Transitions into and out of unpaid care

Prepared for Carers UK

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Contents

This note describes an approach to estimating the number of people who take on a caring role and the number who relinquish that role each year. The requirement was for up-to-date rates of transition into and out of unpaid paid that could be applied to 2001 and 2011 census figures.

Data

The approach is based on longitudinal data drawn from personal interviews conducted every 12 months for the British Household Panel Survey (BHPS). Each year interviewees are asked:

- Is there anyone **living with you** who is sick, disabled or elderly whom you look after or give special help to (for example, a sick, disabled or elderly relative/husband/wife/friend, etc.)?

- Do you provide some regular service or help for any sick, disabled or elderly person <u>not</u> living with you? (excluding help provided in the course of paid employment)

Transitions into unpaid care are recorded when interviewees respond 'Yes' to either or both questions but had responded 'No' to both questions at the previous interview wave 12 months earlier. Similarly, transitions out of unpaid care are recorded when interviewees respond 'No' to both questions but had responded 'Yes' to either or both questions at the previous interview wave. This approach sidesteps the distinction between co-resident care and out-of-household care because the population figures used below are taken from the census which does not record locus of care. Interviewees responding 'Yes' to either or both questions at two successive waves are called 'continuing carers'. The following table summarises the interpretation of carer transitions across successive pairs of waves:

Carer status at preceding wave	Carer status at current wave	
	Carer	Non-carer
Carer	Continuing carers	Transitions out of caregiving
Non-carer	Transitions into caregiving	Non-carers

The BHPS was established in 1991 but since 2008 interviews have been conducted every two years, thereby widening the period for recording transitions and disrupting the annual sequence. For that reason, the findings presented here relate to carer transitions identified from interviews conducted between 1999 and 2008. However, as explained below they can be applied to the 2011 census.

The estimated transition rates relate to adult carers because BHPS questions about care-giving are not addressed to those under age 16. Moreover, the study sample is drawn from

households in Britain that is England, Scotland and Wales. A sub-sample from Northern Ireland was added to the BHPS in 2001 but has not been included here because a wider analysis of trends and changes in unpaid care from which the present study sample was drawn covers the period from 1991 when the Province was not part of the survey. However, it is unlikely that the transition rates reported here would differ very much if the Northern Ireland sub-sample had been included. The number of carers in Northern Ireland represents only 3.3 per cent of the UK total according to the 2011 census and there is no reason to assume that transition rates in the Province are especially higher or lower than elsewhere. It is recommended below that only generalised population estimates of carer transitions are reported; that being the case, it would be quite reasonable to assume that such estimates cover all unpaid carers, including young carers, living throughout the UK.

Analysis

Annual transitions into and out of unpaid care were combined across successive pairs of interview waves from 1999/00, 2000/01, …, to 2007/08. Combining transitions in this way moderates year-on-year fluctuations and increases precision of the estimated rates. The validity of this approach was checked by showing statistically that annual rates of transition did not vary significantly across the study period. For that reason, it is reasonable to assume that the transition rates can be applied beyond the study period to the population census conducted in 2011.

Combining all carer transitions produced the following distribution:

Carer status at preceding wave	Carer status at current wave		
	Carer	Non-carer	All
Carer	7,446	3,547	10,993
Non-carer	3,629	52,297	55,926
All	**11,075**	**55,844**	**66,919**

Two transition rates were calculated:

1. The proportion of carers who took on a caring role during the previous 12 months: 3629 / (7446 + 3629) = 32.77 per cent.

2. The proportion of carers who relinquished a caring role during the previous 12 months: 3547 / (7446 + 3547) = 32.27 per cent.

Precision

The transition rates are estimated from survey data covering all adults living in a sample of private households in Britain. The calculation is therefore subject to what is called sampling error or sampling variation which arises because samples, however carefully drawn, may not accurately represent the total population from which they are drawn. One way of thinking about sampling variation is to imagine that two or more household samples have been drawn in the same way: that is, each household has the same likelihood of being selected for each sample. Chance or random effects in selecting the samples will however mean that each sample contains a different set of households which will, in turn, produce different results that are indicative of the extent of variation due to the sampling process. The BHPS sample is drawn in such a way as to minimise sampling error.

Statisticians have developed methods for measuring the variation or imprecision in survey findings that are based on samples. Imprecision is usually expressed in terms of the confidence that can be placed in a range of estimates that lie on either side of the estimate from a single, study sample. The smaller the range the more precise is the sample estimate. The range of possible estimates is known as a confidence interval which will most likely contain the true estimate that would be obtained were the whole population to be surveyed.

For the transition rates presented above, 95 per cent confidence intervals were calculated showing the upper and lower boundary of the range of possible estimates that might arise from multiple samples:

	Sample estimate	Lower bound	Upper bound
Transitions into care	32.77	31.89	33.64
Transitions out of care	32.27	31.39	33.14

In other words, we can be confident that in 95 out of 100 samples the proportion of carers who had taken on a caring role in the past year would be found to lie between 31.89 per cent and 33.64 per cent. It can be appreciated that the confidence interval is fairly narrow meaning that the sample estimate is quite precise; within this interval, the best estimate of the annual rate of transition into unpaid care is 32.77 per cent.

It will be noticed that the two confidence intervals overlap: the upper bound for transitions out of care (33.14) is higher than the lower bound of transitions into care (31.89). Thus it cannot be said with confidence that more adults take on a caring role each year than relinquish such a role despite the difference between the sample estimates: 32.77 and 32.27. The true estimates for transitions into and out of unpaid care, which could be obtained were every adult in the population interviewed, may be identical or may differ in

the opposite direction. What can be said is that the true estimates are likely to lie within the confidence interval.

Weighting

Survey data are subject to errors other than sampling variation including non-response, sample attrition and other factors that might bias the findings. To mitigate their effects, some statisticians recommend weighting survey data to give greater influence to responses from sub-groups known to be under-represented by comparison with the general population, and lesser influence to responses from sub-groups known to be over-represented. Two weighting schemes were applied to the transition rates reported above, one for responses in the first wave and one for responses in the second wave in each successive pair of interviews. They gave the following results:

	Unweighted estimate	Weighted estimate (A)	Weighted estimate (B)
Transitions into care	32.77	32.60	32.25
Transitions out of care	32.27	32.35	32.15

It can be seen that the weighted estimates hardly differ from the unweighted ones; using the weighted transition rates, therefore, would make little difference to the national population estimates presented below. Together with the recommendation to report only generalised population estimates, it is suggested that unweighted transition rates are used.

Population estimates

The transition rates presented here can be applied to cross-sectional estimates of the total population of carers. Using the 2011 census count of carers in Britain and the UK, estimates for the number of people taking on or relinquishing a caring role each year are as follows:

Number of unpaid carers in 2011 census		Started caregiving 2010/11			Cease caregiving 2011/12		
		Best estimate	Lower bound	Upper bound	Best estimate	Lower bound	Upper bound
		32.77%	31.89%	33.64%	32.27%	31.39%	33.14%
Britain	6,292,246	2,061,811	2,006,799	2,116,824	2,030,255	1,975,258	2,085,252
UK	6,506,226	2,131,927	2,075,044	2,188,810	2,099,298	2,042,431	2,156,165

These figures are likely to underestimate the number of individuals starting and ceasing to provide care because the BHPS does not capture caregiving episodes that start *and* finish between interview waves. Transitions in multiple and serial caregiving may also be missed.

It is recommended that these population estimates are rounded downwards and shortened to reflect a preference for reporting more conservative figures and to recognise the potential errors in sample estimates noted above. Seven figure numbers are not memorable and unlikely to register with most people; they would also be open to criticism for conveying a false sense of precision and accuracy.

Conclusion

Around 2.1m adults in the UK take on a caring role each year and a similar number cease care-giving each year. Transitions into and out of unpaid care are key turning points in individuals' lives when they are likely to need advice, information and practical support. Such transitions are further associated with risk to psychological health, pressures to give up paid work or reduce work hours, adverse financial impacts, and disruption of family and social life.

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