

Supplementary information about the population coverage of the Stockport Cardiovascular Risk Factor Screening Programme 1989–1999 and its representativeness

POPULATION COVERAGE AND REPRESENTATIVENESS

To estimate population coverage of the screening programme by sex as well as by deprivation group, one would have wished to have prospective information about the number of invitees who attended screening, by sex and deprivation group. However, no such information was available about the number of persons “screened” as opposed to persons “invited”. Therefore, coverage by sex and deprivation group was assessed retrospectively and indirectly with the following method.

Numerator information

Programme participants (first screening) during the “prevalence round” 1989–1993 were used as the numerator. Deprivation group status was ascribed to each participant as described in Lyratzopoulos *et al*,[1] through quintiles of Census Enumeration District (ED) Townsend deprivation index score.

Denominator information

The number of Stockport residents aged 35–64 in each ED of the 1991 census was obtained from the “MIMAS Census Dissemination Unit CASWEB” search engine (University of Manchester). Data were stratified by sex and 5-year age bands. Therefore the number of 60 year-old residents, was assumed to equate the number of residents in the age band 60–64 divided by 5. This was subsequently added to the number of individuals in all other 5-year old band (35–59) to produce the number of 35–60 year olds who were resident in each Stockport ED in the 1991 census—as this was the age group targeted by the Programme.

Using the same Townsend deprivation ED score quintile defining points as for the numerator, the 589 Stockport EDs were split into deprivation quintiles, and for each sex, the number of individuals aged 35–60 in each deprivation quintile was calculated.

Coverage calculation (all individuals and by deprivation group)

For each sex, the overall and deprivation group-specific coverage was subsequently calculated as the number of screening participants in each quintile divided by the respective number of individuals resident in the EDs of the respective quintile. The χ^2 test for trend was used to assess significance of any deprivation trends in screening coverage, using the STATS DIRECT software. Table 1 shows the results.

Table 1 Population coverage (first screening episode) of the screening programme 1989–99

Deprivation Group	Women aged 35–60		Men aged 35–60	
	Coverage (%)	Test for trend	Coverage (%)	Test for trend
Affluent	76.1		71.1	
2	77.0		71.1	
3	79.5	p=0.004	73.7	p=0.190
4	78.6		72.5	
Deprived	81.0		72.7	
All	78.4		72.2	

It is worth noting that true coverage would have been higher, as the denominator used in the above calculation includes all residents, i.e. even those that would have been excluded due to established/known cardiovascular disease or risk factors (see main text, Introduction).

SOCIODEMOGRAPHIC CHANGES IN STOCKPORT BETWEEN 1991–2001

The main limitation of the above method relates to the fact that changes in the denominator (in terms of socio-demographic changes between 1989–1991) are ignored, in fact the method assumes that the socio-demographic composition remained “fixed” on 1991, and this year is representative of all other study years. This assumption is clearly inaccurate, but if the degree of inaccuracy is small, it may still be an overall reasonable assumption.

Therefore, to examine whether changes in the socio-demographic composition of Stockport were considerable during the study period 1989–1999, we examined population differences between the two census years 1991 and 2001, by sex and age. It was unfortunately not possible to obtain information on socio-economic changes, due to the different classification system used to assign socio-economic position in 1991 (Social Class) and 2001 (National Statistics Socio-economic Classification).

Change in the age group 35–60, by sex

In relation to Stockport demography, looking at the 2001 and 1991 census figures, it is apparent that there has been very little change (reduction) in the 35–60 years age group, which was the group participating in the study (table 2). In addition, anecdotally it is known that there have been no significant inward or outward migration from Stockport during 1989–1999, and that there have been no major urban regeneration schemes that would significantly alter the social geography of the Borough.

Table 2 Number of Stockport residents aged 35–60 in 1991 and 2001, according to census

			Absolute change	Proportional
	1991	2001	2001–1991	change (%)
Men 35–60	52,559	50,862	–1697	–3.23
Women 35–60	53,638	51,806	–1832	–3.42

			Absolute change	Proportional
	1991	2001	2001–1991	change (%)
All persons all ages	284,395	284,422	+27	+0.01

(Source: MIMAS).

CONCLUSION

There was an overall high level of population coverage, for both sexes. Coverage was highest among the most deprived women, but the overall difference between the most and least deprived group was small, both in absolute and proportional terms. This provides indirect evidence about the overall representativeness of study participants in relation to those in principle eligible for participation to the study. During the period 1991–2001 (which overlaps considerably with the study period 1989–2001) there was overall little change in Stockport demography in terms of individuals in the 35–60 year olds age bracket.

REFERENCE

1. Lyratzopoulos G, McElduff P, Heller RF, *et al.* Mid-term body mass index increase among obese and non-obese individuals in middle life and deprivation status: a cohort study. *BMC Public Health* 2005;**5**:32.