



# *Data Technical Report of the ALSWH:* **Transition or change variables**

**Anne Russell**

December 2006

## **Background**

The Data Management Group has developed rules and SAS code for many variables describing transition/change, mainly between Survey 1 and 2 but in some cases including the first 3 Surveys. While it was initially anticipated that this work would lead to the compilation of transition data sets, it was subsequently decided that these variables may have little general utility, and the ALSWH no longer intends to prepare such data sets.

The Data Management Group has concluded that transition variables will need to be developed according to the needs of specific analyses and that the following materials may assist in that process.

The material included here was previously included in the Data Dictionary Supplement.

## INDEX

### **Demographic**

- 3 Employment Transition
- 6 Transition in Living with Parents
- 8 Transition in Living with Partner
- 10 Marital Status Transition
- 14 Transition to Parenthood
- 17 Transition in Qualifications
- 21 Transition in Work/Study status

### **Gynaecology & Obstetrics**

- 23 Transition in Current Use of Hormone Replacement Therapy
- 25 Transition in Use of Hormone Replacement Therapy (using pre-study history)
- 28 Menopause Transition
- 33 First Pregnancy (relative to surveys 1 and 2)

### **Lifestyle**

- 37 Transition in Alcohol Consumption
- 42 Transition in Frequency of Drinking at Short-term Risk
- 47 Smoking Transition

# Demographic

## Employment Transition

<b>Age Cohorts</b>	Mid-age
<b>Surveys</b>	Surveys 1 to 2 & 2 to 3
<b>Derived Variable</b>	T12Hrs, T23Hrs
<b>Definition</b>	Employment transition
<b>Source Items (Index Numbers)</b>	M1HrsWork, M2HrsWork, M3HrsWork (EMPL-041)
<b>Statistical Form</b>	Categorical variables
<b>Prepared by</b>	Anne Russell and Jessica Ford
<b>Endorsed</b>	19 March 2003

Employment transition was defined as changes between 3 classes:

- Part-time work
- Full-time work
- Unemployed or not in the labour force

Categories for employment transition between surveys 1 and 2 were developed for women with valid data for both M1HrsWork and M2HrsWork (Table 1). Similarly, women with valid data for both M2HrsWork and M3HrsWork have been assigned categories for employment transition between surveys 2 and 3 (Table 1).



**Table 1** Number and percent in each category for employment transition between surveys

Code	Employment transition - Mid-age cohort	Number	Percent
<i>Between surveys 1 and 2 (n = 9 961)</i>			
<b>Mid 1 Part-time</b>			
1	Mid 2 same hours	1 692	17.0
2	Mid 2 more hours (full- or part-time)	1 203	12.1
3	Mid 2 fewer hours	394	4.0
<b>Mid 1 Full-time</b>			
4	Mid 2 same hours	2 224	22.3
5	Mid 2 more hours	568	5.7
6	Mid 2 fewer (full- or part-time)	894	9.0
<b>Mid 1 Full- or part-time</b>			
9	Mid 2 Not in the labour force/unemployed	489	4.9
<b>Mid 1 Not in the labour force or unemployed</b>			
7	Mid 2 Not in the labour force/unemployed	1 790	18.0
8	Mid 2 Part/full-time	707	7.1
<i>Between surveys 2 and 3 (n = 9 467)</i>			
<b>Mid 2 Part-time</b>			
1	Mid 3 same hours	1 119	11.8
2	Mid 3 more hours (full- or part-time)	1 505	15.9
3	Mid 3 fewer hours	473	5.0
<b>Mid 2 Full-time</b>			
4	Mid 3 same hours	1 673	17.7
5	Mid 3 more hours	1 095	11.6
6	Mid 3 fewer (full- or part-time)	1 069	11.3
<b>Mid 2 Full- or part-time</b>			
9	Mid 3 Not in the labour force/unemployed	422	4.5
<b>Mid 2 Not in the labour force or unemployed</b>			
7	Mid 3 Not in the labour force/ unemployed	1 391	14.7
8	Mid 3 Part/full-time	720	7.6



The SAS code defining work related variables at surveys 1, 2 and 3 is:

#### **Transition - Surveys 1 & 2**

```
data mt12hrs;
merge mid1 mid2; by id ;
if m2survey = 1 then do;
    if m1hrswork=. or m2hrswork=. then mt12hrs=.;
    else if m1hrswork ne . and m2hrswork ne . then do;
        if m2hrswork=7 and m1hrswork in (1,2,3,4,5,6) then
            mt12hrs=9;
        else if m1hrswork in (1,2,3) then do;
            if m2hrswork = m1hrswork then mt12hrs = 1;
            else if m2hrswork > m1hrswork then mt12hrs = 2;
            else if m2hrswork < m1hrswork then mt12hrs = 3;
            end;
        else if m1hrswork in (4,5,6) then do;
            if m2hrswork = m1hrswork then mt12hrs = 4;
            else if m2hrswork > m1hrswork then mt12hrs = 5;
            else if m2hrswork < m1hrswork then mt12hrs = 6;
            end;
        else if m1hrswork = 7 then do;
            if m2hrswork = 7 then mt12hrs = 7;
            else if m2hrswork in (1,2,3,4,5,6) then
                mt12hrs = 8;
        end; end; end;
else if m2survey in (2,.) then mt12hrs = . ;
```

#### **Transition - Surveys 2 & 3**

```
data mt23hrs;
merge mid2 mid3 ; by id ;
if m2survey = 1 and m3survey = 1 then do;
    if m2hrswork ne . and m3hrswork ne . then do;
        if m3hrswork=7 and m2hrswork in (1,2,3,4,5,6)
            then mt23hrs=9;
        else if m2hrswork in (1,2,3) then do;
            if m3hrswork = m2hrswork then mt23hrs = 1;
            else if m3hrswork > m2hrswork then mt23hrs = 2;
            else if m3hrswork < m2hrswork then mt23hrs = 3;
            end;
        if m2hrswork in (4,5,6) then do;
            if m3hrswork = m2hrswork then mt23hrs = 4;
            else if m3hrswork > m2hrswork then mt23hrs = 5;
            else if m3hrswork < m2hrswork then mt23hrs = 6;
            end;
        else if m2hrswork = 7 then do;
            if m3hrswork = 7 then mt23hrs = 7;
            else if m3hrswork in (1,2,3,4,5,6) then mt23hrs = 8;
        end; end; end;
```

## Transition in Living with Parents

<b>Age Cohorts</b>	Younger
<b>Surveys</b>	Surveys 1 to 2
<b>Derived Variable</b>	T12LvPrnt
<b>Definition</b>	Transition in living with parents between surveys 1 & 2
<b>Source Items</b>	Survey 1: Question 67e (FAMF-005)
<b>(Index Numbers)</b>	Survey 2: Question 84 e, f & g (FAMF-132 to -134)
<b>Statistical Form</b>	Categorical variable
<b>Prepared by</b>	Sandra Bell and Anne Russell
<b>Endorsed</b>	13 March 2002

### Source Items – Surveys 1 & 2

	Survey 1 Item 67	Survey 2 Item 84	Responses and Codes	
Who lives with you?			Yes	No
Parents	e		1	2
Mother		e	1	0
Father		f	1	0
Step-mother/step-father		g	1	0

### Derived Variable

Transition in living with parents was developed for women from the Younger cohort completing Survey 1 and either the full or the short version of Survey 2. Categories for transition were based on a cross-tabulation of living with parents at both surveys (Table 1) and are shown in Table 2.



**Table 1 Cross-tabulation of living with parents at surveys 1 and 2**

Survey 1	Survey 2			Total
	Yes	No	Missing	
Yes	1 939	2 665	100	4 704
No	452	4 322	102	4 876
Missing	21	80	2	103
<b>Total</b>	<b>2 412</b>	<b>7 067</b>	<b>204</b>	<b>9 683</b>

**Table 2 Number and percent in categories for transition in living with parents (n = 9 683)**

Code	Transition in living with parents	Number	Percent
1	Not with parents Surveys 1 & 2	4 322	46.1
2	With parents at Survey 1, not at Survey 2	2 665	28.4
3	With parents Surveys 1 & 2	1 939	20.7
4	Not with parents Survey 1, with parents at Survey 2	452	4.8
	<b>Total classified</b>	<b>9 378</b>	<b>100.0</b>
9	<i>Missing</i>	305	3.2

The SAS code defining transition in living with parent between surveys 1 and 2 is:

```

/*Living arrangements: LiveParent
    1= live with parents
    2= don't live with parents */;
/* Phase 1: y1LiveParent */
y1LiveParent = y1q67e ;
/* Phase 2: y2LiveParent */;
if (y2q84e=1 or y2q84f=1 or y2q84g=1) then y2LiveParent = 1;
else if y2q84e=0 and y2q84f=0 and y2q84g=0 then y2LiveParent = 2;

/*****
Changes in living with Parents between Surveys 1 & 2
    1 = 'Not with parents S1&2'
    2 = 'With parents S1; not S2'
    3 = 'With parents S1&2'
    4 = 'Not with parents S1; With parents S2'
    9 = 'Missing'
*****/ ;
    if y1LiveParent = 2 and y2LiveParent = 2 then yt12LvPrnt = 1;
else if y1LiveParent = 1 and y2LiveParent = 2 then yt12LvPrnt = 2;
else if y1LiveParent = 1 and y2LiveParent = 1 then yt12LvPrnt = 3;
else if y1LiveParent = 2 and y2LiveParent = 1 then yt12LvPrnt = 4;
else yt12LvPrnt = 9 ;

```



## Transition in Living with Partner

<b>Age Cohorts</b>	Younger
<b>Surveys</b>	Surveys 1 to 2
<b>Derived Variable</b>	T12LvPtr
<b>Definition</b>	Transition in living with a partner between surveys 1 & 2
<b>Source Items</b>	Survey 1: Question 67b (FAMF-002)
<b>(Index Numbers)</b>	Survey 2: Question 84b (FAMF-130)
<b>Statistical Form</b>	Categorical variable
<b>Prepared by</b>	Anne Russell and Sandra Bell
<b>Endorsed</b>	13 March 2002

### Source Items – Survey 1 & 2

	Survey 1	Survey 2	Responses and Codes	
	Item 67	Item 84	Yes	No
Who lives with you?				
Partner	b		1	2
Partner		b	1	0

### Derived Variable

Transition in living with a partner was developed for women from the Younger cohort completing Survey 1 and either the full or the short version of Survey 2. Categories for transition were based on a cross-tabulation of living with a partner at both surveys (Table 1) and are shown in Table 2.

**Table 1** Cross-tabulation of living with a partner at surveys 1 and 2

Survey 1	Survey 2			Total
	Yes	No	Missing	
<b>Yes</b>	1 789	384	30	<b>2 203</b>
<b>No</b>	2 938	4 249	169	<b>7 356</b>
<b>Missing</b>	53	66	5	<b>124</b>
<b>Total</b>	<b>4 780</b>	<b>4 699</b>	<b>204</b>	<b>9 683</b>



**Table 2** Number and percent in categories for transition in living with a partner  
(n = 9 683)

Code	Transition in living with parents	Number	Percent
1	Not with partner Surveys 1 & 2	4 249	45.4
2	With partner at Survey 1, not at Survey 2	384	4.1
3	With partner Surveys 1 & 2	1 789	19.1
4	Not with partner Survey 1, with partner at Survey 2	2 938	31.4
	<b>Total classified</b>	<b>9 360</b>	<b>100.0</b>
9	<i>Missing</i>	323	3.3

The SAS code defining transition in living with parent between surveys 1 and 2 is:

```

/*****
Changes in living with Partner between Surveys 1 & 2
  1 = 'Not with partner S1&2'
  2 = 'With partner S1; not S2'
  3 = 'With partner S1&2'
  4 = 'Not with partner S1; With partner S2'
  9 = 'Missing'
*****/ ;
    if y1q67b = 2 and y2q84b = 0 then yt12LvPtnr = 1;
else if y1q67b = 1 and y2q84b = 0 then yt12LvPtnr = 2;
else if y1q67b = 1 and y2q84b = 1 then yt12LvPtnr = 3;
else if y1q67b = 2 and y2q84b = 1 then yt12LvPtnr = 4;
else yt12LvPtnr = 9 ;

```



## Marital Status Transition

<b>Age Cohorts</b>	Younger
<b>Surveys</b>	Surveys 1 to 2
<b>Derived Variable</b>	T12Marst
<b>Definition</b>	Transition in marital status between surveys 1 & 2
<b>Source Items</b>	Derived variable y1marst (DEMO-023)
<b>(Index Numbers)</b>	Derived variable y2marst (DEMO-072)
<b>Statistical Form</b>	Categorical variable
<b>Prepared by</b>	Anne Russell
<b>Endorsed</b>	13 March 2002

### Source Items - Surveys 1 & 2

Although the survey items concerning marital status differed between surveys 1 and 2, a uniform definition was developed for both surveys. Due to small numbers in some of the 6 categories, transition in marital status was determined from the 4 categories:

- o Married
- o De facto
- o Never married
- o Separated, divorced or widowed

### Derived Variable

Transition in marital status was determined for women from the Younger cohort completing Survey 1 and either the full or short version of Survey 2 (Table 1).



**Table 1** Transition in Marital Status between surveys 1 and 2 (n = 9 683)

Code	Transition in Marital Status	Number	Percent
1	Never married Surveys 1 & 2	4 775	49.7
2	Never married to de facto	1 470	15.3
3	Never to Married	1 166	12.1
4	Married Surveys 1 & 2	661	6.9
5	Married to Separated/Divorced/Widowed	44	0.5
6	De facto Surveys 1 & 2	425	4.4
7	De facto to Married	501	5.2
8	De facto to Never married	243	2.5
9	All other transitions	326	3.4
	<b>Total classified</b>	<b>9 611</b>	
99	<i>Missing</i>	72	0.7

**Variation:** In the manuscript *Changes in smoking behaviour among young women over life stage transitions* (McDermott L, Dobson A, Russell A; accepted for publication *Australian and New Zealand Journal of Public Health*, August 2004) the first category for marital transition (50% of observations) was further divided on the basis of transition in living with parents.

Code	Transition in Marital Status/Living with Parents	Number	Percent
1	Never married-Not living with parents - no change	1 422	15.0
2	Never married-Living with parents in 1996 but not in 2000	1 110	11.7
3	Never married-Living with parents in 2000	2 090	22.1
4	Never married to de facto	1 470	15.3
5	Never to Married	1 166	12.1
6	Married - no change	661	6.9
8	De facto - no change	425	4.4
9	De facto to Married	501	5.2
10	De facto to Never married	243	2.5
11	All other transitions	326	3.4
	<b>Total classified</b>	<b>9 458</b>	<b>100.0</b>
99	<i>Missing</i>	225	2.3

All combinations of values for marital status at each survey that were assigned to each transition category are shown in Table 2.



**Table 2 Marital status transition between surveys 1 and 2, including all combinations of marital status at surveys 1 and 2**

<b>Marital status transition</b>	<b>Survey 1 Marital status</b>	<b>Survey 2 Marital status</b>	<b>Number</b>
Never married Surveys 1 & 2	Missing	Never married	22
	Never married	Never married	4 753
Never married to de facto	Never married	De facto	1 470
Never to Married	Never married	Married	1 166
Married Surveys 1 & 2	Married	Married	661
Married to Separated/ Divorced/Widowed	Married	Separated	24
		Divorced	19
		Widowed	1
De facto Surveys 1 & 2	De facto	De facto	425
De facto to Married	De facto	Married	501
De facto to Never married	De facto	Never married	243
All other transitions	Married	De facto	72
		Never married	105
		Separated	34
		Divorced	1
		Widowed	2
		Separated	11
		De facto	21
		Separated	4
		Divorced	5
		Never married	13
		Divorced	1
		Divorced	1
		Never married	1
		Widowed	1
		Never married	45
Missing	Missing	Separated	8
		Divorced	1
		Widowed	1
		Married	13
		Divorced	9
		Separated	1
		Married	6
		De facto	6
		Never married	36
		Never married	1



The SAS code defining marital status transition between surveys 1 and 2 is:

```

/*****
Transition in Marital status - S1 to S2
    1=Never married
    2=Never to defacto
    3=Never to married
    4=Married 1996 & 2000
    5=Married to Separated/Widowed/Divorced
    6=Defacto 1996 & 2000
    7=Defacto to married
    8=Defacto to never married
    9=all other changes including discrepant ones
*****/ ;
if y1marst = 6 and y2marst = 6 then yt12marst = 1 ;
else if y1marst = . and y2marst = 6 then yt12marst = 1 ;
else if y1marst = . or y2marst = . then yt12marst = 99 ;
else if y1marst = 6 and y2marst = 2 then yt12marst = 2 ;
else if y1marst = 6 and y2marst = 1 then yt12marst = 3 ;

else if y1marst = 1 and y2marst = 1 then yt12marst = 4 ;
else if y1marst = 1 and y2marst in (3,4,5) then yt12marst = 5 ;

else if y1marst = 2 and y2marst = 2 then yt12marst = 6 ;
else if y1marst = 2 and y2marst = 1 then yt12marst = 7 ;
else if y1marst = 2 and y2marst = 6 then yt12marst = 8 ;
else if y1marst and y2marst then yt12marst = 9 ;
/*****
Modified transition in Marital status - S1 to S2
    1=Never married-not living with parents S1&S2
    2=Never married-living with parents S1; not S2
    3=Never married-living with parents S2(yes/no S1)
    4=Never to defacto
    5=Never to married
    6=Married 1996 & 2000
    7=Married to Separated/Widowed/Divorced
    8=Defacto 1996 & 2000
    9=Defacto to married
    10=Defacto to never married
    11=all other changes including discrepant ones
*****/ ;
    if yt12marst = 99 then yt12marstm = 99 ;
else if yt12marst = 1 then do ;
    if yt12liveparent = 1 then yt12marstm = 1 ;
    else if yt12liveparent = 2 then yt12marstm = 2 ;
    else if yt12liveparent in (3,4) then yt12marstm = 3 ;
    else if yt12liveparent = 9 then yt12marstm = 99 ;
    end ;
else yt12marstm = yt12marst + 2 ;

```

## Transition to Parenthood

<b>Age Cohorts</b>	Younger
<b>Surveys</b>	Surveys 1 to 2
<b>Derived Variable</b>	T12Parent
<b>Definition</b>	Transition to parenthood between surveys 1 & 2
<b>Source Items</b>	Survey 1: Question 22d (REPH-023)
<b>(Index Numbers)</b>	Survey 2: Question 35a & b (REPH-059 & REPH-060)
<b>Statistical Form</b>	Categorical variable
<b>Prepared by</b>	Anne Russell and Sandra Bell
<b>Endorsed</b>	13 March 2002

### Source Items – Survey 1

22      **How many times have you:** Given birth to a child

Code	Category
0	Never
1	Once
2	Twice
3	Three times
4	Four or more times
5	Don't want to answer

### Source Items – Survey 2

35      **How many times have you had each of the following:** (*Mark all that apply*)

- a    Live birth (more than 36 weeks)
- b    Live premature birth (36 weeks or less)

Code	Category
1	One
2	Two
3	Three
4	Four
5	Five or more

### *Recodes*

- o Responses have been edited so that if any of the 5 parts of the question 35 is marked, then all unmarked items are coded to 0.
- o If no parts of the question are marked, then all parts are coded to missing.

### Derived Variable

Categories for transition to parenthood were developed for women from the Younger cohort completing survey 1 and either the full or the short version of survey 2. Categories were based on a cross-tabulation of parental status at both surveys (Table 1) and are shown in Table 2

**Table 1 Cross-tabulation of parental status at surveys 1 and 2**

Survey 1	Survey 2		Total
	Is a parent (i.e. had a live birth)	Not a parent (i.e. no live births)	
Is a parent (i.e. has given birth)	696	34	730
Not a parent (i.e. has not given birth)	1 077	7 714	8 791
Does not want to answer questions about birth	6	20	26
Missing	37	99	136
<b>Total</b>	<b>1 816</b>	<b>7 867</b>	<b>9 683</b>

**Table 2 Number and percent in categories for transition to parenthood  
(n = 9 683)**

Code	Transition to Parenthood	Number	Percent
1	Parent before Survey 1	730	7.6
2	Not parent at Survey 1; parent at Survey 2	1 077	11.2
3	Not a parent at Survey 2	7 833	81.3
	<b>Total classified</b>	<b>9 640</b>	
9	<i>Missing</i>	43	0.4

All combinations of values for parental status at each survey that were assigned to each transition category are shown in Table 3.

**Table 3 Transition in parental status categories, including all combinations of parental status at surveys 1 and 2**

Transition	Survey 1	Survey 2	Number
Parent before Survey 1	Is a parent	Not a parent	34
		Is a parent	696
Not parent at Survey 1; parent at Survey 2	Not a parent	Is a parent	1 077
Not a parent at Survey 2	Not a parent	Not a parent	7 714
	Missing	Not a parent	99
	Does not want to answer questions	Not a parent	20
Missing	Missing	Is a parent	37
	Does not want to answer questions	Is a parent	6

The SAS code defining transition to parenthood between surveys 1 and 2 is:

```

/* Parenthood status (given birth) Phase 1: y1parent
   1=parent (i.e. given birth)
   2=not parent
   3=DWA */
y1parent = .;
   if y1q22d=0 then y1parent = 2;
else if y1q22d in (1,2,3,4) then y1parent = 1;
else if y1q22d=5 then y1parent = 3;
/* Parenthood status (had a live birth) Phase 2: y2parent
   1=parent
   0=not parent
   .=only phase 1 */
   if y2q35a in (1,2,3,4,5) or y2q35b in (1,2,3,4,5) then y2parent = 1
;
else if y2q35a = 0 and y2q35b = 0 then y2parent = 0 ;
else y2parent = 0 ;

/*****
Change in parenthood (having a live birth) from Survey 1 to Survey 2
   1 = 'Parent before S1'
   2 = 'Not parent at S1; parent at S2'
   3 = 'Not a parent at S2'
*****/ ;
   if y1parent=1 then yt12Parent = 1;
else if y1parent=2 and y2parent=1 then yt12parent = 2;
else if y2parent = 0 then yt12parent = 3 ;
else yt12parent = . ;

```



## Transition in Qualifications

<b>Age Cohorts</b>	Younger
<b>Surveys</b>	Surveys 1 to 2
<b>Derived Variable</b>	T12QUAL
<b>Definition</b>	Transition in formal qualifications between surveys 1 & 2
<b>Source Items (Index Numbers)</b>	Y1q78 and y2q94 (DEMO-021)
<b>Statistical Form</b>	Categorical variable
<b>Prepared by:</b>	Anne Russell
<b>Endorsed:</b>	13 March 2002

### Source Items – Surveys 1 & 2

Highest formal qualifications were ascertained with the same question in surveys 1 and 2; responses were collapsed as shown.

What is the HIGHEST qualification you have completed?

<b>Code</b>	<b>Category</b>
1	University education
2	Trade/apprenticeship/certificate/diploma
3	Year 12 or equivalent
4	No formal qualifications or Year 10 or equivalent

### Derived Variable

Transition in formal qualifications was developed for women from the Younger cohort completing Survey 1 and either the full or the short version of Survey 2. Categories for transition were based on a cross-tabulation of formal qualifications at both surveys (Table 1).

#### *Qualifications missing at Survey 2*

In order to minimize missing values in the transition variable, younger women for whom data on qualifications was missing at Survey 2 were assumed to have no change in qualifications between the two surveys.

#### *Apparently reduced qualifications at Survey 2*

Taking the coded values (1 to 4) for qualifications as ordinal, 290 women reported a lower level of qualifications at Survey 2 than at Survey 1. These women were categorized as having no change in qualifications and assigned the category reported at Survey 2.

**Table 1 Cross-tabulation of formal qualifications at surveys 1 and 2**

Survey 1	Survey 2					Total
	University	Certificate/ Diploma/ Trade	Year 12	Year 10 or less	Missing	
University	1 158	4	10	1	14	1 187
Certificate/ Diploma/Trade	150	1 218	155	75	108	1 706
Year 12	2 415	817	1 961	45	141	5 379
Year 10 or less	35	212	112	918	87	1 364
Missing	8	15	12	12	0	47
<b>Total</b>	<b>3 766</b>	<b>2 266</b>	<b>2 250</b>	<b>1 051</b>	<b>350</b>	<b>9 683</b>

Categories for transition are shown in Table 2. All combinations of values for qualifications at each survey that were assigned to each transition category are shown in Table 3.

**Table 2 Number and percent in categories for transition in formal qualifications (n = 9 683)**

Code	Transition in formal qualifications	Number	Percent
1	University - no change	1 172	12.2
2	Certificate/diploma/trade - no change	1 330	13.8
3	Year 12 - no change	2 267	23.5
4	Year 10 or less - no change	1 126	11.7
5	Any other to University	2 600	27.0
6	Year 12 to Trade/apprenticeship/certificate/ diploma	817	8.5
7	Year 10 or less to Year 12/Certificate/diploma/trade	324	3.4
	<b>Total classified</b>	<b>9 636</b>	<b>100.0</b>
9	<i>Missing</i>	47	0.5

**Table 3 Transition in qualifications categories, including all combinations of qualifications at surveys 1 and 2**

Transition	Survey 1	Survey 2	Number
University - no change	University	University	1 158
		Missing	14
Trade/apprenticeship/ certificate/diploma - no change	Trade <sup>1</sup>	Trade	1 218
		Missing	108
		University	4
Year 12 - no change	Year 12	Year 12	1 961
		Missing	141
		University	10
		Trade	155
Year 10 or less - no change	Year 10 or less	Year 10 or less	918
		Missing	87
		University	1
		Trade	75
		Year 12 or equivalent	45
Any other to University	Trade	University	150
		Year 12 or equivalent	2 415
		No formal or Year 10 or equivalent	35
Year 12 to Trade	Year 12	Trade	817
Year 10 or less to Year 12 or Trade	No formal or Year 10 or equivalent	Trade	212
		Year 12 or equivalent	112
Missing	Missing	University education	8
		Trade	15
		Year 12 or equivalent	12
		No formal or Year 10 or equivalent	12

<sup>1</sup> Trade: Trade/apprenticeship/ certificate/diploma

<sup>2</sup> No formal: No formal qualifications



The SAS code defining transition in qualifications between surveys 1 and 2 is:

```

/*****
Transition in Qualifications
NB: For transition status only
- if qualifications in 2000 is missing, assume no change in
  qualifications and code as in 1996.
- if qualifications in 2000 "less than" in 1996, assume no change in qualifications
  and code as in 2000.
    1 = 'University - no change'
    2 = 'Certificate/Diploma/Trade - no change'
    3 = 'Year 12 - no change'
    4 = 'Year 10 or less - no change'
    5 = 'Any other to University'
    6 = 'Year 12 to Certificate/Diploma/Trade'
    7 = 'Year 10 or less to Year 12/Certificate/Diploma/Trade'
    9 = 'Missing'
*****/;

if y2qual = 9 and y1qual in (1,2,3,4) then y2qualr = y1qual ;
else y2qualr = y2qual ;

    if y1qual = 9 or y2qualr = 9 then yt12qual = 9 ;
else if y1qual in (1,2,3,4) and y1qual = y2qualr then yt12qual = y1qual ;
else if y1qual in (2,3,4) and y2qualr = 1 then yt12qual = 5 ;
else if y1qual = 3 and y2qualr = 2 then yt12qual = 6 ;
else if y1qual = 4 and y2qualr in (2,3) then yt12qual = 7 ;
else if y1qual in (1,2,3,4) and y1qual < y2qualr then
yt12qual = y2qualr ;

```



## Transition in Work/Study Status

<b>Age Cohorts</b>	Younger
<b>Surveys</b>	Surveys 1 & 2
<b>Derived Variable</b>	T12WrkStdy
<b>Definition</b>	Transition in work/study status between surveys 1 & 2
<b>Source Items (Index Numbers)</b>	Derived variables y1WrkStudy & y2Wrkstdy (EMPL-043)
<b>Statistical Form</b>	Categorical variable
<b>Prepared by</b>	Sandra Bell and Anne Russell
<b>Endorsed</b>	13 March 2002

### Source Items – Surveys 1 & 2

Work/study status was defined similarly at surveys 1 and 2 and was collapsed to the same categories for the derivation of a transition.

Code	Category
1	Study only
2	Work and study
3	Work only
4	No work or study

### Derived Variable

Transition in work/study status was determined for women from the younger cohort completing survey 1 and either the full or the short version of survey 2. Categories for transition were based on a cross-tabulation of work/study status at both surveys (Table 1) and are shown in Table 2.

**Table 1 Cross-tabulation of work/study status at surveys 1 and 2**

Survey 1	Survey 2				Missing	Total
	Study only	Work & study	Work only	No work or study		
Study only	164	1 047	1 822	198	15	3 246
Work & study	34	431	757	65	1	1 288
Work only	88	678	2 607	436	17	3 826
No work or study	80	143	539	381	5	1 148
Missing	6	43	92	33	1	175
<b>Total</b>	<b>372</b>	<b>2 342</b>	<b>5 817</b>	<b>1 113</b>	<b>39</b>	<b>9 683</b>

**Table 2** Number and percent in categories for work/study status (n = 9 683)

Code	Transition in work/study status	Number	Percent
1	Continuing work only	2 607	27.5
2	Continuing study only	164	1.7
3	Stay at home	381	4.0
4	No longer works or studies	699	7.4
5	Study only to Work only	1 822	19.2
6	Work & study to Work only	757	8.0
7	No work or study to Work only	539	5.7
8	Study only to Work and study	1 047	11.1
9	Work with or without study to Study with or without work	1 231	13.0
10	No work or study to Study with or without work	223	2.4
	<b>Total classified</b>	<b>9 470</b>	<b>100.0</b>
99	<i>Missing</i>	213	2.2

The SAS code defining transition in work/study status between surveys 1 and 2 is:

```
if y2work=4 then do ;
    if y1work in (1,2,3) then yt12work = 4 ;
    else if y1work in (4,5,6) then yt12work = 3 ;
end ;

else if y2work = 3 then do ;
    if y1work = 1 then yt12work = 5 ;
    else if y1work = 2 then yt12work = 6 ;
    else if y1work = 3 then yt12work = 1 ;
    else if y1work in (4,5,6) then yt12work = 7 ;
end ;

else if y2work = 2 then do ;
    if y1work = 1 then yt12work = 8 ;
    else if y1work = 2 then yt12work = 9 ;
    else if y1work = 3 then yt12work = 9 ;
    else if y1work in (4,5,6) then yt12work = 10 ;
end ;

else if y2work = 1 then do ;
    if y1work = 1 then yt12work = 2 ;
    else if y1work in (2,3) then yt12work = 9 ;
    else if y1work in (4,5,6) then yt12work = 10 ;
end ;

else yt12work = 99 ;
```

# Gynaecology & Obstetrics

## Transition in Current Use of Hormone Replacement Therapy

<b>Age Cohorts</b>	Mid-age
<b>Surveys</b>	Surveys 1 to 3
<b>Derived Variable</b>	T123HRT
<b>Definition</b>	Transition in current use of Hormone Replacement Therapy
<b>Source Items (Index Numbers)</b>	Survey 1 & 2: Question 22 & Question 26b (REPH-003) Survey 3: Question q26b (REPH-076)
<b>Statistical form</b>	Categorical variable
<b>Prepared by</b>	Jessica Ford and Annette Dobson
<b>Endorsed</b>	24 March 2004

### Background

During mid 2002, the Women's Health Initiative (WHI) USA released reports of evidence indicating long term adverse effects of HRT (Hormone Replacement Therapy) in post-menopausal women<sup>1</sup>. Most of Survey 3 of the Mid-age cohort had been returned prior to the release of this report. So, it is unlikely that the pattern of HRT use reported in the third survey will be affected by this adverse publicity surrounding the release of the WHI results and subsequent changes to recommendations for use<sup>1</sup>. However, a change in the pattern of prescription and use is envisaged with the fourth survey.

### Source Items

Are you currently on hormone replacement therapy (HRT)?

Code	Response
1	Yes
2	No

Note that current use of HRT was ascertained only in the full versions of Surveys 2 and 3.

### Derived Variables

The definition of transition in HRT use was based on current use at each survey. Table 1 shows the percent of women using HRT at the time of each of the first 3 surveys. All of the 8 possible patterns for transition between surveys were reported (Table 2).

**Table 1** Frequency and percent of Mid-age women currently using HRT at Surveys 1, 2 and 3

	Survey 1 (n =14 099)		Survey 2 (n =11 648)		Survey 3 (n =11 196)	
	Number	Percent	Number	Percent	Number	Percent
Yes	2 658	18.9	2 687	23.4	3 681	32.9
No	11 406	81.1	8 796	76.6	7 515	67.1
<b>Total classified</b>	<b>14 064</b>		<b>11 483</b>		<b>11 196</b>	
<i>Missing</i>	35		165		0	

**Table 2** Frequency and percent of women in transition categories for current use of HRT for women with responses in all 3 surveys (n = 10 400)

Code	Transition			Number	Percent
	Used at Survey 1	Used at Survey 2	Used at Survey 3		
1	Yes	Yes	Yes	1 282	12.5
2	Yes	Yes	No	233	2.3
3	Yes	No	Yes	128	1.3
4	Yes	No	No	277	2.7
5	No	Yes	Yes	621	6.1
6	No	Yes	No	236	2.3
7	No	No	Yes	1 347	13.2
8	No	No	No	6 118	59.7
<i>Missing</i>				158	

The SAS code defining HRT transition across surveys 1, 2 and 3 is:

```

/*current ONLY HRT VARIABLES FOR TIME 1,2,3*/;
m1cHRT = m1q22;
m2cHRT = m2q26b;
if m3q26b=1 then m3cHRT = 1;
else if m3q26b=0 then m3cHRT = 2;
    if m1cHRT=1 and m2cHRT=1 and m3cHRT=1 then mt123HRT=1;
else if m1cHRT=1 and m2cHRT=1 and m3cHRT=2 then mt123HRT=2;
else if m1cHRT=1 and m2cHRT=2 and m3cHRT=1 then mt123HRT=3;
else if m1cHRT=1 and m2cHRT=2 and m3cHRT=2 then mt123HRT=4;
else if m1cHRT=2 and m2cHRT=1 and m3cHRT=1 then mt123HRT=5;
else if m1cHRT=2 and m2cHRT=1 and m3cHRT=2 then mt123HRT=6;
else if m1cHRT=2 and m2cHRT=2 and m3cHRT=1 then mt123HRT=7;
else if m1cHRT=2 and m2cHRT=2 and m3cHRT=2 then mt123HRT=8;

```

## Reference

1. Women's Health Initiative, Bethesda, MD. Available at: <http://www.nhlbi.nih.gov/whi/> [Accessed 15 February 2004]



## Transition in Use of Hormone Replacement Therapy (using pre-study history)

<b>Age Cohorts</b>	Mid-age
<b>Surveys</b>	Surveys 1 to 3
<b>Derived Variable</b>	T123HRTp
<b>Definition</b>	Transition in use of Hormone Replacement Therapy, incorporating past use
<b>Source Items</b>	Derived variable: T123HRT (REPH-105)
<b>(Index Numbers)</b>	Survey 1: y1q23 (REPH-004)
<b>Statistical form</b>	Categorical variable
<b>Prepared by</b>	Jessica Ford and Annette Dobson
<b>Endorsed</b>	24 March 2004

### Derived Variable

A definition of transition in HRT use were developed using information from Survey 1 on past use (Table 1) as well transitions in HRT between surveys (Table 2). As such a high percentage of women (73%) had not used HRT before the first survey, past use was categorised as No (Never used) and Yes (<1, 1-4, 5-10, >10 years) for the purpose of defining transition categories (Table 3).

**Table 1 Duration of HRT use before Survey 1**

Code	HRT before Survey 1	Number	Percent
1	Never used	10 233	72.9
2	Less than 1 Year	1 467	10.5
3	1-4 Years	1 643	11.7
4	5-10 Years	518	3.7
5	More than 10 Years	181	1.3
	<b>Total</b>	<b>14 062</b>	
	<i>Missing</i>	37	



**Table 2** Frequency and percent of women in transition categories for current use of HRT for women with responses in all 3 surveys (n = 10 400)

Code	Transition			Number	Percent
	Used at Survey 1	Used at Survey 2 <sup>a</sup>	Used at Survey 3 <sup>a</sup>		
1	Yes	Yes	Yes	1 282	12.5
2	Yes	Yes	No	233	2.3
3	Yes	No	Yes	128	1.3
4	Yes	No	No	277	2.7
5	No	Yes	Yes	621	6.1
6	No	Yes	No	236	2.3
7	No	No	Yes	1 347	13.2
8	No	No	No	6 118	59.7
<i>Missing</i>				158	

<sup>a</sup> current use of HRT was ascertained only in the full versions of Surveys 2 and 3

**Table 3** Frequency and percent of women in each transition category for use of HRT among all women responding to Survey 1, 2 and 3 (n = 10 400)

Code	Transition				Number	Percent
	Used before Survey 1	Used at Survey 1	Used at Survey 2	Used at Survey 3		
1	Yes	Yes	Yes	Yes	1 278	12.5
2	Yes	Yes	Yes	No	232	2.3
3	Yes	Yes	No	Yes	127	1.2
4	Yes	Yes	No	No	272	2.7
5	Yes	No	Yes	Yes	118	1.2
6	Yes	No	Yes	No	45	0.4
7	Yes	No	No	Yes	137	1.3
8	Yes	No	No	No	518	5.1
9	No	Yes	Yes	Yes	4	0.04
10	No	Yes	Yes	No	1	0.01
11	No	Yes	No	Yes	0	0
12	No	Yes	No	No	5	0.05
13	No	No	Yes	Yes	502	4.9
14	No	No	Yes	No	191	1.9
15	No	No	No	Yes	1 206	11.8
16	No	No	No	No	5 587	54.7
<b>Total</b>					<b>10 223</b>	
<i>Missing</i>					177	

Many of the transition categories are not commonly reported; 5 of 16 categories are reported by less than 100 women (approximately 1% of the sample). So it will not be feasible to use this variable in statistical analyses without first deciding on the most appropriate way to collapse categories. This variable will not be included in routinely distributed datasets, although the SAS code to create it is provided below.

```
if m1q23=1 then mHRTpriortrns= mt123HRT + 8;  
else if m1q23 in (2,3,4,5) then mHRTpriortrns= mt123HRT ;
```



## Menopause Transition

<b>Age Cohorts</b>	Mid-age
<b>Surveys</b>	Surveys 1 to 3
<b>Derived Variable</b>	T123MENOP
<b>Definition</b>	Menopausal transition between surveys 1, 2 & 3
<b>Source Items (Index Numbers)</b>	Derived variables at surveys 1,2 & 3: Menpse (REPH-109)
<b>Statistical form</b>	Categorical variable
<b>Prepared by</b>	Jessica Ford and Annette Dobson
<b>Endorsed</b>	24 March 2004

### Source Items

Menopausal status was uniformly defined at surveys 1, 2 and 3 as:

Code	Response
1	Pre-menopausal
2	Peri-menopausal
3	Post-menopausal
4	Surgical menopause

### Derived Variable

Menopause transition was based on changes in these categories between surveys and was definable for 11 500 mid-aged women who were classified for menopausal status at all 3 surveys (Table 1).

**Table 1** Frequency and percent for menopause categories among women classified for menopause at all three surveys (n = 11 500)

	Survey 1		Survey 2		Survey 3	
	Number	Percent	Number	Percent	Number	Percent
Pre-menopause	4488	39.0	3194	27.8	1441	12.5
Peri-menopause	2943	25.6	3176	27.6	2627	22.8
Post-menopause	772	6.7	1452	12.6	3405	29.6
Surgery	3297	28.7	3678	32.0	4027	35.0

Transition categories are based on the principles established in defining menopausal status at each survey. Firstly, that pre-menopause always precedes peri-menopause and that peri-menopause always precedes post-menopause. Also, as surgery is irreversible surgical menopause at one survey must always be followed by surgical menopause at subsequent surveys.

There are 20 realistic transition categories and all were seen in the data. Some unrealistic transitions were also observed and were re-coded (Table 2). The transition pattern for 1 woman could not be re-coded.

**Table 2 Re-coding of unrealistic transitions**

Observed Transition			Re-coded Transition			Number
Survey 1	Survey 2	Survey 3	Survey 1	Survey 2	Survey 3	
Pre	Peri	Pre	Pre	Pre	Pre	199
Pre	Post	Pre	Pre	Pre	Pre	4
Pre	Post	Peri	Pre	Peri	Peri	20
Peri	Pre	Pre	Pre	Pre	Pre	131
Peri	Pre	Peri	Peri	Peri	Peri	213
Peri	Pre	Post	Peri	Peri	Post	126
Peri	Pre	Surgery	Peri	Peri	Surgery	45
Peri	Post	Pre	Peri	Peri	Peri	2
Peri	Post	Peri	Peri	Peri	Peri	23
Post	Pre	Pre	Pre	Pre	Pre	19
Post	Pre	Peri	Peri	Peri	Peri	23
Post	Pre	Post	Post	Post	Post	11
Post	Pre	Surgery	Missing	Missing	Missing	1
Post	Peri	Pre	Peri	Peri	Peri	5
Post	Peri	Peri	Peri	Peri	Peri	16
Post	Peri	Post	Post	Post	Post	42
Post	Peri	Surgery	Peri	Peri	Surgery	3
Post	Post	Pre	Post	Post	Post	5
Post	Post	Peri	Post	Post	Post	27

The frequency and percent of women in each of the 20 transition categories are shown in Table 3.



**Table 3 Frequency and percent assigned to each menopausal transition category (n = 11 499)**

Code	Menopausal Transition			Number	Percent
	Survey 1	Survey 2	Survey 3		
1	Pre	Pre	Pre	1 315	11.4
2	Pre	Pre	Peri	1 187	10.3
3	Pre	Pre	Post	360	3.1
4	Pre	Pre	Surgery	116	1.0
5	Pre	Peri	Peri	651	5.7
6	Pre	Peri	Post	637	5.5
7	Pre	Peri	Surgery	80	0.7
8	Pre	Post	Post	114	1.0
9	Pre	Post	Surgery	2	0.02
10	Pre	Surgery	Surgery	176	1.5
11	Peri	Peri	Peri	883	7.7
12	Peri	Peri	Post	1 015	8.8
13	Peri	Peri	Surgery	121	1.1
14	Peri	Post	Post	653	5.7
15	Peri	Post	Surgery	16	0.1
46	Peri	Surgery	Surgery	171	1.5
17	Post	Post	Post	658	5.7
18	Post	Post	Surgery	13	0.1
19	Post	Surgery	Surgery	34	0.3
20	Surgery	Surgery	Surgery	3 297	28.7

Many of these categories are not commonly reported; 5 of 20 categories are reported by less than 110 women (approximately 1% of the sample). So it will not be feasible include this variable in statistical analyses without further consideration of how it is to be incorporated. Each researcher will need to decide on the approach required for their research question. It may be appropriate to collapse categories. Alternatively, the variable may be used to select specific groups of interest for comparison; for example, premenopausal women (category 1) with compared with women recently reaching natural menopause (category 3).

**Note:** As subsequent survey data become available, options for re-coding and for appropriate transition categories will need to be re-assessed.



The SAS code defining menopausal transition between surveys 1, 2 and 3 is:

```
/*transitions for menopause categories*/

/*20 logical categories for menopause change between S1/S2/S3*/
if m1menp4cat=1 then do;
  if m2menp4cat=1 then do;
    if m3menp4cat=1 then mt123menop=1;
    else if m3menp4cat=2 then mt123menop=2;
    else if m3menp4cat=3 then mt123menop=3;
    else if m3menp4cat=4 then mt123menop=4;
  end;
  else if m2menp4cat=2 then do;
    if m3menp4cat=1 then mt123menop=1;
    else if m3menp4cat=2 then mt123menop=5;
    else if m3menp4cat=3 then mt123menop=6;
    else if m3menp4cat=4 then mt123menop=7;
  end;
  else if m2menp4cat=3 then do;
    if m3menp4cat=1 then mt123menop=1;
    else if m3menp4cat=2 then mt123menop=5;
    else if m3menp4cat=3 then mt123menop=8;
    else if m3menp4cat=4 then mt123menop=9;
  end;
  else if m2menp4cat=4 then do;
    if m3menp4cat=4 then mt123menop=10;
  end;
end;
else if m1menp4cat=2 then do;
  if m2menp4cat=1 then do;
    if m3menp4cat=1 then mt123menop=1;
    else if m3menp4cat=2 then mt123menop=11;
    else if m3menp4cat=3 then mt123menop=12;
    else if m3menp4cat=4 then mt123menop=13;
  end;
  else if m2menp4cat=2 then do;
    if m3menp4cat=1 then mt123menop=11;
    else if m3menp4cat=2 then mt123menop=11;
    else if m3menp4cat=3 then mt123menop=12;
    else if m3menp4cat=4 then mt123menop=13;
  end;
  else if m2menp4cat=3 then do;
    if m3menp4cat=1 then mt123menop=11;
    else if m3menp4cat=2 then mt123menop=11;
    else if m3menp4cat=3 then mt123menop=14;
    else if m3menp4cat=4 then mt123menop=15;
  end;
  else if m2menp4cat=4 then do;
    if m3menp4cat=4 then mt123menop=16;
  end;
end;
end;

else if m1menp4cat=3 then do;
```

```

if m2menp4cat=1 then do;
    if m3menp4cat=1 then mt123menop=1;
    else if m3menp4cat=2 then mt123menop=11;
    else if m3menp4cat=3 then mt123menop=17;
    else if m3menp4cat=4 then mt123menop=.;
end;
else if m2menp4cat=2 then do;
    if m3menp4cat=1 then mt123menop=11;
    else if m3menp4cat=2 then mt123menop=11;
    else if m3menp4cat=3 then mt123menop=17;
    else if m3menp4cat=4 then mt123menop=13;
end;
else if m2menp4cat=3 then do;
    if m3menp4cat=1 then mt123menop=17;
    else if m3menp4cat=2 then mt123menop=17;
    else if m3menp4cat=3 then mt123menop=17;
    else if m3menp4cat=4 then mt123menop=18;
end;
else if m2menp4cat=4 then do;
    if m3menp4cat=4 then mt123menop=19;
end;
end;
else if m1menp4cat=4 and m2menp4cat=4 and m3menp4cat=4 then
mt123menop=20;

```





### First Pregnancy (relative to surveys 1 and 2)

<b>Age Cohorts</b>	Younger
<b>Surveys</b>	Surveys 1 to 2
<b>Derived Variable</b>	T12Preg
<b>Definition</b>	The time of a woman's first pregnancy, relative to the first two study surveys
<b>Source Items (Index Numbers)</b>	Survey 1 & 2: Questions 21 and 34 (REPH-009) Survey 1: Questions 22a-d (REPH-020 to REPH-023) Survey 2: Question 27c (REPH-042) Questions 35a-e (REPH-059 to REPH-063)
<b>Statistical Form</b>	Categorical variable
<b>Prepared by</b>	Anne Russell
<b>Endorsed</b>	24 April 2002

#### Source Items -Survey 1

##### 21 Are you currently pregnant?

Code	Response
1	Yes
2	No
3	Don't know

##### 22 How many times have you: (Circle one number on each line)

- a Been pregnant
- b Had a miscarriage
- c Had a termination
- d Given birth to a child

Code	Response
0	Never
1	Once
2	Twice
3	Three times
4	Four or more
5	Don't want to answer

## Source Items -Survey 2

**27c What age were you when you had: Your first baby**

*(Write age or mark one on each line)*

**Code:** Age reported in years or Zero if Not Applicable

**34 Are you currently pregnant?**

Code	Response
------	----------

- |   |            |
|---|------------|
| 1 | Yes        |
| 2 | No         |
| 3 | Don't know |

**35 How many times have you had each of the following:** *(Mark all that apply)*

- |   |                                         |
|---|-----------------------------------------|
| a | Live birth (more than 36 weeks)         |
| b | Live premature birth (36 weeks or less) |
| c | Stillbirth                              |
| d | Miscarriage                             |
| e | Termination (abortion)                  |

Code	Response
------	----------

- |   |           |
|---|-----------|
| 1 | One       |
| 2 | Two       |
| 3 | Three     |
| 4 | Four      |
| 5 | 5 or more |

Data have been edited so that if any part of the question is marked, then all unmarked items are coded to 0.

If no parts of the question are marked, then all parts are coded to missing.

**Note:** A number of other items from surveys 1 and 2 that contain information about pregnancy were evaluated for use in deriving YT12Preg and were found to be unreliable. The items are:

*Survey 1*

**29 In the last 12 months have you experienced any of the following events?**

- |   |                           |
|---|---------------------------|
| d | Pregnancy                 |
| e | Birth of your first child |

**67 Who lives with you?**

- c. Own children

Survey 2

70 **Have you experienced any of the following events in the last 12 months or more than 12 months ago? (Mark *all that apply*)**

- d Birth of your first child
- e Birth of your second or later child
- p Death of a child
- q Stillbirth of a child

84 **Who lives with you?**

- c. Own children

**Derived Variable**

YT12Preg was developed for all women completing Survey 2 and identifies when a woman had her first pregnancy (including live births, stillbirths, miscarriages and terminations) relative to the first two study surveys. Criteria for allocation to categories are detailed below.

Code	Category
1	First pregnancy 1996 or earlier <ul style="list-style-type: none"><li>o <i>any pregnancy is recorded on Survey 1 OR</i></li><li>o <i>currently pregnant at Survey 1.</i></li></ul>
2	First pregnancy between 1996 & 2000 <i>Not classified as First pregnancy 1996 or earlier AND</i> <ul style="list-style-type: none"><li>o <i>any pregnancy is recorded at Survey 2; OR</i></li><li>o <i>currently pregnant at Survey 2; OR</i></li><li>o <i>the age when a woman had her first baby is the same as or older than her age at Survey 1 (reported Survey 2).</i></li></ul>
3	Never pregnant to date (in 2000) <i>Not classified as First pregnancy 1996 or earlier or First pregnancy between 1996 &amp; 2000 AND</i> <ul style="list-style-type: none"><li>o <i>No pregnancies are reported at Survey 2 and the age when the woman had had her first baby (Survey 2) is recorded as not applicable</i></li></ul>
8	Known to be pregnant by 2000 (survey2) but status in 1996 unknown <i>Not classified as First pregnancy 1996 or earlier or First pregnancy between 1996 &amp; 2000 or Never pregnant to date (in 2000) AND</i> <ul style="list-style-type: none"><li>o <i>all pregnancy data at Survey 1 are missing or 'Don't want to answer' or otherwise insufficient to categorise pregnancy history at Survey 1; AND</i></li><li>o <i>any pregnancy is recorded at Survey 2 or currently pregnant at Survey 2.</i></li></ul>
9	Missing <ul style="list-style-type: none"><li>o <i>Not otherwise classified.</i></li></ul>

Categories for YT12Preg and the number and percent of women in each category are shown in Table 1.

**Table 1**      **Number and percent in each category of YT12Preg**

Category	Number	Percent
First pregnancy 1996 or earlier	1 570	16.2
First pregnancy between 1996 & 2000	1 534	15.8
Never pregnant to date (in 2000)	6 507	67.2
Known to be pregnant by 2000 (survey2) but status in 1996 unknown	41	0.4
Missing	31	0.3

The SAS code defining first pregnancy is:

```

/***** pregnancies at Y1 *****/;
if nmiss(of q22{*) = 4 or (y1q22a=5 and y1q22b=5 and y1q22c=5 and y1q22d=5)
  then y1preg = . ;
else if (y1q22a in (1,2,3,4) or y1q22b in (1,2,3,4) or
  y1q22c in (1,2,3,4) or y1q22d in (1,2,3,4)) then y1preg = 1 ;
else if (y1q22a = 0) then y1preg = 0 ; else y1preg = . ;
/***** pregnancies at Y2 *****/;
if nmiss (of q35{*) = 5 then y2preg = . ;
else if (y2q35a>0 or y2q35b>0 or y2q35c>0 or y2q35d>0 or y2q35e>0)
  then y2preg = 1 ; else y2preg = . ;
/*****
Define time of first pregnancy in relation to surveys 1 & 2
*****/;
* At least 1 Pregnancy (incl. births, miscarriages and termination) at P1;
  if y1preg = 1 then yt12preg = 1 ;
* Never pregnant at Phase 1;
else if y1preg = 0 then do ;
  if y1q21 = 1 then yt12preg = 1 ;
  else if y2preg = 1 then yt12preg = 2 ;
  else if y2q34 = 1 then yt12preg = 2 ;
  else if y2q27c - y1age >= 0 then yt12preg = 2 ;
  else if y2preg = . and y2q27c in (0,.) then yt12preg = 3 ;
  else yt12preg = 9 ;
  end ;
* All Missing or Do not want to answer at P1;
else if nmiss (of q22{*) = 4 or (y1q22a = 5 and y1q22b = 5 and
  y1q22c = 5 and y1q22d = 5) then do ;
  if y1q21 = 1 then yt12preg = 1 ;
  else if y2preg = 1 or y2q34 = 1 then yt12preg = 8 ;
  else yt12preg = 9 ;      end ;
*Insufficient data at P1 ;
else do ;
  if y1q21 = 1 then yt12preg = 1 ;
  else if y2preg = 1 or y2q34 = 1 then yt12preg = 8 ;
  else yt12preg = 9 ;      end ;

```

# Lifestyle

## Transition in Alcohol Consumption

<b>Age Cohorts</b>	Younger, Mid-age and Older
<b>Surveys</b>	Surveys 1 & 2
<b>Derived Variables</b>	T12AlcNMHRC
<b>Definition</b>	Transition in alcohol consumption between surveys 1 & 2
<b>Source Items (Index Number)</b>	Derived variable at Surveys 1 & 2: AlcNMHRC (ALCS-012)
<b>Statistical Form</b>	Categorical variable
<b>Prepared by</b>	Anne Russell
<b>Endorsed</b>	28 May 2003

### Source Items

Alcohol consumption was defined in the same way at surveys 1 and 2 and was based on categories of estimated risk<sup>1</sup>.

<b>Code</b>	<b>Risk category</b>
1	Non-drinker
2	Rarely drinks
3	Low risk drinker <i>Up to 14 drinks per week; up to 2 drinks per day</i>
4	Risky drinker <i>15 to 28 drinks per week; 3 to 4 drinks per day</i>
5	High risk drinker <i>More than 28 drinks per week; 5 or more drinks per day</i>

For the purpose of creating a transition variable, the categories of 'risky' and 'high risk' drinking were aggregated.

### Derived Variable

Transition in alcohol consumption was defined for women from the Younger cohort who completed Survey 1 and either the full or the short version of Survey 2 and for women from the Mid-age and Older cohorts who completed Survey 1 and the full version of Survey 2. Categories for transition were based on a cross-tabulation of alcohol consumption at both surveys (Table 1) and are shown in Table 2.

Table 1: Cross-tabulation of alcohol consumption at surveys 1 and 2

Survey 1	Survey 2					Missing	Total
	Non-drinker	Rarely drinks	Low risk drinker	Risky drinker	High risk drinker		
<i>Younger Cohort</i>							
Non-drinker	432	249	108	5	0	3	797
Rarely drinks	309	1 507	1 406	36	4	19	3 281
Low risk drinker	97	919	3 727	203	12	33	4 991
Risky drinker	13	83	276	72	6	7	457
High risk drinker	5	8	27	17	3	1	61
Missing	15	22	54	5	0	2	98
<b>Total</b>	<b>871</b>	<b>2 788</b>	<b>5 598</b>	<b>338</b>	<b>25</b>	<b>65</b>	<b>9 685</b>
<i>Mid-age Cohort</i>							
Non-drinker	1 233	400	42	1	1	19	1 696
Rarely drinks	231	2 389	933	3	1	29	3 586
Low risk drinker	29	491	4 885	215	15	41	5 676
Risky drinker	3	4	158	305	33	1	504
High risk drinker	2	1	16	25	45	2	91
Missing	44	23	18	1	0	9	95
<b>Total</b>	<b>1 542</b>	<b>3 308</b>	<b>6 052</b>	<b>550</b>	<b>95</b>	<b>101</b>	<b>11 648</b>
<i>Older Cohort</i>							
Non-drinker	2 529	361	70	1	0	77	3 038
Rarely drinks	402	1 554	598	6	0	112	2 672
Low risk drinker	62	504	2 406	124	6	65	3 167
Risky drinker	4	7	80	178	8	2	279
High risk drinker	1	0	2	17	10	1	31
Missing	200	69	34	2	0	9	314
<b>Total</b>	<b>3 198</b>	<b>2 495</b>	<b>3 190</b>	<b>328</b>	<b>24</b>	<b>266</b>	<b>9501</b>

**Table 2: Transition in Alcohol Consumption between surveys 1 and 2**

Code	Transition in Alcohol Consumption	Younger		Mid-age		Older	
		Number	Percent	Number	Percent	Number	Percent
	<i>No Change</i>						
1	Low risk drinker	3 727	39.1	4 885	42.6	2 406	26.9
2	Non-drinker	432	4.5	1 233	10.8	2 529	28.3
3	Rarely drinks	1 507	15.8	2 389	20.8	1 554	17.4
4	Risky or high risk drinker	98	1.0	408	3.6	213	2.4
	<i>Decreased Consumption</i>						
5	Rarely drinks to Non-drinker	309	3.2	231	2.0	402	4.5
6	Low risk drinker to Non-drinker/Rarely drinks	1 016	10.7	520	4.5	566	6.3
7	Risky or high risk drinker to Non-drinker/rarely drinks	109	1.1	10	0.1	12	0.1
8	Risky or high risk drinker to Low risk drinker	303	3.2	174	1.5	82	0.9
	<i>Increased Consumption</i>						
9	Non-drinker to Rarely drinks/Low risk drinker	357	3.8	442	3.9	431	4.8
10	Rarely drinks to Low risk drinker	1 406	14.8	933	8.1	598	6.7
11	Non-drinker/Rarely drinks/ Low risk drinker to Risky or high risk drinker	260	2.7	236	2.1	137	1.5
	<b>Total classified</b>	<b>9 524</b>	<b>99.9</b>	<b>11 461</b>	<b>99.9</b>	<b>8 930</b>	<b>99.8</b>
99	<i>Missing</i>	161	1.7	187	1.6	571	6.0

The SAS code defining transition in alcohol consumption between surveys 1 and 2 is:

```
/* Re-code NHMRC definition to ordinal categories */;
array original{2} y1alcnhmrc y2alcnhmrc ;
array new{2} y1nhmrc y2nhmrc ;
do i = 1 to 2 ;
    if original{i} = 1 then new{i} = 3 ;
    else if original{i} in (2,3) then new{i} = original{i}- 1 ;
    else if original{i} in (4,5) then new{i} = 4 ;
end ;
/*****
Transition in Alcohol risk status - S1 to S2
*****/ ;
    if y1nhmrc=. or y2nhmrc=. then yt12alcnhmrc = 99 ;
else if y1nhmrc = y2nhmrc then do ;
    if y1nhmrc = 3 then yt12alcnhmrc = 1 ;
    else if y1nhmrc in (1,2) then yt12alcnhmrc = y1nhmrc + 1 ;
    else if y1nhmrc = 4 then yt12alcnhmrc = 4 ;
    end ;
else if y1nhmrc > y2nhmrc then do ;
    if y1nhmrc = 2 then yt12alcnhmrc = 5 ;
    else if y1nhmrc = 3 then yt12alcnhmrc = 6 ;
    else if y1nhmrc = 4 then do ;
        if y2nhmrc in (1,2) then yt12alcnhmrc = 7 ;
        else if y2nhmrc = 3 then yt12alcnhmrc = 8 ;
        end ;
    end ;
else if y1nhmrc < y2nhmrc then do ;
    if y2nhmrc in (4,5) then yt12alcnhmrc = 11 ;
    else if y1nhmrc = 1 then yt12alcnhmrc = 9 ;
    else if y1nhmrc = 2 then yt12alcnhmrc = 10 ;
    end ;
end ;
```

### Reference

1. National Health and Medical Research Council. *Australian Alcohol Guidelines: Health Risks and Benefits. Endorsed October 2002.* National Health and Medical Research Council. 2002





## Transition in Frequency of Drinking at Short-term Risk

<b>Age Cohorts</b>	Younger
<b>Surveys</b>	Surveys 1 & 2
<b>Derived Variable</b>	T12AlcSTR
<b>Definition</b>	Transition in frequency of short-term risk drinking between Surveys 1 & 2
<b>Source Items (Index Number)</b>	Surveys 1 & 2: AlcSTR (ALCS-003)
<b>Statistical Form</b>	Categorical variable
<b>Index Number</b>	ALCS-015
<b>Prepared by</b>	Anne Russell
<b>Endorsed</b>	13 March 2002

### Source Items – Surveys 1 and 2

Short-term risk drinking has been defined as having 5 or more drinks on one occasion. The frequency of drinking at short-term risk was assessed with the same question at surveys 1 and 2 of the Younger cohort ('How often do you have five or more standard drinks of alcohol on one occasion?'). Responses were re-coded to be the same at both times.

<b>Code</b>	<b>Response</b>
0	Non-drinker
1	Drinks but never at short-term risk
2	Drinks at short-term risk less than once per month
3	Drinks at short-term risk about once per month
4	Drinks at short-term risk about once per week
5	Drinks at short-term risk more than once per week

The categories 'about once per week' and 'more than once per week' were aggregated for the purpose of creating a transition variable.



### Derived Variable

Transition in drinking at short-term risk was determined for women from the Younger cohort completing Survey 1 and either the full or short version of Survey 2. Categories for transition were based on a cross-tabulation of drinking at short-term risk at both surveys (Table 1) and are shown in Table 2.

**Table 1 Cross-tabulation of the frequency of drinking at short-term risk**

Survey 1 - Frequency of drinking at short-term risk	Survey 2 – Frequency of drinking at short-term risk						Total
	Never drinks	Never	Less than once /month	About once /month	About once /week or more	Missing	
Never drinks	428	231	86	24	19	9	797
Never	210	867	569	151	53	30	1 880
Less than once /month	117	487	1 678	595	253	44	3 174
About once /month	46	162	794	638	393	15	2 048
About once/week or more	38	62	407	485	629	15	1 636
Missing	21	20	50	37	16	4	148
<b>Total</b>	<b>860</b>	<b>1 829</b>	<b>3 584</b>	<b>1 930</b>	<b>1 363</b>	<b>117</b>	<b>9 683</b>



**Table 2** Number and percent in categories for transition in frequency of drinking at short-term risk

Code	Transition frequency of short-term risk drinking	Number	Percent
<i>No Change</i>			
1	Drinks but never drinks at short-term risk (no change)	867	9.2
2	Never drinks (no change)	428	4.5
3	Less than once per month (no change)	1 678	17.8
4	About once per month (no change)	638	6.8
5	About once per week or more (no change)	629	6.7
<i>Decreased</i>			
6	Drinks but never drinks at short-term risk to never drinks	210	2.2
7	Less than once per month to never drinks or drinks but never drinks at short-term risk	604	6.4
8	Decreased from about once per month	1 002	10.6
9	Decreased from about once per week or more to less than once per month	507	5.4
10	Decreased from about once per week or more to about once per month	485	5.2
<i>Increased</i>			
11	Never drinks to drinks but never drinks at short-term risk	231	2.5
12	Never drinks or drinks but never drinks at short-term risk to less than once per month	655	7.0
13	Never drinks or drinks but never drinks at short-term risk to about once per month or more	247	2.6
14	Increased from less than once per month	848	9.0
15	Increased from about once per month	393	4.2
<b>Total classified</b>		<b>9 442</b>	
99	<i>Missing</i>	261	2.7

Categories 1, 2, 6 and 11 can be aggregated for most statistical analyses. Table 3 shows how all the combinations of drinking at short-term risk at each survey that were assigned to each transition category.



**Table 3 Categories for transition in frequency of drinking at short-term risk, including all combinations of frequencies at surveys 1 and 2**

<b>Transition</b>	<b>Survey 1</b>	<b>Survey 2</b>	<b>Number</b>
<b>No Change</b>			
Never drinks	Never drinks	Never drinks	428
Drinks but never at short-term risk	Drinks but never at short-term risk	Drinks but never at short-term risk	867
Less than once per month	Less than once per month	Less than once per month	1 678
About once per month	About once per month	About once per month	638
About once per week or more	About once per week	About once per week	460
		More than once per week	64
	More than once per week	About once per week	79
		More than once per wk	26
<b>Decreased</b>			
Drinks but never at short-term risk to never drinks	Drinks but never at short-term risk	Never drinks	210
Less than once per month to never drinks or drinks but never at short-term risk	Less than once per month	Never drinks	117
		Drinks but never at short-term risk	487
Decreased from about once per month	About once per month	Never drinks	46
		Drinks but never at short-term risk	162
		Less than once per month	794
Decreased from about once per week or more to less than once per month	About once per week	Never drinks	27
		Drinks but never at short-term risk	53
		Less than once per month	356
		Never drinks	11
		Drinks but never at short-term risk	9
		Less than once per month	51
Decreased from about once per week or more to about once per month	About once per week	About once per month	433
	More than once per week	About once per month	52

*Continued next page*



Transition	Survey 1	Survey 2	Number
<b>Increased</b>			
Never drinks to drinks but never at short-term risk	Never drinks	Drinks but never at short-term risk	231
Never drinks or drinks but never at short-term risk to less than once per month	Never drinks	Less than once per month	86
Never drinks or drinks but never at short-term risk to about once per month or more	Never drinks at short-term risks	Less than once per month	569
	Never drinks	About once per month	24
		About once per week	17
		More than once per week	2
	Drinks but never at short-term risk	About once per month	151
		About once per week	47
		More than once per wk	6
Increased from less than once per month	Less than once per month	About once per month	595
		About once per week	222
		More than once per week	31
Increased from about once per month	About once per month	About once per week	348
		More than once per week	45
<b>Missing</b>			
	Missing	Missing	4
		Never drinks	21
		Drinks but never at short-term risk	20
		Less than once per month	50
		About once per month	37
		About once per week	16
	Never drinks	Missing	9
	Drinks but never at short-term risk	Missing	30
	Less than once per month	Missing	44
	About once per month	Missing	15
	About once per week	Missing	12
	More than once per week	Missing	3



**Variation:** The manuscript *Changes in smoking behaviour among young women over life stage transitions* (McDermott L, Dobson A, Russell A. *Australian and New Zealand Journal of Public Health*, 2004; 28(4):330-335) looked at sub-groups of the Younger cohort. Because of the analysis of relatively small numbers, it was necessary to collapse some of the above categories; specifically categories 4 and 5; 7 and 8; 9 and 10; 12 and 13; and 14 and 15.

The SAS code defining transition in the frequency of drinking at short-term risk between surveys 1 and 2 is:

```

/* Recode y1q37 to match coding of y2q61 */;
if y1q37 = 6 then y1q37 = 0 ;

/*****
Transition in drinking at short term risk - S1 to S2
*****/ ;
if y1q37 = . or y2q61 = . then yt12AlcSTR = 99 ;
else if y1q37 = y2q61 then do ;
    if y1q37 = 0 then yt12AlcSTR = 2 ;
    if y1q37 = 1 then yt12AlcSTR = 1 ;
    else if y1q37 in (2,3,4) then yt12AlcSTR = y1q37 + 1 ;
    else if y1q37 = 5 then yt12AlcSTR = 5 ;
    end ;
else if (y1q37 = 4 and y2q61 = 5) or (y1q37 = 5 and y2q61 = 4)
    then yt12AlcSTR = 5 ;
else if y1q37 > y2q61 then do ;
    if y1q37 = 1 then yt12AlcSTR = 6 ;
    else if y1q37 = 2 then yt12AlcSTR = 7 ;
    else if y1q37 = 3 then yt12AlcSTR = 8 ;
    else if y1q37 in (4,5) then do ;
        if y2q61 in (0,1,2) then yt12AlcSTR = 9 ;
        else if y2q61 =3 then yt12AlcSTR = 10 ;
        end ;
    end ;
else if y1q37 < y2q61 then do ;
    if y1q37 = 0 and y2q61 = 1 then yt12AlcSTR = 11 ;
    if y1q37 in (0,1) then do ;
        if y2q61 = 2 then yt12AlcSTR = 12 ;
        else if y2q61 in (3,4,5) then yt12AlcSTR = 13 ;
        end ;
    else if y1q37 = 2 then yt12AlcSTR = 14 ;
    else if y1q37 = 3 then yt12AlcSTR = 15 ;
    end ;

```

## Smoking Transition

<b>Age Cohorts</b>	Younger
<b>Surveys</b>	Surveys 1 and 2
<b>Derived Variable</b>	T12Smok
<b>Definition</b>	Transition in smoking status between surveys 1 & 2
<b>Source Items</b>	Derived variable Survey 1: Y1smokst (SMOK-015)
<b>(Index Numbers)</b>	Derived variable Survey 2: Y2smkAIHW(SMOK-018)
<b>Statistical Form</b>	Categorical variable
<b>Prepared by</b>	Anne Russell, Jean Ball and Annette Dobson
<b>Endorsed</b>	13 March 2002

### Source Items

At Survey 1 the definition for smoking status was modified from the National Heart Foundation of Australia (1990)<sup>1</sup>. Between surveys 1 (1996) and 2 (2000) the Australian Institute of Health and Welfare<sup>2</sup> revised it's definition of smoking status. Both sets of categories are shown over the page. Consequently, two variables for smoking status are included in the Survey 2 data, y2smokst (using the Survey 1 definition) and y2smkAIHW (based on the AIHW definition).

For transition, the interest was in changes between never smoking, ex-smoking and current smoking. At this level there were no differences between y2smokst and y2smkAIHW and so y2smokst was used as the basis for transition. Responses to item 55 (*In your lifetime, would you have smoked at least 100 cigarettes (or equivalent)?* with responses Yes, No) were used to resolve apparent inconsistencies in the cross-tabulation of smoking status at the 2 surveys (Table 1).



<b>Code</b>	<b>Survey 1 Category</b>
1	Never smoker
2	Ex-smoker
3	Current smoker – smokes less than 10 cigarettes per day
4	Current smoker – smokes 10-19 cigarettes per day
5	Current smoker – smokes 20 or more cigarettes per day
	<b>Survey 2 Category</b>
1	Never smoker <i>A person who does not smoke now and has smoked fewer than 100 cigarettes or similar amount of other tobacco products in his/her lifetime</i>
2	Ex-smoker <i>A person who does not smoke at all now, but has smoked at least 100 cigarettes or a similar amount of other tobacco products in his/her lifetime.</i>
3	Irregular smoker <i>A person who smokes less than weekly</i>
4	Weekly smoker <i>A person who smokes at least weekly but not daily</i>
5	Daily smoker <i>A person who smokes daily</i>

**Table 1 Re-coding of smoking status at surveys 1 and 2 for the purpose of assignment to transition status only**

Survey data			Recoded values		
Survey 1 Smoking Status	Survey 2 Smoking Status	Ever smoked more than 100 cigarettes (Y2q55)	Survey 1 Smoking Status	Survey 2 Smoking Status	Number
Missing	Never smoked		Never smoked		267
Ex-smoker		No	Never smoked		459
Current smoker		No	Never smoked		163
	Missing	No		Never smoked	24



### Derived Variable

Smoking transition status was determined for 9 682 women from the Younger cohort completing Survey 1 and either the full or the short version of Survey 2. Categories for transition were based on a cross-tabulation of smoking status at both surveys (Table 2) and are shown in Table 3.

**Table 2** Cross-tabulation of smoking status at surveys 1 and 2, after re-coding

Survey 1 Smoking Status	Survey 2 Smoking Status				Total
	Never smoker	Ex-smoker	Current Smoker	Missing	
Never smoker	5 523	169	313	50	6 055
Ex-smoker		583	321	42	946
Current smoker		520	1 722	115	2 357
Missing		104	193	28	325
<b>Total</b>	<b>5 523</b>	<b>1 376</b>	<b>2 549</b>	<b>235</b>	<b>9 683</b>

**Table 3** Smoking status transition between surveys 1 and 2

Code	Smoking transition	Number	Percent
1	Never smoked	5 523	60.4
2	Ex-smoker	583	6.4
3	Initiate and quit <sup>a</sup>	169	1.9
4	Quitter	520	5.7
5	Re-starter	321	3.5
6	New Adopter	313	3.4
7	Continuing smoker	1 722	18.8
	<b>Total classified</b>	<b>9 151</b>	<b>100.0</b>
9	Missing	532	5.5
	<b>Total</b>	<b>9 683</b>	

<sup>a</sup> The number of women in this category is small and in many analyses it will be necessary to combine them with another category. In this case it is recommended that they be included with Ex-smokers (category 2).

All combinations of values for smoking status at each survey that were assigned to each transition category are shown in Table 4.



**Table 4 Smoking status transition between surveys 1 and 2, including all combinations of smoking status at surveys 1 and 2**

Smoking transition	Y1 Smoking status	Y2 Smoking status	Number
Never smoked	Never smoked	Never smoked	5 523
Initiate and quit	Never smoked	Ex-smoker	169
Ex-smoker	Ex-smoker	Ex-smoker	583
Quitter	Smoker	Ex-smoker	520
Re-starter	Ex-smoker	Smoker	321
New Adopter	Never	Smoker	313
Continuing smoker	Smoker	Smoker	1 722
Missing	Missing	Missing	28
		Ex-smoker	104
		Smoker	193
		Never	50
		Ex-smoker	42
		Smoker	115

The SAS code defining smoking transition between Surveys 1 and 2 is:

```

/* Re-code y1smokst if y1smokst is missing AND y2smokst is Never
smoker.
n = 267 */;
if y1smokst = . and y2smokst=1 then y1smokst = 1 ;

/* Using data on NEVER smoked >100 cigs in Y2(q55=2),
re-code y1smokst to Never(1) if currently Ex(2) or Current (3,4,5).
n = 459 + 163 = 622 */;
if y1smokst in (2,3,4,5) and y2q55=2 then y1smokst = 1 ;

/* Using data on NEVER smoked >100 cigs in Y2(q55=2),
re-code y2smokst to Never(1) if currently Missing.
n = 24 */;
if y2smokst = . and y2q55=2 then y2smokst = 1 ;

/* Collapse y1 to 3 groups */;
if y1smokst in (1,2) then smokstaty1 = y1smokst ;
else if y1smokst in (3,4,5) then smokstaty1 = 3 ;

/* Collapse y2 to 3 groups */;
if y2smokst in (1,2) then smokstaty2 = y2smokst ;
else if y2smokst in (3,4,5) then smokstaty2 = 3 ;
/*****

```

```

Smoking transition - S1 to S2
  1 = 'Never Smoked'
  2 = 'Ex-smoker'
  3 = 'Initiate and quit'
  4 = 'Quitter'
  5 = 'Re-starter'
  6 = 'New adopter'
  7 = 'Continuing smoker'
*****/ ;
  if smokstaty1=1 and smokstaty2=1 then yt12smok = 1 ;
else if smokstaty1=2 and smokstaty2 = 2 then yt12smok = 2 ;
else if smokstaty1=1 and smokstaty2=2 then yt12smok = 3 ;
else if smokstaty1=3 and smokstaty2 in (1,2) then yt12smok = 4 ;
else if smokstaty1=2 and smokstaty2 = 3 then yt12smok = 5 ;
else if smokstaty1=1 and smokstaty2 = 3 then yt12smok = 6 ;
else if smokstaty1=3 and smokstaty2 = 3 then yt12smok = 7 ;
else yt12smok = 9 ;

```

## References

1. National Heart Foundation of Australia. *Risk factor prevalence study survey 3 1989*. National Heart Foundation of Australia and Australian Institute of Health; 1990
2. Australian Institute of Health and Welfare. National Health Data Dictionary. Version 9. AIHW Catalogue No. HWI 24. Australian Institute of Health and Welfare; 2000

