285	299	330	289	423
Female	28201	824	973	1099	933	1232
	Absence	Attendance (only given week)					
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	100	10	10	11	9	11
Male	100	10	10	10	9	11
Female	100	10	10	11	9	11
WEEK -1						
Overall	100	7	7	7	6	8
Male	100	8	8	7	6	8
Female	100	7	7	8	6	8
WEEK -2						
Overall	100	5	5	6	5	6
Male	100	4	4	5	4	6
Female	100	5	5	6	5	6
WEEK -3						
Overall	100	3	4	4	4	5
Male	100	3	3	4	3	3
Female	100	4	4	4	4	5
WEEK -4						
Overall	100	3	3	4	3	4
Male	100	3	3	3	3	4
Female	100	3	3	4	3	4

Week 0: 011110 to 071110	Absence	Attendance (only given week)					
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	54178	3393	4216	4203	1600	2395
Male	14783	1012	1200	1200	508	786
Female	39389	2380	3015	3003	1092	1609
WEEK -1						
Overall	49619	1901	2527	2495	945	1408
Male	13483	543	704	689	287	463
Female	36130	1357	1822	1766	658	943
WEEK -2						
Overall	46313	1200	1555	1551	627	888
Male	12639	393	458	447	194	299
Female	33669	847	1117	1104	433	589
WEEK -3						
Overall	43874	817	1069	1094	479	652
Male	11988	227	306	321	147	221
Female	31881	590	765	775	332	431
WEEK -4						
Overall	42172	641	826	875	394	518
Male	11517	173	224	243	120	173
Female	30650	468	602	632	274	338
	Absence	Attendance (only given week)					
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	100	6	8	8	3	4
Male	100	7	8	8	3	5
Female	100	6	8	8	3	4
WEEK -1						
Overall	100	4	5	5	2	3
Male	100	4	5	5	2	3
Female	100	4	5	5	2	3
WEEK -2						
Overall	100	3	3	3	1	2
Male	100	3	3	4	2	2
Female	100	3	3	3	1	2
WEEK -3						
Overall	100	2	2	2	1	1
Male	100	2	3	3	1	2
Female	100	2	2	2	1	1
WEEK -4						
Overall	100	2	2	2	1	1
Male	100	2	2	2	1	2
Female	100	2	2	2	1	1

Figure G1 Absence by sex (absolute & percentage)

Appendix H Absence by GP referral (absolute & percentage)

Week 0: 010210 to 070210	Absence	Attendance (only given week)				
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	31486	3561	3238	3146	4493	4429
GP referral	2178	211	210	213	305	339
No referral	29309	3350	3028	2933	4188	4089
	WEEK -1					
Overall	26970	1649	1697	1486	2561	2435
GP referral	1888	95	108	102	187	208
No referral	25082	1554	1589	1384	2374	2227
	WEEK -2					
Overall	24948	1141	1118	1051	1877	1823
GP referral	1751	63	68	68	136	160
No referral	23197	1078	1050	983	1739	1663
	WEEK -3					
Overall	24430	1043	1045	960	1760	1705
GP referral	1717	58	63	62	127	152
No referral	22713	985	982	898	1633	1553
	WEEK -4					
Overall	24004	1001	989	908	1683	1651
GP referral	1692	58	57	56	118	148
No referral	22312	943	932	852	1564	1503

Week 0: 050410 to 110410	Absence	Attendance (only given week)				
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	37725	5459	5486	5561	3874	5331
GP referral	2584	373	363	388	269	374
No referral	35139	5086	5131	5198	3705	4957
	WEEK -1					
Overall	33739	5482	5639	5647	2725	3549
GP referral	2316	218	231	232	182	239
No referral	31421	3263	3408	3415	2543	3310
	WEEK -2					
Overall	29910	2168	2215	2282	1748	2300
GP referral	2055	126	137	149	104	148
No referral	27855	2042	2078	2133	1644	2152
	WEEK -3					
Overall	27188	1448	1538	1561	1267	1642
GP referral	1871	82	88	88	72	112
No referral	25329	1366	1449	1462	1195	1530
	WEEK -4					
Overall	25429	1130	1193	1228	997	1322
GP referral	1756	80	86	78	58	95
No referral	23572	1050	1127	1149	939	1229

Week 0: 070610 to 130610	Absence	Attendance (only given week)				
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	43857	5353	5141	4976	5186	4532
GP referral	2969	357	372	304	325	288
No referral	40885	4995	4769	4672	4861	4245
	WEEK -1					
Overall	39436	3410	3588	3188	3474	2970
GP referral	2686	228	248	189	204	188
No referral	36748	3182	3140	2999	3270	2782
	WEEK -2					
Overall	35601	2123	2025	1965	2133	1886
GP referral	2441	142	154	107	124	124
No referral	33158	1981	1871	1858	2009	1772
	WEEK -3					
Overall	32636	1548	1548	1329	1446	1291
GP referral	2245	93	110	72	77	70
No referral	30389	1253	1238	1257	1369	1221
	WEEK -4					
Overall	30612	1008	984	1004	1054	997
GP referral	2137	73	81	55	52	53
No referral	28473	935	907	949	1002	944

Week 0: 300810 to 050910	Absence	Attendance (only given week)				
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	51200	5110	5083	5481	4677	5732
GP referral	3474	335	332	402	337	357
No referral	47732	4775	4750	5079	4339	5375
	WEEK -1					
Overall	46557	5098	5189	5451	2966	3753
GP referral	3144	186	184	344	216	229
No referral	43410	2912	3004	3207	2749	3524
	WEEK -2					
Overall	43039	2014	2106	2458	2010	2620
GP referral	2949	115	131	178	154	159
No referral	40088	1899	1975	2280	1856	2461
	WEEK -3					
Overall	40037	1405	1607	1780	1551	2049
GP referral	2803	77	103	135	126	120
No referral	37802	1328	1504	1648	1403	1919
	WEEK -4					
Overall	38689	1088	1276	1430	1225	1657
GP referral	2678	90	76	115	99	105
No referral	36011	1028	1197	1315	1126	1552

Week 0: 011110 to 071110	Absence	Attendance (only given week)				
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	54178	3393	4216	4203	1600	2395
GP referral	3628	223	262	255	95	161
No referral	50547	3170	3953	3948	1504	2234
	WEEK -1					
Overall	49619	1901	2527	2435	945	1408
GP referral	3340	126	163	153	50	98
No referral	46276	1775	2363	2280	894	1310
	WEEK -2					
Overall	46313	1200	1555	1551	627	888
GP referral	3136	80	99	100	51	84
No referral	43174	1120	1455	1451	595	824
	WEEK -3					
Overall	43874	817	1069	1094	479	652
GP referral	3050	58	70	69	26	49
No referral	40922	781	999	1025	453	603
	WEEK -4					
Overall	42172	641	826	875	394	518
GP referral	2857	48	56	57	22	41
No referral	39313	593	770	818	372	477

	Absence	Attendance (only given week)				
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	100	11	10	10	14	14
GP referral	100	10	10	10	14	16
No referral	100	11	10	10	14	14
	WEEK -1					
Overall	100	6	6	6	9	9
GP referral	100	5	6	5	10	11
No referral	100	6	6	6	9	9
	WEEK -2					
Overall	100	5	4	4	8	7
GP referral	100	4	4	4	6	6
No referral	100	5	5	4	7	7
	WEEK -3					
Overall	100	4	4	4	7	7
GP referral	100	3	4	4	7	9
No referral	100	4	4	4	7	7
	WEEK -4					
Overall	100	4	4	4	7	7
GP referral	100	3	3	3	7	9
No referral	100	4	4	4	7	7

	Absence	Attendance (only given week)				
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	100	14	15	15	11	14
GP referral	100	14	14	14	10	14
No referral	100	14	15	15	11	14
	WEEK -1					
Overall	100	10	11	11	8	11
GP referral	100	9	10	10	8	10
No referral	100	10	11	11	8	11
	WEEK -2					
Overall	100	7	7	8	6	8
GP referral	100	6	7	7	5	7
No referral	100	7	7	8	6	8
	WEEK -3					
Overall	100	5	6	6	5	6
GP referral	100	4	5	5	4	6
No referral	100	5	6	6	5	6
	WEEK -4					
Overall	100	4	5	5	4	5
GP referral	100	3	4	4	3	5
No referral	100	4	5	5	4	5

	Absence	Attendance (only given week)				
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	100	12	12	11	12	10
GP referral	100	12	13	10	11	10
No referral	100	12	12	11	12	10
	WEEK -1					
Overall	100	9	9	8	9	8
GP referral	100	8	9	7	8	7
No referral	100	9	9	8	9	8
	WEEK -2					
Overall	100	6	6	6	6	5
GP referral	100	6	6	4	5	5
No referral	100	6	6	6	6	5
	WEEK -3					
Overall	100	4	4	4	4	4
GP referral	100	4	5	3	3	3
No referral	100	4	4	4	4	4
	WEEK -4					
Overall	100	3	3	3	3	3
GP referral	100	3	4	3	2	2
No referral	100	3	3	3	4	3

	Absence	Attendance (only given week)				
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	100	10	10	11	9	11
GP referral	100	10	10	12	10	10
No referral	100	10	10	11	9	11
	WEEK -1					
Overall	100	7	7	7	6	8
GP referral	100	6	6	6	7	7
No referral	100	7	7	7	6	8
	WEEK -2					
Overall	100	5	5	6	5	6
GP referral	100	4	4	6	5	6
No referral	100	5	5	6	5	6
	WEEK -3					
Overall	100	3	4	4	4	5
GP referral	100	3	4	5	4	5
No referral	100	4	4	4	4	5
	WEEK -4					
Overall	100	3	3	4	3	4
GP referral	100	2	3	4	4	4
No referral	100	3	3	4	3	4

	Absence	Attendance (only given week)				
	WEEK 0	Week +1	Week +2	Week +3	Week +4	Week +5
Overall	100	6	8	8	3	4
GP referral	100	6	7	7	3	4
No referral	100	6	8	8	3	4
	WEEK -1					
Overall	100	4	5	5	2	3
GP referral	100	4	5	5	2	3
No referral	100	4	5	5	2	3
	WEEK -2					
Overall	100	3	3	3	1	2
GP referral	100	3	3	3	1	2
No referral	100	3	3	3	1	2
	WEEK -3					
Overall	100	2	2	2	1	1
GP referral	100	2	2	2	1	2
No referral	100	2	2	2	1	1
	WEEK -4					
Overall	100	2	2	2	1	1
GP referral	100	2	2	2	1	1
No referral	100	2	2	2	1	1

Figure H1 Absence by GP referral (absolute & percentage)

Appendix I Absence by activity levels (absolute & percentage)

Figure I1 Absence by activity levels (absolute & percentage)