

USER SUPPORT

UKHLS health conditions (hcond)

The questions asked, who were asked them, and how and why these questions have been changed across waves

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Non-technical summary

The report explains how diagnosed health conditions were measured across the two linked studies that make up Understanding Society: the earlier BHPS (1991–2009) and UKHLS (from 2009 onward). It focuses on how the health-condition questions changed over time, who was asked them, how responses were coded, and why BHPS and UKHLS variables are generally not harmonised.

In BHPS, the health-condition questions were broad and initially limited. At Wave 1, respondents could report up to four non-temporary conditions from a fixed list, such as mobility problems, sensory difficulties, breathing problems, diabetes, anxiety/depression, epilepsy, and migraine. From Waves 2–10, the four-condition limit was removed and all applicable conditions could be reported. From Waves 11–18, cancer and stroke were added, and in Waves 11 and 16 extra follow-up questions asked about treatment or severity for each reported condition.

In UKHLS Waves 1–9, the system shifted to doctor-diagnosed conditions. New entrants were asked whether a health professional had ever told them they had conditions such as asthma, arthritis, heart disease, stroke, emphysema, diabetes, epilepsy, high blood pressure, and depression. Continuing sample members were instead asked about newly diagnosed conditions since their last interview. Follow-up questions covered whether the respondent still had the condition, age at diagnosis, and for new diagnoses, hospitalisation and time spent in hospital. Researcher should note that several routing errors occurred in early waves, including omissions in Wave 2 and mistaken follow-up questions for heart attack and stroke.

From UKHLS Wave 10 onward, the health module became more detailed and structured. COPD and a broader mental-health category were added, while some earlier categories were removed. Arthritis, cancer, diabetes, and mental-health responses were split into more specific subtypes, producing a more detailed derived condition coding scheme. For continuing sample members, Wave 10 also changed the approach: instead of only asking about diagnoses since the previous wave, respondents were asked again about all conditions ever diagnosed, plus whether they still had them and whether they had been hospitalised.

In Waves 11–12, continuing sample members were asked two things: whether they still had conditions reported at the previous interview, and whether they had any newly diagnosed conditions since then. This separated “ongoing condition” reporting from “new diagnosis” reporting.

Wave 13 introduced further expansion. It added a new set of clinically relevant conditions, including blood or bone marrow cancer, cystic fibrosis, spleen problems, sickle cell disease, severe obesity, and neurological/brain conditions with subtypes such as Parkinson’s disease, motor neurone disease, learning disability, and cerebral palsy. It also introduced a separate mental health conditions module covering depression, psychosis, bipolar disorder, eating disorders, PTSD, phobias, panic attacks, ADHD, dementia, OCD, personality disorder, alcohol/drug dependence, and other anxiety or emotional disorders.

From Wave 14 onward, these additions were consolidated into a single expanded composite condition list. Mental health conditions were fully integrated into the main health-condition coding for new entrants, and similar changes were made for continuing sample members’ newly diagnosed conditions. Additional physical conditions such as chronic kidney disease, cystic fibrosis, spleen problems, sickle cell disease, severe obesity, and neurological disorders were included in the main derived variables. Continuing sample members also continued to be asked whether previously reported conditions were still present, but routing rules were tightened to avoid duplicating

questions for newly reported conditions and to exclude some conditions, such as heart attack and stroke, from “still have it” follow-ups where those questions did not make sense.

Overall, the measurement of diagnosed health conditions in Understanding Society has become progressively more detailed, clinically specific, and internally consistent over time. However, because wording, coverage, routing, and coding changed substantially across waves—and especially between BHPS and UKHLS—researchers need to be careful when comparing variables longitudinally or across the two surveys.

Introduction

In Understanding Society, respondents are asked questions about various health conditions that they have been diagnosed with or reported by a health professional. The choice of these questions have been informed by the expertise of health research experts and established studies in the field, such as the National Health and Nutrition Examination Survey and the Adult Psychiatric Morbidity Study. Over the years, the questions undergone some changes to improve these measures. In this document we describe the questions, who were asked and how and why these have been changed across waves.

Understanding Society, in its current form started in 2009. Its pre-decessor, the British Household Panel Survey (BHPS), was fielded from 1991-2009. The surviving sample was invited to join the new survey and those who agreed became part of the study from onwards the 2nd wave in 2010. To allow researchers to use both studies together they data has been harmonized, and for details of this harmonisation exercise read the [BHPS – Harmonised User Guide](#). To distinguish the two surveys, which are collectively referred to as Understanding Society, the current study is referred to as UKHLS and its pre-decessor as BHPS. To know more about these surveys, take a look at the [UKHLS Main Survey User Guide](#) and the [BHPS User Manual](#)

When variables were considered to be harmonizable, the same name is given (with the BHPS name changed to the UKHLS variable name if these were different). If two variables are not harmonizable, even if they are similar, then these are left as they are. But if these two variables had the same name, then the BHPS variable is given a suffix `_bh`. As you will see in this document, the BHPS and UKHLS questions were not considered to be harmonizable and so they have different names.

Information collected in each annual interview, referred to as a wave, is collected in a set of wave specific files. The naming convention for the variables and data files is that all wave specific variables and datafiles have the same root name with a prefix reflecting the survey and the wave. For BHPS the prefixes are `bw_` where `w` is for Wave 1, `b` for Wave 2 and so on and for UKHLS the prefixes are `w_` where `w` is for Wave 1, `b` for Wave 2 and so on.

BHPS Waves 1-18

The health condition questions in BHPS were worded differently and so these are not considered to be harmonizable with the UKHLS questions and the names are left as they are.

BHPS Wave 1

“Does (NAME) have any of the health problems or disabilities listed on this card? You can just tell me which letters apply.”

CODE FIRST FOUR MENTIONED, OR CODE ‘NONE’

EXCLUDE TEMPORARY CONDITIONS

	1 st	2 nd	3 rd	4 th
A Problems with arms/legs etc	01----	01----	01----	01----
B Difficulty in seeing	02----	02----	02----	02----
C Difficulty in hearing	03----	03----	03----	03----
D Skin conditions/allergies	04----	04----	04----	04----
E Chest/breathing problems	05----	05----	05----	05----
F Heart/blood	06----	06----	06----	06----
G Stomach/liver/kidneys	07----	07----	07----	07----
H Diabetes	08----	08----	08----	08----
I Nerves/anxiety/depression	09----	09----	09----	09----
J Alcohol/drugs	10----	10----	10----	10----
K Epilepsy	11----	11----	11----	11----
L Migraine/chronic headaches	12----	12----	12----	12----
M Other (GIVE DETAILS)	13----	13----	13----	13----

Up to 4 conditions were recorded in the variables **bw_hlprb1-4** with the values representing the health conditions:

- 1 Probs wth arms/leg
- 2 Difficulty seeing
- 3 Difficulty hearing
- 4 Skin conds/allergies
- 5 Chest/breathing probs
- 6 Heart and blood
- 7 Stomach/liver/kidneys
- 8 Diabetes
- 9 Nerves/anxiety/depression
- 10 Alcohol/drugs
- 11 Epilepsy
- 12 Migraine/chronic headachache
- 13 Other

If no condition was chosen then **bw_hlprb=-8**, and **bw_hlprb1-bw_hlprb4=-8**. These variables were then recoded into a series of 0-1 variables where the variable had a value of 1 if that was mentioned:

bw_hlprba “Health problems: Arms, legs, hands, etc”

bw_hlprbb “Health problems: Sight”

bw_hlprbc “Health problems: Hearing”

bw_hlprbd “Health problems: Skin conditions/allergy”

bw_hlprbe “Health problems: Chest/breathing”

bw_hlprbf “Health problems: Heart/blood pressure”

bw_hlprbg “Health problems: Stomach or digestion”

- bw_hlprbh** "Health problems: Diabetes"
- bw_hlprbi** "Health problems: Anxiety, depression, etc"
- bw_hlprbj** "Health problems: Alcohol or drugs"
- bw_hlprbk** "Health problems: Epilepsy"
- bw_hlprbl** "Health problems: Migraine"
- bw_hlprbm** "Health problems: Other"

BHPS Waves 2-10

From Wave 2 until Wave 10, the 4 condition constraint was removed and respondents could choose all the conditions if applicable and more details were added to the conditions.

Do you have any of the health problems or disabilities listed on this card? You can just tell me which letters apply.

EXCLUDE TEMPORARY CONDITIONS

CODE ALL THAT APPLY OR CODE 'NONE'

- A Problems or disability connected with: arms, legs, hands, feet, back, or neck (including arthritis and rheumatism)01
- B Difficulty in seeing (other than needing glasses to read normal size print)02
- C Difficulty in hearing03
- D Skin conditions/allergies04
- E Chest/breathing problems, asthma, bronchitis05
- F Heart/blood pressure or blood circulation problems06
- G Stomach/liver/kidneys or digestive problems07
- H Diabetes08
- I Anxiety, depression or bad nerves09
- J Alcohol or drug related problems10
- K Epilepsy11
- L Migraine or frequent headaches12
- M Other health problems (PLEASE GIVE DETAILS)

If no condition was chosen then **bb_hlprb=-8**, and a series of variables were created where the variable had a value of 1 if that condition was mentioned.

- bw_hlprba** "Health problems: Arms, legs, hands, etc"
- bw_hlprbb** "Health problems: Sight"
- bw_hlprbc** "Health problems: Hearing"
- bw_hlprbd** "Health problems: Skin conditions/allergy"
- bw_hlprbe** "Health problems: Chest/breathing"
- bw_hlprbf** "Health problems: Heart/blood pressure"
- bw_hlprbg** "Health problems: Stomach or digestion"
- bw_hlprbh** "Health problems: Diabetes"
- bw_hlprbi** "Health problems: Anxiety, depression, etc"
- bw_hlprbj** "Health problems: Alcohol or drugs"
- bw_hlprbk** "Health problems: Epilepsy"
- bw_hlprbl** "Health problems: Migraine"
- bw_hlprbm** "Health problems: Other"

BHPS Wave 11-18

From Wave 11, Cancer and Stroke were also added and responses were recorded in **bw_hlprba - bw_hlprbo**.

M3 Do you have any of the health problems or disabilities listed on this card? You can just tell me which numbers apply.

EXCLUDE TEMPORARY CONDITIONS

CODE ALL THAT APPLY OR CODE 'NONE'

None 0 GO TO M4

Problems or disability connected with: arms, legs, hands, feet back, or neck (including arthritis and rheumatism) 01 PHLPRBA

Difficulty in seeing (other than needing glasses to read normal size print)..... 02 PHLPRBB

Difficulty in hearing..... 03 PHLPRBC

Skin conditions/allergies 04 PHLPRBD

Chest/breathing problems, asthma, bronchitis 05 PHLPRBE

Heart/high blood pressure or blood circulation problems 06 PHLPRBF

Stomach/liver/kidneys or digestive problems..... 07 PHLPRBG

Diabetes 08 PHLPRBH

Anxiety, depression or bad nerves, psychiatric problems 09 PHLPRBI

Alcohol or drug related problems 10 PHLPRBJ

Epilepsy..... 11 PHLPRBK

Migraine or frequent headaches 12 PHLPRBL

Cancer..... 13 PHLPRBN

Stroke 14 PHLPRBO

Other health problems (PLEASE GIVE DETAILS)..... 15
PHLPRBM

In Waves 11 and 16 some additional questions were included on treatment for those conditions the respondent said they had, which were recorded in **bw_hlprxa-o** (1=yes, 2=no).

If M3 = 1 ASK

RM1a) 'Has a doctor ever told you that you suffer from osteoarthritis, rheumatoid arthritis, gout or osteoporosis?' PHLPRXA

Yes..... 1

No..... 2

If M3 = 2 ASK

RM1b) 'Do you attend a hospital out-patients or have annual check-ups?' PHLPRXB

Yes..... 1

No..... 2

If M3 = 3 ASK

RM1c) 'Do you wear or have you ever tried a hearing aid?' PHLPRXC

Yes..... 1

No..... 2

If M3 = 4 ASK

RM1d) 'Do you use regularly any specific medication?' PHLPRXD

Yes..... 1

No..... 2

If M3 = 5 ASK

RM1e) 'Do you suffer asthma attacks or become easily short of breath?' PHLPRXE
Yes..... 1
No..... 2
If M3 = 6 ASK

RM1f) 'Do you have angina or heart failure or have had a heart attack?' PHLPRXF
Yes..... 1
No..... 2
If M3 = 7 ASK

RM1g) 'Was the problem investigated in hospital and, since then, requires regular treatment?' PHLPRXG
Yes..... 1
No..... 2
If M3 = 8 ASK

RM1h) 'Do you inject insulin?' PHLPRXH
Yes..... 1
No..... 2
If M3 = 9 ASK

RM1i) 'Are you receiving treatment for your psychiatric problems?' PHLPRXI
Yes..... 1
No..... 2
If M3 = 10 ASK

RM1j) 'Are you under regular supervision?' PHLPRXJ
Yes..... 1
No 2
If M3 = 11 ASK

RM1k) 'Do you take regular medication for your epilepsy?' PHLPRXK
Yes..... 1
No 2
If M3 = 12 ASK

RM1l) 'Do you take medication for your migraines or frequent headaches?' PHLPRXL
Yes..... 1
No 2
If M3 = 13 ASK

RM1m) 'Are you receiving treatment for your cancer?' PHLPRXM
Yes..... 1
No 2
If M3 = 14 ASK

RM1n) 'Is there any lasting paralysis from your stroke?' PHLPRXN
Yes..... 1
No 2
If M3 = 15 ASK

RM1o) 'Are you seen regularly (at least once per year) in a hospital out-patients department?' PHLPRXO
Yes..... 1
No 2

UKHLS Waves

UKHLS Waves 1-9

New entrants

In Wave 1, everyone and in Waves 3-9, new entrants to the study were asked the following question, **hcond**, and its follow-ups (see below). These were designed to be only asked the first time someone was interviewed.

ERROR: New entrants were not asked these questions in Wave 2.

hcond: “Has a doctor or other health professional ever told you that you have any of the conditions listed on this card?”

Respondents were asked to choose all the conditions that were applicable from this list: “Asthma”, “Arthritis”, “Congestive heart failure”, “Coronary heart disease”, “Angina”, “Heart attack or myocardial infarction”, “Stroke”, “Emphysema”, “Hyperthyroidism or an overactive thyroid”, “Hypothyroidism or an under-active thyroid”, “Chronic bronchitis”, “Any kind of liver condition”, “Cancer or malignancy”, “Diabetes”, “Epilepsy”, “High blood pressure” and “Clinical depression”.

In Waves 6, an “Other” condition was added to the list and in Waves 7-9, the health conditions, “Multiple Schlerosis” and “H.I.V.” were added.

The responses were recorded in the variables, **hcond1-20**, which had a value of 1 if that condition was mentioned and 0 otherwise. If none of the conditions listed were chosen then the variable, **hcond-96**, labelled “none of these” was set to 1, and 0 otherwise.

*Note, the responses to HIV health condition (**hcond20**) are only available under Special License. Although respondents were allowed to report the specific “other” health condition which was recorded verbatim, these are not released (**hcond0**).*

For each health condition mentioned, i.e., **hcond*=1**, these follow-up questions were asked:

- **hconds:** “Do you still have [Hcond]?”
The responses were recorded in the variables, **hconds***, which had a value of 1 if the response was Yes, and 2 if the response was No. This was not asked for health conditions “Heart attack or myocardial infarction”, “Stroke”, “Other”, “Multiple Schlerosis”, H.I.V, (**hcond6, hcond7, hcond18, hcond19, hcond20**).
- **hconda:** “What age were you when you ewre first told you had a [Hcond]?”
The responses were recorded in the variables, **hconda***. This was not asked for health condition, “Other” (**hcond18**).

*ERROR: In Wave 1, the follow-ups, whether still had the condtion, was mistakenly asked for the health conditions, heart attack and stroke, (**hconds6, hconds7**).*

*ERROR: In Wave 1, there was an error in the age for stroke and heart attack questions (**hconda6, hconda7**), and so in Wave 3, all continuing members were asked if they ever had a heart attack or stroke (**hconde6, hconde7**) and if yes, then the age at which they had that (**hcondea6, hcondea7**). A **hconde96** was also recorded to confirm whether either or none of these conditions were reported.*

Summary of health conditions ever diagnosed, asked of new entrants in Waves 1, 3-9

Continuing sample members

After the initial wave, continuing sample members were asked about any new health conditions they had been diagnosed with since the previous interview, using this question, **hcondn**:

hcondn: "Since [previous interview date] has a doctor or other health professional newly diagnosed you as having any of the conditions listed on this card?"

Respondents were asked to choose all the conditions that were applicable from this list: "Asthma", "Arthritis", "Congestive heart failure", "Coronary heart disease", "Angina", "Heart attack or myocardial infarction", "Stroke", "Emphysema", "Hyperthyroidism or an overactive thyroid", "Hypothyroidism or an under-active thyroid", "Chronic bronchitis", "Any kind of liver condition", "Cancer or malignancy", "Diabetes", "Epilepsy", "High blood pressure" and "Clinical depression".

In Waves 6, an "Other" condition was added to the list and in Waves 7-9, the health conditions, "Multiple Schlerosis" and "H.I.V." were added.

The responses were recorded in the variables, **hcondn1-20**, which had a value of 1 if that condition was mentioned and 0 otherwise. If none of the conditions listed were chosen then the variable, **hcondn96**, labelled "none of these" was set to 1, and 0 otherwise.

*Note, the responses to HIV health condition (**hcondn20**) are only available under Special License. Although respondents were allowed to report the specific "other" health condition which was recorded verbatim, these are not released (**hcondno**).*

For each newly diagnosed health condition mentioned, i.e., **hcondn*=1**, these follow-up questions were asked:

- **hospc**: "Thinking of your [hcondn], have you been in hospital or clinic as an in-patient overnight or longer since [ff_IntDate] because of this health condition?"
The responses were recorded in the variables, **hospc***, which had a value of 1 if the response was Yes, and 2 if the response was No.
- **hospcd**: "How many days have you spent in hospital or clinic as an in-patient since [ff_IntDate] because of your [hcondn]?"
The responses were recorded in the variables, **hospcd***. Respondents were asked these questions only if they had been hospitalised for a specific health condition, i.e., **hospc*=1**.
- **hcondns**: "Do you still have [hcondn]?"
The responses were recorded in the variables **hcondns***, which had a value of 1 if the response was Yes, and 2 if the response was No.

*ERROR: In Waves 2-9, the follow-ups, whether still had the condtion, was mistakenly asked for the health conditions, heart attack, stroke, Multiple Schelerosis and H.I.V. (**hcondns6, hcondns7, hcondns19, hcondns20**).*

UKHLS Wave 10-12

Wave 10 onwards **three** changes were introduced to capture diagnosed health conditions better.

1. Health conditions “COPD (Chronic Obstructive Pulmonary Disease)” and “An emotional, nervous or psychiatric problem” were added to the list, while health conditions “Hyperthyroidism or an over-active thyroid” and “Clinical Depression” were dropped.
2. If health conditions, “Arthritis”, “Cancer or malignancy”, Diabetes and “An emotional, nervous or psychiatric problem” were chosen, then respondents were asked to identify the specific type of that health condition in follow-up questions.
3. It was noted that until Wave 9, continuing sample members were not asked if they still had the health conditions that they had reported in previous waves. So, the decision was taken to ask them about all the health conditions they had ever been diagnosed with, not just since last wave and then from onwards Wave 11, to ask them if they still had any of the previously reported health condition (in addition to the usual questions about any new health condition diagnosed with since last interview).

New entrants, Waves 10-12

In Waves 10-12, new entrants were asked the usual **hcond** question with a modified health conditions list (as mentioned above).

hcond: “Has a doctor or other health professional ever told you that you have any of these conditions?”

The responses were recorded in **hcond*** which had a value of 1 if that condition was mentioned and 0 otherwise. If none of the conditions listed were chosen then the variable, **hcondn96**, labelled “none of these” was set to 1, and 0 otherwise. Those who chose **hcond2=1** were asked **arthtyp**, **hcond13=1** are asked **cancertyp**, **hcond14=1** are asked **diabetestyp**, **hcond22=1** are asked **mhealthtyp**. Using the responses from **hcond*** and these follow-up questions, variables, **hcondcode1, 3-8, 10-12, 15-16, 19-21, 23-43** were computed which had a value of 1 if that condition was mentioned and 0 otherwise. If none of the conditions listed were chosen then the variable, **hcondcode96**, labelled “none of these” was set to 1, and 0 otherwise. So, **hcondcode1, 3-8, 10-12, 15-16, 19-21, 23-43, 96** is the complete list of health conditions ever diagnosed. This information is summarised below. *Note, the responses to HIV health condition (hcond20, hcondcode20) are only available under Special License. Although respondents were allowed to report the specific “other” health condition which was recorded verbatim, these are not released (hcondo).*

As in previous waves, for each health condition chosen, **hcondcode*=1**, respondents were asked these follow-up questions:

- **hconds**: “Do you still have [hcondcode]?”
The responses were recorded in the variables, **hconds***, which had a value of 1 if the response was Yes, and 2 if the response was No. These were not asked for health conditions for which these follow-ups didn’t make sense and so **hconds6/7/19/20 & hconds25/32/36/43/97** do not exist.
- **hconda**: “What age were you when you were first told you had a [hcondcode] ?”
The responses were recorded in the variables, **hconda***. These were not asked for health conditions for which these follow-ups didn’t make sense and so **hconda25/32/36/43/97** do not exist.

Coding of final health conditions diagnosed, asked of new entrants in Waves 10-12		
hcond1=1, "asthma		hcondcode1=1
hcond2, "arthritis	arthtyp=1 "osteoarthritis"	hcondcode23=1
	arthtyp=2, "rheumatoid arthritis"	hcondcode24=1
	arthtyp=3, "other type of arthritis"	hcondcode25=1
	arthtyp=4, "more than one of the above"	-
	arthtyp=5, "don't know"	-
hcond3, "congestive heart failure		hcondcode3=1
hcond4, "coronary heart disease		hcondcode4=1
hcond5, "angina		hcondcode5=1
hcond6, "heart attack or myocardial infarction,		hcondcode6=1
hcond7, "stroke		hcondcode7=1
hcond8, "emphysema		hcondcode8=1
hcond10, "hypothyroidism or an under-active thyroid		hcondcode10=1
hcond11, "chronic bronchitis		hcondcode11=1
hcond12, "any kind of liver condition		hcondcode12=1
hcond13, "cancer or malignancy	cancertyp=1, "bowel/colorectal"	hcondcode26=1
	cancertyp=2, "lung"	hcondcode27=1
	cancertyp=3, "breast"	hcondcode28=1
	cancertyp=4, "prostrate" [not asked of women]	hcondcode29=1
	cancertyp=5, "liver"	hcondcode30=1
	cancertyp=6, "skin cancer or melanoma"	hcondcode31=1
	cancertyp=7, "other"	hcondcode32=1
hcond14, "diabetes	diabetestyp=1, "type 1 diabetes"	hcondcode33=1
	diabetestyp=2, "type 2 diabetes"	hcondcode34=1
	diabetestyp=3, "gestational diabetes/during pregnancy"	hcondcode35=1
	diabetestyp=4, "other type of diabetes"	hcondcode36=1
	diabetestyp=5, "more than one of the above"	-
	diabetestyp=6, "don't know"	-
hcond15, "epilepsy		hcondcode15=1
hcond16, "high blood pressure		hcondcode16=1
hcond18, "other		hcondcode97=1
hcond19, "multiple sclerosis"		hcondcode19=1
hcond20, "h.i.v."		hcondcode20=1
hcond21, "copd (chronic obstructive pulmonary disease"		hcondcode21=1
hcond22 "an emotional, nervous or psychiatric problem"	mhealthtyp=1, "anxiety"	hcondcode37=1
	mhealthtyp=2, "depression"	hcondcode38=1
	mhealthtyp=3, "psychosis or schizophrenia"	hcondcode39=1
	mhealthtyp=4, "bipolar disorder or manic depression"	hcondcode40=1
	mhealthtyp=5, "an eating disorder"	hcondcode41=1
	mhealthtyp=6, "post-traumatic disorder"	hcondcode42=1
	mhealthtyp=7, "other"	hcondcode43=1
hcond96, "none"		hcondcode96=1

Continuing sample members, Wave 10

As mentioned above, in Wave 10, continuing sample members were again asked about all the health conditions they had ever been diagnosed with (and so the new question was given a new name):

hcondever: “Has a doctor or other health professional ever told you that you have any of these conditions?”

Their responses were recorded in **hcondever** * which had a value of 1 if that condition was mentioned and 0 otherwise. If none of the conditions listed were chosen then the variable, **hcondnever96**, labelled “none of these” was set to 1, and 0 otherwise. Those who chose **hcondever2=1** were asked **arthtyp**, **hcondever13=1** were asked **cancertyp**, **hcondever14=1** were asked **diabetestyp**, and **hcondever22=1** are asked **mhealthtyp**. Using the responses from **hcondever*** and these follow-up questions, variables, **hcondncode1, 3-8, 10-12, 15-16, 19-21, 23-43** were computed which had a value of 1 if that condition was mentioned and 0 otherwise. If none of the conditions listed were chosen then the variable, **hcondncode96**, labelled “none of these” was set to 1, and 0 otherwise. So, **hcondncode1, 3-8, 10-12, 15-16, 19-21, 23-43, 96** is the complete list of health conditions ever diagnosed. This information is summarised below.

Note, the responses to HIV health condition (hcond20, hcondcode20) are only available under Special License. Although respondents were allowed to report the specific “other” health condition which was recorded verbatim, these are not released (hcondevero).

For each health condition mentioned, i.e., **hcondncode***=1, respondents were asked these follow-up questions:

- **hcondns**: “Do you still have [hcondncode]?”
The responses were recorded in **hcondns***, which had a value of 1 if the response was Yes, and 2 if the response was No. These were not asked in case of health conditions for which the follow-ups did not make sense and so **hcondns6/7/19/20** and **hcondns25/32/36/43/97** do not exist.
- **hcondna**: “What age were you when you were first told you had a {if hcondncode = 6|7} [hcondncode]?”
The responses were recorded in **hcondna***. These were not asked in case of health conditions for which these follow-ups did not make sense and so **hcondna25/32/36/43/97** do not exist.
- **hcondnheart**: “Has a doctor or other health professional newly diagnosed you as having had a heart attack or myocardial infarction since [ff_IntDate], when we last interviewed you? If you are uncertain about the timing of the diagnosis, report the diagnosis at this interview.”
The responses were recorded as 1 for Yes and 2 for No. This question was asked only in case of “heart attack or myocardial infarction”, i.e., **hcondncode6=1**.
- **hcondnstroke**: “Has a doctor or other health professional newly diagnosed you as having had a stroke since [ff_IntDate], when we last interviewed you?”
The responses were recorded as 1 for Yes and 2 for No. This question was asked only in case of “stroke”, i.e., **hcondncode7=1**.
- **hospc**: “Thinking of your [hcondncode], have you been in hospital or clinic as an in-patient overnight or longer since [ff_IntDate] because of this health condition?”
The responses were recorded in **hospc***, which had a value of 1 if the response was Yes, and 2 if the response was No. These questions were asked only if the respondent said they still had the health condition (**hcondns***=1) OR if they had been diagnosed with “heart attack or

myocardial infarction” or “stroke” since last interview, i.e., **hcondnheart=1** OR **hcondnstroke=1** OR if they had ever been diagnosed with health conditions “Multiple Sclerosis” or “HIV”, i.e., **hcondncode19/20=1**.

- **hospcdc**: “How many days have you spent in hospital or clinic as an in-patient since [ff_IntDate] because of your [hcondn]?”

The responses were recorded in **hospcdc***. These were asked only if hospitalization had been reported for any health condition, i.e., **hospc*=1**.

Coding of final health conditions ever diagnosed, asked of continuing sample members in Waves 10		
hcondever1, “asthma		hcondncode1=1
hcondever2, “arthritis	arthtypn=1 “osteoarthritis”	hcondncode23=1
	arthtypn=2, “rheumatoid arthritis”	hcondncode24=1
	arthtypn=3, “other type of arthritis”	hcondncode25=1
	arthtypn=4, “more than one of the above”	-
	arthtypn=5, “don’t know”	-
hcondever3, “congestive heart failure		hcondncode3=1
hcondever4, “coronary heart disease		hcondncode4=1
hcondever5, “angina		hcondncode5=1
hcondever6, “heart attack or myocardial infarction,		hcondncode6=1
hcondever7, “stroke		hcondncode7=1
hcondever8, “emphysema		hcondncode8=1
hcondever10, “hypothyroidism or an under-active thyroid		hcondncode10=1
hcondever11, “chronic bronchitis		hcondncode11=1
hcondever12, “any kind of liver condition		hcondncode12=1
hcondever13, “cancer or malignancy	cancertypn=1, “bowel/colorectal”	hcondncode26=1
	cancertypn=2, “lung”	hcondncode27=1
	cancertypn=3, “breast”	hcondncode28=1
	cancertypn=4, “prostrate” [not asked of women]	hcondncode29=1
	cancertypn=5, “liver”	hcondncode30=1
	cancertypn=6, “skin cancer or melanoma”	hcondncode31=1
	cancertypn=7, “other”	hcondncode32=1
hcondever14, “diabetes	diabetestypn=1, “type 1 diabetes”	hcondncode33=1
	diabetestypn=2, “type 2 diabetes”	hcondncode34=1
	diabetestypn=3, “gestational diabetes/during pregnancy”	hcondncode35=1
	diabetestypn=4, “other type of diabetes”	hcondncode36=1
	diabetestypn=5, “more than one of the above”	-
	diabetestypn=6, “don’t know”	-
hcondever15, “epilepsy		hcondncode15=1
hcondever16, “high blood pressure		hcondncode16=1
hcondever18, “other		hcondncode97=1

hcondever19, "multiple schlerosis"		hcondncode19=1
hcondever20, "h.i.v."		hcondncode20=1
hcondever21, "copd (chronic obstructive pulmonary disease"		hcondncode21=1
hcondever22 "an emotional, nervous or psychiatric problem"	mhealthtypn=1, "anxiety"	hcondncode37=1
	mhealthtypn=2, "depression"	hcondncode38=1
	mhealthtypn=3, "psychosis or schizophrenia"	hcondncode39=1
	mhealthtypn=4, "bipolar disorder or manic depression"	hcondncode40=1
	mhealthtypn=5, "an eating disorder"	hcondncode41=1
	mhealthtypn=6, "post-traumatic disorder"	hcondncode42=1
	mhealthtypn=7, "other"	hcondncode43=1
hcondever96, "none"		hcondncode96=1

Continuing sample members, Waves 11-12

In Waves 11-12, there were no major changes. But for continuing sample members, the questions asked were no longer about health conditions every being diagnosed. Rather they were asked two sets of questions.

First, if they had reported having been diagnosed with a health condition and still had it at the time of the last interview, then they were asked if they still had that condition at the current interview. The health condition from last wave is recorded in the variables **prevhcond1, 3-8, 10-12, 15-16, 19-21, 23-43, 96**, with a value of 1 meaning that they still had the condition at the last interview. But if prior health condition was stroke or heart attack or any “other” type of health condition that was not carried forward, so **prevhcond6/7/25/32/36/43/97** do not exist. *Note in the questionnaire **prevhcond*** are referred to as **ff_prevhcondstil*** and the “HIV” health condition variable (**prevhcond20**) is only available under Special License.*

For each previously mentioned health condition, i.e., **prevhcond*=1**, respondents were asked these follow-up questions:

- **hcondp**: *“According to our records you have previously mentioned that you have been diagnosed with [ff_prevhcondstil] in the past. Do you still have [ff_prevhcondstil]?”*
The responses were recorded in **hcondp***, which had values of 1 for Yes and 2 for No. These questions were not asked in case of “multiple sclerosis” or “HIV”, i.e., not asked if **prevhcond19/20=1**.
- **hospcp**: *“Thinking of your [ff_prevhcondstil], have you been in hospital or clinic as an in-patient overnight or longer since [ff_IntDate] because of this health condition?”*
The responses were recorded in **hospcp***, which had values of 1 for Yes and 2 for No. These questions were only asked if the respondent said they still had the condition, **hcondp*=1**, or they ever had HIV or multiplesclerosis, **prevhcond19/20=1**.
- **hospdcp**: *“How many days have you spent in hospital or clinic as an in-patient since [ff_IntDate] because of your [ff_prevhcondstil]?”*
The responses were recorded in **hospdcp***. Respondents were asked this question only if they had reported any hospitalisations, **hospcp*=1**

Second, as in Waves 2-9, continuing sample members were also asked about any new health conditions they had been diagnosed with since the last interview. The health conditions and the follow-ups are the same as introduced in Wave 10:

hcondnew: *“Since [ff_IntDate] has a doctor or other health professional newly diagnosed you as having any of the following conditions? Please just tell me the numbers that apply”*

The responses were recorded in **hcondnew*** which have a value of 1 if that condition was mentioned and 0 otherwise. If none of the conditions listed were chosen then the variable, **hcondnew96**, labelled “none of these” was set to 1, and 0 otherwise. Those who chose “Arthritis” (**hcondnew2=1**) were asked **arthtypn**, “Cancer or malignancy” (**hcondnew13=1**) were asked **cancertypn**, “Diabetes” (**hcondnew14=1**) were asked **diabetestypn**, and “An emotional, nervous or psychiatric problem” (**hcondnew22=1**) are asked **mhealthtypn**. Using the responses from **hcondnew*** and these follow-up questions, variables, **hcondncodE1, 3-8, 10-12, 15-16, 19-21, 23-43** were computed which had a value of 1 if that condition was mentioned and 0 otherwise. If none of

the conditions listed were chosen then the variable, **hcondncode96**, labelled “none of these” was set to 1, and 0 otherwise. So, **hcondncode1, 3-8, 10-12, 15-16, 19-21, 23-43, 96** is the complete list of health conditions ever diagnosed. This information is summarised below.

*Note, the responses to HIV health condition (**hcondnew20, hcondncode20**) are only available under Special License. Although respondents were allowed to report the specific “other” health condition which was recorded verbatim, these are not released (**hcondnewo**).*

For each of these newly diagnosed health condition, i.e., **hcondncodeE=1**, respondents were asked these follow-up questions:

- **hcondns**: “Do you still have [hcondncode]?”
The responses were recorded in **hcondns***, which had values of 1 for Yes and 2 for No. These follow-ups were not asked in case of health conditions for which the follow-ups do not make sense and so **hcondns6/7/19/25/32/36/43/97**.
- **hospc**: “Thinking of your [hcondncode], have you been in hospital or clinic as an in-patient overnight or longer since [ff_IntDate] because of this health condition?”
The responses were recorded in **hospc***, which had values of 1 for Yes and 2 for No. These were not asked in case of health conditions for which the follow-ups do not make sense and so **hospc25/32/36/43/97** do not exist. [This was not conditional on if they still had the condition]
- **hospcdc**: “How many days have you spent in hospital or clinic as an in-patient since [ff_IntDate] because of your [hcondncode]?”
The responses were recorded in **hospcdc***. Respondents were asked these questions only if they had reported hospitalisations for any health condition, **hospc*=1**.

Coding of final health conditions newly diagnosed, asked of continuing sample members in Waves 11-12		
hcondnew1=1, “asthma		hcondncode1=1
hcondnew2, “arthritis	arthtypn=1 “osteoarthritis”	hcondncode23=1
	arthtypn=2, “rheumatoid arthritis”	hcondncode24=1
	arthtypn=3, “other type of arthritis”	hcondncode25=1
	arthtypn=4, “more than one of the above”	-
	arthtypn=5, “don’t know”	-
hcondnew3, “congestive heart failure		hcondncode3=1
hcondnew4, “coronary heart disease		hcondncode4=1
hcondnew5, “angina		hcondncode5=1
hcondnew6, “heart attack or myocardial infarction,		hcondncode6=1
hcondnew7, “stroke		hcondncode7=1
hcondnew8, “emphysema		hcondncode8=1
hcondnew10, “hypothyroidism or an under-active thyroid		hcondncode10=1
hcondnew11, “chronic bronchitis		hcondncode11=1
hcondnew12, “any kind of liver condition		hcondncode12=1
	cancertypn=1, “bowel/colorectal”	hcondncode26=1

hcondnew13, "cancer or malignancy"	cancertypn=2, "lung"	hcondncode27=1
	cancertypn=3, "breast"	hcondncode28=1
	cancertypn=4, "prostrate" [not asked of women]	hcondncode29=1
	cancertypn=5, "liver"	hcondncode30=1
	cancertypn=6, "skin cancer or melanoma"	hcondncode31=1
	cancertypn=7, "other"	hcondncode32=1
hcondnew14, "diabetes"	diabetestypn=1, "type 1 diabetes"	hcondncode33=1
	diabetestypn=2, "type 2 diabetes"	hcondncode34=1
	diabetestypn=3, "gestational diabetes/during pregnancy"	hcondncode35=1
	diabetestypn=4, "other type of diabetes"	hcondncode36=1
	diabetestypn=5, "more than one of the above"	-
	diabetestypn=6, "don't know"	-
hcondnew15, "epilepsy"		hcondncode15=1
hcondnew16, "high blood pressure"		hcondncode16=1
hcondnew18, "other"		hcondncode97=1
hcondnew19, "multiple sclerosis"		hcondncode19=1
hcondnew20, "h.i.v."		hcondncode20=1
hcondnew21, "copd (chronic obstructive pulmonary disease"		hcondncode21=1
hcondnew22 "an emotional, nervous or psychiatric problem"	mhealthtypn=1, "anxiety"	hcondncode37=1
	mhealthtypn=2, "depression"	hcondncode38=1
	mhealthtypn=3, "psychosis or schizophrenia"	hcondncode39=1
	mhealthtypn=4, "bipolar disorder or manic depression"	hcondncode40=1
	mhealthtypn=5, "an eating disorder"	hcondncode41=1
	mhealthtypn=6, "post-traumatic disorder"	hcondncode42=1
	mhealthtypn=7, "other"	hcondncode43=1
hcondnew96, "none"		hcondncode96=1

Wave 13

New entrants and Continuing sample members

In Wave 13, most of the health conditions questions were the same as in Waves 10-12, with some exceptions.

1. The health condition “An emotional, nervous or psychiatric problem” was dropped from the list for **hcond**, the question about health conditions ever diagnosed with for new entrants. *Note this was not the case for the newly diagnosed health conditions question for continuing sample members, **hcondnew**.*
2. The routing of **hcondp** was changed. In Waves 11 & 12 this question which asked if the continuing sample member still has the condition they had reported having at the last interview but was not asked of those reporting Multiple Sclerosis (**prevhcond19**) or HIV (**prevhcond20**). From Wave 13 onwards this is also not asked of those reporting a heart attack or myocardial infarction (**prevhcond6**) or stroke (**prevhcond7**)
3. New entrants and continuing sample members were asked about a set of new health conditions, **hcond_cov** and followups: **brainnervtypn** if **HCOND_COV=24**. These were combined into **hcondcode_cov**. For each **hcondcode_cov=1**, there were two follow-ups. (i) **hconda_cov**: age at which they were diagnosed and (ii) **hconds_cov**: whether they still have the condition.

<i>Final coding of of additional health conditions asked of new entrants & continuing sample members in Wave 13</i>		
hcond_cov8=1, “blood or bone marrow cancer, such as leukaemia”		hondcode_cov44=1
hcond_cov28= 1, “cystic fibrosis”		hcondcode_cov45=1
hcond_cov24=1, “conditions affecting the brain and nerves, such as parkinson's disease, motor neurone disease, multiple sclerosis (ms), a learning disability or cerebral palsy”	brainnervtypn=1, “parkinson’s disease”	hcondcode_cov46=1
	brainnervtypn=2, “motor neurone disease”	hcondcode_cov47=1
	brainnervtypn=3, “multiple sclerosis”	hcondcode_cov19=1
	brainnervtypn=4, “a learning disability”	hcondcode_cov48=1
	brainnervtypn=5, “celebral palsy”	hcondcode_cov49=1
	brainnervtypn=6, “other”	hcondcode_cov50=1
hcond_cov25=1, “problems with your spleen or you've had your spleen removed”		hcondcode_cov51=1
hcond_cov26=1, “sickle cell disease”		hcondcode_cov52=1
hcond_cov27=1, “very overweight (a bmi of 40 or above)”		hcondcode_cov53=1
hcond_cov96=1, “none of these”		hcondcode_cov96=1

4. New entrants and continuing sample members were asked a new Mental Health Conditions module which included the question: **mhcond**: “Has a doctor or other health professional ever told you that you have any of these conditions? Please just tell me the numbers that

apply. Please select all of the answers that apply to you.” Responses were recorded in the variables **mhcond***, with a value of 1 if the mental health condition was mentioned and 0 otherwise (see the table below for the list of response options). Those who chose “Any other anxiety disorder” (**mhcond=18**), were also asked **mhcondoanx**, and those who chose “Any other mental, emotional or neurological problem or condition” (**mhcond=19**), were also asked **mhcondo**. Responses to these questions were recorded in **mhcondcode38-
mhcondcode65**. Those who did not chose any condition were assigned a value of 1 for the variables **mhcond96** and **mhcondcode96**. For each mental health condition chosen, i.e., **mhcondcode*=1**, these follow-up questions were asked:

- **mhconda**: “What age were you when you were first told you had **mhcondcode?**”
The responses were recorded in **mhconda***. These questions were not asked in case of **mhcond64/65/96=1**.
- **mhconds**: “Do you still have **mhcondcode?**”
The responses were recorded in **mhconds***, with values of 1 for yes and 2 for No. These questions were not asked in case of **mhcond58/64/65/96=1**.

Recoding of mental health conditions asked of new entrants & continuing sample members in Wave 13

mhcond2=1	depression	mhcondcode38=1
mhcond3=1	psychosis or schizophrenia	mhcondcode39=1
mhcond4=1	bipolar disorder (or 'manic depression')	mhcondcode40=1
mhcond5=1	an eating disorder	mhcondcode41=1
mhcond6=1	post-traumatic stress disorder	mhcondcode42=1
mhcond8=1	a phobia	mhcondcode54=1
mhcond9=1	panic attacks	mhcondcode55=1
mhcond10=1	attention deficit hyperactivity disorder (adhd) or attention deficit disorder (add)	mhcondcode56=1
mhcond11=1	post-natal depression	mhcondcode57=1
mhcond12=1	dementia (including alzheimer's)	mhcondcode58=1
mhcond13=1	nervous breakdown	mhcondcode59=1
mhcond14=1	a personality disorder	mhcondcode60=1
mhcond15=1	obsessive compulsive disorder (ocd)	mhcondcode61=1
mhcond16=1	seasonal affective disorder	mhcondcode62=1
mhcond17=1	alcohol or drug dependence	mhcondcode63=1
mhcond18=1	any other anxiety disorder	mhcondcode64=1
mhcond19=1	any other mental, emotional or neurological problem or condition	mhcondcode65=1
mhcond96=1	none of these	mhcondcode96=1

Wave 14 onwards

New entrants

There were two changes introduced in Wave 14.

First, new entrants were asked a detailed mental health conditions module, **mhcond***, similar to the one in Wave 13, but in Wave 14 these were combined with responses for the usual health conditions responses to create a the final list of health conditions.

mhcond: *“Has a doctor or other health professional ever told you that you have any of these conditions? Please just tell me the numbers that apply. Please select all of the answers that apply to you.”* Respondents were asked to choose from this list: “Depression”, “Psychosis or schizophrenia”, “Bipolar disorder (or 'manic depression')”, “An eating disorder”, “Post-traumatic stress disorder”, “A phobia”, “Panic attacks”, “Attention deficit hyperactivity disorder (ADHD) or Attention deficit disorder (ADD)”, “Post-natal depression”, “Dementia (including Alzheimer’s)”, “Nervous breakdown”, “A personality disorder”, “Obsessive compulsive disorder (OCD)”, “Seasonal affective disorder”, “Alcohol or drug dependence”, “Any other anxiety disorder”, “Generalised anxiety disorder”, “Any other emotional, nervous or psychiatric problem or condition”.

The responses were recorded in the variables **mhcond***, which have a value of 1 if that condition was mentioned and 0 otherwise. Those who chose **mhcond=18**, were also asked about other anxiety disorders (**mhcondoanx**) and those who chose **mhcond=19**, were also asked about other mental, emotional or neurological problems (**mhcondo**).

Second, and the health conditions asked in **hcond_cov*** in Wave 13 were combined with the usual health conditions responses to create the final list of health conditions. These additional conditions and their responses were recorded in, **hcond23** (“Chronic kidney disease”), **hcond24** (“Conditions affecting the brain and nerves, such as Parkinson’s disease, motor neurone disease, a learning disability or cerebral palsy”), **hcond26** (“Sickle cell disease”), **hcond27** (“Very overweight (a BMI of 40 or above)”), **hcond29** (“Problems with your spleen”). As before, those who chose “Arthritis” (**hcond2=1**) were asked **arthtyp**, “Cancer or malignancy” (**hcond13=1**) were asked **Cancertyp**, “Diabetes” (**hcond14=1**) were asked **diabetestyp**, **hcond22=1**. Those who chose (“Conditions affecting the brain and nerves, such as Parkinson’s disease, motor neurone disease, a learning disability or cerebral palsy” (**hcond24=1**) were asked **brainnervtyp**.

Third, a new health condition was added to the list: **HCOND29** (“Problems with your spleen”) and those who chose this (**hcond29=1**) were asked **spleenout**.

Using the responses from all these questions including the mental health conditions, a composite list of health conditions was created: **hcondcode1, 3-8, 10-12, 15-16, 19-21, 23-42, 66-89, 97**. Those who did not choose any of these health conditions were coded as 1 for **hcondcode96**.

For each health condition mentioned, i.e., **hcondcode*=1**, respondents were asked these follow-up questions:

- **hconda:** *“What age were you when you were first told you had a [HCOND CODE]?”*
The responses were recorded in **hconda***. These questions were not asked for health conditions for which it didn’t make sense and so **hconda25/32/36/76/77/85/97** do not exist.
- **hconds:** *“Do you still have [hcondcode]?”*
The responses were recorded in **hconds***, with a value of 1 for Yes, and 2 for No. These questions were not asked for health conditions for which it didn’t make sense and so **hconds6/7/10/19/20/23/24/25/32/36/70/71/76/77/78/81/83/84/85/87/97** do not exist. This was also not asked if **hcond86=1 & spleenout=1**.

Final coding of health conditions ever diagnosed with, asked of new entrants in Wave 14 onwards

hcond1=1 "asthma"		hcondcode1=1
hcond2=1 "arthritis"	arthtyp=1 "osteoarthritis"	hcondcode23=1
	arthtyp=2, "rheumatoid arthritis"	hcondcode24=1
	arthtyp=3, "other type of arthritis"	hcondcode25=1
	arthtyp=4, "more than one of the above"	-
	arthtyp=5, "don't know"	-
hcond3=1 "congestive heart failure"		hcondcode3=1
hcond4=1 "coronary heart disease"		hcondcode4=1
hcond5=1 "angina"		hcondcode5=1
hcond6=1 "heart attack or myocardial infarction"		hcondcode6=1
hcond7=1 "stroke"		hcondcode7=1
hcond8=1 "emphysema"		hcondcode8=1
hcond10=1 "hypothyroidism or an under-active thyroid"		hcondcode10=1
hcond11=1 "chronic bronchitis"		hcondcode11=1
hcond12=1 "any kind of liver condition"		hcondcode12=1
hcond13=1 "cancer or malignancy"	cancertyp=1, "bowel/colorectal"	hcondcode26=1
	cancertyp=2, "lung"	hcondcode27=1
	cancertyp=3, "breast"	hcondcode28=1
	cancertyp=4, "prostrate" [not asked of women]	hcondcode29=1
	cancertyp=5, "liver"	hcondcode30=1
	cancertyp=6, "skin cancer or melanoma"	hcondcode31=1
	cancertyp=7, "other"	hcondcode32=1
	cancertyp=8, "blood or bone marrow cancer, such as leukaemia"	hcondcode79=1
hcond14=1 "diabetes"	diabetestyp=1, "type 1 diabetes"	hcondcode33=1
	diabetestyp=2, "type 2 diabetes"	hcondcode34=1
	diabetestyp=3, "gestational diabetes/ during pregnancy"	hcondcode35=1
	diabetestyp=4, "other type of diabetes"	hcondcode36=1
	diabetestyp=5, "more than one of the above"	-
	diabetestyp=6, "don't know"	-
hcond15=1 "epilepsy"		hcondcode15=1
hcond16=1 "high blood pressure"		hcondcode16=1
hcond18=1 "other"		hcondcode97=1
hcond19=1 "multiple sclerosis"		hcondcode19=1
hcond20=1 "h.i.v."		hcondcode20=1

hcond21=1 "copd (chronic obstructive pulmonary disease"		hcondcode21=1
mhcond2=1 "depression"		hcondcode38=1
mhcond3=1 "psychosis or schizophrenia"		hcondcode39=1
mhcond4=1 "bipolar disorder (or 'manic depression')"		hcondcode40=1
mhcond5=1 "an eating disorder"		hcondcode41=1
mhcond6=1 "post-traumatic stress disorder"		hcondcode42=1
mhcond8=1 "a phobia"		hcondcode66=1
mhcond9=1 "panic attacks"		hcondcode67=1
mhcond10=1 "attention deficit hyperactivity disorder (adhd) or attention deficit disorder (add)"		hcondcode68=1
mhcond11=1 "post-natal depression"		hcondcode69=1
mhcond12=1 "dementia (including alzheimer's)"		hcondcode70=1
mhcond13=1 "nervous breakdown"		hcondcode71=1
mhcond14=1 "a personality disorder"		hcondcode72=1
mhcond15=1 "obsessive compulsive disorder (ocd)"		hcondcode73=1
mhcond16=1 "seasonal affective disorder"		hcondcode74=1
mhcond17=1 "alcohol or drug dependence"		hcondcode75=1
mhcond18=1 "any other anxiety disorder"		hcondcode76=1
mhcond19=1 "generalised anxiety disorder"		hcondcode89=1
mhcond97=1 "any other emotional, nervous or psychiatric problem or condition"		hcondcode77=1
hcond28=1 "cystic fibrosis"		hcondcode78=1
hcond23=1 "chronic kidney disease"		hcondcode80=1
hcond24=1 "conditions affecting the brain and nerves, such as parkinson's disease, motor neurone disease, a learning disability or cerebral palsy "	brainnervtyp=1 "parkinson's disease"	hcondcode81=1
	brainnervtyp=2 "motor neurone disease"	hcondcode82=1
	brainnervtyp=4 "a learning disability"	hcondcode83=1
	brainnervtyp=5 "cerebral palsy"	hcondcode84=1
	brainnervtyp=6 "other"	hcondcode85=1
hcond29=1 "problems with your spleen"		hcondcode86=1
hcond26=1 "sickle cell disease"		hcondcode87=1
hcond27=1 "very overweight (a bmi of 40 or above)"		hcondcode88=1
hcond96=1 "none"	mhcond96=1	hcondcode96=1

Continuing sample members

Wave 14 onwards, the health conditions questions asked of continuing sample members changed. First the newly diagnosed health condition questions were changed further in line with the questions for new entrants. Second, the questions to ascertain if they still had a condition they had at the last interview excluded the health conditions 6 & 7 (heart attack or myocardial infarction, stroke)

They were asked the same mental health conditions questions as new entrants (**mhcondn**, **mhcondnoanx**, **mhcondno**), and then question about any new health condition and its follow-ups (**hcondnew**, **arthtypn**, **cancertypn**, **diabetestypn**, **brainnervtypn**, **spleenoutn**). Using the responses from all these questions including the mental health conditions, a composite list of health conditions was created: **hcondncode1, 3-8, 10-12, 15-16, 19-21, 23-42, 66-89, 97**. Those who did not choose any of these health conditions were coded as 1 for **hcondncode96**

For each newly diagnosed health condition mentioned, i.e., **hcondncode*=1**, these follow-up questions were asked:

- **hcondns**: *“Do you still have [hcondncode]?”*
The responses were recorded in **hcondns***, with a value of 1 for Yes and 2 for No. These questions were not asked for health conditions for which these follow-ups didn't make sense and so it was not asked for **HCONDNCODE= 6, 7, 10, 19, 20, 23-25, 32, 36, 70, 71, 76-78, 81-85, 87, 97** & if **hcond86=1 & spleenout=1**. so, the corresponding **hconds** do not exist.
- **hospc**: *“Thinking of your [hcondncode], have you been in hospital or clinic as an in-patient overnight or longer since [ff_IntDate] because of this health condition?”*
The responses were recorded in **hospc***, with a value of 1 for Yes and 2 for No. These questions were not asked for health conditions for which these follow-ups didn't make sense and so **hconds6/7/10/19/20/23/24/25/32/36/70/71/76/77/78/81/83/84/85/87/97** do not exist. This was also not asked if **hcond86=1 & spleenout=1**.
- **hospcdc**: *“How many days have you spent in hospital or clinic as an in-patient since [ff_IntDate] because of your [HCONDNCODE]?”*
The responses were recorded in **hospcdc***, and respondents were asked these questions only if they had been hospitalised for a specific health condition, i.e., **hospc*=1**

Only in Wave 14 and not after that, these continuing sample members were asked two additional mental health questions:

- **mhgad**: *“Has a doctor or other health professional ever told you that you have generalised anxiety disorder?”*
Responses were recorded as 1 for Yes and 2 for No.
- **mhgada**: *“What age were you when you were first told you had generalised anxiety disorder?”*
Responses were recorded as 1 for yes and 2 for No, and this question was asked only if **mhgad=1**.

Final coding of health conditions ever diagnosed with, asked of continuing sample members Wave 14 onwards

hcondnew1=1 "asthma"		hcondncode1=1
hcondnew2=1 "arthritis"	arthtyp=1 "osteoarthritis"	hcondncode23=1
	arthtyp=2, "rheumatoid arthritis"	hcondncode24=1
	arthtyp=3, "other type of arthritis"	hcondncode25=1
	arthtyp=4, "more than one of the above"	-
	arthtyp=5, "don't know"	-
hcondnew3=1 "congestive heart failure"		hcondncode3=1
hcondnew4=1 "coronary heart disease"		hcondncode4=1
hcondnew5=1 "angina"		hcondncode5=1
hcondnew6=1 "heart attack or myocardial infarction"		hcondncode6=1
hcondnew7=1 "stroke"		hcondncode7=1
hcondnew8=1 "emphysema"		hcondncode8=1
hcondnew10=1 "hypothyroidism or an under-active thyroid"		hcondncode10=1
hcondnew11=1 "chronic bronchitis"		hcondncode11=1
hcondnew12=1 "any kind of liver condition"		hcondncode12=1
hcondnew13=1 "cancer or malignancy"	cancertyp=1, "bowel/colorectal"	hcondncode26=1
	cancertyp=2, "lung"	hcondncode27=1
	cancertyp=3, "breast"	hcondncode28=1
	cancertyp=4, "prostrate" [not asked of women]	hcondncode29=1
	cancertyp=5, "liver"	hcondncode30=1
	cancertyp=6, "skin cancer or melanoma"	hcondncode31=1
	cancertyp=7, "other"	hcondncode32=1
	cancertyp=8, "blood or bone marrow cancer, such as leukaemia"	hcondncode79=1
hcondnew14=1 "diabetes"	diabetestyp=1, "type 1 diabetes"	hcondncode33=1
	diabetestyp=2, "type 2 diabetes"	hcondncode34=1
	diabetestyp=3, "gestational diabetes/ during pregnancy"	hcondncode35=1
	diabetestyp=4, "other type of diabetes"	hcondncode36=1
	diabetestyp=5, "more than one of the above"	-
	diabetestyp=6, "don't know"	-
hcondnew15=1 "epilepsy"		hcondncode15=1

hcondnew16=1 "high blood pressure"		hcondncode16=1
hcondnew18=1 "other"		hcondncode97=1
hcondnew19=1 "multiple sclerosis"		hcondncode19=1
hcondnew20=1 "h.i.v."		hcondncode20=1
hcondnew21=1 "copd (chronic obstructive pulmonary disease"		hcondncode21=1
mhcondn2=1 "depression"		hcondncode38=1
mhcondn3=1 "psychosis or schizophrenia"		hcondncode39=1
mhcondn4=1 "bipolar disorder (or 'manic depression')		hcondncode40=1
mhcondn5=1 "an eating disorder"		hcondncode41=1
mhcondn6=1 "post-traumatic stress disorder"		hcondncode42=1
mhcondn8=1 "a phobia"		hcondncode66=1
mhcondn9=1 "panic attacks"		hcondncode67=1
mhcondn10=1 "attention deficit hyperactivity disorder (adhd) or attention deficit disorder (add)"		hcondncode68=1
mhcondn11=1 "post-natal depression"		hcondncode69=1
mhcondn12=1 "dementia (including alzheimer's)"		hcondncode70=1
mhcondn13=1 "nervous breakdown"		hcondncode71=1
mhcondn14=1 "a personality disorder"		hcondncode72=1
mhcondn15=1 "obsessive compulsive disorder (ocd)"		hcondncode73=1
mhcondn16=1 "seasonal affective disorder"		hcondncode74=1
mhcondn17=1 "alcohol or drug dependence"		hcondncode75=1
mhcondn18=1 "any other anxiety disorder"		hcondncode76=1
mhcondn19=1 "generalised anxiety disorder"		hcondncode89=1
mhcondn97=1 "any other emotional, nervous or psychiatric problem or condition"		hcondncode77=1
hcondn28=1 "cystic fibrosis"		hcondncode78=1
hcondn23=1 "chronic kidney disease"		hcondncode80=1
hcondn24=1 "conditions affecting the brain and nerves, such as parkinson's disease, motor neurone disease, a learning disability or cerebral palsy "	brainnervtyp=1 "parkinson's disease"	hcondncode81=1
	brainnervtyp=2 "motor neurone disease"	hcondncode82=1
	brainnervtyp=4 "a learning disability"	hcondncode83=1
	brainnervtyp=5 "cerebral palsy"	hcondncode84=1

	brainnervtyp=6 "other"	hcondncode85=1
hcondn29=1 "problems with your spleen"		hcondncode86=1
hcondn26=1 "sickle cell disease"		hcondncode87=1
hcondn27=1 "very overweight (a bmi of 40 or above)"		hcondncode88=1
hcondn96=1 "none"	mhcond96=1	hcondncode96=1

Continuing sample members were also asked asked about the health conditions they had previously reported, as in Waves 11-12 but with some changes to the routing. All continuing sample members were asked if they still had any health condition previously reported, fed forwarded from previous wave, and available as the variables, **prevhcond***, which had a value of 1 if that condition was reported to still have it at the time of the last interview, 0 otherwise. *Note in the questionnaire **prevhcond*** are referred to as **ff_prevhcondstil*** and the "HIV" health condition variable (**prevhcond20**) are only available under Special License. Note in Waves 11 & 12, hcondp was asked if **prevhcond6/7=1**, but that has change Wave 14 onwards*

For each previously mentioned health condition, i.e., **prevhcond*=1**, respondents were asked these follow-up questions:

- **hcondp**: "According to our records you have previously mentioned that you have been diagnosed with [ff_prevhcondstil] in the past. Do you still have [ff_prevhcondstil]?"
The responses were recorded in **hcondp***, which had values of 1 for Yes and 2 for No. Respondents were asked these questions only if that health condition was not mentioned as a newly diagnosed health condition, i.e., **hcondncode*=0**, and these were not asked in case of heart attack", "stroke", "multiple schlerosis" or "HIV", i.e., not asked if **prevhcond6/7/19/20=1**.
- **hospcp**: "Thinking of your [ff_prevhcondstil], have you been in hospital or clinic as an in-patient overnight or longer since [ff_IntDate] because of this health condition?"
The responses were recorded in **hospcp***, which had values of 1 for Yes and 2 for No. These questions were only asked if the respondent said they still had the condition, **hcondp*=1**, or they ever had HIV or multipleschlerosis, **prevhcond19/20=1**.
- **hospdcp**: "How many days have you spent in hospital or clinic as an in-patient since [ff_IntDate] because of your [ff_prevhcondstil]?"
The responses were recorded in **hospdcp***. Respondents were asked this question only if they had reported any hspitalisations, **hospcp*=1**