



Multi Instrument Comparison (MIC) Project

User Manual (v14 October 2014)

Data Description and Use

Centre for Health Economics
Monash University
(www.aqol.com.au)

Table of Contents

1.1 Objectives of MIC project	4
1.2 Collaborating Researchers.....	4
1.3 CHE Research Staff	5
2. Using the data	6
2.1 Summary of Data Collection	6
2.2 Technical Notes	8
2.3 Variable list and location	8
3. Notes on the data collection	33
3.1 Edit procedures (data cleaning).....	33
4 Questionnaires.....	42
4.1 Main questionnaire.....	42
VAS.....	43
Personal Wellbeing (PWI).....	45
ONS - Integrated Household Survey	46
SWLS	47
EQ-5D.....	48
AQoL-8D (Researcher's Copy - NOT TO BE USED FOR COLLECTING DATA).....	49
AQoL-4D.....	54
SF-6D.....	56
SF36	57
HUI3	61
15D.....	63
QWB-SA	66
ICECAP-A.....	69
Demographic questions.....	70
Checking questions.....	73
4.2 Disease Specific Questionnaires	74
DASS21.....	74
K10.....	75
APHAB.....	76
ST. GEORGE'S RESPIRATORY QUESTIONNAIRE FOR COPD PATIENTS (SGRQ-C).....	78
DIABETES-39	81
Arthritis Impact Measurement Scales 2 (AIMS2-SF)	82
CANCER QLQ C-30.....	84

ASTHMA QUESTIONNAIRE.....	856
MacNew	856

5. Scoring Algorithms Error! Bookmark not defined.

5.1 For Multi Attribute Utility Instruments (MAU). 91

AQoL-4D (SPSS).....	91
AQoL-8D (SPSS and STATA)	96
HUI3	108
15D.....	110
QWB.....	112
SF6D	123

5.2 For Non MAU instruments

PWI, SWLS, IHS (SPSS).....	130
ICECAP-A	132

5.3 For Disease Instruments

DASS21.....	134
K10	134
APHAB.....	135
D-39	140
AIMS2-SF.....	143
QLQ C-30.....	146
Asthma.....	149
Macnew	150

List of tables

Table 1 Country and disease area summary	6
Table 2 Main Questionnaire	6
Table 3 Disease Specific Questionnaires	7
Table 4 Target Sample Size.....	7
Table 5 Actual sample achieved by disease group and country.....	7
Table 6 Variables: Abbreviations, description name and definition.....	8

1. Introduction

The Multi Instrument Comparison (MIC) Project is a cross national survey funded by Australia's National Health and Medical Research Council (NHMRC Fund ID: 1006334). The study seeks to compare a number of instruments across eight disease areas with data collections being carried out in five countries.

1.1 Objectives of MIC project

1. Cross validation study of the instruments used for measuring QALYs and wellbeing
2. To determine the sensitivity, convergent validity and reliability of different instruments for different patient groups
3. To determine the convergent validity of the MAU instruments using non-utility criterion metrics
4. To obtain profiles of patient groups in 8 different categories from the different instruments
5. To compare responses across countries
6. To construct transformations between instruments.

1.2 Collaborating Researchers

Professor Jeff Richardson

Jeff Richardson has worked in the area of quality of life measurement for 20 years. He initiated the Assessment of Quality of Life (AQoL) instrument program which has produced four separate instruments for measuring quality of life. Over time this has involved interviewing many thousands of patients and members of the public. Recent work has involved the comparison of different instruments (as a pilot to the present project), and a comparison between instruments used by economists and psychologists for measuring quality of life. This work has resulted in numerous publications as indicated in his résumé. Richardson was recently invited to author a review of these instruments for the forthcoming on-line Encyclopaedia of Health Economics to be published by Elsevier.

Professor Robert Kaplan

Robert Kaplan has been the leading American authority on the measurement of quality of life for over three decades. He is the author or co-author of 10 books on various aspects of theoretical and applied psychology. His classic text with Saccuzzo has been reprinted 7 times, most recently in 2009. Robert Kaplan was the co-developer of the American Quality of Well-Being Index, the earliest of the instruments to be included in the present study.

Professor Robert Cummins

Robert Cummins is Australia's leading expert in the area of subjective wellbeing measurement. His research was recognised by his being named among the top 25 researchers in the field of developmental disabilities. He has maintained and updated an annual survey of personal wellbeing. He has published widely in areas employing the Personal Well-being Index and most recently in the area of homeostatically protected mood and depression.

Professor Jan Abel Olsen

Jan Abel Olsen is one of Norway's leading health economists with an international reputation based upon his publications in recognized international journals and his books published by Oxford University Press. His special interest has been in the valuation of health outcomes, and the integration of equity and fairness into economic evaluations. Norwegian data is available by contacting Professor Abel Olsen

Professor Joanna Coast

Joanna Coast has pioneered a divergent approach to quality of life measurement and is the principle author of the ICECAP instrument for measuring capabilities. Coast is one of the UK's leading health economists specialising in quality of life measurement and its application in a variety of settings.

Professor Michael Schlander

Michael Schlander's background was initially in the application of quality of life instruments in his capacity as an industry analyst. His transition to academia was marked by a highly critical review of quality of life measurement by the UK National Institute for health and Clinical Excellence (NICE) published by Springer, New York. Since then he has written prolifically in the area of quality assessment.

1.3 CHE Research Staff**Angelo Iezzi**

Angelo Iezzi is the project manager. His responsibilities are to ensure that the project conforms to ethical standards, to select and compile the instruments, to oversee the online work, train interviewers, manage data collection and storage and project administration, including liaison with research partners. He is also involved with data analysis, write-up and conference presentations.

Aimee Maxwell

Aimee Maxwell is responsible for the online work – coding the software (Lime Survey), preparing and uploading the surveys, producing and managing quotas and filters for data collection, liaising with the panel company throughout all stages of the data collection, developing algorithms into SPSS, data analysis, reports and conference presentations.

Munir Khan

Munir Khan is responsible for developing algorithms into SPSS, data analysis, progress reports and conference presentations.

John McKie

John McKie will be concerned with exploring the relationship between subjective wellbeing and utility instruments.

Sharon Lakua

Sharon Lakua is the personal assistant to Chief Investigator Richardson. She has played a major role in documentation, from the preparation of grant application, documentation of progress, literature searches

and communication between Chief Investigators, the University administration and others involved with this project.

2. Using the data

2.1 Summary of Data Collection

Data was collected online in five countries as listed in Table 1: Australia, Canada, Norway, UK and the USA. Respondents were members of panels and had agreed to participate in online research. All respondents completed the composite questionnaire (Table 2).

Table 1 Country and disease area summary

Countries	Disease area
1. Australia	Arthritis
4. Canada	Asthma
6. Germany	Cancer
5. Norway (not included in this dataset)	Depression
3. UK	Diabetes
2. USA	Hearing Loss
	Heart disease

Respondents self-reporting one of the disease conditions (depression, hearing loss, asthma, COPD, diabetes, arthritis, heart, cancer) also completed a disease specific questionnaire to confirm their condition and its severity (Table 3).

The instruments in the main questionnaire were administered in their entirety but in randomised order relative to each other.

Table 2 Main Questionnaire

Subjective Wellbeing (SWB)	Personal Wellbeing Index (PWI)	9
	Integrated Household Survey (IHS)	5
	Satisfaction with Life Survey (SWLS)	4
	subtotal	18
Multi Attribute Utility (MAU) Instruments	EQ-5D	5
	AQoL-8D and AQoL-4D	44
	HUI3	8
	15D	15
	QWB-SA	77
Non-Utility Instrument	SF-36	36
	Self TTO	1
	ICECAP-A	5
	subtotal	209
Demographics		18
	Total items in composite instrument	227

Table 3 Disease Specific Questionnaires

Health Condition	Disease Specific Instruments	Number of items
Depression	DASS21 and K10	31
Hearing Loss	Abbreviated Profile of Hearing Aid Benefit (APHAB)	24
Asthma	Asthma Quality of Life Questionnaire(AQLQ-Sydney)	20
Diabetes	Diabetes-39	39
Osteoarthritis	Arthritis Impact Measurement Scales 2 (AIMS2-SF)	26
Heart Disease	Macnew	27
Cancer	Cancer QLQ C-30	30

Table 4 Target Sample Size

	Australia	USA	UK	Canada	Norway	Germany
Disease free	300	300	300	300	300	300
Disease Sample						
Depression	150	150	150	150	150	150
Hearing Loss	150	150	150	150	150	150
Asthma	150	150	150	150	150	150
Diabetes	150	150	150	150	150	150
Arthritis	150	150	150	150	150	150
Heart Disease	150	150	150	150	150	150
Cancer	150	150	150	150	150	150

Table 5 Actual Sample Achieved by health state and country*

Diseases	Australia	UK	USA	Canada	Norway	Germany	Total
Asthma	141	150	150	138	130	147	856
Cancer	154	137	148	138	80	115	772
Depression	146	158	168	145	140	160	917
Diabetes	168	161	168	144	143	140	924
Hearing loss	155	126	156	144	115	136	832
Arthritis	163	159	179	139	130	159	929
Heart disease	149	167	170	154	151	152	943
Disease sample	1076	1058	1139	1002	889	1009	6282
'Healthy public'	265	298	321	328	288	260	1760
Total	1341	1356	1460	1330	1177	1269	7933

* Extra Disease Sample Achieved by health state and country – unused

Diseases	Australia
COPD	66
Stroke	23
Total	89

2.2 Technical Notes

Reading the Data File

Data is available in SPSS and is sent independently on request. The SPSS data file contains the variable list with definitions used and the data. The variable list is reproduced overleaf.

Dimension scores and/or utility scores have been included at the end of the data file. Scores included are for AQoL-8D and AQoL-4D, HUI3, 15D and SF-36.

2.3 Variable list and location

The variable list below contains a vertical list of variable names ('Name' column). The order of these names corresponds to the horizontal order of column headings in the data sheet.

A column heading in the data sheet can be found in the variable list by selecting any cell in the 'Name' column in the variable list, clicking 'control f' and writing in the variable name. Alternately scrolling down the list will produce the same result.

Table 6 Variables: Abbreviations, description name and definition

SCALE	NAME	LABEL	NOTES
	Respondent	Respondent	
	MIC_Country	MIC Country	
	disease	Have you got a current diagnosis of any of the following health problems?	
	gender	gender	
	Age	Age group	
	Edu	Highest level of education (even if not finished)?	
	DONOTREMOVE_s ubsid	DO NOT DELETE subsid - unique ID number across all datasets -CINT identifier	
	FID	FID - unique ID across all datasets, from CINT's partners	
	LS_id	Limesurvey data identification number - only unique in this dataset	
	submitdate	submitdate	
AQoL-8D	vIL	AQoL8D Dim1 Independent Living value	
	vHap	AQoL8D Dim2 Happiness value	
	vMH	AQoL8D Dim3 Mental Health value	
	vCop	AQoL8D Dim4 Coping value	
	vRel	AQoL8D Dim5 Relationships value	
	vSW	AQoL8D Dim6 Self Worth value	
	vPa	AQoL8D Dim7 Pain value	
	vS	AQoL8D Dim8 Senses value	
	vSuperDimMental	AQoL8D vSuperDimMental value	
	vSuperDimPhysical	AQoL8D vSuperDimPhysical value	
	AQoL8DUtility	AQoL-8D Utility	
AQoL-4D	D1IL_4D	Independent Living dimension score AQoL4D	
	D2REL_4D	Relationships dimension score AQoL4D	
	D3SEN_4D	Senses dimension score AQoL4D	
	D4MEN_4D	Mental Health dimension score AQoL4D	
	AQoL4D	AQoL4D Utility	
EQ5D	EQ5D_score	EQ5D Utility	

HUI3	HUI3_Utility	HUI3 Utility	
SF-6D	SF_6D	SF-6D Utility	
15D	D15SCORE	15D Utility	
SF-36	GH	SF-36 GENERAL HEALTH	
	PF	SF-36 PHYSICAL FUNCTION	
	RP	SF-36 ROLE PHYSICAL	
	BP	SF-36 BODILY PAIN	
	VT	SF-36 VITALITY	
	SF	SF-36 SOCIAL FUNCTION	
	RE	SF-36 ROLE EMOTIONAL	
	MH	SF-36 MENTAL HEALTH	
	PCS	SF-36 PHYSICAL COMPOSITE SCALE	
	MCS	SF-36 MENTAL COMPOSITE SCALE	
	SF36_Score	SF36 RAW Score	
	SF36_0_1_Score	SF36 0 to 1 Score	
QWB	QWBTotalScore	QWB Total RAW Score	
	QWB_0_1	QWB Score 0 to 1	
PWI	PWI_0_1	PWI Score - FOR ANALYSIS	
	PWI_a_0_1	PWIA Score - Whole satisfaction question only - do not use in analysis	
	Tot_PWI_btoi	Total PWI score - 8 domain questions	
	Ave_PWI_Score	Average PWI score - 8 domains	
SWLS	Tot_SWLS_Score	TOTAL SWLS score	
	SWLS_0_1	SWLS 0 to 1 score	
ICECAP	ic01	Feeling settled and secure	
	ic02	Love, friendship and support	
	ic03	Being independent	
	ic04	Achievement and progress	
	ic05	Enjoyment and pleasure	
	ICECAP_Capability	ICECAP_A Capability Score	
ONS	ONSi	[Overall, how satisfied are you with your life nowadays?]	
	ONSj	[Overall, to what extent do you feel that the things you do in your life are worthwhile?]	
	ONSk	[Overall, how happy did you feel yesterday?]	
	ONSI	[Overall, how anxious did you feel yesterday?]	
	Tot_ONS_Score	Total ONS score	
	ONS_0_1	ONS Score 0=worst 1=best	
	ownhealth_1	[In general, would you say your health is]	
	rate_screen_VAS	VAS What rating from 0 to 100 would you give to the state of your health?	
SELF-TTO	selfTTO	Self TTO score	
	SelfTTO_Score	Self TTO score 0=worst 1=best	
APHAB	APHAB_GLOBAL_0_1	APHAB Global score 0=worst to 1=best	
	APHAB_GLOBAL_0_1unaided	APHAB Global unaided score 0=worst to 1=best - mean of the scores for all the items in the EC, RV and BN subscales	
	APHAB_GLOBAL_0_1aided	APHAB Global aided score 0=worst to 1=best - mean of the scores for all the items in the EC, RV and BN subscales	
D39	D39_weighted_global	diabetes WEIGHTED global score 0=worst to 1=best	

	diabetes_whole_score_0_1	diabetes ADDITIVE global score 0=worst to 1=best	
	d39_energmob_0_1	Diabetes-39 Energy and Mobility scale transformed 0-1	
	d39_control_0_1	Diabetes-39 Diabetes Control scale transformed 0-1	
	d39_anxworr_0_1	Diabetes-39 Anxiety and Worry scale transformed 0-1	
	d39_socburd_0_1	Diabetes-39 Social Burden scale transformed 0-1	
	d39_sexfunc_0_1	Diabetes-39 Sexual functioning scale transformed 0-1	
MACNEW	m_emo	MacNew emotional scale	
	m_phys	MacNew physical scale	
	m_soc	MacNew social scale	
	macnew_global	MacNew global score	
	macnew_emo_0_1	MacNew emotional scale 0=worst 1=best	
	macnew_phys_0_1	MacNew physical scale 0=worst 1=best	
	macnew_soc_0_1	MacNew social scale 0=worst 1=best	
	macnew_global_0_1	MacNew GLOBAL score 0=worst 1=best	
AQLQ	AsthmaTotalScore	AsthmaTotalScore - mean of all items	
	AsthmaBreath	Asthma Breathlessness mean of 1+2+3+4+5	
	AsthmaMood	Asthma Mood Disruption mean of 6+7+8+9+10	
	AsthmaSoc	Asthma Social Disruption mean of 11+12+13+14+15+16+17	
	AsthmaCon	Asthma Concerns For Health mean of 9+11+14+17+18+19+20	
	AsthmaTotalScore_0_1	Asthma total score - mean of all items - transformed 0 worst 1 best	
	AsthmaBreath_0_1	Asthma breathlessness score - mean of 1+2+3+4+5 - transformed 0 worst 1 best	
	AsthmaMood_0_1	Asthma mood disruption score - mean of 6+7+8+9+10 - transformed 0 worst 1 best	
	AsthmaSoc_0_1	Asthma social disruption score - mean of 11+12+13+14+15+16+17 - transformed 0 worst 1 best	
	AsthmaCon_0_1	Asthma Concerns for health score - mean of 9+11+14+17+18+19+20 - transformed 0 worst 1 best	
CQLQ	cancer_whole_score_0_1	cancer_whole_score 0 (worst) 1 (best)	
	CANCER_QLQ2	CANCER_Global Health Status/QoL - from questions Q29 + Q30 - NOT a whole instrument score 0=worst 1=best	
	CANCER_PF	CANCER_Physical Function scale from questions 1+2+3+4+5 0=worst 1=best	
	CANCER_RF	CANCER_Role Function scale from questions 6+7 0=worst 1=best	
	CANCER_EF	CANCER_Emotional Functioning scale from questions 21+22+23+24 0=worst 1=best	
	CANCER_CF	CANCER_Cognitive Functioning scale from questions 20 + 25 0=worst 1=best	
	CANCER_SF	CANCER_Social Functioning scale from questions 26+27 0=worst 1=best	
	CANCER_PAIN	CANCER_Pain subscale from questions 9 + 19 0=worst 1=best no pain	
	CANCER_FATIGUE	CANCER_Fatigue subscale from questions 10+12+18 0=worst 1=best no fatigue	

K10	K10_score	K10 depression score 10-50 scale	
	K10_0to1	K10 depression score 0=worst 1=best	
DASS	DASS_S	DASS_21 stress score 0=best 42=worst	
	DASS_D	DASS_21 depression score 0=best 42=worst	
	DASS_A	DASS_21 anxiety score 0=best 42=worst	
	DASS_S_0to1	DASS_21 stress score 0=worst 1=best	
	DASS_D_0to1	DASS_21 depression score 0=worst 1=best	
	DASS_A_0to1	DASS_21 anxiety score 0=worst 1=best	
AIMS2	AIMS2_PHYS	AIMS2 Physical RAW subscale score range 12-60 high is worse	
	AIMS2_SYM	AIMS2 Symptom RAW subscale score range 3-15 high is worse	
	AIMS2_AFF	AIMS2 Affect RAW subscale score range 5-25 high is worse	
	AIMS2_SOC	AIMS2 Social RAW subscale score range 4-20 high is worse	
	AIMS2_WORK	AIMS2 Work RAW subscale score range 2-10 high is worse	
	AIMS2_raw_scales_summed	AIMS2_raw_scales_summed=AIMS2_PHYS+AIMS2_SYM+AIMS2_AFF+AIMS2_SOC	
	AIMS2_whole_scale_0_1	AIMS2_whole_scale_0_1	
	AIMS2_Physical_0to1	AIMS2 Physical subscale 0=worst 1=best	
	AIMS2_Symptom_0to1	AIMS2 Symptom subscale 0=worst 1=best	
	AIMS2_Affect_0to1	AIMS2 Affect subscale 0=worst 1=best	
	AIMS2_Social_0to1	AIMS2 Social subscale 0=worst 1=best	
	AIMS2_Work_0to1	AIMS2 Work subscale 0=worst 1=best	
	time_mins	total time in minutes	
PWI	PWI_a	[Thinking about your own life and personal circumstances, how satisfied are you with your life as a whole?]	Completely dissatisfied(0) - completely satisfied (10)
	PWI_b	[How satisfied are you with your standard of living?]	
	PWI_c	[How satisfied are you with your health?]	
	PWI_d	[How satisfied are you with what you are achieving in life?]	
	PWI_e	[How satisfied are you with your personal relationships?]	
	PWI_f	[How satisfied are you with how safe you feel?]	
	PWI_g	[How satisfied are you with feeling part of your community?]	
	PWI_h	[How satisfied are you with your future security?]	
	PWI_i	[How satisfied are you with your spirituality or religion?]	
SWLS	SWLS_a	[In most ways my life is close to my ideal] How content are you with your life.	Strongly disagree - strongly agree
	SWLS_b	[The conditions of my life are excellent] How content are you with your life.	
	SWLS_c	[I am satisfied with my life] How content are you with your life.	
	SWLS_d	[So far I have gotten the important things I want in life] How content are you with your life.	
	SWLS_e	[If I could live my life over, I would change almost nothing] How content are you with your life.	
EQ5D	EQ5Da	Mobility	5 level EQ-5D
	EQ5Db	Self-care	
	EQ5Dc	Usual activities	
	EQ5Dd	Pain / discomfort	
	EQ5De	Anxiety / depression	
SF36	sf1	[In general, would you say your health is]	Excellent - poor
	sf2	[Compared to one year ago, how would you rate your health in general now?]	Much better – much worse
	sf3	[Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports.]	Limited a lot/limited a

	sf4	[Moderate activities, such as moving a table, Pushing a vacuum cleaner, bowling, or playing golf]	little/not limited at all
	sf5	[Lifting or carrying groceries]	
	sf6	[Climbing several flights of stairs]	
	sf7	[Climbing one flight of stairs]	
	sf8	[Bending, kneeling or stooping]	
	sf9	[Walking more than one kilometre]	
	sf10	[walking half a kilometre]	
	sf11	[Walking 100 metres]	
	sf12	[Bathing or dressing yourself]	
	sf13	[Cut down the amount of time you spent on work or other activities]	All the time – none of the time
	sf14	[Accomplished less than you would like]	
	sf15	[Were limited in the kind of work or other activities]	
	sf16	[Had difficulty performing work or other activities (for example, it took extra effort)]	
	sf17	[Cut down the amount of time you spent on work or other activities]	
	sf18	[Accomplished less than you would like]	
	sf19	[Did work or other activities less carefully than usual]	
	sf20	[During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours or group?]	Not at all - extremely
	sf21	[How much bodily pain have you had during the past 4 weeks?]	None – very severe
	sf22	During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?	Not at all - extremely
	sf23	[Did you feel full of life?]	All the time – none of the time
	sf24	[Have you been very nervous?]	
	sf25	[Have you felt so down in the dumps that nothing could cheer you up?]	
	sf26	[Have you felt calm and peaceful?]	
	sf27	[Did you have a lot of energy?]	
	sf28	[Have you felt down and depressed?]	
	sf29	[Did you feel worn out?]	
	sf30	[Have you been happy?]	
	sf31	[Did you feel tired?]	
	sf32	During the past 4 weeks, how much of the time have your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc)?	Definitely true – definitely false
	sf33	[I seem to get sick a little easier than other people]	
	sf34	[I am as healthy as anybody I know]	
	sf35	[I expect my health to get worse]	
	sf36	[My health is excellent]	
HUI3	HUIvision	HUI - Please indicate which answer is correct for you regarding your vision.	
	HUIhearing	HUI - Please indicate which answer is correct for you regarding your hearing.	
	HUIspeech	HUI - Please indicate which answer is correct for you regarding your speech.	
	HUIambulation	HUI - Please indicate which answer is correct for you regarding your ambulation.	
	HUIdexterity	HUI - Please indicate which answer is correct for you regarding your dexterity.	
	HUIemotion	HUI - Please indicate which answer is correct for you regarding your emotion.	
	HUIcognition	HUI - Please indicate which answer is correct for you regarding your cognition.	
	HUIpain	HUI - Please indicate which answer is correct for you regarding your pain.	
15D	MOVE	MOBILITY - 15D	
	SEE	VISION - 15D	

	HEAR	HEARING - 15D	
	BREATH	BREATHING - 15D	
	SLEEP	SLEEPING - 15D	
	EAT	EATING - 15D	
	SPEECH	SPEECH - 15D	
	ELIM	ELIMINATION - 15D	
	UACT	USUAL ACTIVITIES - 15D	
	MENTAL	MENTAL FUNCTION - 15D	
	DISCO	DISCOMFORT AND SYMPTOMS - 15D	
	DEPR	DEPRESSION - 15D	
	DISTR	DISTRESS - 15D	
	VITAL	VITALITY - 15D	
	SEXUAL	SEXUAL ACTIVITY - 15D	
	MOVE1	15D MOVE score	
	SEE1	15D SEE score	
	HEAR1	15D HEAR score	
	BREATH1	15D BREATH score	
	SLEEP1	15D SLEEP score	
	EAT1	15D EAT score	
	SPEECH1	15D SPEECH score	
	ELIM1	15D ELIM score	
	UACT1	15D Usual ACTIVITIES score	
	MENTAL1	15D MENTAL score	
	DISCO1	15D DISCOMFORT AND SYMPTOMS score	
	DEPR1	15D DEPRESSION score	
	DISTR1	15D DISTRESS score	
	VITAL1	15D VITALTY score	
	SEX1	15D SEXUAL score	
AQoL-8D	aqol1	Thinking about how much energy you have to do the things you want to do: I am	
	aqol2	How often do you feel socially excluded or left out?	
	aqol3	Thinking about how easy or difficult it is for you to get around by yourself outside your house (e.g., shopping, visiting):	
	aqol4	Thinking about your health and your role in your community (that is to say neighbourhood, sporting, work, study, church or cultural groups):	
	aqol5	How often do you feel sad?	
	aqol6	Thinking about how often you experience serious pain: I experience it	
	aqol7	How much confidence do you have in yourself?	
	aqol8	When you think about whether you are calm and tranquil or agitated, are you:	
	aqol9	Thinking about your health and your relationship with your family:	
	aqol10	Your close relationships (family and friends) are:	
	aqol11	How well can you communicate with others? (e.g., by talking, listening, writing or signing)	
	aqol12	How often do you have trouble sleeping?	
	aqol13	How often do you feel worthless?	
	aqol14	How often do you feel angry?	
	aqol15	Thinking about your mobility, including using any aids or equipment such as wheelchairs, frames, sticks:	
	aqol16	Do you ever feel like hurting yourself?	
	aqol17	How enthusiastic do you feel?	
	aqol18	How often did you feel worried over the last 7 days?	
	aqol19	Thinking about washing yourself, toileting, dressing, eating or looking after your appearance:	
	aqol20	How often do you feel happy?	
	aqol21	How much do you feel you can cope with life's problems?	
	aqol22	How much pain or discomfort do you experience?	
	aqol23	How much do you enjoy your close relationships (family and friends)?	

	aqol24	How often does pain interfere with your usual activities?	
	aqol25	How often do you feel pleasure?	
	aqol26	How much of a burden do you feel you are to other people?	
	aqol27	How content are you with your life?	
	aqol28	How is your vision (while using any visual aids you need)?	
	aqol29	How often do you feel in control of your life?	
	aqol30	How much help do you need with jobs around the house (e.g., preparing food, cleaning the house or gardening)?	
	aqol31	How often do you feel socially isolated?	
	aqol32	How is your hearing (while using any hearing aids you need)?	
	aqol33	How often do you feel depressed?	
	aqol34	Your close and intimate relationships (including any sexual relationships) make you:	
	aqol35	How often did you feel in despair over the last seven days?	
AQoL-4D	aqol1_4D	Do you need any help looking after yourself?	
	aqol2_4D	When doing household tasks (for example, preparing food, gardening, vacuuming):	
	aqol3_4D	Thinking about how easily you can get around your home and community:	
	aqol4_4D	Because of your health, your relationships (for example, with your friends, partner or parents) generally:	
	aqol5_4D	Thinking about your relationship with other people:	
	aqol6_4D	Thinking about your health and your relationship with your family:	
	aqol7_4D	Thinking about your vision, including when using your glasses or contact lenses if needed:	
	aqol8_4D	Thinking about your hearing, including when using your hearing aid if needed:	
	aqol9_4D	How well can you communicate with others? (e.g., by talking, listening, writing or signing)	
	aqol10_4D	Thinking about how you sleep:	
	aqol11_4D	Thinking about how you generally feel:	
	aqol12_4D	How much pain or discomfort do you experience?	
QWB	QWB1a1	[Blindness or severely impaired vision in both eyes?]	Yes/no
	QWB1a2	[Blindness or severely impaired vision in only one eye?]	
	QWB1b	[Speech problems such as stuttering or being unable to speak clearly?]	
	QWB1c1	[Missing or paralyzed hands, feet, arms, or legs?]	
	QWB1c2	[Missing or paralyzed fingers or toes?]	
	QWB1d	[Any deformity of the face, fingers, hand or arm, foot or leg, or back (e.g. severe scoliosis)?]	
	QWB1e	[General fatigue, tiredness, or weakness?]	
	QWB1f	[A problem with unwanted weight gain or weight loss?]	
	QWB1g	[A problem with being under or over weight?]	
	QWB1h	[Problems chewing your food inadequately]	
	QWB1i	[Any hearing loss or deafness?]	
	QWB1j	[Any noticeable skin problems, such as bad acne or large burns or scars on face, body, arms, or legs?]	
	QWB1k	[Eczema or burning/itching rash?]	
	QWB1l1	[Dentures?]	
	QWB1l2	[Oxygen tank?]	
	QWB1l3	[Prosthesis?]	
	QWB1l4	[Eye glasses or contact lenses?]	
	QWB1l5	[Hearing aid?]	
	QWB1l6	[Magnifying glass?]	
	QWB1l7	[Neck, back or leg brace?]	
	QWB2a_0	[Any problems with your vision not corrected with glasses or contact lenses (such as double vision, distorted vision, flashes, or floaters)?] [no days]	No days/yesterday/2 days ago/3 days ago
	QWB2a_1	[Any problems with your vision not corrected with glasses or contact lenses (such as double vision, distorted vision, flashes, or floaters)?]	

	[yesterday]	
QWB2a_2	[Any problems with your vision not corrected with glasses or contact lenses (such as double vision, distorted vision, flashes, or floaters)?] [2 days ago]	
QWB2a_3	[Any problems with your vision not corrected with glasses or contact lenses (such as double vision, distorted vision, flashes, or floaters)?] [3 days ago]	
QWB2b_0	[Any eye pain, irritation, discharge, or excessive sensitivity to light?] [no days]	
QWB2b_1	[Any eye pain, irritation, discharge, or excessive sensitivity to light?] [yesterday]	
QWB2b_2	[Any eye pain, irritation, discharge, or excessive sensitivity to light?] [2 days ago]	
QWB2b_3	[Any eye pain, irritation, discharge, or excessive sensitivity to light?] [3 days ago]	
QWB2c_0	[A headache?] [no days]	
QWB2c_1	[A headache?] [yesterday]	
QWB2c_2	[A headache?] [2 days ago]	
QWB2c_3	[A headache?] [3 days ago]	
QWB2d_0	[Dizziness, earache, or ringing in your ears?] [no days]	
QWB2d_1	[Dizziness, earache, or ringing in your ears?] [yesterday]	
QWB2d_2	[Dizziness, earache, or ringing in your ears?] [2 days ago]	
QWB2d_3	[Dizziness, earache, or ringing in your ears?] [3 days ago]	
QWB2e_0	[Difficulty hearing, or discharge, or bleeding from an ear?] [no days]	
QWB2e_1	[Difficulty hearing, or discharge, or bleeding from an ear?] [yesterday]	
QWB2e_2	[Difficulty hearing, or discharge, or bleeding from an ear?] [2 days ago]	
QWB2e_3	[Difficulty hearing, or discharge, or bleeding from an ear?] [3 days ago]	
QWB2f_0	[Stuffy or runny nose, or bleeding from the nose?] [no days]	
QWB2f_1	[Stuffy or runny nose, or bleeding from the nose?] [yesterday]	
QWB2f_2	[Stuffy or runny nose, or bleeding from the nose?] [2 days ago]	
QWB2f_3	[Stuffy or runny nose, or bleeding from the nose?] [3 days ago]	
QWB2g_0	[A sore throat, difficulty swallowing, or hoarse voice?] [no days]	
QWB2g_1	[A sore throat, difficulty swallowing, or hoarse voice?] [yesterday]	
QWB2g_2	[A sore throat, difficulty swallowing, or hoarse voice?] [2 days ago]	
QWB2g_3	[A sore throat, difficulty swallowing, or hoarse voice?] [3 days ago]	
QWB2h_0	[A toothache or jaw pain?] [no days]	
QWB2h_1	[A toothache or jaw pain?] [yesterday]	
QWB2h_2	[A toothache or jaw pain?] [2 days ago]	
QWB2h_3	[A toothache or jaw pain?] [3 days ago]	
QWB2i_0	[Sore or bleeding lips, tongue, or gums?] [no days]	
QWB2i_1	[Sore or bleeding lips, tongue, or gums?] [yesterday]	
QWB2i_2	[Sore or bleeding lips, tongue, or gums?] [2 days ago]	
QWB2i_3	[Sore or bleeding lips, tongue, or gums?] [3 days ago]	
QWB2j_0	[Coughing or wheezing?] [no days]	
QWB2j_1	[Coughing or wheezing?] [yesterday]	
QWB2j_2	[Coughing or wheezing?] [2 days ago]	
QWB2j_3	[Coughing or wheezing?] [3 days ago]	
QWB2k_0	[Shortness or breath or difficulty breathing?] [no days]	
QWB2k_1	[Shortness or breath or difficulty breathing?] [yesterday]	
QWB2k_2	[Shortness or breath or difficulty breathing?] [2 days ago]	
QWB2k_3	[Shortness or breath or difficulty breathing?] [3 days ago]	
QWB2l_0	[Chest pain, pressure, palpitations, fast or skipped heart beat, or other discomfort in the chest?] [no days]	
QWB2l_1	[Chest pain, pressure, palpitations, fast or skipped heart beat, or other discomfort in the chest?] [yesterday]	
QWB2l_2	[Chest pain, pressure, palpitations, fast or skipped heart beat, or other discomfort in the chest?] [2 days ago]	

	QWB2l_3	[Chest pain, pressure, palpitations, fast or skipped heart beat, or other discomfort in the chest?] [3 days ago]	
	QWB2m_0	[An upset stomach, abdominal pain, nausea, heartburn, or vomiting?] [no days]	
	QWB2m_1	[An upset stomach, abdominal pain, nausea, heartburn, or vomiting?] [yesterday]	
	QWB2m_2	[An upset stomach, abdominal pain, nausea, heartburn, or vomiting?] [2 days ago]	
	QWB2m_3	[An upset stomach, abdominal pain, nausea, heartburn, or vomiting?] [3 days ago]	
	QWB2n_0	[Difficulty with bowel movements, diarrhea, constipation, rectal bleeding, black tar-like stools, or any pain or discomfort in the rectal area?] [no days]	
	QWB2n_1	[Difficulty with bowel movements, diarrhea, constipation, rectal bleeding, black tar-like stools, or any pain or discomfort in the rectal area?] [yesterday]	
	QWB2n_2	[Difficulty with bowel movements, diarrhea, constipation, rectal bleeding, black tar-like stools, or any pain or discomfort in the rectal area?] [2 days ago]	
	QWB2n_3	[Difficulty with bowel movements, diarrhea, constipation, rectal bleeding, black tar-like stools, or any pain or discomfort in the rectal area?] [3 days ago]	
	QWB2o_0	[Pain, burning, or blood in urine?] [no days]	
	QWB2o_1	[Pain, burning, or blood in urine?] [yesterday]	
	QWB2o_2	[Pain, burning, or blood in urine?] [2 days ago]	
	QWB2o_3	[Pain, burning, or blood in urine?] [3 days ago]	
	QWB2p_0	[Loss of bladder control, frequent night-time urination, or difficulty with urination?] [no days]	
	QWB2p_1	[Loss of bladder control, frequent night-time urination, or difficulty with urination?] [yesterday]	
	QWB2p_2	[Loss of bladder control, frequent night-time urination, or difficulty with urination?] [2 days ago]	
	QWB2p_3	[Loss of bladder control, frequent night-time urination, or difficulty with urination?] [3 days ago]	
	QWB2q_0	[Genital pain, itching, burning, or abnormal discharge, or pelvic cramping or abnormal bleeding (does not include normal menstruation)?] [no days]	
	QWB2q_1	[Genital pain, itching, burning, or abnormal discharge, or pelvic cramping or abnormal bleeding (does not include normal menstruation)?] [yesterday]	
	QWB2q_2	[Genital pain, itching, burning, or abnormal discharge, or pelvic cramping or abnormal bleeding (does not include normal menstruation)?] [2 days ago]	
	QWB2q_3	[Genital pain, itching, burning, or abnormal discharge, or pelvic cramping or abnormal bleeding (does not include normal menstruation)?] [3 days ago]	
	QWB2r_0	[A broken arm, wrist, foot, leg, or any other broken bone (other than in the back)?] [no days]	
	QWB2r_1	[A broken arm, wrist, foot, leg, or any other broken bone (other than in the back)?] [yesterday]	
	QWB2r_2	[A broken arm, wrist, foot, leg, or any other broken bone (other than in the back)?] [2 days ago]	
	QWB2r_3	[A broken arm, wrist, foot, leg, or any other broken bone (other than in the back)?] [3 days ago]	
	QWB2s_0	[Pain, stiffness, cramps, weakness, or numbness in the neck or back?] [no days]	
	QWB2s_1	[Pain, stiffness, cramps, weakness, or numbness in the neck or back?] [yesterday]	
	QWB2s_2	[Pain, stiffness, cramps, weakness, or numbness in the neck or back?] [2 days ago]	
	QWB2s_3	[Pain, stiffness, cramps, weakness, or numbness in the neck or back?] [3 days ago]	

	QWB2t_0	[Pain, stiffness, cramps, weakness, or numbness in the hips or sides?] [no days]	
	QWB2t_1	[Pain, stiffness, cramps, weakness, or numbness in the hips or sides?] [yesterday]	
	QWB2t_2	[Pain, stiffness, cramps, weakness, or numbness in the hips or sides?] [2 days ago]	
	QWB2t_3	[Pain, stiffness, cramps, weakness, or numbness in the hips or sides?] [3 days ago]	
	QWB2u_0	[Pain, stiffness, cramps, weakness, or numbness in any of the joint muscles of the hand, feet, arms, or legs?] [no days]	
	QWB2u_1	[Pain, stiffness, cramps, weakness, or numbness in any of the joint muscles of the hand, feet, arms, or legs?] [yesterday]	
	QWB2u_2	[Pain, stiffness, cramps, weakness, or numbness in any of the joint muscles of the hand, feet, arms, or legs?] [2 days ago]	
	QWB2u_3	[Pain, stiffness, cramps, weakness, or numbness in any of the joint muscles of the hand, feet, arms, or legs?] [3 days ago]	
	QWB2v_0	[Fever, chills, or sweats?] [no days]	
	QWB2v_1	[Fever, chills, or sweats?] [yesterday]	
	QWB2v_2	[Fever, chills, or sweats?] [2 days ago]	
	QWB2v_3	[Fever, chills, or sweats?] [3 days ago]	
	QWB2w_0	[Swelling of ankles, hands, feet, or abdomen?] [no days]	
	QWB2w_1	[Swelling of ankles, hands, feet, or abdomen?] [yesterday]	
	QWB2w_2	[Swelling of ankles, hands, feet, or abdomen?] [2 days ago]	
	QWB2w_3	[Swelling of ankles, hands, feet, or abdomen?] [3 days ago]	
	QWB2x_0	[Loss of consciousness, fainting, or seizures?] [no days]	
	QWB2x_1	[Loss of consciousness, fainting, or seizures?] [yesterday]	
	QWB2x_2	[Loss of consciousness, fainting, or seizures?] [2 days ago]	
	QWB2x_3	[Loss of consciousness, fainting, or seizures?] [3 days ago]	
	QWB2y_0	[Difficulty with your balance, standing, or walking?] [no days]	
	QWB2y_1	[Difficulty with your balance, standing, or walking?] [yesterday]	
	QWB2y_2	[Difficulty with your balance, standing, or walking?] [2 days ago]	
	QWB2y_3	[Difficulty with your balance, standing, or walking?] [3 days ago]	
	QWB3a_0	[Trouble falling asleep or staying asleep?] [no days]	
	QWB3a_1	[Trouble falling asleep or staying asleep?] [yesterday]	
	QWB3a_2	[Trouble falling asleep or staying asleep?] [2 days ago]	
	QWB3a_3	[Trouble falling asleep or staying asleep?] [3 days ago]	
	QWB3b_0	[Spells of feeling nervous or shaky?] [no days]	
	QWB3b_1	[Spells of feeling nervous or shaky?] [yesterday]	
	QWB3b_2	[Spells of feeling nervous or shaky?] [2 days ago]	
	QWB3b_3	[Spells of feeling nervous or shaky?] [3 days ago]	
	QWB3c_0	[Spells of feeling upset, downhearted, or blue?] [no days]	
	QWB3c_1	[Spells of feeling upset, downhearted, or blue?] [yesterday]	
	QWB3c_2	[Spells of feeling upset, downhearted, or blue?] [2 days ago]	
	QWB3c_3	[Spells of feeling upset, downhearted, or blue?] [3 days ago]	
	QWB3d_0	[Excessive worry or anxiety?] [no days]	
	QWB3d_1	[Excessive worry or anxiety?] [yesterday]	
	QWB3d_2	[Excessive worry or anxiety?] [2 days ago]	
	QWB3d_3	[Excessive worry or anxiety?] [3 days ago]	
	QWB3e_0	[Feelings that you have little or no control over events in your life?] [no days]	
	QWB3e_1	[Feelings that you have little or no control over events in your life?] [yesterday]	
	QWB3e_2	[Feelings that you have little or no control over events in your life?] [2 days ago]	
	QWB3e_3	[Feelings that you have little or no control over events in your life?] [3 days ago]	
	QWB3f_0	[Feelings of being lonely or isolated?] [no days]	
	QWB3f_1	[Feelings of being lonely or isolated?] [yesterday].	

	QWB3f_2	[Feelings of being lonely or isolated?] [2 days ago]	
	QWB3f_3	[Feelings of being lonely or isolated?] [3 days ago]	
	QWB3g_0	[Feelings of frustration, irritation, or close to losing your temper?] [no days]	
	QWB3g_1	[Feelings of frustration, irritation, or close to losing your temper?] [yesterday]	
	QWB3g_2	[Feelings of frustration, irritation, or close to losing your temper?] [2 days ago]	
	QWB3g_3	[Feelings of frustration, irritation, or close to losing your temper?] [3 days ago]	
	QWB3h_0	[A hangover?] [no days]	
	QWB3h_1	[A hangover?] [yesterday]	
	QWB3h_2	[A hangover?] [2 days ago]	
	QWB3h_3	[A hangover?] [3 days ago]	
	QWB3i_0	[Any decrease of sexual interest or performance?] [no days]	
	QWB3i_1	[Any decrease of sexual interest or performance?] [yesterday]	
	QWB3i_2	[Any decrease of sexual interest or performance?] [2 days ago]	
	QWB3i_3	[Any decrease of sexual interest or performance?] [3 days ago]	
	QWB3j_0	[Confusion, difficulty understanding the written or spoken word, or significant memory loss?] [no days]	
	QWB3j_1	[Confusion, difficulty understanding the written or spoken word, or significant memory loss?] [yesterday]	
	QWB3j_2	[Confusion, difficulty understanding the written or spoken word, or significant memory loss?] [2 days ago]	
	QWB3j_3	[Confusion, difficulty understanding the written or spoken word, or significant memory loss?] [3 days ago]	
	QWB3k_0	[Thoughts or images you could not get out of your mind?] [no days]	
	QWB3k_1	[Thoughts or images you could not get out of your mind?] [yesterday]	
	QWB3k_2	[Thoughts or images you could not get out of your mind?] [2 days ago]	
	QWB3k_3	[Thoughts or images you could not get out of your mind?] [3 days ago]	
	QWB3l_0	[To take any medication including over-the-counter remedies (aspirin/tylenol, allergy medications, insulin, hormones, estrogen, thyroid, prednisone)?] [no days]	
	QWB3l_1	[To take any medication including over-the-counter remedies (aspirin/tylenol, allergy medications, insulin, hormones, estrogen, thyroid, prednisone)?] [yesterday]	
	QWB3l_2	[To take any medication including over-the-counter remedies (aspirin/tylenol, allergy medications, insulin, hormones, estrogen, thyroid, prednisone)?] [2 days ago]	
	QWB3l_3	[To take any medication including over-the-counter remedies (aspirin/tylenol, allergy medications, insulin, hormones, estrogen, thyroid, prednisone)?] [3 days ago]	
	QWB3m_0	[To stay on a medically prescribed diet for health reasons?] [no days].	
	QWB3m_1	[To stay on a medically prescribed diet for health reasons?] [yesterday]	
	QWB3m_2	[To stay on a medically prescribed diet for health reasons?] [2 days ago]	
	QWB3m_3	[To stay on a medically prescribed diet for health reasons?] [3 days ago]	
	QWB3n_0	[A loss of appetite or over-eating?] [no days]	
	QWB3n_1	[A loss of appetite or over-eating?] [yesterday]	
	QWB3n_2	[A loss of appetite or over-eating?] [2 days ago]	
	QWB3n_3	[A loss of appetite or over-eating?] [3 days ago]	
	QWB4	In the last 3 days did you have any symptoms, health complaints, or pains that have not been mentioned?	Yes/no
	QWB4yeswhat_A	[Symptom A:] What were they?	No days/yesterday/2 days ago/3 days ago
	QWB4yeswhat_Acomment	[Comment] What were they?	
	QWB4yeswhat_B	[Symptom B:] What were they?	

QWB4yeswhat_Bcomment	[Comment] What were they?
QWB4yeswhen_A1	[Symptom A:] On which days did you have them?
QWB4yeswhen_A2	[Symptom B:] On which days did you have them?
QWB5a_0	[Did you spend any part of the day or night as a patient in a hospital, nursing home, or rehabilitation center?] [no days]
QWB5a_1	[Did you spend any part of the day or night as a patient in a hospital, nursing home, or rehabilitation center?] [yesterday]
QWB5a_2	[Did you spend any part of the day or night as a patient in a hospital, nursing home, or rehabilitation center?] [2 days ago]
QWB5a_3	[Did you spend any part of the day or night as a patient in a hospital, nursing home, or rehabilitation center?] [3 days ago]
QWB5b_0	[Because of any impairment or health problem, did you need help with your personal care needs, such as eating, dressing, bathing, or getting around your home?] [no days]
QWB5b_1	[Because of any impairment or health problem, did you need help with your personal care needs, such as eating, dressing, bathing, or getting around your home?] [yesterday]
QWB5b_2	[Because of any impairment or health problem, did you need help with your personal care needs, such as eating, dressing, bathing, or getting around your home?] [2 days ago] ...
QWB5b_3	[Because of any impairment or health problem, did you need help with your personal care needs, such as eating, dressing, bathing, or getting around your home?] [3 days ago]
QWB6a_0	[Which days did you drive a motor vehicle?] [no days]
QWB6a_1	[Which days did you drive a motor vehicle?] [yesterday]
QWB6a_2	[Which days did you drive a motor vehicle?] [2 days ago]
QWB6a_3	[Which days did you drive a motor vehicle?] [3 days ago]
QWB6b_0	[Which days did you use public transportation such as a bus, underground, patient transport, train, or airplane?] [no days]
QWB6b_1	[Which days did you use public transportation such as a bus, underground, patient transport, train, or airplane?] [yesterday]
QWB6b_2	[Which days did you use public transportation such as a bus, underground, patient transport, train, or airplane?] [2 days ago]
QWB6b_3	[Which days did you use public transportation such as a bus, underground, patient transport, train, or airplane?] [3 days ago]
QWB6c_0	[Which days did you either not drive a motor vehicle or not use public transportation because of your health, or need help from another person to use?] [no days]
QWB6c_1	[Which days did you either not drive a motor vehicle or not use public transportation because of your health, or need help from another person to use?] [yesterday]
QWB6c_2	[Which days did you either not drive a motor vehicle or not use public transportation because of your health, or need help from another person to use?] [2 days ago]
QWB6c_3	[Which days did you either not drive a motor vehicle or not use public transportation because of your health, or need help from another person to use?] [3 days ago]
QWB7a_0	[Have trouble climbing stairs or inclines or walking off the footpath?] [no days]
QWB7a_1	[Have trouble climbing stairs or inclines or walking off the footpath?] [yesterday]
QWB7a_2	[Have trouble climbing stairs or inclines or walking off the footpath?] [2 days ago]
QWB7a_3	[Have trouble climbing stairs or inclines or walking off the footpath?] [3 days ago]

QWB7b_0	[Avoid walking, have trouble walking, or walk more slowly than other people your age?] [no days]
QWB7b_1	[Avoid walking, have trouble walking, or walk more slowly than other people your age?] [yesterday]
QWB7b_2	[Avoid walking, have trouble walking, or walk more slowly than other people your age?] [2 days ago]
QWB7b_3	[Avoid walking, have trouble walking, or walk more slowly than other people your age?] [3 days ago]
QWB7c_0	[Limp or use a cane, crutches, or walker?] [no days]
QWB7c_1	[Limp or use a cane, crutches, or walker?] [yesterday]
QWB7c_2	[Limp or use a cane, crutches, or walker?] [2 days ago]
QWB7c_3	[Limp or use a cane, crutches, or walker?] [3 days ago]
QWB7d_0	[Avoid or have trouble bending over, stooping, or kneeling?] [no days]
QWB7d_1	[Avoid or have trouble bending over, stooping, or kneeling?] [yesterday]
QWB7d_2	[Avoid or have trouble bending over, stooping, or kneeling?] [2 days ago]
QWB7d_3	[Avoid or have trouble bending over, stooping, or kneeling?] [3 days ago]
QWB7e_0	[Have any trouble lifting or carrying everyday objects such as books, a briefcase, or groceries?] [no days]
QWB7e_1	[Have any trouble lifting or carrying everyday objects such as books, a briefcase, or groceries?] [yesterday]
QWB7e_2	[Have any trouble lifting or carrying everyday objects such as books, a briefcase, or groceries?] [2 days ago]
QWB7e_3	[Have any trouble lifting or carrying everyday objects such as books, a briefcase, or groceries?] [3 days ago]
QWB7f_0	[Have any other limitations in physical movements?] [no days]
QWB7f_1	[Have any other limitations in physical movements?] [yesterday]
QWB7f_2	[Have any other limitations in physical movements?] [2 days ago]
QWB7f_3	[Have any other limitations in physical movements?] [3 days ago]
QWB7g_0	[Spend all or most of the day in bed, chair, or couch because of health reasons?] [no days]
QWB7g_1	[Spend all or most of the day in bed, chair, or couch because of health reasons?] [yesterday]
QWB7g_2	[Spend all or most of the day in bed, chair, or couch because of health reasons?] [2 days ago]
QWB7g_3	[Spend all or most of the day in bed, chair, or couch because of health reasons?] [3 days ago]
QWB7h_0	[Spend all or most of the day in a wheelchair?] [no days]
QWB7h_1	[Spend all or most of the day in a wheelchair?] [yesterday]
QWB7h_2	[Spend all or most of the day in a wheelchair?] [2 days ago]
QWB7h_3	[Spend all or most of the day in a wheelchair?] [3 days ago]
QWB7i_0	[If in a wheelchair, on which days did someone else control its movement?] [no days]
QWB7i_1	[If in a wheelchair, on which days did someone else control its movement?] [yesterday]
QWB7i_2	[If in a wheelchair, on which days did someone else control its movement?] [2 days ago]
QWB7i_3	[If in a wheelchair, on which days did someone else control its movement?] [3 days ago]
QWB8a_0	[Because of any physical or emotional health reasons, on which days did you avoid, need help with, or were limited in doing some of your usual activities, such as work, school, or housekeeping?] [no days]
QWB8a_1	[Because of any physical or emotional health reasons, on which days did you avoid, need help with, or were limited in doing some of your usual activities, such as work, school, or housekeeping?] [yesterday].
QWB8a_2	[Because of any physical or emotional health reasons, on which days did you avoid, need help with, or were limited in doing some of your usual activities, such as work, school, or housekeeping?] [2 days ago]

	QWB8a_3	[Because of any physical or emotional health reasons, on which days did you avoid, need help with, or were limited in doing some of your usual activities, such as work, school, or housekeeping?] [3 days ago]	
	QWB8b_0	[Because of any physical or emotional health reasons, on which days did you avoid or feel limited in doing some of your usual activities, such as visiting family or friends, hobbies, shopping, recreational, or religious activities?] [no days]	
	QWB8b_1	[Because of any physical or emotional health reasons, on which days did you avoid or feel limited in doing some of your usual activities, such as visiting family or friends, hobbies, shopping, recreational, or religious activities?] [yesterday]	
	QWB8b_2	[Because of any physical or emotional health reasons, on which days did you avoid or feel limited in doing some of your usual activities, such as visiting family or friends, hobbies, shopping, recreational, or religious activities?] [2 days ago]	
	QWB8b_3	[Because of any physical or emotional health reasons, on which days did you avoid or feel limited in doing some of your usual activities, such as visiting family or friends, hobbies, shopping, recreational, or religious activities?] [3 days ago]	
	QWB8c_0	[On which days did you have to change any of your plans or activities because of your health? (Consider only activities that you did not report in the last 2 questions.)] [no days]	
	QWB8c_1	[On which days did you have to change any of your plans or activities because of your health? (Consider only activities that you did not report in the last 2 questions.)] [yesterday]	
	QWB8c_2	[On which days did you have to change any of your plans or activities because of your health? (Consider only activities that you did not report in the last 2 questions.)] [2 days ago]	
	QWB8c_3	[On which days did you have to change any of your plans or activities because of your health? (Consider only activities that you did not report in the last 2 questions.)] [3 days ago]	
	QWB9a	Would you say that your health is: (HEALTH TEST 3)	Excellent - poor
	QWB9b	Compared to a year ago, how would you rate your health in general now?	Much better – much worse
	QWB9_c	Think about a scale of 0 to 100 What number from 0 to 100 would you give to the state of your health, on average, over the last 3 days?	In multiples of 10
D39	DIABETES_1	[your diabetes medication schedule]	
	DIABETES_2	[worries about money matters]	
	DIABETES_3	[limited energy levels]	
	DIABETES_4	[following your doctor's prescribed treatment plan for diabetes]	
	DIABETES_5	[food restrictions required to control your diabetes]	
	DIABETES_6	[concerns about your future]	
	DIABETES_7	[other health problems besides diabetes]	
	DIABETES_8	[stress or pressure in your life]	
	DIABETES_9	[feelings of weakness]	
	DIABETES_10	[restrictions on how far you can walk]	
	DIABETES_11	[any daily exercises for your diabetes]	
	DIABETES_12	[loss or blurring of vision]	
	DIABETES_13	[not being able to do what you want]	
	DIABETES_14	[having diabetes]	
	DIABETES_15	[losing control of your blood sugar levels]	
	DIABETES_16	[other illnesses besides diabetes]	
	DIABETES_17	[testing your blood sugar levels]	
	DIABETES_18	[the time required to control your diabetes]	
	DIABETES_19	[the restrictions your diabetes places on your family and friends]	
	DIABETES_20	[being embarrassed because you have diabetes]	
	DIABETES_21	[diabetes interfering with your sex life]	
	DIABETES_22	[feeling depressed or low]	
	DIABETES_23	[problems with sexual functioning]	

	DIABETES_24	[getting your diabetes well controlled]	
	DIABETES_25	[complications from your diabetes]	
	DIABETES_26	[doing things that your family and friends don't do]	
	DIABETES_27	[keeping a record of your blood sugar levels]	
	DIABETES_28	[the need to eat at regular intervals]	
	DIABETES_29	[not being able to do housework or other jobs around the house]	
	DIABETES_30	[a decreased interest in sex]	
	DIABETES_31	[having to organise your daily life around diabetes]	
	DIABETES_32	[needing to rest often]	
	DIABETES_33	[problems in climbing stairs or walking up steps]	
	DIABETES_34	[having trouble caring for yourself (dressing, bathing, or using the toilet)]	
	DIABETES_35	[restless sleep]	
	DIABETES_36	[walking more slowly than others]	
	DIABETES_37	[being identified as a diabetic]	
	DIABETES_38	[having diabetes interfere with your family life]	
	DIABETES_39	[diabetes in general]	
	diabetes_whole_scale_added	diabetes_whole_scale_added high (worst)	
	d39_energmob	Diabetes-39 Energy and Mobility scale RAW score - questions 3+7+9+10+11+12+13+16+25+29+32+33+34+35+36	
	d39_control	Diabetes-39 Control scale RAW score - questions 1+4+5+14+15+17+18+24+27+28+31+39	
	d39_anxworr	Diabetes-39 Anxiety and Worry scale RAW score - questions 2+6+8+22	
	d39_socburd	Diabetes-39 Social Burden scale RAW score - questions 19+20+26+37+38	
	d39_sexfunc	Diabetes-39 Sexual functioning scale RAW score - questions 21+23+30	
APHAB	APHAB_aid	Hearing aid experience:	
	APHAB_aid_daily	Daily hearing aid use:	
	APHAB_Employ	Employment:	
	APHAB_1_un	[When I am in a crowded grocery store, talking with the cashier, I can follow the conversation.] [Scale 1] unaided BN scale to be REVERSED	
	APHAB_1_aided	[When I am in a crowded grocery store, talking with the cashier, I can follow the conversation.] [Scale 2] aided BN scale to be REVERSED	
	APHAB_2_un	[I miss a lot of information when I'm listening to a lecture.] [Scale 1] unaided RV scale	
	APHAB_2_aided	[I miss a lot of information when I'm listening to a lecture.] [Scale 2] with aid RV scale	
	APHAB_3_un	[Unexpected sounds, like a smoke detector or alarm bell are uncomfortable.] [Scale 1] unaided AV scale	
	APHAB_3_aided	[Unexpected sounds, like a smoke detector or alarm bell are uncomfortable.] [Scale 2] with aid AV scale	
	APHAB_4_un	[I have difficulty hearing a conversation when I'm with one of my family at home.] [Scale 1] unaided EC scale	
	APHAB_4_aided	[I have difficulty hearing a conversation when I'm with one of my family at home.] [Scale 2] with aid EC scale	
	APHAB_5_un	[I have trouble understanding the dialogue in a movie or at the theater.] [Scale 1] unaided RV scale	
	APHAB_5_aided	[I have trouble understanding the dialogue in a movie or at the theater.] [Scale 2] with aid RV scale	
	APHAB_6_un	[When I am listening to the news on the car radio, and family members are talking, I have trouble hearing the news.] [Scale 1] unaided BN scale	
	APHAB_6_aided	[When I am listening to the news on the car radio, and family members are talking, I have trouble hearing the news.] [Scale 2] with aid BN scale	
	APHAB_7_un	[When I'm at the dinner table with several people, and am trying to have a conversation with one person, understanding speech is difficult.] [Scale 1] unaided BN scale	

APHAB_7_aided	[When I'm at the dinner table with several people, and am trying to have a conversation with one person, understanding speech is difficult.] [Scale 2] with aid BN scale	
APHAB_8_un	[Traffic noises are too loud.] [Scale 1] unaided AV scale	
APHAB_8_aided	[Traffic noises are too loud.] [Scale 2] with aid AV scale	
APHAB_9_un	[When I am talking with someone across a large empty room, I understand the words.] [Scale 1] unaided RV scale to be REVERSED	
APHAB_9_aided	[When I am talking with someone across a large empty room, I understand the words.] [Scale 2] with aid RV scale to be REVERSED	
APHAB_10_un	[When I am in a small office, interviewing or answering questions, I have difficulty following the conversation.] [Scale 1] unaided EC scale	
APHAB_10_aided	[When I am in a small office, interviewing or answering questions, I have difficulty following the conversation.] [Scale 2] with aid EC scale	
APHAB_11_un	[When I am in a theater watching a movie or play, and the people around me are whispering and rustling paper wrappers, I can still make out the dialogue.] [Scale 1] unaided RV scale to be REVERSED	
APHAB_11_aided	[When I am in a theater watching a movie or play, and the people around me are whispering and rustling paper wrappers, I can still make out the dialogue.] [Scale 2] with aid RV scale to be REVERSED	
APHAB_12_un	[When I am having a quiet conversation with a friend, I have difficulty understanding.] [Scale 1] unaided EC scale	
APHAB_12_aided	[When I am having a quiet conversation with a friend, I have difficulty understanding.] [Scale 2] with aid EC scale	
APHAB_13_un	[The sounds of running water, such as a toilet or shower, are uncomfortably loud.] [Scale 1] unaided AV scale	
APHAB_13_aided	[The sounds of running water, such as a toilet or shower, are uncomfortably loud.] [Scale 2] with aid AV scale	
APHAB_14_un	[When a speaker is addressing a small group, and everyone is listening quietly, I have to strain to understand.] [Scale 1] unaided EC scale	
APHAB_14_aided	[When a speaker is addressing a small group, and everyone is listening quietly, I have to strain to understand.] [Scale 2] with aid EC scale	
APHAB_15_un	[When I'm in a quiet conversation with my doctor in an examination room, it is hard to follow the conversation.] [Scale 1] unaided EC scale	
APHAB_15_aided	[When I'm in a quiet conversation with my doctor in an examination room, it is hard to follow the conversation.] [Scale 2] with aid EC scale	
APHAB_16_un	[I can understand conversations even when several people are talking.] [Scale 1] unaided BN scale to be REVERSED	
APHAB_16_aided	[I can understand conversations even when several people are talking.] [Scale 2] with aid BN scale to be REVERSED	
APHAB_17_un	[The sounds of construction work are uncomfortably loud.] [Scale 1] unaided AV scale	
APHAB_17_aided	[The sounds of construction work are uncomfortably loud.] [Scale 2] with aid AV scale	
APHAB_18_un	[It's hard for me to understand what is being said at lectures or church services.] [Scale 1] unaided RV scale	
APHAB_18_aided	[It's hard for me to understand what is being said at lectures or church services.] [Scale 2] with aid RV scale	
APHAB_19_un	[I can communicate with others when we are in a crowd.] [Scale 1] unaided BN scale to be REVERSED	
APHAB_19_aided	[I can communicate with others when we are in a crowd.] [Scale 2] with aid BN scale to be REVERSED	
APHAB_20_un	[The sound of a fire engine siren close by is so loud that I need to cover my ears.] [Scale 1] unaided AV scale	
APHAB_20_aided	[The sound of a fire engine siren close by is so loud that I need to cover my ears.] [Scale 2] with aid AV scale	
APHAB_21_un	[I can follow the words of a sermon when listening to a religious service.] [Scale 1] unaided RV scale to be REVERSED	

	APHAB_21_aided	[I can follow the words of a sermon when listening to a religious service.] [Scale 2] with aid RV scale to be REVERSED	
	APHAB_22_un	[The sound of screeching tires is uncomfortably loud.] [Scale 1] unaided AV scale	
	APHAB_22_aided	[The sound of screeching tires is uncomfortably loud.] [Scale 2] with aid AV scale	
	APHAB_23_un	[I have to ask people to repeat themselves in one-on-one conversation in a quiet room.] [Scale 1] unaided EC scale	
	APHAB_23_aided	[I have to ask people to repeat themselves in one-on-one conversation in a quiet room.] [Scale 2] with aid EC scale	
	APHAB_24_un	[I have trouble understanding others when an air conditioner or fan is on.] [Scale 1] unaided BN scale	
	APHAB_24_aided	[I have trouble understanding others when an air conditioner or fan is on.] [Scale 2] with aid BN scale	
	APHAB_EC_UNav	APHAB_Ease of Communication _UNAIDED subscale average	
	APHAB_EC_AIDav	APHAB_Ease of Communication _AIDED subscale average	
	APHAB_BN_UNav	APHAB Background Noise _UNAIDED subscale average	
	APHAB_BN_AIDav	APHAB Background Noise _AIDED subscale average	
	APHAB_RV_UNav	APHAB Reverberation _UNAIDED subscale average	
	APHAB_RV_AIDav	APHAB Reverberation _AIDED subscale average	
	APHAB_AV_UNav	APHAB Aversiveness _UNAIDED subscale average	
	APHAB_AV_AIDav	APHAB Aversiveness _AIDED subscale average	
	APHAB_ECu_0_1	APHAB_Ease of Communication _UNAIDED subscale average 0=worst to 1=best scale	
	APHAB_ECa_0_1	APHAB_Ease of Communication _AIDED subscale average 0=worst to 1=best scale	
	APHAB_BNu_0_1	APHAB Background Noise _UNAIDED subscale average 0=worst to 1=best scale	
	APHAB_BNa_0_1	APHAB Background Noise _AIDED subscale average 0=worst to 1=best scale	
	APHAB_RVu_0_1	APHAB Reverberation _UNAIDED subscale average 0=worst to 1=best scale	
	APHAB_RVa_0_1	APHAB Reverberation _AIDED subscale average 0=worst to 1=best scale	
	APHAB_AVu_0_1	APHAB Aversiveness _UNAIDED subscale average 0=worst to 1=best scale	
	APHAB_AVa_0_1	APHAB Aversiveness _AIDED subscale average 0=worst to 1=best scale	
	APHAB_GLOBALunaided	APHAB Global unaided score - mean of the scores for all the items in the unaided EC, RV and BN subscales	
	APHAB_GLOBALaided	APHAB Global AIDED score - mean of the scores for all the items in the AIDED EC, RV and BN subscales	
AIMS2	AIMS2_1	[How often were you physically able to drive a car or use public transportation?]	
	AIMS2_2	[How often were you in a bed or chair for most of the day?]	
	AIMS2_3	[Did you have trouble doing vigorous activities such as running, lifting heavy objects, or participating in strenuous sports?]	
	AIMS2_4	[Did you have trouble either walking several blocks or climbing a few flights of stairs?]	

	AIMS2_5	[Were you unable to walk unless assisted by another person or by a cane, crutches or walker?]	
	AIMS2_6	[Could you easily write with a pen or pencil?]	
	AIMS2_7	[Could you easily button a shirt or blouse?]	
	AIMS2_8	[Could you easily turn a key in a lock?]	
	AIMS2_9	[Could you easily comb or brush your hair?]	
	AIMS2_10	[Could you easily reach shelves that were above your head?]	
	AIMS2_11	[Did you need help to get dressed?]	
	AIMS2_12	[Did you need help to get out of bed?]	
	AIMS2_13	[How often did you have severe pain from your arthritis?]	
	AIMS2_14	[How often did your morning stiffness last more than one hour from the time you woke up?]	
	AIMS2_15	[How often did your pain make it difficult for you to sleep?]	
	AIMS2_16	[How often have you felt tense or high strung?]	
	AIMS2_17	[How often have you been bothered by nervousness or your nerves]	
	AIMS2_18	[How often have you been in low or very low spirits?]	
	AIMS2_19	[How often have you enjoyed the things you do?]	
	AIMS2_20	[How often did you feel like a burden to others?]	
	AIMS2_21	[How often did you get together with friends or relatives?]	
	AIMS2_22	[How often were you on the telephone with close friends or relatives?]	
	AIMS2_23	[How often did you go to a meeting of a church, club, team, or other groups?]	
	AIMS2_24	[Did you feel that your family or friends were sensitive to your personal needs?]	
	AIMS2_employ	Are you unemployed, disabled, or retired?	
	AIMS2_25	[How often were you unable to do any paid work, house work or school work?]	
	AIMS2_26	[On the days you did work, how often did you have to work a shorter day?]	
MACNEW	macnew1	In general, how much of the time during the last 2 weeks have you felt frustrated, impatient or angry?	
	macnew2	How often during the last 2 weeks have you felt worthless or inadequate?	
	macnew3	In the last 2 weeks, how much of the time did you feel very confident and sure that you could deal with your heart problem?	
	macnew4	In general how much of the time did you feel discouraged or down in the dumps during the last 2 weeks?	
	macnew5	How much of the time during the past 2 weeks did you feel relaxed and free of tension?	
	macnew6	How often during the last 2 weeks have you felt worn out or low in energy?	
	macnew7	How happy, satisfied, or pleased have you been with your personal life during the last 2 weeks?	
	macnew8	In general, how often during the last 2 weeks have you felt restless, or as if you were having difficulty trying to calm down?	
	macnew9	How much shortness of breath have you experienced during the last 2 weeks while doing your day-to-day physical activities?	
	macnew10	How often during the last 2 weeks have you felt tearful or like crying?	
	macnew11	How often during the last 2 weeks have you felt as if you are more dependent than you were before your heart problem?	
	macnew12	How often during the last 2 weeks have you felt you were unable to do your usual social activities or social activities with your family?	
	macnew13	How often during the last 2 weeks have you felt as if others no longer have the same confidence in you as they did before your heart problem?	
	macnew14	How often during the last 2 weeks have you experienced chest pain while doing your day-to-day activities?	
	macnew15	How often during the last 2 weeks have you felt unsure of yourself or lacking in self-confidence?	

	macnew16	How often during the last 2 weeks have you been bothered by aching or tired legs?	
	macnew17	During the last 2 weeks, how much have you been limited in doing sports or exercise as a result of your heart problem?	
	macnew18	How often during the last 2 weeks have you felt apprehensive or frightened?	
	macnew19	How often during the last 2 weeks have you felt dizzy or lightheaded?	
	macnew20	In general, during the last 2 weeks how much have you been restricted or limited as a result of your heart problem?	
	macnew21	How often during the last 2 weeks have you felt unsure as to how much exercise or physical activity you should be doing?	
	macnew22	How often during the last 2 weeks have you felt as if your family is being over-protective toward you?	
	macnew23	How often during the past 2 weeks have you felt as if you were a burden on others?	
	macnew24	How often during the past 2 weeks have you felt excluded from doing things with other people because of your heart problem?	
	macnew25	How often during the past 2 weeks have you felt unable to socialize because of your heart problem?	
	macnew26	In general, during the last 2 weeks how much have you been physically restricted or limited as a result of your heart problem?	
	macnew27	How often during the last 2 weeks have you felt your heart problem limited or interfered with sexual intercourse?	
AQLQ	ASTHMA_1	[I have been troubled by episodes of shortness of breath.]	
	ASTHMA_2	[I have been troubled by wheezing attacks.]	
	ASTHMA_3	[I have been troubled by tightness in the chest.]	
	ASTHMA_4	[I have been restricted in walking down the street on level ground or doing light housework because of asthma or shortness of breath.]	
	ASTHMA_5	[I have been restricted in walking up hills or doing heavy housework because of asthma or shortness of breath.]	
	ASTHMA_6	[I have felt tired or a general lack of energy.]	
	ASTHMA_7	[I have been unable to sleep at night.]	
	ASTHMA_8	[I have felt sad or depressed.]	
	ASTHMA_9	[I have felt frustrated with myself.]	
	ASTHMA_10	[I have felt anxious, under tension or stressed.]	
	ASTHMA_11	[I have felt that asthma or shortness of breath is preventing me from achieving what I want from life.]	
	ASTHMA_12	[Asthma or shortness of breath has interfered with my social life.]	
	ASTHMA_13	[I have been limited in going to certain places because they are bad for my asthma.]	
	ASTHMA_14	[I have been limited in going certain places because I have been afraid of getting an asthma attack and not being able to get help.]	
	ASTHMA_15	[I have been restricted in the sports, hobbies or other recreations I can engage in because of my asthma or shortness of breath.]	
	ASTHMA_16	[I have felt generally restricted.]	
	ASTHMA_17	[I have felt that asthma is controlling my life.]	
	ASTHMA_18	[I have been worried about my present or future health because of asthma.]	
	ASTHMA_19	[I have been worried about asthma shortening my life.]	
	ASTHMA_20	[I have felt dependent on my asthma inhalers.]	
C-QLQ	CANCER_1	[Do you have any trouble doing strenuous activities, like carrying a heavy shopping bag or a suitcase?]	
	CANCER_2	[Do you have any trouble taking a long walk?]	
	CANCER_3	[Do you have any trouble taking a short walk outside of the house?]	
	CANCER_4	[Do you need to stay in bed or a chair during the day?]	
	CANCER_5	[Do you need help with eating, dressing, washing yourself or using the toilet?]	
	CANCER_6	[Were you limited in doing either your work or other daily activities?]	

	CANCER_7	[Were you limited in pursuing your hobbies or other leisure time activities?]	
	CANCER_8	[Were you short of breath?]	
	CANCER_9	[Have you had pain?]	
	CANCER_10	[Did you need to rest?]	
	CANCER_11	[Have you had trouble sleeping?]	
	CANCER_12	[Have you felt weak?]	
	CANCER_13	[Have you lacked appetite?]	
	CANCER_14	[Have you felt nauseated?]	
	CANCER_15	[Have you vomited?]	
	CANCER_16	[Have you been constipated?]	
	CANCER_17	[Have you had diarrhea?]	
	CANCER_18	[Were you tired?]	
	CANCER_19	[Did pain interfere with your daily activities?]	
	CANCER_20	[Have you had difficulty in concentrating on things, like reading a newspaper or watching television?]	
	CANCER_21	[Did you feel tense?]	
	CANCER_22	[Did you worry?]	
	CANCER_23	[Did you feel irritable?]	
	CANCER_24	[Did you feel depressed?]	
	CANCER_25	[Have you had difficulty remembering things?]	
	CANCER_26	[Has your physical condition or medical treatment interfered with your family life?]	
	CANCER_27	[Has your physical condition or medical treatment interfered with your social activities?]	
	CANCER_28	[Has your physical condition or medical treatment caused you financial difficulties?]	
	CANCER_29	[How would you rate your overall health during the PAST WEEK?]	
	CANCER_30	[How would you rate your quality of life health during the PAST WEEK?]	
DASS	DASS21_1	[I found it hard to wind down]	
	DASS21_2	[I was aware of dryness of my mouth]	
	DASS21_3	[I couldn't seem to experience any positive feeling at all]	
	DASS21_4	[I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)]	
	DASS21_5	[I found it difficult to work up the initiative to do things]	
	DASS21_6	[I tended to over-react to situations]	
	DASS21_7	[I experienced trembling (eg, in the hands)]	
	DASS21_8	[I felt that I was using a lot of nervous energy]	
	DASS21_9	[I was worried about situations in which I might panic and make a fool of myself]	
	DASS21_10	[I felt that I had nothing to look forward to]	
	DASS21_11	[I found myself getting agitated]	
	DASS21_12	[I found it difficult to relax]	
	DASS21_13	[I felt down-hearted and blue]	
	DASS21_14	[I was intolerant of anything that kept me from getting on with what I was doing]	
	DASS21_15	[I felt I was close to panic]	
	DASS21_16	[I was unable to become enthusiastic about anything]	
	DASS21_17	[I felt I wasn't worth much as a person]	
	DASS21_18	[I felt that I was rather touchy]	
	DASS21_19	[I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)]	
	DASS21_20	[I felt scared without any good reason]	
	DASS21_21	[I felt that life was meaningless]	
K10	K10_1	[In the past 4 weeks, about how often did you feel tired for no good reason?]	
	K10_2	[In the past 4 weeks, about how often did you feel nervous?]	

	K10_3	[In the past 4 weeks, about how often did you feel so nervous that nothing could calm you down?]	
	K10_4	[In the past 4 weeks, about how often did you feel hopeless?]	
	K10_5	[In the past 4 weeks, about how often did you feel restless or fidgety?]	
	K10_6	[In the past 4 weeks, about how often did you feel so restless that you could not sit still?]	
	K10_7	[In the past 4 weeks, about how often did you feel depressed?]	
	K10_8	[In the past 4 weeks, about how often did you feel that everything was an effort?]	
	K10_9	[In the past 4 weeks, about how often did you feel so sad that nothing could cheer you up?]	
	K10_10	[In the past 4 weeks, about how often did you feel worthless?]	
RANDOM GROUP ORDER	groupOrder_1	[Which MAU questionnaire was Displayed First]	Randomised order of instruments
	groupOrder_2	[Which MAU questionnaire was Displayed Second]	
	groupOrder_3	[Which MAU questionnaire was Displayed Third]	
	groupOrder_4	[Which MAU questionnaire was Displayed Fourth]	
	groupOrder_5	[Which MAU questionnaire was Displayed Fifth]	
	groupOrder_6	[Which MAU questionnaire was Displayed Sixth]	
	groupOrder_7	[Which MAU questionnaire was Displayed Seventh]	
	groupOrder_8	[Which MAU questionnaire was Displayed Eighth]	
	yob_corrected	Year of birth	
	yob_original	original year of birth - before corrections due to format errors	
	cob	Country of birth	
	ethnicity	Ethnicity	
	postcode	Postcode:	
	marital	Are you living with a spouse or partner?	
	edu_highest	Currently what is the highest level of education you have completed?	
	stan_living16	When you were young (less than 16) , what was your standard of living at home?	
	stan_living	How do you rate your current standard of living?	
	eq5d_test	Select the answer that best describes your own health state today regarding your MOBILITY	
	job	What is your current (or last) profession or job?	
	work_7	What is your current occupational status?	
	work_7_other	[Other] What is your current occupational status?	
	income_8	Choose the option that corresponds with your pre-tax or gross household income (include all sources).	
	condition	Do you have a condition that has lasted for more than three months (e.g., illness, injury, disability)?	
	what_condition	Name of condition?	
	condition_start_months	[months (if in the past 12 months)] When did it start?	
	condition_start_years	[years] When did it start?	
	exercise_11	How many days per week do you do moderate-intensity physical activity/exercise (such as brisk walking, swimming, cycling)?	
	exer_mins_12	How many minutes of moderate-intensity physical activity do you do when you exercise?	
	smoke_13	On average, how many cigarettes do you smoke a day?	
	alcohol_14	How often do you have a drink containing alcohol?	
	alc_many_15	How many drinks containing alcohol do you have on a typical day when you are drinking?	
	height_9	What is your height in metres?	
	height_cleaned	What is your height in metres?	
	weight_10	What is your weight in kilograms?	

	weight_cleaned	What is your weight in kilograms?	
	outliersincludedBMI	all BMI including outliers	
	BMI	BMI 16-50	
	future_health	How do you feel about your future health?	
	again12mth	An important part of this study is to find out how answers change over time. Would you be willing to complete this survey again in 12 months ?	
	dis1_7	[Arthritis] Have you got a current diagnosis of any of the following health problems? Please select all boxes which apply to you.	
	dis1_1	[Asthma] Have you got a current diagnosis of any of the following health problems? Please select all boxes which apply to you.	
	dis1_2	[Cancer] Have you got a current diagnosis of any of the following health problems? Please select all boxes which apply to you.	
	dis1_4	[Depression] Have you got a current diagnosis of any of the following health problems? Please select all boxes which apply to you.	
	dis1_5	[Diabetes] Have you got a current diagnosis of any of the following health problems? Please select all boxes which apply to you.	
	dis1_6	[Hearing problems] Have you got a current diagnosis of any of the following health problems? Please select all boxes which apply to you.	
	dis1_8	[Heart Problems] Have you got a current diagnosis of any of the following health problems? Please select all boxes which apply to you.	
	dis1_9	[None of these] Have you got a current diagnosis of any of the following health problems? Please select all boxes which apply to you.	
	dis_sev_7	[Arthritis] Please indicate the severity of each illness:	
	dis_sev_1	[Asthma] Please indicate the severity of each illness:	
	dis_sev_2	[Cancer] Please indicate the severity of each illness:	
	dis_sev_4	[Depression] Please indicate the severity of each illness:	
	dis_sev_5	[Diabetes] Please indicate the severity of each illness:	
	dis_sev_6	[Hearing problems] Please indicate the severity of each illness:	
	dis_sev_8	[Heart Problems] Please indicate the severity of each illness:	
	rate_exclnt	How does your present health compare with excellent health?	
	rate1	Rate your own health between 0-100	
	rate1010	If you had only 10 years to live, would you choose to live it in your Present health (which won't change) or in Excellent health?	
	rate6mth	What if you could live for 6 extra months , i.e. 10.5 years in total in your present health (which won't change), would you choose that or 10 years in excellent health?	
	rate5yrs	What if you could live for 5 more years, i.e. 15 years in total in your present health, would you choose that or 10 years in excellent health?	
	rateopen	Please write a number for your answer and indicate whether it is in days or weeks or months or years	
	rateopen_1	Min months above 10years	
	rateopen_2	Min years above 10 years	
	TTO_intro2	Is present health as good as best possible?	
	TTO_intro3_1010	Is present health as good as best possible 2	
SIC	SIC1_a	[Arm that was most affected by your stroke?] These questions are about the physical problems which may have occurred as a result of your stroke	For stroke, not scored or utilised

			These questions are about the physical problems which may have occurred as a result of your stroke
SIC1_b	[Grip of your hand that was most affected by your stroke?]		
SIC1_c	[Leg that was most affected by your stroke?]		
SIC1_d	[Foot/ankle that was most affected by your stroke?]		
SIC2_a	[Remember things that people just told you?] These questions are about memory and thinking In the past week, how difficult was it for you to...		
SIC2_b	[Remember things that happen the day before?]		
SIC2_c	[Remember to do things (e.g. keep scheduled appointments or take medication)?]		
SIC2_d	[Remember the day of the week?]		
SIC2_e	[Concentrate?]		
SIC2_f	[Think quickly?] .		
SIC2_g	[Solve everyday problems?]		
SIC3_a	[Feel sad?]		
SIC3_b	[Feel that there is nobody you are close to?]		
SIC3_c	[Feel that you are a burden to others?]		
SIC3_d	[Feel that you have nothing to look forward to?]		
SIC3_e	[Blame yourself for mistakes that you make?]		
SIC3_f	[Enjoy things as much as ever]		
SIC3_g	[Feel quite nervous?]		
SIC3_h	[Feel that life is worth living?]		
SIC3_i	[Smile and laugh at least once a day?]		These questions are about how you feel, about changes in your mood and about your ability to control your emotions since your stroke. In the past week, how often did you...
SIC4_a	[Say the name of someone who was in front of you?]		
SIC4_b	[Understand what was being said to you in a conversation?]		
SIC4_c	[Reply to questions?]		
SIC4_d	[Correctly name objects?]		
SIC4_e	[Participate in a conversation with a group of people?]		
SIC4_f	[Have a conversation on the telephone?]		
SIC4_g	[Call another person on the telephone, including selecting the correct phone number and dialling?]		The following questions are about your ability to communicate with other people, as well as your ability to understand what you read and what you hear in a conversation. In the past week, how difficult
SIC5_a	[Cut your food with a knife and fork?]		
SIC5_b	[Dress the top part of your body?]		
SIC5_c	[Bathe yourself?]		
SIC5_d	[Clip your toenails?]		
SIC5_e	[Get to the toilet on time?]		
SIC5_f	[Control your bladder (not have an accident)?]		
SIC5_g	[Control your bowels (not have an accident)?]		
SIC5_h	[Do light household tasks/chores (e.g. dust, make a bed, take out garbage, do the dishes)?]		
SIC5_i	[Go shopping?]		
SIC5_j	[Do heavy household chores (e.g. vacuum, laundry, or yard work)?]		The following questions ask about activities you might do during a typical day. In the past 2 weeks, how difficult was it to...
SIC6_a	[Stay sitting without losing your balance?]		
SIC6_b	[Stay standing without losing your balance?]		
SIC6_c	[Walk without losing your balance?]		
SIC6_d	[Move from a bed to a chair?]		The following questions are about your ability to be

	SIC6_e	[Walk one block?]	mobile, at home and in the community. In the past 2 weeks, how difficult was it to ...
	SIC6_f	[Walk fast?]	
	SIC6_g	[Climb one flight of stairs?]	
	SIC6_h	[Climb several flight of stairs?]	
	SIC6_i	[Get in and out of the car?]	
	SIC7_a	[Carry heavy objects (e.g. bag of groceries)?]	The following questions are about your ability to use your hand that was MOST AFFECTED by your stroke. In the past 2 weeks, how difficult was it to use your hand that was most affected by your stroke to...
	SIC7_b	[Turn a doorknob?]	
	SIC7_c	[Open a can or jar?] ...	
	SIC7_d	[Tie a shoelace?]	
	SIC7_e	[Pick up a small coin?] .	
	SIC8_1	[Your work (paid, voluntary, or other)?]	The following questions are about how stroke has affected your ability to participate in the activities that you usually do, things that are meaningful to you and help you to find a purpose in life.
	SIC8_2	[Your social activities?]	
	SIC8_3	[Quiet recreation (crafts, reading)?]	
	SIC8_4	[Active recreation (sports, outing, travel)?]	
	SIC8_5	[Your role as a family member and/or friend?]	
	SIC8_6	[Your participation in spiritual or religious activities?]	
	SIC8_7	[Your ability to control your life as you wish?]	
	SIC8_8	[Your ability to help others?]	
	SIC9_1	[No Recovery Full Recovery] Stroke recovery On a scale of 0 to 100 how much have you recovered from your stroke?	
SGRQ	SGRQ_health	Please choose one option to show how you describe your current health:	for COPD, not scored or utilised
	SGRQ_1	I cough	
	SGRQ_2	I bring up phlegm (sputum)	
	SGRQ_3	I have shortness of breath	
	SGRQ_4	I have attacks of wheezing	
	SGRQ_5	How many attacks of chest trouble did you have during the last year?	
	SGRQ_6	How often do you have good days (with Little chest trouble)?	
	SGRQ_7	If you have a wheeze, is it worse in the morning?	
	SGRQ_8	How would you describe your chest condition?	
	SGRQ_9_1	[Getting washed or dressed]	
	SGRQ_9_2	[Walking around the home]	
	SGRQ_9_3	[Walking outside on the level]	
	SGRQ_9_4	[Walking up a flight of stairs]	

SGRQ_9_5	[Walking up hills]
SGRQ_10_1	[My cough hurts]
SGRQ_10_2	[My cough makes me tired]
SGRQ_10_3	[I am breathless when I talk]
SGRQ_10_4	[I am breathless when I bend over]
SGRQ_10_5	[My cough or breathing disturbs my sleep]
SGRQ_10_6	[I get exhausted easily]
SGRQ_11_1	[My cough or breathing is embarrassing in public]
SGRQ_11_2	[My chest trouble is a nuisance to my family, friends or neighbours]
SGRQ_11_3	[I get afraid of panic when I cannot get my breath]
SGRQ_11_4	[I feel that I am not in control of my chest problem]
SGRQ_11_5	[I have become frail or an invalid because of my chest]
SGRQ_11_6	[Exercise is not safe for me]
SGRQ_11_7	[Everything seems too much of an effort]
SGRQ_12_1	[I take a long time to get washed or dressed]
SGRQ_12_2	[I cannot take a bath or shower, or I take a long time]
SGRQ_12_3	[I walk slower than other people, or I stop for rests]
SGRQ_12_4	[Jobs such as housework take a long time, or I have to stop for rests]
SGRQ_12_5	[If I walk up one flight of stairs, I have to go slowly or stop]
SGRQ_12_6	[If I hurry or walk fast, I have to stop or slow down]
SGRQ_12_7	[My breathing makes it difficult to do things such as walk up hills, carrying things up stairs, light gardening such as weeding, dance, play bowls or play golf]
SGRQ_12_8	[My breathing makes it difficult to do things such as carry heavy loads, dig the garden or shovel snow, jog or walk at 5 miles/hour (8 km/hour), play tennis or swim]
SGRQ_13_1	[I cannot play sports or games]
SGRQ_13_2	[I cannot go out for entertainment or recreation]
SGRQ_13_3	[I cannot go out of the house to do the shopping]
SGRQ_13_4	[I cannot do housework]
SGRQ_13_5	[I cannot move far from my bed or chair]
SGRQ_14	How does your chest trouble affect you?

3. Notes on the data collection

3.1 Edit procedures (data cleaning)

Results of edit procedures

	Public (deleted)	Patient (deleted)	Valid sample
Australia	265 (152)	1165 (211)	1430
USA	321 (66)	1139 (143)	1460
UK	298 (69)	1058 (161)	1356
Canada	328 (34)	1002 (238)	1330
Norway	288 (68)	889 (210)	1177
Germany	260 (84)	1009 (207)	1269
Totals	1760	6262	8022

Analysis of edit procedures

(1a) Australia Public (round 1)

No completed		300
Deleted	Edit 1	52
	Edit 2	60
	Edit 3	14
	Edit 4	1
Total after edits		173 (127 deleted)

Edit 1- Any responses that were done in less than 20 minutes were eliminated. The survey median completion time was 32 mins.

Edit 2 - In round 1 of PUBLIC data collection, it was seen that a proportion of respondents had Own Health ratings that varied from 0 – 100. As the general public needed to be in good health so as to make valid comparisons with the patient groups, people with Own Health ratings less than 65 (using a VAS) were removed from the dataset. (In round two, inclusion into the survey was predicated on a rating of 70 and above.)

Edit 3 - Respondents were removed from the dataset if they indicated that they suffered from any of the disease states that will be studied in the PATIENT rounds (asthma, cancer, COPD, depression, diabetes, hearing, osteoarthritis or stroke).

Edit 4 - EQ5D question 4 (pain) and AQoL-8D question 22 (pain) answers were compared. Anyone with 2 response levels difference was eliminated.

(1b) Australia Public (round 2)

No completed		117
Deleted	Edit 1	5
	Edit 2	0
	Edit 3	4
	Edit 4	8
	Edit 5	8
Total after edits		92 (25 deleted)

TOTAL PUBLIC left after both rounds and all deletes = 265

Edit 1- Any responses that were done in less than 20 minutes were eliminated. The survey median completion time was 32 mins.

Edit 2 - Inclusion into the survey was predicated on a rating of 70 and above.

Edit 3 - Respondents were removed from the dataset if they indicated that they suffered from any of the disease states that will be studied in the PATIENT rounds (asthma, cancer, COPD, depression, diabetes, hearing, osteoarthritis or stroke).

Edit 4 - The EQ-5D mobility question was duplicated in the survey. Anyone with a response that varied by more than +/-1 difference was eliminated. Those differing by only +/- 1 were examined with other criteria to determine their eligibility.

Edit 5 - EQ5D question 4 (pain) and AQL-8D question 22 (pain) answers were compared. Anyone with 2 response levels difference was eliminated.

(1c) Australia Disease

No completed		1376
Deleted	Edit 1	36
	Edit 2	16
	Edit 3	10
	Edit 4	3
	Edit 5	7
	Edit 6	72
	Edit 7	20
	Edit 8	41
	APHAB	6
Total after edits		1165 (211 deleted)

Edit 1 - Any response that was completed in less than 20 minutes was eliminated. The survey median completion time was 40 mins (range 7.7 – 260.9mins). Times between 20-25mins were marked to inspect at the final edit.

Edit 2 - The EQ-5D mobility question was duplicated in the survey. Anyone with a response that varied by more than +/-1 difference was eliminated. Those differing by only +/- 1 were examined with other criteria to determine their eligibility.

Edit 3 The SF-36 question 1 and question concerning Own Health were identical. Those with responses greater than +/- 1 were eliminated. Those without identical answers but within +/- 1 were earmarked.

Edit 4- The SF-36 question 1 minus QWB question 9a - answers were compared and anyone with a response that varied greater than +/-1 difference was immediately eliminated, those within +/- 1 were examined along with other criteria to determine their eligibility.

Edit 5- Own Health minus QWB question 9a - answers were compared and anyone with a response that varied greater than ± 1 difference was eliminated. Those within ± 1 were examined along with other criteria to determine their eligibility.

Edit 6- EQ5D question 4 (pain) and AQL-8D question 22 (pain) answers were compared. Anyone with 2 response levels difference was eliminated.

Edit 7- The number of inconsistencies from edits 2,3,4,5,6 was coded. Anyone with 2 or more inconsistencies and a time less than 25 minutes was eliminated.

Edit 8- Anyone with 3 inconsistencies from edits 2,3,4,5,6 was eliminated.

APHAB inconsistencies –Respondents who indicated that they had no hearing aid but then answered hearing aid questions were eliminated.

Australia disease	Frequency	Percent
asthma	141	12.1
cancer	154	13.2
depression	146	12.5
diabetes	168	14.4
hearing loss	155	13.3
arthritis	163	14.0
heart disease	149	12.8
COPD	66	5.7
stroke	23	2.0
Total	1165	100.0

(2a) UK Public

No completed	367
--------------	-----

Deleted	Edit 1	64
	Edit 2	0
	Edit 3	5
	Edit 4	0
	Edit 5	0
Total after edits		298 (69 deleted)

(296 agreed to the 12 month followup)

Edit 1 - Any response that was done in less than 20 minutes was eliminated. The survey median completion time was 28.15 mins (range 0.8 –151.4mins). Times between 20-25mins were marked to inspect at the final edit.

Edits 2-5 as per (1b)

(2b) UK Disease

	No completed	1219
Deleted	Edit 1	97
	Edit 2	11
	Edit 3	8
	Edit 4	2
	Edit 5	1
	Edit 6	8
	Edit 7	32
	Edit 8	0
APHAB		2
Total after edits		1058 (161 deleted)

Edit 1 - Any response that was done in less than 20 minutes was eliminated. The survey median completion time was 33.8 mins (range 7.5 – 220.3mins). Times between 20-25mins were marked to inspect at the final edit.

Edits 2-8 as per (1c).

APHAB inconsistencies –Respondents who indicated that they had no hearing aid but then answered hearing aid questions were eliminated.

UK Disease:	Frequency	Percent
asthma	150	14.2
cancer	137	12.9
depression	158	14.9
diabetes	161	15.2
hearing loss	126	11.9
arthritis	159	15.0
heart disease	167	15.8
Total	1058	100.0

(3a) USA Public

No completed	387
Deleted Edit 1	36
Edit 2	0
Edit 3	6
Edit 4	0
Edit 5	24
Total after edits	321 (66 deleted)

(308 agreed to the 12 month followup)

Edit 1 - Any responses that were done in less than 20 minutes were eliminated. The survey median completion time was 31.78 mins (range 11.1 – 181.1mins). Times between 20-25mins were marked to inspect at the final edit

Edits 2-5 as per (1b)

(3b) USA Disease

No completed	1282
*deletions due to falsified disease state	3
Deleted Edit 1	64
Edit 2	14
Edit 3	12
Edit 4	2
Edit 5	2
Edit 6	5
Edit 7	28
Edit 8	6
APHAB	7
Total after edits	1139 (143 deleted)

* deletions due to duplicated ID = participant IDs were identified multiple times in the dataset, each time with a different disease specified until access to survey was obtained.

Edit 1 - Any responses that were done in less than 20 minutes were eliminated. The survey median completion time was 33.96 mins (range 0.6 – 257.6mins). Times between 20-25mins were marked to inspect at the final edit.

Edits 2-8 as per (1c).

APHAB inconsistencies –Respondents who indicated that they had no hearing aid but then answered hearing aid questions were eliminated.

USA Disease	Frequency	Percent
asthma	150	13.2
cancer	148	13.0
depression	168	14.7
diabetes	168	14.7
hearing loss	156	13.7
arthritis	179	15.7
heart disease	170	14.9
Total	1139	100.0

(4a) Canada Public

No completed	362
Deleted Edit 1	22
Edit 2	0
Edit 3	3
Edit 4	6
Edit 5	3
Total after edits	328 (34 deleted)

(312 agreed to the 12 month followup)

Edit 1 - Any responses that were done in less than 20 minutes were eliminated. The survey median completion time was 31.08 mins (range 10.2 – 152.9mins). Times between 20-25mins were marked to inspect at the final edit

Edits 2-5 as per (1b)

(4b) Canada Disease

No completed	1240
deletions due to duplicated ID	55
Deleted Edit 1	64
Edit 2	18
Edit 3	5
Edit 4	4
Edit 5	4
Edit 6	12
Edit 7	17
Edit 8	54
APHAB	5
Total after edits	1002 (238 deleted)

* deletions due to duplicated ID = participant IDs were identified multiple times in the dataset, each time with a different disease specified until access to survey was obtained.

Edit 1 - Any responses that were done in less than 20 minutes were eliminated. The survey median completion time was 37.49 mins (range 8.32 –249.62mins). Times between 20-25mins were marked to inspect at the final edit.

Edits 2-8 as per (1c).

APHAB inconsistencies –Respondents who indicated that they had no hearing aid but then answered hearing aid questions were eliminated.

Canada Disease:	Frequency	Percent
asthma	138	13.8
cancer	138	13.8
depression	145	14.5
diabetes	144	14.4
hearing loss	144	14.4
arthritis	139	13.9
heart disease	154	15.4
Total	1002	100.0

(5a) Norway Public (not included in this dataset)

No completed	356
deletions due to duplicated ID	37
Deleted Edit 1	27
Edit 2	0
Edit 3	1
Edit 4	1
Edit 5	2
Total after edits	288 (68 deleted)

(275 agreed to the 12 month followup)

Edit 1 - Any responses that were done in less than 15 minutes were eliminated. The survey median completion time was 26.18 mins (range 10.8 – 108.1 mins). Times between 15-20 mins were marked to inspect at the final edit.

Edits 2-5 as per (1b)

(5b) Norway Disease (not included in this dataset)

No completed	1099
deletions due to duplicated ID	108
Deleted Edit 1	52
Edit 2	14
Edit 3	29
Edit 6	7
Edit 7	0
Edit 8	0
Total after edits	889 (210 deleted)

Edit 1 - Any responses that were done in less than 15 minutes were eliminated. The survey median completion time was 27.36 mins (range 6.57 – 199.34 mins). Times between 15-20 mins were marked to inspect at the final edit.

Edit 2 - The EQ-5D mobility question was duplicated in the survey. Anyone with a response that varied by more than +/-1 difference was eliminated. Those differing by only +/- 1 were examined with other criteria to determine their eligibility.

Edit 3 - The SF-36 question 1 and question concerning Own Health were identical. Those with responses greater than +/- 1 were eliminated. Those without identical answers but within +/- 1 were earmarked.

Edits 4 and 5 were not possible as the QWB was not included in the Norwegian study.

Edit 6- EQ5D question 4 (pain) and AQoL-8D question 22 (pain) answers were compared. Anyone with 2 response levels difference was eliminated.

Edit 7- The number of inconsistencies from edits 2,3,4,5,6 was coded. Anyone with 2 or more inconsistencies and a time less than 25 minutes was eliminated.

Edit 8- Anyone with 3 inconsistencies from edits 2,3,4,5,6 was eliminated.

Norway disease	Frequency	Percent
asthma	130	14.6
cancer	80	9.0
depression	140	15.7
diabetes	143	16.1
hearing loss	115	12.9
arthritis	130	14.6
heart disease	151	17.0
Total	889	100.0

(6a) German Public

No completed	344
deletions due to duplicated ID	0
DeletedEdit 1	15
Edit 2	0
Edit 3	52
Edit 4	0
Edit 5	17
Total after edits	260 (84 deleted)

(337 agreed to the 12 month followup, after deletions this left 253 agreeing to the 12month)

Edit 1 - Any responses that were done in less than 15 minutes were eliminated. The survey median completion time was 24.26 mins (range 7.4 - 135.6 mins). Times between 15-20 mins were marked to inspect at the final edit.

Edits 2-5 as per (1b)

(6b) German Disease

No completed	1216
Deletions due to mismatching disease choices	56
Deleted Edit 1	53
Edit 2	12
Edit 3	8
Edit 6	65
Edit 7	11
Missing data	2*
Total after edits	1009 (207 deleted)

- *Two response sets were deleted from analysis as the SF36 and AQoL8D were missing from them. Participants completed the survey though.*

Edit 1 - Any responses that were done in less than 15 minutes were eliminated. The survey median completion time was 30.59 mins, mean completion time was 34 mins (range 8.75 – 168.56 mins). Times between 15-20 mins were marked to inspect at the final edit.

Edit 2 - The EQ-5D mobility question was duplicated in the survey. Anyone with a response that varied by more than +/-1 difference was eliminated. Those differing by only +/- 1 were examined with other criteria to determine their eligibility.

Edit 3 - The SF-36 question 1 and question concerning Own Health were identical. Those with responses greater than +/- 1 were eliminated. Those without identical answers but within +/- 1 were earmarked.

Edits 4 and 5 were not possible as the QWB was not included in the German study.

Edit 6- EQ5D question 4 (pain) and AQoL-8D question 22 (pain) answers were compared. Anyone with 2 response levels difference was eliminated.

Edit 7- The number of inconsistencies from edits 2,3,4,5,6 was coded. Anyone with 2 or more inconsistencies and a time less than 25 minutes was eliminated.

Edit 8- Anyone with 3 inconsistencies from edits 2,3,4,5,6 was eliminated.

German disease	Frequency	Percent
asthma	147	14.6
cancer	115	11.4
depression	160	15.9
diabetes	140	13.9
hearing loss	136	13.5
arthritis	159	15.8
heart disease	152	15.1
Total	1009	100.0

4 Questionnaires

4.1 Main questionnaire

Researcher Copy Only

Composite MIC Questionnaire version 10 MIC 090212

Instruments included in questionnaire		Items
Subjective wellbeing	Personal Wellbeing Index	9
	Integrated Household Survey	4
	SWLS	5
Subtotal		18
QoL MA Instruments	EQ-5D	5
	AQoL-8D and AQoL-4D	44
	SF-36	36
	HUI3	8
	15D	15
	QWB-SA	77
Subtotal		185
Capabilities	ICECAP-A	5
VAS		1
Demographics		22
Total Core Items		231

Rate Your Health

Visual Analogue Scale (VAS)

The following question will ask you to think about your own health today and compare it with what we will define as 'Excellent Health'.

** Description of Excellent Health*

Physical Health

- No pain, discomfort or itching
- Perfect hearing, vision, speech
- Excellent strength, flexibility, movement, energy

Mental Health

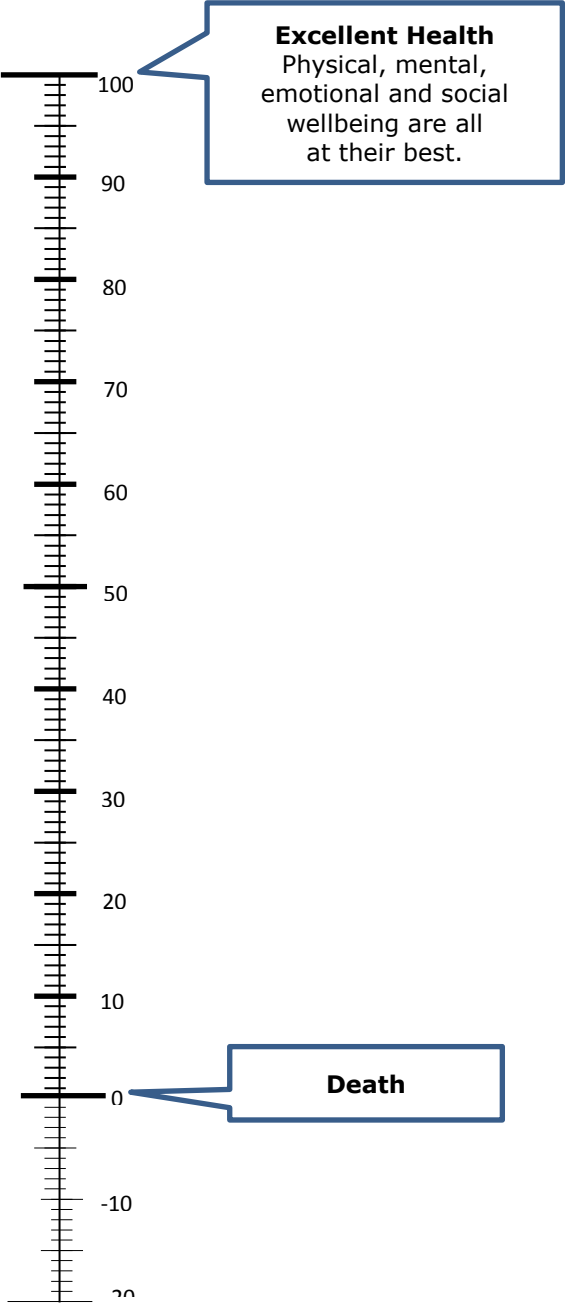
- *Very happy, enthusiastic, contented*
- *Never sad, depressed*
- *Confident, high self worth*

Social

- *Excellent social and family relationships*

Excellent health is the **best possible health** you can imagine. You may have some health problems which, however slight, means that your health may be less than what is described as excellent in the box above.

Please think about **your own state of health**.
How would you rate **your health state** on the scale shown?



Choose the number corresponding to your rating in the answer box below.

Personal Wellbeing (PWI)

The following questions ask how satisfied you feel on a scale from zero to 10. Zero means you feel completely dissatisfied and 10 means you feel completely satisfied. The middle of the scale is 5, which means you feel neutral, neither satisfied nor dissatisfied.

<i>(Please select the answer for each item that is correct for you)</i>	Completely satisfied									Neutral									Completely satisfied
	0	1	2	3	4	5	6	7	8	9	10								
i) Thinking about your own life and personal circumstances, how satisfied are you with your life as a whole ?																			
ii) How satisfied are you with your standard of living ?																			
iii) How satisfied are you with your health ?																			
iv) How satisfied are you with what you are achieving in life ?																			
v) How satisfied are you with your personal relationships ?																			
vi) How satisfied are you with how safe you feel ?																			
vii) How satisfied are you with feeling part of your community ?																			
viii) How satisfied are you with your future security ?																			
ix) How satisfied are you with your spirituality or religion ?																			

Office of National Statistics (ONS) - Integrated Household Survey

	0	1	2	3	4	5	6	7	8	9	10
i) Overall, how satisfied are you with your life nowadays	Not at all satisfied					Neutral					Completely satisfied
j) Overall, to what extent do you feel that the things you do in your life are worthwhile?	Not at all worthwhile					Neutral					Completely worthwhile
k) Overall, how happy did you feel yesterday?	Not at all happy					Neutral					Completely happy
l) Overall, how anxious did you feel yesterday?	Not at all anxious					Neutral					Completely anxious

SWLS

	Strongly disagree	Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Agree	Strongly agree
a) In most ways my life is close to my ideal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) The conditions of my life are excellent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) I am satisfied with my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) So far I have gotten the important things I want in life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) If I could live my life over, I would change almost nothing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EQ-5D-5L

Select the answer under each heading below, that best describes your own health state today

a. Mobility

I have no problem in walking about	<input type="checkbox"/>
I have slight problems in walking about	<input type="checkbox"/>
I have moderate problems in walking about	<input type="checkbox"/>
I have severe problems in walking about	<input type="checkbox"/>
I am unable to walk about	<input type="checkbox"/>

b. Self - care

I have no problems washing or dressing myself	<input type="checkbox"/>
I have slight problems washing or dressing myself	<input type="checkbox"/>
I have moderate problems washing or dressing myself	<input type="checkbox"/>
I have severe problems washing or dressing myself	<input type="checkbox"/>
I am unable to wash or dress myself.	<input type="checkbox"/>

c. Usual Activities (*e.g. work, study, housework, family or leisure activities*)

I have no problems doing my usual activities.	<input type="checkbox"/>
I have slight problems doing my usual activities.	<input type="checkbox"/>
I have moderate problems doing my usual activities.	<input type="checkbox"/>
I have severe problems doing my usual activities.	<input type="checkbox"/>
I am unable to do my usual activities.	<input type="checkbox"/>

d. Pain/Discomfort

I have no pain or discomfort.	<input type="checkbox"/>
I have slight pain or discomfort.	<input type="checkbox"/>
I have moderate pain or discomfort.	<input type="checkbox"/>
I have severe pain or discomfort.	<input type="checkbox"/>
I have extreme pain or discomfort.	<input type="checkbox"/>

e. Anxiety/Depression

I am not anxious or depressed.	<input type="checkbox"/>
I am slightly anxious or depressed.	<input type="checkbox"/>
I am moderately anxious or depressed.	<input type="checkbox"/>
I am severely anxious or depressed.	<input type="checkbox"/>
I am extremely anxious or depressed.	<input type="checkbox"/>

AQoL-8D (Researcher's Copy - NOT TO BE USED FOR COLLECTING DATA)

AQoL-8D has 8 dimensions within 2 SuperDimensions:

Physical SuperDimension contains Independent Living, Pain and Senses

Psychological SuperDimension contains Mental Health, Happiness, Coping, Relationships, and Self-worth

Select the answer that best describes your situation during the last week

1. INDEPENDENT LIVING

Q1. How much help do you need with jobs around the house (eg preparing food, cleaning the house or gardening):

- ☐ I can do all these tasks very quickly and efficiently without any help
- ☐ I can do these tasks relatively easily without help
- ☐ I can do these tasks only very slowly without help
- ☐ I cannot do most of these tasks unless I have help
- ☐ I can do none of these tasks by myself.

Q2. Thinking about how easy or difficult it is for you to get around by yourself outside your house (eg shopping, visiting):

- ☐ getting around is enjoyable and easy
- ☐ I have no difficulty getting around outside my house
- ☐ a little difficulty
- ☐ moderate difficulty
- ☐ a lot of difficulty
- ☐ I cannot get around unless somebody is there to help me.

Q3. Thinking about your mobility, including using any aids or equipment such as wheelchairs, frames, sticks:

- ☐ I am very mobile
- ☐ I have no difficulty with mobility
- ☐ I have some difficulty with mobility (for example, going uphill)
- ☐ I have difficulty with mobility. I can go short distances only.
- ☐ I have a lot of difficulty with mobility. I need someone to help me.
- ☐ I am bedridden.

Q4. Thinking about washing yourself, toileting, dressing, eating or looking after your appearance:

- ☐ these tasks are very easy for me
- ☐ I have no real difficulty in carrying out these tasks
- ☐ I find some of these tasks difficult, but I manage to do them on my own
- ☐ many of these tasks are difficult, and I need help to do them
- ☐ I cannot do these tasks by myself at all.

2. PAIN

Q5. Thinking about how often you experience serious pain:

I experience it

- ☐ very rarely
- ☐ less than once a week
- ☐ three to four times a week
- ☐ most of the time.

Q6. How much pain or discomfort do you experience:

-
- ☐ none at all
 - ☐ I have moderate pain
 - ☐ I suffer from severe pain
 - ☐ I suffer unbearable pain.

Q7. How often does pain interfere with your usual activities?

- ☐ never
- ☐ rarely
- ☐ sometimes
- ☐ often
- ☐ always

3. SENSES

Q8. Thinking about your vision (using your glasses or contact lenses if needed):

- ☐ I have excellent sight
- ☐ I see normally
- ☐ I have some difficulty focusing on things, or I do not see them sharply, e.g. small print, a newspaper or seeing objects in the distance.
- ☐ I have a lot of difficulty seeing things. My vision is blurred. I can see just enough to get by with.
- ☐ I only see general shapes. I need a guide to move around

Q9. Thinking about your hearing (using your hearing aid if needed):

- ☐ I have excellent hearing
- ☐ I hear normally
- ☐ I have some difficulty hearing or I do not hear clearly. I have trouble hearing softly-spoken people or when there is background noise.
- ☐ I have difficulty hearing things clearly. Often I do not understand what is said. I usually do not take part in conversations because I cannot hear what is said.
- ☐ I hear very little indeed. I cannot fully understand loud voices speaking directly to me.
- ☐ I am completely deaf.

Q10. When you communicate with others, e.g. by talking, listening, writing or signing:

- ☐ I have no trouble speaking to them or understanding what they are saying
- ☐ I have some difficulty being understood by people who do not know me. I have no trouble understanding what others are saying to me.
- ☐ I am understood only by people who know me well. I have great trouble understanding what others are saying to me.
- ☐ I cannot adequately communicate with others.

4. MENTAL HEALTH

Q15. How often do you feel depressed?

- ☐ never
- ☐ almost never
- ☐ sometimes
- ☐ often
- ☐ very often
- ☐ all the time

Q16. How often do you have trouble sleeping?

- ☐ never
- ☐ almost never
- ☐ sometimes
- ☐ often
- ☐ all the time

Q17. How often do you feel angry?

- ☐ never
- ☐ almost never
- ☐ sometimes
- ☐ often
- ☐ all the time

Q18. Do you ever feel like hurting yourself?

- ☐ never
- ☐ rarely
- ☐ sometimes
- ☐ often
- ☐ all the time

Q19. How often did you feel in despair over the last seven days?

- ☐ never
- ☐ occasionally
- ☐ sometimes
- ☐ often
- ☐ all the time.

Q20. And still thinking about the last seven days, how often did you feel worried:

- ☐ never
- ☐ occasionally
- ☐ sometimes
- ☐ often
- ☐ all the time.

Q21. How often do you feel sad?

- ☐ never
- ☐ rarely
- ☐ some of the time
- ☐ usually
- ☐ nearly all the time.

Q22. When you think about whether you are calm and tranquil or agitated:

I am

- ☐ always calm and tranquil
- ☐ usually calm and tranquil
- ☐ sometimes calm and tranquil, sometimes agitated
- ☐ usually agitated
- ☐ always agitated.

5. HAPPINESS

Q11. How content are you with your life?

- ☐ extremely
- ☐ mainly
- ☐ moderately
- ☐ slightly
- ☐ not at all

Q12. How enthusiastic do you feel?

- ☐ extremely
- ☐ very
- ☐ somewhat
- ☐ not much
- ☐ not at all

Q13. How often do you feel happy?

- ☐ all the time
- ☐ mostly
- ☐ sometimes
- ☐ almost never
- ☐ never

Q14. How often do you feel pleasure?

- ☐ always
- ☐ usually
- ☐ sometimes
- ☐ almost never
- ☐ never

6. COPING

Q23. Thinking about how much energy you have to do the things you want to do:

I am

- ☐ always full of energy
- ☐ usually full of energy
- ☐ occasionally energetic
- ☐ usually tired and lacking energy
- ☐ always tired and lacking energy.

Q24. How often do you feel in control of your life?

- ☐ always
- ☐ mostly
- ☐ sometimes
- ☐ only occasionally
- ☐ never

Q25. How much do you feel you can cope with life's problems?

- ☐ completely
- ☐ mostly
- ☐ partly
- ☐ very little
- ☐ not at all.

7. RELATIONSHIPS

Q26. How much do you enjoy your close relationships (family and friends)?

- ☐ immensely
- ☐ a lot
- ☐ a little
- ☐ not much
- ☐ I hate it

Q27. Your close relationships (family and friends) are:

- ☐ very satisfying
- ☐ satisfying
- ☐ neither satisfying nor dissatisfying
- ☐ dissatisfying
- ☐ unpleasant
- ☐ very unpleasant

Q28. How often do you feel socially isolated?

- ☐ never
- ☐ rarely
- ☐ sometimes
- ☐ often
- ☐ always

Q29. How often do you feel socially excluded or left out?

- ☐ never
- ☐ rarely
- ☐ sometimes
- ☐ often
- ☐ always

Q30. Your close and intimate relationships (including any sexual relationships) make you:

- ☐ very happy
- ☐ generally happy
- ☐ neither happy nor unhappy
- ☐ generally unhappy
- ☐ very unhappy

Q31. Thinking about your health and your relationship with your family:

- ☐ my role in the family is unaffected by my health
- ☐ there are some parts of my family role I cannot carry out
- ☐ there are many parts of my family role I cannot carry out
- ☐ I cannot carry out any part of my family role.

Q32. Thinking about your health and your role in your community (that is to say neighbourhood, sporting, work, church or cultural groups):

- ☐ my role in the community is unaffected by my health
- ☐ there are some parts of my community role I cannot carry out
- ☐ there are many parts of my community role I cannot carry out

8. SELF WORTH

Q33. How much of a burden do you feel you are to other people?

- ☐ not at all
- ☐ a little
- ☐ a moderate amount
- ☐ a lot
- ☐ totally

Q34. How often do you feel worthless?

- ☐ never
- ☐ almost never
- ☐ sometimes
- ☐ usually
- ☐ always

Q35. How much confidence do you have in yourself?

- ☐ complete confidence
- ☐ a lot
- ☐ a moderate amount
- ☐ a little
- ☐ none at all

AQoL-4D

Select the answer that best describes your situation during the last week

1. Do I need any help looking after myself?

- ☐ I need no help at all
- ☐ Occasionally I need some help with personal care tasks
- ☐ I need help with the more difficult personal care tasks
- ☐ I need daily help with most or all personal care tasks.

2. When doing household tasks: (For example: preparing food, gardening, using the video recorder, radio, telephone or washing)

- ☐ I need no help at all
- ☐ Occasionally I need some help with household tasks
- ☐ I need help with the more difficult household tasks
- ☐ I need daily help with most or all household tasks.

3. Thinking about how easily I can get around my home and community:

- ☐ I get around my home and community by myself without any difficulty
- ☐ I find it difficult to get around my home and community by myself
- ☐ I cannot get around the community by myself, but I can get around my home with some difficulty
- ☐ I cannot get around either the community or my home by myself.

4. Because of my health, my relationships (for example: with my friends, partner or parents) generally:

- ☐ are very close and warm
- ☐ are sometimes close and warm
- ☐ are seldom close and warm
- ☐ I have no close and warm relationships

5. Thinking about my relationship with other people:

- ☐ I have plenty of friends, and am never lonely
- ☐ Although I have friends, I am occasionally lonely
- ☐ I have some friends, but am often lonely for company
- ☐ I am socially isolated and feel lonely.

6. Thinking about your health and your relationship with your family:

- ☐ my role in the family is unaffected by my health
- ☐ there are some parts of my family role I cannot carry out
- ☐ there are many parts of my family role I cannot carry out
- ☐ I cannot carry out any part of my family role.

7. Thinking about my vision, including when using my glasses or contact lenses if needed:

- ☐ I see normally
- ☐ I have some difficulty focusing on things, or I do not see them sharply. For example: small print, a newspaper or seeing objects far away.
- ☐ I have a lot of difficulty seeing things. My vision is blurred. For example: I can see just enough to get by with.
- ☐ I only see general shapes, or am blind. *For example: I need a guide to move around.*

8. Thinking about my hearing, including using my hearing aid if needed:

- ☐ I hear normally
- ☐ I have some difficulty hearing or I do not hear clearly. For example: I ask people to speak up, or turn up the TV or radio volume.
- ☐ I have difficulty hearing things clearly. For example: Often I do not understand what is said. I usually do not take part in conversations because I cannot hear what is said.
- ☐ I hear very little indeed. For example: I cannot fully understand loud voices speaking directly to me.

9. When you communicate with others: (For example: by talking, listening, writing or signing.)

- ☐ I have no trouble speaking to them or understanding what they are saying.
- ☐ I have some difficulty hearing or I do not hear clearly. For example: I ask people to speak up, or turn up the TV or radio volume.
- ☐ I have difficulty hearing things clearly. For example: Often I do not understand what is said. I usually do not take part in conversations because I cannot hear what is said.
- ☐ I hear very little indeed. For example: I cannot fully understand loud voices speaking directly to me.

10. Thinking about how I sleep:

- ☐ I am able to sleep without difficulty most of the time
- ☐ My sleep is interrupted some of the time, but I am usually able to go back to sleep without difficulty
- ☐ My sleep is interrupted most nights, but I am usually able to go back to sleep without difficulty
- ☐ I sleep in short bursts only. I am awake most of the night.

11. Thinking about how I generally feel:

- ☐ I do not feel anxious, worried or depressed
- ☐ I am slightly anxious, worried or depressed
- ☐ I feel moderately anxious, worried or depressed
- ☐ I am extremely anxious, worried or depressed.

12. How much pain or discomfort do you experience:

- ☐ none at all
- ☐ I have moderate pain
- ☐ I suffer from severe pain
- ☐ I suffer unbearable pain.

SF-6D

NOTE: this questionnaire includes SF-6D and SF 36.

Not for data collection.

Physical Functioning

- ☐ My health does not limit me in vigorous activities
- ☐ My health limits me a little in vigorous activities
- ☐ My health limits me a little in moderate activities
- ☐ My health limits me a lot in moderate activities
- ☐ My health limits me a little in bathing and dressing
- ☐ My health limits me a lot in bathing and dressing

Role limitations

- ☐ I have no problems with my work or other regular daily activities as a result of my physical health or any emotional problems
- ☐ I am limited in the kind of work or other activities as a result of my physical health
- ☐ I accomplish less than I would like as a result of emotional problems
- ☐ I am limited in the kind of work or other activities as a result of my physical health and accomplish less than I would like as a result of emotional problems

Social functioning

- ☐ My health limits my social activities none of the time
- ☐ My health limits my social activities a little of the time
- ☐ My health limits my social activities some of the time
- ☐ My health limits my social activities most of the time
- ☐ My health limits my social activities all of the time

Pain

- ☐ I have no pain
- ☐ I have pain but it does not interfere with my normal work (both outside the home and housework)
- ☐ I have pain that interferes with my normal work (both outside the home and housework) a little bit
- ☐ I have pain that interferes with my normal work (both outside the home and housework) moderately
- ☐ I have pain that interferes with my normal work (both outside the home and housework) quite a bit
- ☐ I have pain that interferes with my normal work (both outside the home and housework) extremely

Mental health

- ☐ I feel tense or downhearted and low none of the time
- ☐ I feel tense or downhearted and low a little of the time
- ☐ I feel tense or downhearted and low some of the time
- ☐ I feel tense or downhearted and low most of the time
- ☐ I feel tense or downhearted and low all of the time

Vitality

- ☐ I have a lot of energy all of the time
- ☐ I have a lot of energy most of the time
- ☐ I have a lot of energy some of the time
- ☐ I have a lot of energy a little of the time
- ☐ I have a lot of energy none of the time

SF36 (v2 UK)

See * at end of questionnaire for different items in US version.

Select one answer for each question

1. In general, would you say your health is

Excellent	Very good	Good	Fair	Poor
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Compared to one year ago, how would you rate your health in general now?

Much better	Somewhat better	The same	Somewhat Worse	Much Worse
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following questions are about activities you might do during a typical day. Does your health now limit you in these following activities, if so how much?

3. Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports.
4. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf.
5. Lifting or carrying groceries
6. Climbing several flights of stairs
7. Climbing one flight of stairs
8. Bending, kneeling or stooping
9. Walking more than one kilometre
10. Walking half a kilometre
11. Walking 100 metres
12. Bathing or dressing yourself

Yes limited a lot	Yes limited a little	Not limited at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

During the *past 4 weeks*, have you had any of the following problems with your work or other regular daily activities *as a result of your PHYSICAL health*?

13. Cut down the amount of time you spent on work or other activities
14. accomplished less than you would like
15. were limited in the kind of work or other activities
16. had difficulty performing work or other activities (for example, it took extra effort)

All of the time	Most of the time	Some of the time	A little of the time	None of the time
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

During the *past 4 weeks*, have you had any of the following problems with your work or other regular daily activities as a result of your **EMOTIONAL** problems (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time	
17. Cut down the amount of time you spent on work or other activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18. accomplished less than you would like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19. didn't do work or other activities as carefully as usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Not at all	Slightly	Moderately	Quite a bit	Extremely	
20. During the <i>past 4 weeks</i> , to what extent has your <i>physical health or emotional problems</i> interfered with your normal social activities with family, friends, neighbours or group?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	None	Very mild	Mild	Moderate	Severe	
21. How much bodily pain have you had during the past 4 weeks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Not at all	A little	Moderately	Quite a bit	Extremely	Very severe
22. During the <i>past 4 weeks</i> , how much did pain interfere with your normal work (including both work outside the home and housework)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

The following questions are about how you feel and how things have been with you during the *past 4 weeks*. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past 4 weeks...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
23. Did you feel full of life?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Have you been a very nervous person?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Have you felt so down in the dumps that nothing could cheer you up?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Have you felt calm and peaceful?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

27. Did you have a lot of energy? ☐ ☐ ☐ ☐ ☐
28. Have you felt down-hearted and depressed? ☐ ☐ ☐ ☐ ☐

How much of the time during the past 4 weeks...

29. Did you feel worn out? ☐ ☐ ☐ ☐ ☐
30. Have you been a happy person? ☐ ☐ ☐ ☐ ☐
31. Did you feel tired? ☐ ☐ ☐ ☐ ☐

32. During the *past 4 weeks*, how much of the time has your *physical health or emotional problems* interfered with your social activities (like visiting friends, relatives, etc)?

How true or false is each of the following statements for you?

33. I seem to get sick a little easier than other people ☐ ☐ ☐ ☐ ☐
34. I am as healthy as anybody I know ☐ ☐ ☐ ☐ ☐
35. I expect my health to get worse ☐ ☐ ☐ ☐ ☐
36. My health is excellent ☐ ☐ ☐ ☐ ☐

- Different response levels in US version:**

During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities **as a result of your physical health**?

(Circle One Number on Each Line)

	Yes	No
13. Cut down the amount of time you spent on work or other activities	1	2
14. Accomplished less than you would like	1	2

15. Were limited in the kind of work or other activities	1	2
16. Had difficulty performing the work or other activities (for example, it took extra effort)	1	2

During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities **as a result of any emotional problems** (such as feeling depressed or anxious)?

(Circle One Number on Each Line)

	Yes	No
17. Cut down the amount of time you spent on work or other activities	1	2
18. Accomplished less than you would like	1	2
19. Didn't do work or other activities as carefully as usual	1	2

Please select the answer for each attribute that is correct for you

Vision

- ☐ Able to see well enough to read ordinary newsprint and recognize a friend on the other side of the street, without glasses or contact lenses.
- ☐ Able to see well enough to read ordinary newsprint and recognize a friend on the other side of the street, but with glasses.
- ☐ Able to read ordinary newsprint with or without glasses but unable to recognize a friend on the other side of the street, even with glasses.
- ☐ Able to recognize a friend on the other side of the street with or without glasses but unable to read ordinary newsprint, even with glasses.
- ☐ Unable to read ordinary newsprint and unable to recognize a friend on the other side of the street, even with glasses.
- ☐ Unable to see at all.

Hearing

- ☐ Able to hear what is said in a group conversation with at least three other people, without a hearing aid.
- ☐ Able to hear what is said in a conversation with one other person in a quiet room without a hearing aid, but requires a hearing aid to hear what is said in a group conversation with at least three other people.
- ☐ Able to hear what is said in a conversation with one other person in a quiet room with a hearing aid, and able to hear what is said in a group conversation with at least three other people, with a hearing aid.
- ☐ Able to hear what is said in a conversation with one other person in a quiet room, without a hearing aid, but unable to hear what is said in a group conversation with at least three other people even with a hearing aid.
- ☐ Able to hear what is said in a conversation with one other person in a quiet room with a hearing aid, but unable to hear what is said in a group conversation with at least three other people even with a hearing aid.
- ☐ Unable to hear at all.

Speech

- ☐ Able to be understood completely when speaking with strangers or people who know me well.
- ☐ Able to be understood partially when speaking with strangers but able to be understood completely when speaking with people who know me well.
- ☐ Able to be understood partially when speaking with strangers or people who know me well.
- ☐ Unable to be understood when speaking with strangers but able to be understood partially by people who know me well.
- ☐ Unable to be understood when speaking to other people (or unable to speak at all).

Ambulation

- ☐ Able to walk around the neighbourhood without difficulty, and without walking equipment.
- ☐ Able to walk around the neighbourhood with difficulty, but does not require walking equipment or the help of another person.
- ☐ Able to walk around the neighbourhood with walking equipment, but without the help of another person.
- ☐ Able to walk only short distances with walking equipment, and requires a wheelchair to get around the neighbourhood.
- ☐ Unable to walk alone, even with walking equipment. Able to walk short distances with the help of another person, and requires a wheelchair to get around the neighbourhood.
- ☐ Cannot walk at all.

Dexterity

- ☐ Full use of two hands and ten fingers.
- ☐ Limitations in the use of hands or fingers, but does not require special tools or help of another person.
- ☐ Limitations in the use of hands or fingers, is independent with use of special tools (does not require the help of another person).
- ☐ Limitations in the use of hands or fingers, requires the help of another person for some tasks (not independent even with the use of special tools).
- ☐ Limitations in the use of hands or fingers, requires the help of another person for most tasks (not independent even with the use of special tools).
- ☐ Limitations in the use of hands or fingers, requires the help of another person for all tasks (not independent even with the use of special tools).

Emotion

- ☐ Happy and interested in life.
- ☐ Somewhat happy.
- ☐ Somewhat unhappy.
- ☐ Very unhappy.
- ☐ So unhappy that life is not worthwhile.

Cognition

- ☐ Able to remember most things, think clearly and solve day to day problems.
- ☐ Able to remember most things, but have a little difficulty when trying to think and solve day to day problems.
- ☐ Somewhat forgetful, but able to think clearly and solve day to day problems.
- ☐ Somewhat forgetful, and have a little difficulty when trying to think or solve day to day problems.
- ☐ Very forgetful, and have great difficulty when trying to think or solve day to day problems.
- ☐ Unable to remember anything at all, and unable to think or solve day to day problems.

Pain

- ☐ Free of pain and discomfort.
- ☐ Mild to moderate pain that prevents no activities.
- ☐ Moderate pain that prevents a few activities.
- ☐ Moderate to severe pain that prevents some activities.
- ☐ Severe pain that prevents most activities.

Select the answer which best describes your present health status.

1. MOBILITY

- ☐ I am able to walk normally (without difficulty) indoors, outdoors and on stairs.
- ☐ I am able to walk without difficulty indoors, but outdoors and/or on stairs I have slight difficulties.
- ☐ I am able to walk without help indoors (with or without an appliance), but outdoors and/or on stairs only with considerable difficulty or with help from others.
- ☐ I am able to walk indoors only with help from others.
- ☐ I am completely bed-ridden and unable to move about.

2. VISION

- ☐ I see normally, i.e. I can read newspapers and TV text without difficulty (with or without glasses).
- ☐ I can read papers and/or TV text with slight difficulty (with or without glasses).
- ☐ I can read papers and/or TV text with considerable difficulty (with or without glasses).
- ☐ I cannot read papers or TV text either with glasses or without, but I can see enough to walk about without guidance.
- ☐ I cannot see enough to walk about without a guide, i.e. I am almost or completely blind.

3. HEARING

- ☐ I can hear normally, i.e. normal speech (with or without a hearing aid).
- ☐ I hear normal speech with a little difficulty.
- ☐ I hear normal speech with considerable difficulty; in conversation I need voices to be louder than normal.
- ☐ I hear even loud voices poorly; I am almost deaf.
- ☐ I am completely deaf.

4. BREATHING

- ☐ I am able to breathe normally, i.e. with no shortness of breath or other breathing difficulty.
- ☐ I have shortness of breath during heavy work or sports, or when walking briskly on flat ground or slightly uphill.
- ☐ I have shortness of breath when walking on flat ground at the same speed as others my age.
- ☐ I get shortness of breath even after light activity, e.g. washing or dressing myself.
- ☐ I have breathing difficulties almost all the time, even when resting.

5. SLEEPING

- ☐ I am able to sleep normally, i.e. I have no problems with sleeping
- ☐ I have slight problems with sleeping, e.g. difficulty in falling asleep, or sometimes waking at night.
- ☐ I have moderate problems with sleeping, e.g. disturbed sleep, or feeling I have not slept enough.
- ☐ I have great problems with sleeping, e.g. having to use sleeping pills often or routinely, or usually waking at night and/or too early in the morning.
- ☐ I suffer severe sleeplessness, e.g. sleep is almost impossible even with full use of sleeping pills, or staying awake most of the night.

6. EATING

- ☐ I am able to eat normally, i.e. with no help from others.
- ☐ I am able to eat by myself with minor difficulty (e.g. slowly, clumsily, shakily, or with special appliances).
- ☐ I need some help from another person in eating.
- ☐ I am unable to eat by myself at all, so I must be fed by another person.
- ☐ I am unable to eat at all, so I am fed either by tube or intravenously

7. SPEECH

- ☐ I am able to speak normally, i.e. clearly, audibly and fluently.
- ☐ I have slight speech difficulties, e.g. occasional fumbling for words, mumbling, or changes of pitch.
- ☐ I can make myself understood, but my speech is e.g. disjointed, faltering, stuttering or stammering.
- ☐ Most people have great difficulty understanding my speech.
- ☐ I can only make myself understood by gestures.

8. ELIMINATION

- ☐ My bladder and bowel work normally and without problems.
- ☐ I have slight problems with my bladder and/or bowel function, e.g. difficulties with urination, or loose or hard bowels.
- ☐ I have marked problems with my bladder and/or bowel function, e.g. occasional 'accidents', or severe constipation or diarrhoea.
- ☐ I have serious problems with my bladder and/or bowel function, e.g. routine 'accidents', or need of catheterization or enemas.
- ☐ I have no control over my bladder and/or bowel function.

9. USUAL ACTIVITIES

- ☐ I am able to perform my usual activities (e.g. employment, studying, housework, free-time activities) without difficulty.
- ☐ I am able to perform my usual activities slightly less effectively or with minor difficulty.
- ☐ I am able to perform my usual activities much less effectively, with considerable difficulty, or not completely.
- ☐ I can only manage a small proportion of my previously usual activities.
- ☐ I am unable to manage any of my previously usual activities.

10. MENTAL FUNCTION

- ☐ I am able to think clearly and logically, and my memory functions well
- ☐ I have slight difficulties in thinking clearly and logically, or my memory sometimes fails me.
- ☐ I have marked difficulties in thinking clearly and logically, or my memory is somewhat impaired.
- ☐ I have great difficulties in thinking clearly and logically, or my memory is seriously impaired.
- ☐ I am permanently confused and disoriented in place and time.

11. DISCOMFORT AND SYMPTOMS

- ☐ I have no physical discomfort or symptoms, e.g. pain, ache, nausea, itching etc.
- ☐ I have mild physical discomfort or symptoms, e.g. pain, ache, nausea, itching etc
- ☐ I have marked physical discomfort or symptoms, e.g. pain, ache, nausea, itching etc.
- ☐ I have severe physical discomfort or symptoms, e.g. pain, ache, nausea, itching etc
- ☐ I have unbearable physical discomfort or symptoms, e.g. pain, ache, nausea, itching etc.

12. DEPRESSION

- ☐ I do not feel at all sad, melancholic or depressed.
- ☐ I feel slightly sad, melancholic or depressed.
- ☐ I feel moderately sad, melancholic or depressed.
- ☐ I feel very sad, melancholic or depressed.
- ☐ I feel extremely sad, melancholic or depressed.

13. DISTRESS

- ☐ I do not feel at all anxious, stressed or nervous.
- ☐ I feel slightly anxious, stressed or nervous.
- ☐ I feel moderately anxious, stressed or nervous.
- ☐ I feel very anxious, stressed or nervous.
- ☐ I feel extremely anxious, stressed or nervous.

14. VITALITY

- ☐ I feel healthy and energetic.
- ☐ I feel slightly weary, tired or feeble.
- ☐ I feel moderately weary, tired or feeble.
- ☐ I feel very weary, tired or feeble, almost exhausted.
- ☐ I feel extremely weary, tired or feeble, totally exhausted.

15. SEXUAL ACTIVITY

- ☐ My state of health has no adverse effect on my sexual activity.
- ☐ My state of health has a slight effect on my sexual activity.
- ☐ My state of health has a considerable effect on my sexual activity.
- ☐ My state of health makes sexual activity almost impossible.
- ☐ My state of health makes sexual activity impossible.

QWB-SA

This survey asks about health problems that you have experienced in the **last 3 days, not including today**.

1. Please indicate whether you currently experience each of the following health symptoms or problems. Do you have...

	Y E S	N O
a. Blindness or severely impaired vision in both eyes?	<input type="checkbox"/>	<input type="checkbox"/>
Blindness or severely impaired vision in only one eye?	<input type="checkbox"/>	<input type="checkbox"/>
b. Speech problems such as stuttering or being unable to speak clearly?	<input type="checkbox"/>	<input type="checkbox"/>
c. Missing or paralyzed hands, feet, arms, or legs?	<input type="checkbox"/>	<input type="checkbox"/>
Missing or paralyzed fingers or toes?	<input type="checkbox"/>	<input type="checkbox"/>
d. Any deformity of the face, fingers, hand or arm, foot or leg, or back (e.g. severe scoliosis)?	<input type="checkbox"/>	<input type="checkbox"/>
e. General fatigue, tiredness, or weakness?	<input type="checkbox"/>	<input type="checkbox"/>
f. A problem with unwanted weight gain or weight loss?	<input type="checkbox"/>	<input type="checkbox"/>
g. A problem with being under or over weight?	<input type="checkbox"/>	<input type="checkbox"/>
h. Problems chewing your food inadequately	<input type="checkbox"/>	<input type="checkbox"/>
i. Any hearing loss or deafness?	<input type="checkbox"/>	<input type="checkbox"/>
j. Any noticeable skin problems, such as bad acne or large burns or scars on face, body, arms, or legs?	<input type="checkbox"/>	<input type="checkbox"/>
k. Eczema or burning/itching rash?	<input type="checkbox"/>	<input type="checkbox"/>
l. Which of the following health aides do you use/have?	<input type="checkbox"/>	<input type="checkbox"/>
1 Dentures?	<input type="checkbox"/>	<input type="checkbox"/>
2 Oxygen tank?	<input type="checkbox"/>	<input type="checkbox"/>
3 Prosthesis?	<input type="checkbox"/>	<input type="checkbox"/>
4 Eye glasses or contact lenses?	<input type="checkbox"/>	<input type="checkbox"/>
5 Hearing aide?	<input type="checkbox"/>	<input type="checkbox"/>
6 Magnifying glass?	<input type="checkbox"/>	<input type="checkbox"/>
7 Neck, back, or leg brace?	<input type="checkbox"/>	<input type="checkbox"/>

2. For the following list of problems, indicate which days (if any) over the past 3 days, not including today, you had the problem. If you have not had the symptom in the past 3 days, **do not leave the question blank**, please fill in "no days". If you have experienced the symptom in the past 3 days, please fill in which of the days you had it; if you experienced it on more than one of the days, please fill in all days that apply.

Did you have....

	no days	yesterday	2 days ago	3 days ago
a. Any problems with your vision not corrected with glasses or contact lenses (such as double vision, distorted vision, flashes, or floaters)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Any eye pain, irritation, discharge, or excessive sensitivity to light?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. A headache?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Dizziness, earache, or ringing in your ears?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Difficulty hearing, or discharge, or bleeding from an ear?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Stuffy or runny nose, or bleeding from the nose?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. A sore throat, difficulty swallowing, or hoarse voice?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. A toothache or jaw pain?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Sore or bleeding lips, tongue, or gums?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Coughing or wheezing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

k. Shortness or breath or difficulty breathing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Chest pain, pressure, palpitations, fast or skipped heart beat, or other discomfort in the chest?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. An upset stomach, abdominal pain, nausea, heartburn, or vomiting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Difficulty with bowel movements, diarrhoea, constipation, rectal bleeding, black tar-like stools, or any pain or discomfort in the rectal area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. Pain, burning, or blood in urine?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. Loss of bladder control, frequent night-time urination, or difficulty with urination?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q. Genital pain, itching, burning, or abnormal discharge, or pelvic cramping or abnormal bleeding (does not include normal menstruation)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
r. A broken arm, wrist, foot, leg, or any other broken bone (other than in the back)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
s. Pain, stiffness, cramps, weakness, or numbness in the neck or back?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
t. Pain, stiffness, cramps, weakness, or numbness in the hips or sides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
u. Pain, stiffness, cramps, weakness, or numbness in any of the joint muscles of the hand, feet, arms, or legs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. Swelling of ankles, hands, feet, or abdomen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
w. Fever, chills, or sweats?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
x. Loss of consciousness, fainting, or seizures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
y. Difficulty with your balance, standing, or walking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The following symptoms are about your feelings, thoughts, and behaviors. Please fill in which days (if any) over the past 3 days, not including today, you have had..	no days	yesterday	2 days ago	3 days ago
a. Trouble falling asleep or staying asleep?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Spells of feeling nervous or shaky?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Spells of feeling upset, downhearted, or blue?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Excessive worry or anxiety?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Feelings that you have little or no control over events in your life?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Feelings of being lonely or isolated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Feelings of frustration, irritation, or close to losing your temper?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. A hangover?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Any decrease of sexual interest or performance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Confusion, difficulty understanding the written or spoken word, or significant memory loss?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Thoughts or images you could not get out of your mind?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. To take any medication including over-the-counter remedies (aspirin/tylenol, allergy medications, insulin, hormones, estrogen, thyroid, prednisone)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. To stay on a medically prescribed diet for health reasons?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. A loss of appetite or over-eating?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. In the last 3 days did you have any symptoms, health complaints, or pains that have not been mentioned?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
	no days	yesterday	2 days ago	3 days ago
If yes, what were they and on which days did you have them?				
Symptom A: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Symptom B: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Over the last 3 days...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5a. Did you spend any part of the day or night as a patient in a hospital, nursing home, or rehabilitation center?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5b. Because of any impairment or health problem, did you need help with your personal care needs, such as eating, dressing, bathing, or getting around your home?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6a. Which days did you drive a motor vehicle?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6b. Which days did you use public transportation such as a bus, subway, Medi-van, train, or airplane?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6c. Which days did you either not drive a motor vehicle or not use public transportation because of your health, or need help from another person to use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7a. Have trouble climbing stairs or inclines or walking off the curb?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7b. Avoid walking, have trouble walking, or walk more slowly than other people your age?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7c. Limp or use a cane, crutches, or walker?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7d. Avoid or have trouble bending over, stooping, or kneeling?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7e. Have any trouble lifting or carrying everyday objects such as books, a briefcase, or groceries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7f. Have any other limitations in physical movements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Over the last 3 days...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7g. Spend all or most of the day in bed, chair, or couch because of health reasons?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7h. Spend all or most of the day in a wheelchair?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If in a wheelchair , on which days did someone else control its movement?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8a. Because of any physical or emotional health reasons, on which days did you avoid, need help with, or were limited in doing some of your usual activities, such as work, school, or housekeeping?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8b. Because of any physical or emotional health reasons, on which days did you avoid or feel limited in doing some of your usual activities, such as visiting family or friends, hobbies, shopping, recreational, or religious activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8c. On which days did you have to change any of your plans or activities because of your health? (Consider only activities that you did not report in the last 2 questions.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9a. Would you say that your health is:					
<input type="checkbox"/> Excellent					
<input type="checkbox"/> Very Good					
<input type="checkbox"/> Good					
<input type="checkbox"/> Fair					
<input type="checkbox"/> Poor					
9b. Compared to a year ago, how would you rate your health in general now?					
<input type="checkbox"/> Much better now than a year ago					
<input type="checkbox"/> Somewhat better now than a year ago					
<input type="checkbox"/> About the same as a year ago					
<input type="checkbox"/> Somewhat worse than a year ago					
<input type="checkbox"/> Much worse than a year ago					
9c. Think about a scale of 0 to 100, with zero being the least desirable state of health that you could imagine and 100 being perfect health. What number from 0 to 100 would you give to the state of your health, on average, over the last 3 days?					
<input type="checkbox"/> 0 <input type="checkbox"/> 10 <input type="checkbox"/> 20 <input type="checkbox"/> 30 <input type="checkbox"/> 40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input type="checkbox"/> 70 <input type="checkbox"/> 80 <input type="checkbox"/> 90 <input type="checkbox"/> 100					

ICECAP-A

Please indicate which statements best describe your overall quality of life at the moment by selecting one answer for each of the five attributes below

1. Feeling settled and secure

- ☐ I am able to feel settled and secure in **all** areas of my life
- ☐ I am able to feel settled and secure in many areas of my life
- ☐ I am only able to feel settled and secure in a few areas of my life
- ☐ I am **unable** to feel settled and secure in **any** areas of my life

2. Love, friendship, and support

- ☐ I can have a lot of love, friendship, and support
- ☐ I can have quite a lot of love, friendship, and support
- ☐ I can only have a little love, friendship, and support
- ☐ I cannot have any love, friendship, and support

3. Being independent

- ☐ I am able to be completely independent
- ☐ I am able to be independent in many things
- ☐ I am only able to be independent in a few things
- ☐ I am unable to be at all independent

4. Achievement and progress

- ☐ I can achieve and progress in all aspects of my life
- ☐ I can achieve and progress in many aspects of my life
- ☐ I can achieve and progress in a few aspects of my life
- ☐ I cannot achieve and progress in any aspects of my life

5. Enjoyment and pleasure

- ☐ I can have a lot of enjoyment and pleasure
- ☐ I can have quite a lot of enjoyment and pleasure
- ☐ I can have a little enjoyment and pleasure
- ☐ I cannot have any enjoyment and pleasure

Demographic questions

Some questions about yourself

1. You are: ☐ Male ☐ Female

2. Your year of birth? _____

3. Country of birth? _____

4. What is your ethnicity?

OCEANIAN

Australian Peoples

New Zealand Peoples

Melanesian and Papuan

Micronesian

Polynesian

NORTH-WEST EUROPEAN

British

Irish

Western European

Northern European

SOUTHERN AND EASTERN EUROPEAN

Southern European

South Eastern European

Eastern European

NORTH AFRICAN AND MIDDLE EASTERN

Arab

Jewish

Peoples of the Sudan

Other North African and Middle Eastern

SOUTH-EAST ASIAN

Mainland South-East Asian

Maritime South-East Asian

NORTH-EAST ASIAN

Chinese Asian

Other North-East Asian

SOUTHERN AND CENTRAL ASIAN

Southern Asian

Central Asian

PEOPLE OF THE AMERICAS

North American

South American

Central American

Caribbean Islander

SUB-SAHARAN AFRICAN

Central and West African

Southern and East African

5. What is your postcode? _____

6. Are you living with a spouse or partner? ☐ Yes ☐ No

7. Currently what is the highest level of education you have completed?

(Please tick one box)

- | | |
|--|--|
| <input type="checkbox"/> Some high school | <input type="checkbox"/> Completed high school |
| <input type="checkbox"/> Some University/college | <input type="checkbox"/> Grad <input type="checkbox"/> Post Grad |
| <input type="checkbox"/> Apprenticeship | <input type="checkbox"/> Technical diploma |

8. When you were young (less than 16) , what was your standard of living at home?

- | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Very good | Good | Poor | Very poor |

9. How do you rate your current standard of living?

- | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Very good | Good | Poor | Very poor |

10. What is your current (or last) profession or job?

11. What is your current occupational status? (Please tick one box)

- | | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Fulltime | Part time | Homemaker | Unemployed | Retired | Disability | Pensioner | Student |

12. Tick the box corresponding to your pre-tax or gross household income (include all sources)

- | | | | | |
|---|--|------------------------------------|--------------------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Below \$350pw
(less than \$18,200pa) | \$350-649
(\$18,200-33,748pa) | \$650-999pw
(\$33,800-51,948pa) | \$1000-1399pw
(\$52,000-72,748pa) | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| \$1400-1999pw
(\$72,800-103,948pa) | \$2000-2999pw
(\$104,000-155,948pa) | \$3000pw
(above \$156,000pa) | refused | don't know |

13 Do you have a condition that has lasted for more than three months (e.g., illness, injury, disability)?

- ☐ No ☐ Yes

(name of condition) _____

14. When did it start? ☐ I have not had a condition which lasted that long

OR ☐ Year _____ Month (if in past 12 months) _____

15. On how many days per week do you do moderate-intensity physical activity/exercise (such as brisk walking, swimming, cycling)?

- | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Never | less than 1x week | once a week | 2-3 times a week | about every day |

16. How many minutes of moderate-intensity physical activity do you do when you exercise?

- | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| less than 15 | 15-29 | 30-60 | more than 60 |

17. On average, how many cigarettes do you smoke a day? *(Please tick one box)*

- ☐
0, I don't smoke
- ☐
1-10
- ☐
11-20
- ☐
21 or more

18. How often do you have a drink containing alcohol? *Please tick one box*

- ☐
Never
- ☐
Monthly or less
- ☐
2-4 times a month
- ☐
2-3 times a week
- ☐
4 or more times a week

19. How many drinks containing alcohol do you have on a typical day when you are drinking?

- ☐
1 or 2
- ☐
3 or 4
- ☐
5 or 6
- ☐
7 or 9
- ☐
10 or more

20. What is your height? _____

21. What is your weight? _____

22. How do you feel about your future health?

☐

☐

☐

☐

☐

Very optimistic

Optimistic

Neither optimistic nor pessimistic

Pessimistic

Very pessimistic

Thank you for completing this questionnaire

EQ-5D duplicate for checking data**a. Mobility**

- ☐ I have no problem in walking about
- ☐ I have slight problems in walking about
- ☐ I have moderate problems in walking about
- ☐ I have severe problems in walking about
- ☐ I am unable to walk about

HUI duplicate for checking**97. Vision**

- ☐ Able to see well enough to read ordinary newsprint and recognize a friend on the other side of the street, without glasses or contact lenses.
- ☐ Able to see well enough to read ordinary newsprint and recognize a friend on the other side of the street, but with glasses.
- ☐ Able to read ordinary newsprint with or without glasses but unable to recognize a friend on the other side of the street, even with glasses.
- ☐ Able to recognize a friend on the other side of the street with or without glasses but unable to read ordinary newsprint, even with glasses.
- ☐ Unable to read ordinary newsprint and unable to recognize a friend on the other side of the street, even with glasses.
- ☐ Unable to see at all.

15D duplicate for checking**3. HEARING**

- ☐ I can hear normally, i.e. normal speech (with or without a hearing aid).
- ☐ I hear normal speech with a little difficulty.
- ☐ I hear normal speech with considerable difficulty; in conversation I need voices to be louder than normal.
- ☐ I hear even loud voices poorly; I am almost deaf.
- ☐ I am completely deaf.

Disease Specific Questionnaires

DASS21

Statements in Questions 6 to 26 applied to you *over the past week*. Please tick the answer that is correct for you

	0 Did not apply to me at all	1 Applied to me to some degree, or some of the time	2 Applied to me to a considerable degree, or a good part of time	3 Applied to me very much, or most of the time
1. I found it hard to wind down				
2. I was aware of dryness of my mouth				
3. couldn't seem to experience any positive feeling at all				
4. I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)				
5. I found it difficult to work up the initiative to do things				
6. I tended to over-react to situations				
7. I experienced trembling (eg, in the hands)				
8. I felt that I was using a lot of nervous energy				
9. I was worried about situations in which I might panic and make a fool of myself				
10. I felt that I had nothing to look forward to				
11. I found myself getting agitated				
12. I found it difficult to relax				
13. I felt down-hearted and blue				
14. I was intolerant of anything that kept me from getting on with what I was doing				
15. I felt I was close to panic				
16. I was unable to become enthusiastic about anything				
17. I felt I wasn't worth much as a person				
18. I felt that I was rather touchy				
19. I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)				
20. I felt scared without any good reason				
21. I felt that life was meaningless				

These questions deal with the Past 4 weeks.

1. In the past 4 weeks, about how often did you feel tired for no good reason?
2. In the past 4 weeks, about how often did you feel nervous?
3. In the past 4 weeks, about how often did you feel so nervous that nothing could calm you down?
4. In the past 4 weeks, about how often did you feel hopeless?
5. In the past 4 weeks, about how often did you feel restless or fidgety?
6. In the past 4 weeks, about how often did you feel so restless that you could not sit still?
7. In the past 4 weeks, about how often did you feel depressed?
8. In the past 4 weeks, about how often did you feel that everything was an effort?
9. In the past 4 weeks, about how often did you feel so sad that nothing could cheer you up?
10. In the past 4 weeks, about how often did you feel worthless?

All of the time	Most of the time	Some of the time	A little of the time	None of the time

APHAB

24 items

Hearing aid experience

- ☐ None
- ☐ Less than 6 weeks
- ☐ 6 weeks to 11 months
- ☐ 1 to 10 years
- ☐ Over 10 years

Daily hearing aid use

- ☐ Less than 1 hour per day
- ☐ 1 to 4 hours per day
- ☐ 4 to 8 hours per day
- ☐ 8 to 16 hours per day

Employment

- ☐ full-time
- ☐ part-time
- ☐ not employed outside the home, or retired

INSTRUCTIONS: Please choose the answers that come closest to your everyday experience. Notice that each choice includes a percentage. You can use this to help you decide on your answer. For example, if a statement is true about 75% of the time, circle "C" for that item. If you have not experienced the situation we describe, try to think of a similar situation that you have been in and respond for that situation. If you have no idea then leave that item blank.

A = Always (99%)
 B = Almost Always (87%)
 C = Generally (75%)
 D = Half-the-time (50%)
 E = Occasionally (25%)
 F = Seldom (12%)
 G = Never (1%)

	Without Hearing Aid								With Hearing Aid						
1. When I am in a crowded grocery store, talking with the cashier, I can follow the conversation.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
2. I miss a lot of information when I'm listening to a lecture.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
3. Unexpected sounds, like a smoke detector or alarm bell are uncomfortable.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
4. I have difficulty hearing a conversation when I'm with one of my family at home.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
5. I have trouble understanding the dialogue in a movie or at the theater.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
6. When I am listening to the news on the car radio, and family members are talking, I have trouble hearing the news.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
7. When I'm at the dinner table with several people, and am trying to have a conversation with one person, understanding speech is difficult.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
8. Traffic noises are too loud.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
9. When I am talking with someone across a large empty room, I understand the words.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
10. When I am in a small office, interviewing or answering questions, I have difficulty following the conversation.	A	B	C	D	E	F	G		A	B	C	D	E	F	G

	Without Hearing Aid								With Hearing Aid						
11. When I am in a theater watching a movie or play, and the people around me are whispering and rustling paper wrappers, I can still make out the dialogue.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
12. When I am having a quiet conversation with a friend, I have difficulty understanding.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
13. The sounds of running water, such as a toilet or shower, are uncomfortably loud.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
14. When a speaker is addressing a small group, and everyone is listening quietly, I have to strain to understand.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
15. When I'm in a quiet conversation with my doctor in an examination room, it is hard to follow the conversation.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
16. I can understand conversations even when several people are talking.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
17. The sounds of construction work are uncomfortably loud.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
18. It's hard for me to understand what is being said at lectures or church services.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
19. I can communicate with others when we are in a crowd.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
20. The sound of a fire engine siren close by is so loud that I need to cover my ears.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
21. I can follow the words of a sermon when listening to a religious service.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
22. The sound of screeching tires is uncomfortably loud.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
23. I have to ask people to repeat themselves in one-on-one conversation in a quiet room.	A	B	C	D	E	F	G		A	B	C	D	E	F	G
24. I have trouble understanding others when an air conditioner or fan is on.	A	B	C	D	E	F	G		A	B	C	D	E	F	G

ST. GEORGE'S RESPIRATORY QUESTIONNAIRE FOR COPD PATIENTS (SGRQ-C)

Before completing the rest of the questionnaire:

Please tick in one box to show how you describe your current health:

<input type="checkbox"/>	Very good
<input type="checkbox"/>	Good
<input type="checkbox"/>	Fair
<input type="checkbox"/>	Poor
<input type="checkbox"/>	Very poor

Questions about how much chest trouble you have

I cough

- ☐ most days a week
- ☐ several days a week
- ☐ only with chest infections
- ☐ not at all

I bring up phlegm (sputum)

- ☐ most days a week
- ☐ several days a week
- ☐ only with chest infections
- ☐ not at all

I have shortness of breath

- ☐ most days a week
- ☐ several days a week
- ☐ not at all

I have attacks of wheezing

- ☐ most days a week
- ☐ several days a week
- ☐ a few days a month
- ☐ only with chest infections
- ☐ not at all

How many attacks of chest trouble did you have during the last year?

- ☐ 3 or more attacks
- ☐ 1 or 2 attacks
- ☐ none

How often do you have good days (with little chest trouble)?

- ☐ no good days
- ☐ a few good days
- ☐ most days are good
- ☐ every day is good

If you have a wheeze, is it worse in the morning?

No	Yes
<input type="checkbox"/>	<input type="checkbox"/>

How would you describe your chest condition? Please tick one box

- ☐ Causes me a lot of problems or is the most important problem I have
☐ Causes me a few problems
☐ Causes no problem

Questions about what activities usually make you feel breathless

For each statement please tick in the box that applies to you these days:

TRUE

FALSE

Getting washed or dressed		
Walking around the home		
Walking outside on the level		
Walking up a flight of stairs		
Walking up hills		
Some more questions about your cough and breathlessness	TRUE	FALSE
My cough hurts		
My cough makes me tired		
I am breathless when I talk		
I am breathless when I bend over		
My cough or breathing disturbs my sleep		
I get exhausted easily		
Questions about other effects that your chest trouble may have on you	TRUE	FALSE
My cough or breathing is embarrassing in public		
My chest trouble is a nuisance to my family, friends or neighbours		
I get afraid of panic when I cannot get my breath		
I feel that I am not in control of my chest problem		
I have become frail or an invalid because of my chest		
Exercise is not safe for me		
Everything seems too much of an effort		
These are questions about how your activities might be affected by your breathing	TRUE	FALSE
I take a long time to get washed or dressed		
I cannot take a bath or shower, or I take a long time		
I walk slower than other people, or I stop for rests		
Jobs such as housework take a long time, or I have to stop for rests		
If I walk up one flight of stairs, I have to go slowly or stop		
If I hurry or walk fast, I have to stop or slow down		
My breathing makes it difficult to do things such as walk up hills, carrying things up stairs, light gardening such as weeding, dance, play bowls or play golf		
My breathing makes it difficult to do things such as carry heavy loads, dig the garden or shovel snow, jog or walk at 5 miles per hour, play tennis or swim		
We would like to know how your chest trouble <u>usually</u> affects your life.	TRUE	FALSE
I cannot play sports or games		
I cannot go out for entertainment or recreation		
I cannot go out of the house to do the shopping		
I cannot do housework		
I cannot move far from my bed or chair		

How does your chest trouble affect you?	TRUE	FALSE
It does not stop me doing anything I would like to do		
It does stop me doing one or two things I would like to do		
It does not stop me doing most of the things I would like to do		
It does not stop me doing everything I would like to do		

DIABETES-39

During the **past** month how much was the quality of **your** life affected by:
(place an X in a box between 1 and 7)

	Not affected at all						Extremely affected
1. your diabetes medication schedule	1	2	3	4	5	6	7
2. worries about money matters	1	2	3	4	5	6	7
3. limited energy levels	1	2	3	4	5	6	7
4. following your doctor's prescribed treatment plan for diabetes	1	2	3	4	5	6	7
5. food restrictions required to control your diabetes	1	2	3	4	5	6	7
6. concerns about our future	1	2	3	4	5	6	7
7. other health problems besides diabetes	1	2	3	4	5	6	7
8. stress or pressure in your life	1	2	3	4	5	6	7
9. feelings of weakness	1	2	3	4	5	6	7
10. restrictions on how far you can walk	1	2	3	4	5	6	7
11. any daily exercises for your diabetes	1	2	3	4	5	6	7
12. loss or blurring of vision	1	2	3	4	5	6	7
13. not being able to do what you want	1	2	3	4	5	6	7
14. having diabetes	1	2	3	4	5	6	7
15. losing control of your blood sugar levels	1	2	3	4	5	6	7
16. other illnesses besides diabetes	1	2	3	4	5	6	7
17. testing your blood sugar levels	1	2	3	4	5	6	7
18. the time required to control your diabetes	1	2	3	4	5	6	7
19. the restrictions your diabetes places on your family and friends	1	2	3	4	5	6	7
20. being embarrassed because you have diabetes	1	2	3	4	5	6	7
21. diabetes interfering with your sex life	1	2	3	4	5	6	7
22. feeling depressed or low	1	2	3	4	5	6	7
23. problems with sexual functioning	1	2	3	4	5	6	7
24. getting your diabetes well controlled	1	2	3	4	5	6	7
25. complications from your diabetes	1	2	3	4	5	6	7
26. doing things that your family and friends don't do	1	2	3	4	5	6	7
27. keeping a record of your blood sugar levels	1	2	3	4	5	6	7
28. the need to eat at regular intervals	1	2	3	4	5	6	7
29. not being able to do housework or other jobs around the house	1	2	3	4	5	6	7
30. a decreased interest in sex	1	2	3	4	5	6	7
31. having to organise your daily life around diabetes	1	2	3	4	5	6	7
32. needing to rest often	1	2	3	4	5	6	7
33. problems in climbing stairs or walking up steps	1	2	3	4	5	6	7
34. having trouble caring for yourself (dressing, bathing, or using the toilet)	1	2	3	4	5	6	7
35. restless sleep	1	2	3	4	5	6	7
36. walking more slowly than others	1	2	3	4	5	6	7
37. being identifies as a diabetic	1	2	3	4	5	6	7
38. having diabetes interfere with your family life	1	2	3	4	5	6	7
39. diabetes in general	1	2	3	4	5	6	7

Arthritis Impact Measurement Scales 2 (AIMS2-SF)

During the past four weeks ...

	All days	Most days	Some days	Few days	No Days
1. How often were you physically able to drive a car or use public transportation?					
2. How often were you in a bed or chair for most of the day?					
3. Did you have trouble doing vigorous activities such as running, lifting heavy objects, or participating in strenuous sports?					
4. Did you have trouble either walking several blocks or climbing a few flights of stairs?					
5. Were you unable to walk unless assisted by another person or by a cane, crutches or walker?					
6. Could you easily write with a pen or pencil?					
7. Could you easily button a shirt or blouse?					
8. Could you easily turn a key in a lock?					
9. Could you easily comb or brush your hair?					
10. Could you easily reach shelves that were above your head?					
11. Did you need help to get dressed?					
12. Did you need help to get out of bed?					
13. How often did you have severe pain from your arthritis?					
14. How often did your morning stiffness last more than one hour from the time you woke up?					
15. How often did your pain make it difficult for you to sleep?					
16. How often have you felt tense or high strung?					
17. How often have you been bothered by nervousness or your nerves					
18. How often have you been in low or very low spirits?					
19. How often have you enjoyed the things you do?					
20. How often did you feel like a burden to others?					
21. How often did you get together with friends or relatives?					
22. How often were you on the telephone with close friends or relatives?					
23. How often did you go to a meeting of a church, club, team, or other groups?					
24. Did you feel that your family or friends were sensitive to your personal needs?					

If you are unemployed, disabled, or retired, stop here.

25. How often were you unable to do any paid work, house work or school work?					
26. On the days you did work, how often did you have to work a shorter day?					

Raw data was collected so that scores were coded All Days =1 to No Days=5. Qs 2-5, 11-18, 20, 25, 26 are reversed scored. See scoring algorithm later in this manual.

CANCER QLQ C-30

	Not at All	A Little	Quite a Bit	Very Much
Do you have any trouble doing strenuous activities, like carrying a heavy shopping bag or a suitcase?	1	2	3	4
Do you have any trouble taking a <u>long</u> walk?	1	2	3	4
Do you have any trouble taking a <u>short</u> walk outside of the house?	1	2	3	4
Do you need to stay in bed or a chair during the day?	1	2	3	4
Do you need help with eating, dressing, washing yourself or using the toilet?	1	2	3	4

During the past week:

Were you limited in doing either your work or other daily activities?	1	2	3	4
Were you limited in pursuing your hobbies or other leisure time activities?	1	2	3	4
Were you short of breath?	1	2	3	4
Have you had pain?	1	2	3	4
Did you need to rest?	1	2	3	4
Have you had trouble sleeping?	1	2	3	4
Have you felt weak?	1	2	3	4
Have you lacked appetite?	1	2	3	4
Have you felt nauseated?	1	2	3	4
Have you vomited?	1	2	3	4
Have you been constipated?	1	2	3	4

During the past week:

Have you had diarrhoea?	1	2	3	4
Were you tired?	1	2	3	4
Did pain interfere with your daily activities?	1	2	3	4
Have you had difficulty in concentrating on things, like reading a newspaper or watching television?	1	2	3	4
Did you feel tense?	1	2	3	4
Did you worry?	1	2	3	4
Did you feel irritable?	1	2	3	4
Did you feel depressed?	1	2	3	4
Have you had difficulty remembering things?	1	2	3	4
Has your physical condition or medical treatment interfered with your family life?	1	2	3	4
Has your physical condition or medical treatment interfered with your <u>social</u> activities?	1	2	3	4
Has your physical condition or medical treatment caused you financial difficulties?	1	2	3	4

For the following questions please circle the number between 1 and 7 that best applies to you

29. How would you rate your overall health during the past week?

1 2 3 4 5 6 7
Very poor Excellent

30. How would you rate your overall quality of life during the past week?

1 2 3 4 5 6 7
Very poor Excellent

ASTHMA QUESTIONNAIRE

What follows is a series of statements describing the way in which asthma (or its treatment) affects some people. You are asked to tick the response to each statement which most closely applies to you over the last four weeks.

	Not at all	Mildly	Moderately	Severely	Very severely
1. I have been troubled by episodes of shortness of breath.					
2. I have been troubled by wheezing attacks.					
3. I have been troubled by tightness in the chest.					
4. I have been restricted in walking down the street on level ground or doing light housework because of asthma or shortness of breath.					
5. I have been restricted in walking up hills or doing heavy housework because of asthma or shortness of breath.					
6. I have felt tired or a general lack of energy.					
7. I have been unable to sleep at night.					
8. I have felt sad or depressed.					
9. I have felt frustrated with myself.					
10. I have felt anxious, under tension or stressed.					
11. I have felt that asthma or shortness of breath is preventing me from achieving what I want from life.					
12. Asthma or shortness of breath has interfered with my social life.					
13. I have been limited in going to certain places because they are bad for my asthma.					
14. I have been limited in going certain places because I have been afraid of getting an asthma attack and not being able to get help.					
15. I have been restricted in the sports, hobbies or other recreations I can engage in because of my asthma or shortness of breath .					
16. I have felt generally restricted .					
17. I have felt that asthma is controlling my life.					
18. I have been worried about my present or future health because of asthma.					
19. I have been worried about asthma shortening my life.					
20. I have felt dependent on my asthma inhalers.					

MACNEW.

We would now like to ask you some questions about how you have been feeling DURING THE LAST 2 WEEKS. Please select one answer for each question

In general, how much of the time during the last 2 weeks have you felt frustrated, impatient or angry?

All of the time

Most of the time

A good bit of the time

Some of the time

A little of the time

Hardly any of the time

None of the time

How often during the last 2 weeks have you felt worthless or inadequate?

All of the time

Most of the time

A good bit of the time

Some of the time

A little of the time

Hardly any of the time

None of the time

In the last 2 weeks, how much of the time did you feel very confident and sure that you could deal with your heart problem?

None of the time

A little of the time

Some of the time

A good bit of the time

Most of the time

Almost all of the time

All of the time

In general how much of the time did you feel discouraged or down in the dumps during the last 2 weeks?

All of the time

Most of the time

A good bit of the time

Some of the time

A little of the time

Hardly any of the time

None of the time

How much of the time during the past 2 weeks did you feel relaxed and free of tension?

None of the time

A little of the time

Some of the time

A good bit of the time

Most of the time

Almost all of the time

All of the time

How often during the last 2 weeks have you felt worn out or low in energy?

All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time

How happy, satisfied, or pleased have you been with your personal life during the last 2 weeks?

Very dissatisfied, unhappy most of the time
 Generally dissatisfied, unhappy
 Somewhat dissatisfied, unhappy
 Generally satisfied, pleased
 Happy most of the time
 Very happy most of the time
 Extremely happy, could not have been more satisfied or pleased

In general, how often during the last 2 weeks have you felt restless, or as if you were having difficulty trying to calm down?

All of the time
 Most of the time
 A good bit of the time
 Some of the time
 A little of the time
 Hardly any of the time
 None of the time

How much shortness of breath have you experienced during the last 2 weeks while doing your day-to-day physical activities?

Extreme shortness of breath
 Very short of breath
 Quite a bit of shortness of breath
 Moderate shortness of breath
 Some shortness of breath
 A little shortness of breath
 No shortness of breath

How often during the last 2 weeks have you felt tearful or like crying?

All of the time
 Most of the time
 A good bit of the time
 Some of the time
 A little of the time
 Hardly any of the time
 None of the time

How often during the last 2 weeks have you felt as if you are more dependent than you were before your heart problem?

All of the time
 Most of the time
 A good bit of the time
 Some of the time
 A little of the time

Hardly any of the time
None of the time

How often during the last 2 weeks have you felt you were unable to do your usual social activities or social activities with your family?
All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time

How often during the last 2 weeks have you felt as if others no longer have the same confidence in you as they did before your heart problem?
All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time

How often during the last 2 weeks have you experienced chest pain while doing your day-to-day activities?
All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time

How often during the last 2 weeks have you felt unsure of yourself or lacking in self-confidence?
All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time

How often during the last 2 weeks have you been bothered by aching or tired legs?
All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time

During the last 2 weeks, how much have you been limited in doing sports or exercise as a result of your heart problem?

Extremely limited
Very limited
Limited quite a bit
Moderately limited
Somewhat limited
Limited a little
Not limited at all

How often during the last 2 weeks have you felt apprehensive or frightened?

All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time

How often during the last 2 weeks have you felt dizzy or lightheaded?

All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time

In general, during the last 2 weeks how much have you been restricted or limited as a result of your heart problem?

Extremely limited
Very limited
Limited quite a bit
Moderately limited
Somewhat limited
Limited a little
Not limited at all

How often during the last 2 weeks have you felt unsure as to how much exercise or physical activity you should be doing?

All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time

How often during the last 2 weeks have you felt as if your family is being over-protective toward you?

All of the time
Most of the time
A good bit of the time

Some of the time
A little of the time
Hardly any of the time
None of the time

How often during the past 2 weeks have you felt as if you were a burden on others?
All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time

How often during the past 2 weeks have you felt excluded from doing things with other people because of your heart problem?
All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time

How often during the past 2 weeks have you felt unable to socialize because of your heart problem?
All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time

In general, during the last 2 weeks how much have you been physically restricted or limited as a result of your heart problem?

Extremely limited
Very limited
Limited quite a bit
Moderately limited
Somewhat limited
Limited a little
Not limited at all

How often during the last 2 weeks have you felt your heart problem limited or interfered with sexual intercourse?
All of the time
Most of the time
A good bit of the time
Some of the time
A little of the time
Hardly any of the time
None of the time
Not applicable

A. Instruments (MAU).

1. AQoL-4D ALGORITHM in SPSS

****FOR AQOL-4D UTILITY MODEL (WITH MISSING VALUES) (CHE Version 7 Dated 11 March 2011).**

* THIS ALGORITHM (CHE Version 7 Dated 11 March 2011) IS AN INTERIM RELEASE AND

* MAY BE CHANGED WITHOUT NOTICE.

* RESEARCHERS SHOULD CHECK WITH THE AQOL GROUP AT MONASH UNIVERSITY

* FOR ANY MODIFICATION www.aqol.com.au

* This file analyses the AQoL-4D instrument and produces an overall instrument utility score and individual scores for the 4 dimensions.

* ***NOTE:** While the original AQoL had 15 items, the 3 items about medicinal use are not part of the scoring algorithm and are not part of the analysis.

* Variable names: For this algorithm, the variables in your questionnaire or database should be named "aqol1 to aqol12" etc.

* The dimensions are scaled on a "Dimension Worst Health State - Dimension Best Health State" scale where DWHS = 0.00 and DBHS = 1.00. **

* These are not strict utility values as they have not been evaluated on a life-death Scale**

* The AQoL-4D utility scores are scaled such that the:

* "AQoL-4D worst health state" = -0.04 (i.e. this is worse than Death, where Death = 0.00).

* "AQoL-4D best health state" = 1.00 (i.e. this is good HRQoL)

*Missing Values: Note that missing data are handled by imputing values within each dimension.

*The algorithm allows for only 1 missing response per dimension being imputed from the mean of the other 2 responses in the dimension. (Each dimension has 3 responses). **

*If more than one response is missing in a dimension, the dimension will not be scored and there will not be a overall instrument score. **

* aqol# are item responses in your data**

* duQ# are item disutilities **

* Missing values represented by blank or dot.

Compute Q1 = aqol1.

Compute Q2 = aqol2.

Compute Q3 = aqol3.

Compute Q4 = aqol4.

Compute Q5 = aqol5.

Compute Q6 = aqol6.

Compute Q7 = aqol7.

Compute Q8 = aqol8.

Compute Q9 = aqol9.

Compute Q10 = aqol10.

Compute Q11 = aqol11.

Compute Q12 = aqol12.

Execute.

***** Imputing Missing Values in Database *****

**** Independent Living - Dimension 1

Compute ILmiss = Nmiss (Q1 to Q3).

Do if ILmiss = 1.

Do repeat

A = Q1 to Q3.

If (Missing (A)) A = RND(Mean (Q1 to Q3)).

End repeat.

End if.

*** Relationships - Dimension 2 *****

Compute RELmiss = Nmiss (Q4 to Q6).

Do if RELmiss =1.

Do repeat

A = Q4 to Q6.

If (Missing (A)) A = RND(Mean (Q4 to Q6)).

End repeat.

End if.

*** Senses Dimension 3 *****

Compute SENmiss = Nmiss (Q7 to Q9).

Do if SENmiss =1.

Do repeat

A = Q7 to Q9.

If (Missing (A)) A = RND(Mean (Q7 to Q9)).

End repeat.

End if.

**** Mental Health - Dimension 4 ****

Compute MENmiss = Nmiss (Q10 to Q12).

Do if MENmiss =1.

Do repeat

A = Q10 to Q12.

If (Missing (A)) A = RND(Mean (Q10 to Q12)).

End repeat.

End if.

Execute.

**ITEM DISUTILITIES

***Dimension 1. Independent living*

1. Personal care

If (Q1 = 1) duQ1 = 0.000.

If (Q1 = 2) duQ1 = 0.154.

If (Q1 = 3) duQ1 = 0.403.

If (Q1 = 4) duQ1 = 1.000.

***2. Household Help

If (Q2 = 1) duQ2 = 0.000.
If (Q2 = 2) duQ2 = 0.244.
If (Q2 = 3) duQ2 = 0.343.
If (Q2 = 4) duQ2 = 1.000.

***3. Getting Around Outside

If (Q3 = 1) duQ3 = 0.000.
If (Q3 = 2) duQ3 = 0.326.
If (Q3 = 3) duQ3 = 0.415.
If (Q3 = 4) duQ3 = 1.000.

***Dimension 2. Relationships

***4. Family and Friends

If (Q4 = 1) duQ4 = 0.000.
If (Q4 = 2) duQ4 = 0.169.
If (Q4 = 3) duQ4 = 0.396.
If (Q4 = 4) duQ4 = 1.000.

***5. Other People

If (Q5 = 1) duQ5 = 0.000.
If (Q5 = 2) duQ5 = 0.095.
If (Q5 = 3) duQ5 = 0.191.
If (Q5 = 4) duQ5 = 1.000.

***6. Health and Family

If (Q6 = 1) duQ6 = 0.000.
If (Q6 = 2) duQ6 = 0.147.
If (Q6 = 3) duQ6 = 0.297.
If (Q6 = 4) duQ6 = 1.000.

***Dimension 3. Senses

***7. Vision

If (Q7 = 1) duQ7 = 0.000.
If (Q7 = 2) duQ7 = 0.145.
If (Q7 = 3) duQ7 = 0.288.
If (Q7 = 4) duQ7 = 1.000.

***8. Hearing

If (Q8 = 1) duQ8 = 0.000.
If (Q8 = 2) duQ8 = 0.253.
If (Q8 = 3) duQ8 = 0.478.
If (Q8 = 4) duQ8 = 1.000.

***9. Communication

If (Q9 = 1) duQ9 = 0.000.
If (Q9 = 2) duQ9 = 0.219.
If (Q9 = 3) duQ9 = 0.343.
If (Q9 = 4) duQ9 = 1.000.

***Dimension 4. Mental Health

***10. Sleeping

If (Q10 = 1) duQ10 = 0.000.

If (Q10 = 2) duQ10 = 0.107.

If (Q10 = 3) duQ10 = 0.109.

If (Q10 = 4) duQ10 = 1.000.

***11. Anxiety and Depression

If (Q11 = 1) duQ11 = 0.000.

If (Q11 = 2) duQ11 = 0.141.

If (Q11 = 3) duQ11 = 0.199.

If (Q11 = 4) duQ11 = 1.000.

***12. Pain

If (Q12 = 1) duQ12 = 0.000.

If (Q12 = 2) duQ12 = 0.104.

If (Q12 = 3) duQ12 = 0.312.

If (Q12 = 4) duQ12 = 1.000.

*****MODELLING DIMENSIONS*****

***DIMENSION 1 - INDEPENDENT LIVING.

Compute duD1= (1.0989*(1-(1-0.6097*duQ1)*(1-0.4641*duQ2)*(1-0.5733*duQ3))).

** DIMENSION 2 - RELATIONSHIPS.

Compute duD2 = (1.0395*(1-(1-0.7023*duQ4)*(1-0.6253*duQ5)*(1-0.6638*duQ6))).

** DIMENSION 3 - SENSES.

Compute duD3 = (1.6556*(1-(1-0.2476*duQ7)*(1-0.2054*duQ8)*(1-0.3382*duQ9))).

** DIMENSION 4 - MENTAL HEALTH.

Compute duD4= (1.2920*(1-(1-0.1703*duQ10)*(1-0.2554*duQ11)*(1-0.6347*duQ12))).

*****DIMENSION SCORES

Compute uD1IL = 1-duD1.

Compute uD2REL= 1-duD2 .

Compute uD3SEN = 1-duD3 .

Compute uD4MEN = 1-duD4.

***INSTRUMENT SCORE

*** This model uses W = 1.04.

Compute uAQOL4D = ((1.04* ((1-(0.841*duD1))*
(1-(0.855*duD2))*
(1-(0.931*duD3))*
(1-(0.997*duD4)))) - 0.04).

Execute.

VARIABLE LABELS uAQoL4D 'AQoL4D Uility Score'
uD1IL 'Independent Living dimension score'
uD2REL 'Relationships dimension score'
uD3SEN 'Senses dimension score'
uD4MEN 'Mental Health dimension score'

Execute.

Delete Variables Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12
ILmiss RELmiss SENmiss MENmiss
duQ1 duQ2 duQ3 duQ4 duQ5 duQ6 duQ7 duQ8 duQ9 duQ10 duQ11 duQ12
duD1 duD2 duD3 duD4.

Execute.

DESCRIPTIVES VARIABLES=uAQoL4D uD1IL uD2REL uD3SEN uD4MEN
/STATISTICS=MEAN SUM STDDEV MIN MAX.

Execute.

*****THE END*****

2. AQoL-8D ALGORITHM in SPSS

```
*****SPSS ALGORITHM FOR AQOL-8D UTILITY MODEL (WITH MISSING VALUES)
*** THIS ALGORITHM (CHE version 13 - 26 February 2013) IS AN INTERIM RELEASE AND MAY BE CHANGED
WITHOUT NOTICE.
*** RESEARCHERS SHOULD CHECK WITH THE AQOL GROUP AT MONASH UNIVERSITY
*** FOR ANY MODIFICATION www.aqol.com.au***
*****
***This file analyses AQoL-8D instrument data (from the general public) and produces scores for each
dimension and the overall instrument utility score.
***Use the AQoL-8D Data Collection copy to collect data.
***Variable names: For this algorithm, the variables in your questionnaire or database should be named
*** "aqol1, aqol2 ...aqol35" (according to data collection copy).
*****
* The AQoL-8D utility scores are scaled such that the:
* "AQoL-8D worst health state" = 0.09 ( where Death = 0.00).
* "AQoL-8D best health state" = 1.00
*****
*** The dimensions are scaled on a "Dimension Worst Health State - Dimension Best Health State" scale
* ** where DWHS = 0.00 and DBHS = 1.00.
* **These are not strict utility values as they have not been evaluated on a life-death scale
*****
***Missing Values: Note that missing data are represented by a blank and are handled by imputing values
within each dimension.
***Dimensions with 3-4 items will allow for 1 missing value to be imputed, dimensions with 7-8 items will
allow for 2 missing values.
***However, if more item responses in the dimensions are missing the observations will be dropped and
there will not be a dimension score or an
instrument score for the individual.
*****
* aqol# are item responses in your data
* 'v' is a value score, 'dv' is a disvalue score – these terms apply to item and dimension scores which have
been scaled on a Best-Worst scale.
* 'u' is an instrument utility score, 'du' is an instrument disutility score - these have been scaled on a Life-
Death scale.

* Missing values represented by a blank or dot.

Compute Q17 = aqol1.
Compute Q23 = aqol2.
Compute Q2 = aqol3.
Compute Q26 = aqol4.
Compute Q15 = aqol5.
Compute Q30 = aqol6.
Compute Q29 = aqol7.
Compute Q16 = aqol8.
Compute Q25 = aqol9.
Compute Q21 = aqol10.
Compute Q35 = aqol11.
Compute Q10 = aqol12.
Compute Q28 = aqol13.
Compute Q11 = aqol14.
Compute Q3 = aqol15.
Compute Q12 = aqol16.
Compute Q6 = aqol17.
Compute Q14 = aqol18.
Compute Q4 = aqol19.
```

```

Compute Q7 = aqol20.
Compute Q19 = aqol21.
Compute Q31 = aqol22.
Compute Q20 = aqol23.
Compute Q32 = aqol24.
Compute Q8 = aqol25.
Compute Q27= aqol26.
Compute Q5 = aqol27.
Compute Q33 = aqol28.
Compute Q18 = aqol29.
Compute Q1 = aqol30.
Compute Q22 = aqol31.
Compute Q34 = aqol32.
Compute Q9 = aqol33.
Compute Q24 = aqol34.
Compute Q13 = aqol35.
Execute.

```

```

*****
*****      Imputing Missing Values in Database      *****
*****

```

```

** Independent Living - Dimension 1**

```

```

Compute ILmiss = Nmiss (Q1,Q2,Q3,Q4).
Do if ILmiss < 2.
Do repeat
  A = Q1,Q2,Q3,Q4.
If (Missing (A)) A = RND(Mean (Q1,Q2,Q3,Q4)).
End repeat.
End if.

```

```

** Happiness - Dimension 2**

```

```

Compute HAPmiss = Nmiss (Q5,Q6,Q7,Q8).
Do if HAPmiss < 2.
Do repeat
  A = Q5,Q6,Q7,Q8.
If (Missing (A)) A = RND(Mean (Q5,Q6,Q7,Q8)).
End repeat.
End if.

```

```

** Mental Health - Dimension 3**

```

```

Compute MENmiss = Nmiss (Q9,Q10,Q11,Q12,Q13,Q14,Q15,Q16).
Do if MENmiss < 3.
Do repeat
  A = Q9,Q10,Q11,Q12,Q13,Q14,Q15,Q16.
If (Missing (A)) A = RND(Mean (Q9,Q10,Q11,Q12,Q13,Q14,Q15,Q16)).
End repeat.
End if.

```

```

** Coping - Dimension 4**

```

```

Compute COPmiss = Nmiss (Q17,Q18,Q19).
Do if COPmiss < 2.

```

```

Do repeat
  A = Q17,Q18,Q19.
If (Missing (A)) A = RND(Mean (Q17,Q18,Q19)).
End repeat.
End if.

** Relationships - Dimension 5**

Compute RELmiss = Nmiss (Q20,Q21,Q22,Q23,Q24,Q25,Q26).
Do if RELmiss < 3.
Do repeat
  A = Q20,Q21,Q22,Q23,Q24,Q25,Q26.
If (Missing (A)) A = RND(Mean (Q20,Q21,Q22,Q23,Q24,Q25,Q26)).
End repeat.
End if.

** Self Worth - Dimension 6**

Compute SWmiss = Nmiss (Q27,Q28,Q29).
Do if SWmiss < 2.
Do repeat
  A = Q27,Q28,Q29.
If (Missing (A)) A = RND(Mean (Q27,Q28,Q29)).
End repeat.
End if.

** Pain - Dimension 7**

Compute PAINmiss = Nmiss (Q30,Q31,Q32).
Do if PAINmiss < 2.
Do repeat
  A = Q30,Q31,Q32.
If (Missing (A)) A = RND(Mean (Q30,Q31,Q32)).
End repeat.
End if.

** Senses - Dimension 8**

Compute SENmiss = Nmiss (Q33,Q34,Q35).
Do if SENmiss < 2.
Do repeat
  A = Q33,Q34,Q35.
If (Missing (A)) A = RND(Mean (Q33,Q34,Q35)).
End repeat.
End if.
Execute.

Execute.

*****ITEM DISVALUES*****

*****Dimension 1. Independent living*****

**** Household Help ****

if (Q1=1) dvQ1 = 0.
if (Q1=2) dvQ1=0.1334507.
if (Q1=3) dvQ1=0.460669.

```

if (Q1=4) dvQ1=0.7936972.
if (Q1=5) dvQ1=1.

**** Getting Around Outside ****

if (Q2=1) dvQ2 = 0.
if (Q2=2) dvQ2=0.0917315.
if (Q2=3) dvQ2=0.314841.
if (Q2=4) dvQ2=0.535053.
if (Q2=5) dvQ2=0.8222968.
if(Q2=6) dvQ2=1.

**** Walking ****

if (Q3=1) dvQ3 = 0.
if (Q3=2) dvQ3=0.0940283.
if (Q3=3) dvQ3=0.3187279.
if (Q3=4) dvQ3=0.6148056.
if (Q3=5) dvQ3=0.844523.
if (Q3=6) dvQ3=1.

***** Personal Care *****

if (Q4=1) dvQ4 = 0.
if (Q4=2) dvQ4=0.1082686.
if (Q4=3) dvQ4=0.4139223.
if (Q4=4) dvQ4=0.7867845.
if (Q4=5) dvQ4=1.

*****Dimension 2. Happiness *****

**** Content

if (Q5=1) dvQ5 = 0.
if (Q5=2) dvQ5=0.1560424.
if (Q5=3) dvQ5=0.4026148.
if (Q5=4) dvQ5=0.7089399.
if (Q5=5) dvQ5=1.

***** Enthusiastic *****

if (Q6=1) dvQ6 = 0.
if (Q6=2) dvQ6=0.1318728.
if (Q6=3) dvQ6=0.3950883.
if (Q6=4) dvQ6=0.735477.
if (Q6=5) dvQ6=1.

***** Happy *****

if (Q7=1) dvQ7 = 0.
if (Q7=2) dvQ7=0.1459717.
if (Q7=3) dvQ7=0.4298587.
if (Q7=4) dvQ7=0.8393286.
if (Q7=5) dvQ7=1.

***** Pleasure *****

if (Q8=1) dvQ8 = 0.
if (Q8=2) dvQ8=0.1578092.
if (Q8=3) dvQ8=0.429894.
if (Q8=4) dvQ8=0.8219788.
if (Q8=5) dvQ8=1.

****Dimension 3. Mental Health ****

*****Depressed *****

if (Q9=1) dvQ9=0.
if (Q9=2) dvQ9=0.1134663.
if (Q9=3) dvQ9=0.3526687.
if (Q9=4) dvQ9=0.6515031.
if (Q9=5) dvQ9=0.8622086.
if (Q9=6) dvQ9=1.

***** Sleeping *****

if (Q10=1) dvQ10=0.
if (Q10=2) dvQ10=0.1179755.
if (Q10=3) dvQ10=0.4062884.
if (Q10=4) dvQ10=0.7589264.
if (Q10=5) dvQ10=1.

***** Angry *****

if (Q11=1) dvQ11 = 0.
if (Q11=2) dvQ11=0.1359692.
if (Q11=3) dvQ11=0.4124308.
if (Q11=4) dvQ11=0.7768615.
if (Q11=5) dvQ11=1.

***** Self Harm *****

if (Q12=1) dvQ12 = 0.
if (Q12=2) dvQ12 = 0.1949538.
if (Q12=3) dvQ12 = 0.5608308.
if (Q12=4) dvQ12 = 0.8464615.
if (Q12=5) dvQ12 = 1.

***** Despair *****

if (Q13=1) dvQ13= 0.
if (Q13=2) dvQ13 = 0.2171692.
if (Q13=3) dvQ13 = 0.4772615.
if (Q13=4) dvQ13 = 0.8019077.
if (Q13=5) dvQ13 = 1.

***** Worried *****

if (Q14=1) dvQ14 = 0.
if (Q14=2) dvQ14 = 0.1876923.
if (Q14=3) dvQ14 = 0.4160923.
if (Q14=4) dvQ14 = 0.7501846.
if (Q14=5) dvQ14 = 1.

**** Sad ****

if (Q15=1) dvQ15 = 0.
if (Q15=2) dvQ15=0.1395399.
if (Q15=3) dvQ15=0.4214461.
if (Q15=4) dvQ15=0.8039077.
if (Q15=5) dvQ15=1.

**** Calm ****

if (Q16=1) dvQ16 = 0.
if (Q16=2) dvQ16=0.1281846.
if (Q16=3) dvQ16=0.4345231.
if (Q16=4) dvQ16=0.8016308.
if (Q16=5) dvQ16=1.

*****Dimension 4. Coping*****

**** Energy ****

if (Q17=1) dvQ17 = 0.
if (Q17=2) dvQ17=0.1276615.
if (Q17=3) dvQ17=0.4356308.
if (Q17=4) dvQ17=0.7820308.
if (Q17=5) dvQ17=1.

**** Control Data****

if (Q18=1) dvQ18 = 0.
if (Q18=2) dvQ18=0.1350154.
if (Q18=3) dvQ18=0.4562615.
if (Q18=4) dvQ18=0.7667178.
if (Q18=5) dvQ18=1.

**** Coping ****

if (Q19=1) dvQ19 = 0.
if (Q19=2) dvQ19=0.1526994.
if (Q19=3) dvQ19=0.4942945 .
if (Q19=4) dvQ19=0.8233436.
if (Q19=5) dvQ19=1.

*****Dimension 5. Relationships*****

**** Enjoy Close Relationships ***

if (Q20=1) dvQ20 = 0.
if (Q20=2) dvQ20=0.1178799.
if (Q20=3) dvQ20=0.4588339.

if (Q20=4) dvQ20=0.785618.
if (Q20=5) dvQ20=1.

**** Close Relationships Satisfying ***

if (Q21=1) dvQ21 = 0.
if (Q21=2) dvQ21=0.1342908.
if (Q21=3) dvQ21=0.4568085.
if (Q21=4) dvQ21=0.6911702.
if (Q21=5) dvQ21=0.8694326.
if (Q21=6) dvQ21=1.

**** Socially Isolated in***

if (Q22=1) dvQ22 = 0.
if (Q22=2) dvQ22=0.144947.
if (Q22=3) dvQ22=0.4325795.
if (Q22=4) dvQ22=0.7831802.
if (Q22=5) dvQ22=1.

**** Socially Excluded*****

if (Q23=1) dvQ23 = 0.
if (Q23=2) dvQ23=0.1570671.
if (Q23=3) dvQ23=0.4522262.
if (Q23=4) dvQ23=0.7950884.
if (Q23=5) dvQ23=1.

***** Intimate *****

if (Q24=1) dvQ24 = 0.
if (Q24=2) dvQ24=0.1334629.
if (Q24=3) dvQ24=0.4630035.
if (Q24=4) dvQ24=0.8013781.
if (Q24=5) dvQ24=1.

***** Family Role *****

if (Q25=1) dvQ25 = 0.
if (Q25=2) dvQ25=0.3218021.
if (Q25=3) dvQ25=0.7301767.
if (Q25=4) dvQ25=1.

***** Community Role) ****

If (Q26=1) dvQ26 = 0.
if (Q26=2) dvQ26=0.3061838.
if (Q26=3) dvQ26=0.6763251.
if (Q26=4) dvQ26=1.

*****Dimension 6. Self Worth*****

**** Burden *****

if (Q27=1) dvQ27 = 0.
if (Q27=2) dvQ27=0.2070154.
if (Q27=3) dvQ27=0.4830769.
if (Q27=4) dvQ27=0.8004308.

if (Q27=5) dvQ27=1.

**** Worthless ****

if (Q28=1) dvQ28 = 0.

if (Q28=2) dvQ28=0.1376.

if (Q28=3) dvQ28=0.4591077.

if (Q28=4) dvQ28=0.8102462.

if (Q28=5) dvQ28=1 .

**** Confidence ****

if (Q29=1) dvQ29 = 0.

if (Q29=2) dvQ29=0.1168308.

if (Q29=3) dvQ29=0.3800308.

if (Q29=4) dvQ29= 0.7261539.

if (Q29=5) dvQ29=1.

*****Dimension 7. Pain*****

**** Serious Pain ****

if (Q30=1) dvQ30 = 0.

if (Q30=2) dvQ30=0.2779755.

if (Q30=3) dvQ30=0.7484356.

if (Q30=4) dvQ30=1.

**** Pain ****

if (Q31=1) dvQ31 = 0.

if (Q31=2) dvQ31=0.3648308.

if (Q31=3) dvQ31=0.8076308.

if (Q31=4) dvQ31=1.

***** Pain Interferes *****

if (Q32=1) dvQ32=0 .

if (Q32=2) dvQ32=0.148.

if (Q32=3) dvQ32=0.4483692.

if (Q32=4) dvQ32=0.7833846.

if (Q32=5) dvQ32=1.

*****Dimension 8. Senses*****

**** Vision ****

if (Q33=1) dvQ33 = 0.

if (Q33=2) dvQ33=0.1033569.

if (Q33=3) dvQ33=0.3308834.

if (Q33=4) dvQ33=0.640212.

if (Q33=5) dvQ33=0.8293993.

if (Q33=6) dvQ33=1.

**** Hearing ****

if (Q34=1) dvQ34 = 0.

if (Q34=2) dvQ34=0.0860638.

if (Q34=3) dvQ34=0.3353004.

```
if (Q34=4) dvQ34=0.5915901.
if (Q34=5) dvQ34=0.8342756.
if (Q34=6) dvQ34=1.
```

```
***** Communicate *****
```

```
if (Q35=1) dvQ35 = 0.
if (Q35=2) dvQ35=0.2628975.
if (Q35=3) dvQ35=0.7520142.
if (Q35=4) dvQ35=1.
```

```
Execute.
```

```
*****
```

```
***** MODELING DIMENSIONS *****
```

```
*****
```

```
**example for 3 item dimension:
```

```
***dvD1 = 1/kD1[(1+kD1*w1*dvX1j)*(1+kd1*w2*dvX2j)*(1+kd1*w3*dvX3j)-1]
```

```
**where dvD1 = disvalue for dimension 1
```

```
** kD1 = scaling constant for dimension 1
```

```
** w1 = item 1 item- worst disutility (average value)
```

```
** (using 0-1 dimension best-dimension worst scale)
```

```
** dvX1j = item 1 disvalue for jth item level
```

```
**vd1=1-dvD1
```

```
*****
```

```
*
```

```
***** D1: INDEPENDENT LIVING: kD1= -0.99521
```

```
***** D2: HAPPINESS: kD2= -0.99249
```

```
***** D3: MENTAL HEALTH: kD3 = -0.99997
```

```
***** D4: COPING: kD4=-0.97169
```

```
***** D5: RELATIONSHIPS: kD5 = -0.99969
```

```
***** D6: SELF WORTH: kD6 = -0.97649
```

```
***** D7: PAIN: kD7= -0.96620
```

```
***** D8: SENSES: kD8= -0.95510
```

```
*****
```

```
*****
```

```
***** IND LIVING *****
```

```
Compute dvD1=(1/-0.99521)*((1+(-0.99521*0.5486219*dvQ1))*(1+(-0.99521*0.6012721*dvQ2))*(1+(-0.99521*0.8691166*dvQ3))*(1+(-0.99521*0.8093594*dvQ4))-1).
```

```
Execute.
```

```
***** HAPPINESS *****
```

```
Compute dvD2=(1/-0.99249)*((1+(-0.99249*0.6649117*dvQ5))*(1+(-0.99249*0.6029329*dvQ6))*(1+(-0.99249*0.7667844*dvQ7))*(1+(-0.99249*0.7760071*dvQ8))-1).
```

```
Execute.
```

```
***** MENTAL HEALTH *****
```

```
Compute dvD3=(1/-0.99997)*((1+(-0.99997*0.7373292*dvQ9))*(1+(-0.99997*0.6304348*dvQ10))*(1+(-0.99997*0.7028882*dvQ11))*(1+(-0.99997*0.8626087*dvQ12))*(1+(-0.99997*0.7395962*dvQ13))*(1+(-0.99997*0.6553106*dvQ14))*(1+(-0.99997*0.6904659*dvQ15))*(1+(-0.99997*0.7567391*dvQ16))-1).
```

Execute.

***** COPING *****

Compute $dvD4 = (1/(-0.97169)) * ((1 + (-0.97169 * 0.6193147 * dvQ17)) * (1 + (-0.97169 * 0.7066355 * dvQ18)) * (1 + (-0.97169 * 0.7957009 * dvQ19))) - 1$.

Execute.

***** RELATIONSHIPS *****

Compute $dvD5 = (1/(-0.99969)) * ((1 + (-0.99969 * 0.6672085 * dvQ20)) * (1 + (-0.99969 * 0.6928014 * dvQ21)) * (1 + (-0.99969 * 0.6928269 * dvQ22)) * (1 + (-0.99969 * 0.7430035 * dvQ23)) * (1 + (-0.99969 * 0.6544523 * dvQ24)) * (1 + (-0.99969 * 0.6727915 * dvQ25)) * (1 + (-0.99969 * 0.6635336 * dvQ26))) - 1$.

Execute.

***** SELF WORTH *****

Compute $dvD6 = (1/(-0.97649)) * ((1 + (-0.97649 * 0.7140062 * dvQ27)) * (1 + (-0.97649 * 0.7584162 * dvQ28)) * (1 + (-0.97649 * 0.7175155 * dvQ29))) - 1$.

Execute.

***** PAIN *****

Compute $dvD7 = (1/(-0.96620)) * ((1 + (-0.96620 * 0.7087227 * dvQ30)) * (1 + (-0.96620 * 0.6931776 * dvQ31)) * (1 + (-0.96620 * 0.698972 * dvQ32))) - 1$.

Execute.

***** SENSES *****

Compute $dvD8 = (1/(-0.95510)) * ((1 + (-0.95510 * 0.6560071 * dvQ33)) * (1 + (-0.95510 * 0.6373498 * dvQ34)) * (1 + (-0.95510 * 0.7253191 * dvQ35))) - 1$.

Execute.

*****ECONOMETRIC CORRECTION FOR DIMENSION SCORES

Compute $dvD1_EcCorH = 0.1231425 * dvQ4 + 0.5252653 * dvD1$.

Compute $dvD2_EcCorH = 0.1374472 * dvD2 + 0.1759046 * dvQ5 + 0.175983 * dvQ6 + 0.1979496 * dvQ7 + 0.1063231 * dvQ8$.

Compute $dvD3_EcCorH = 0.443354 * dvD3 + 0.1038306 * dvQ9 + 0.091616 * dvQ11 + 0.168528 * dvQ12$.

Compute $dvD4_EcCorH = 0.2321386 * dvD4 + 0.2042243 * dvQ17 + 0.0900727 * dvQ18 + 0.1977208 * dvQ19$.

Compute $dvD5_EcCorH = 0.5334976 * dvD5$.

Compute $dvD6_EcCorH = 0.1900847 * dvD6 + 0.1842691 * dvQ27 + 0.1151989 * dvQ28 + 0.2580828 * dvQ29$.

Compute $dvD7_EcCorH = 0.205 * dvD7 + 0.2051462 * dvQ30 + 0.2773581 * dvQ31 + 0.2054599 * dvQ32$.

Compute $dvD8_EcCorH = 0.5818769 * dvD8 + 0.0840249 * dvQ33 + 0.1127009 * dvQ35$.

EXECUTE.

*****OVERALL AQoL-8D MULTIPLICATIVE DISUTILITY SCORE, AND MENTAL AND PHYSICAL SUPER DIMENSION SCORES

Compute $duAQoL8D_MULT = (1/(-0.999919)) * ((1 + (-0.999919 * 0.7373292 * dvD3_EcCorH)) * (1 + (-0.999919 * 0.6626875 * dvD6_EcCorH)) * (1 + (-0.999919 * 0.6427187 * dvD4_EcCorH)) * (1 + (-0.999919 * 0.718875 * dvD7_EcCorH)))$

$(1+(-0.999919*0.6517958*dvD1_EcCorH))*(1+(-0.999919*0.7125704*dvD2_EcCorH))*(1+(-0.999919*0.7187676*dvD5_EcCorH))*(1+(-0.999919*0.6900705*dvD8_EcCorH))-1).$

Compute dvSuperDimMental $= (1/-0.999919)*((1+(-0.999919*0.7373292*dvD3_EcCorH))*(1+(-0.999919*0.6626875*dvD6_EcCorH))*(1+(-0.999919*0.6427187*dvD4_EcCorH))*(1+(-0.999919*0.7125702*dvD2_EcCorH))*(1+(-0.999919*0.7187676*dvD5_EcCorH))-1).$

Compute dvSuperDimPhysical $= (1/-0.999919)*((1+(-0.999919*0.718875*dvD7_EcCorH))*(1+(-0.999919*0.6517958*dvD1_EcCorH))*(1+(-0.999919*0.6900705*dvD8_EcCorH))-1).$
EXECUTE.

COMPUTE vIL=1-dvD1_EcCorH.
COMPUTE vHap=1-dvD2_EcCorH.
COMPUTE vMH=1-dvD3_EcCorH.
COMPUTE vCop=1-dvD4_EcCorH.
COMPUTE vRel=1-dvD5_EcCorH.
COMPUTE vSW=1-dvD6_EcCorH.
COMPUTE vPa=1-dvD7_EcCorH.
COMPUTE vS=1-dvD8_EcCorH.
EXECUTE.

Compute uAQoL8D_MULT = 1-duAQoL8D_MULT.
Compute vSuperDimMental = 1-dvSuperDimMental.
Compute vSuperDimPhysical = 1-dvSuperDimPhysical.
Execute.

variable labels vIL 'AQoL8D Dim1 Independent Living value'.
variable labels vHap 'AQoL8D Dim2 Happiness value'.
variable labels vMH 'AQoL8D Dim3 Mental Health value'.
variable labels vCop 'AQoL8D Dim4 Coping value'.
variable labels vRel 'AQoL8D Dim5 Relationships value'.
variable labels vSW 'AQoL8D Dim6 Self Worth value'.
variable labels vPa 'AQoL8D Dim7 Pain value'.
variable labels vS 'AQoL8D Dim8 Senses value'.
variable labels vSuperDimMental 'AQoL8D vSuperDimMental value'.
variable labels vSuperDimPhysical 'AQoL8D vSuperDimPhysical value'.
execute.

****AQoL-8D: ECONOMETRIC CORRECTION****

Compute lnuAQoL8d_mult = ln(uAQoL8D_MULT).
Compute vLAQoL8D = vIL*lnuAQoL8d_mult.
Compute vHapAQoL8D = vHap*lnuAQoL8d_mult.
Compute vMHAQoL8D = vMH*lnuAQoL8d_mult.
Compute vCopAQoL8D = vCop*lnuAQoL8d_mult.
Compute vRelAQoL8D = vRel*lnuAQoL8d_mult.
Compute vSWAQoL8D = vSW*lnuAQoL8d_mult.
Compute vPAQoL8D = vPa*lnuAQoL8d_mult.
Compute vSAQoL8D = vS*lnuAQoL8d_mult.
Compute vHapvRelAQoL8D = vRel*vHap*lnuAQoL8d_mult.
Compute vMHvSWAQoL8D = vMH*vSW*lnuAQoL8d_mult.
Compute vMHvSAQoL8D = vMH*vS*lnuAQoL8d_mult.
EXECUTE.

```

Compute lnuAQoL_8D = lnuAQoL8d_mult*0.2949 + 0.2864*vHapAQoL8D + 0.1421*vMHAQoL8D -
0.0780*vCopAQoL8D+0.3169*vRelAQoL8D -0.0406*vPaAQoL8D -0.5429*vHapvRelAQoL8D -
0.2389*vMHvSWAQoL8D -0.1495*vMHvSAQoL8D.
Compute uAQoL8D = EXP(lnuAQoL_8D).
Execute.

```

```

Compute AQoL8DUtility = uAQoL8D*0.9891+0.0109.
variable labels AQoL8DUtility 'Utility Score for AQoL-8D'.
Execute.

```

```

*****A Note on the final adjustment for utilities greater than
1.0000*****

```

```

*In the final two lines of code, utilities which are > 1.00 are replaced with U = MULT^0.192.

```

```

**Utilities > 1.00 occur because of rare combinations of dimension scores which result in a negative
exponent in the final equation. In our experience, this situation has occurred in 0.4% of cases (21 cases in
sample of 5433).

```

```

**In these cases the exponent has been replaced by 0.192, which is the average exponent from a sample of
the healthy Australian population.

```

```

if (AQoL8DUtility>=1) i=1.
if (i=1) AQoL8DUtility_temp = (uAQoL8D_MULT**0.191873).
if (i=1) AQoL8DUtility = AQoL8DUtility_temp.
Execute.

```

```

DESCRIPTIVES VARIABLES= vIL vHap vMH vCop vRel vSW vPa vS vSuperDimPhysical vSuperDimMental
AQoL8DUtility
/STATISTICS=MEAN SUM STDDEV MIN MAX.
Execute.

```

```

Delete Variables

```

```

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21 Q22 Q23 Q24 Q25
Q26 Q27 Q28 Q29 Q30 Q31 Q32 Q33 Q34 Q35
ILmiss HAPmiss MENmiss COPmiss RELmiss SWmiss PAINmiss SENmiss
dvQ1 dvQ2 dvQ3 dvQ4 dvQ5 dvQ6 dvQ7 dvQ8 dvQ9 dvQ10 dvQ11 dvQ12 dvQ13 dvQ14 dvQ15 dvQ16 dvQ17
dvQ18 dvQ19 dvQ20 dvQ21 dvQ22 dvQ23 dvQ24 dvQ25 dvQ26 dvQ27 dvQ28 dvQ29 dvQ30 dvQ31 dvQ32
dvQ33 dvQ34 dvQ35
dvD1 dvD2 dvD3 dvD4 dvD5 dvD6 dvD7 dvD8
dvD1_EcCorH dvD2_EcCorH dvD3_EcCorH dvD4_EcCorH dvD5_EcCorH dvD6_EcCorH dvD7_EcCorH
dvD8_EcCorH
duAQoL8D_MULT dvSuperDimMental dvSuperDimPhysical
lnuAQoL8d_mult lnuAQoL_8D uAQoL8D
vHapvRelAQoL8D vMHvSWAQoL8D vMHvSAQoL8D i AQoL8DUtility_temp vILAQoL8D vHapAQoL8D
vMHAQoL8D vCopAQoL8D vRelAQoL8D vSWAQoL8D vPaAQoL8D
vSAQoL8D.
Execute.

```

3. HUI3 ALGORITHM in SPSS

* THIS ALGORITHM (CHE Version 1 dated 16 February 2012) IS AN INTERIM RELEASE AND
* MAY BE CHANGED WITHOUT NOTICE.

Created by Munir A. Khan. This program was written with PASW Version 17.0 for Windows

* RESEARCHERS SHOULD CHECK WITH THE AQOL GROUP AT MONASH UNIVERSITY

* FOR ANY MODIFICATION www.aqol.com.au

* This file analyses the HUI3 instrument and produces an overall instrument utility score.

** Variable names: For this algorithm, the variables in our database were named "HUIvision, HUIhearing,
HUIambulation, HUIdexterity, HUIemotion, HUIcognition, HUIpain**

*The item response level scores presented below was taken from: Health Utilities Inc Multi-Attribute health Status
Classification System: Health Utilities Index Mark 3 (HUI3)**

* <http://www.healthutilities.com/hui3.htm>*

It is presumed that the data set includes the following eight variables:

Dimension	Variable Name	Range

Vision	vision	1-6
Hearing	hearing	1-6
Speech	speech	1-5
Ambulation	ambulation	1-6
Dexterity	dexterity	1-6
Emotion	emotion	1-5
Cognition	cognition	1-6
Pain	pain	1-5

***The HUI3 Utility scores are scaled such that Death= 0.00 and Best Possible Health = 1.00*

Compute vision = HUIvision

Compute hearing =HUIhearing

Compute speech = HUIspeech.

Compute ambulation = HUIambulation.

Compute dexterity = HUIdexterity.

Compute emotion = HUIemotion.

Compute cognition = HUIcognition.

Compute pain = HUIpain.

Execute.

*****Dimension 1. Vision *****

if (vision=1) b1 = 1.00.

if (vision=2) b1 = 0.98.

if (vision=3) b1 = 0.89.

if (vision=4) b1 = 0.84.

if (vision=5) b1 = 0.75.

if (vision=6) b1 = 0.61.

Execute.

*****Dimension 2. Hearing *****

if (hearing=1) b2 = 1.00.

if (hearing=2) b2 = 0.95.

if (hearing=3) b2 = 0.89.

if (hearing=4) b2 = 0.80.

if (hearing=5) b2 = 0.74.

if (hearing=6) b2 = 0.61.

Execute.

*****Dimension 3. Speech *****

if (speech=1) b3 = 1.00.
if (speech=2) b3 = 0.94.
if (speech=3) b3 = 0.89.
if (speech=4) b3 = 0.81.
if (speech=5) b3 = 0.68.
Execute.

*****Dimension 4. Ambulation *****

if (ambulation=1) b4 = 1.00.
if (ambulation=2) b4 = 0.93.
if (ambulation=3) b4 = 0.86.
if (ambulation=4) b4 = 0.73.
if (ambulation=5) b4 = 0.65.
if (ambulation=6) b4 = 0.58.
Execute.

*****Dimension 5. Dexterity *****

if (dexterity=1) b5 = 1.00.
if (dexterity=2) b5 = 0.95.
if (dexterity=3) b5 = 0.88.
if (dexterity=4) b5 = 0.76.
if (dexterity=5) b5 = 0.65.
if (dexterity=6) b5 = 0.56.

*****Dimension 6. Emotion *****

if (emotion=1) b6 = 1.00.
if (emotion=2) b6 = 0.95.
if (emotion=3) b6 = 0.85.
if (emotion=4) b6 = 0.64.
if (emotion=5) b6 = 0.46.
Execute.

*****Dimension 7. Cognition *****

if (cognition=1) b7 = 1.00.
if (cognition=2) b7 = 0.92.
if (cognition=3) b7 = 0.95.
if (cognition=4) b7 = 0.83.
if (cognition=5) b7 = 0.60.
if (cognition=6) b7 = 0.42.
Execute.

*****Dimension 8. Pain *****

if (pain=1) b8 = 1.00.
if (pain=2) b8 = 0.96.
if (pain=3) b8 = 0.90.
if (pain=4) b8 = 0.77.
if (pain=5) b8 = 0.55.
Execute.
COMPUTE HUI3_Utility=1.371*(b1*b2*b3*b4*b5*b6*b7*b8)-0.371.
EXECUTE.

VARIABLE LABELS HUI3_Utility 'HUI3 Utility Score'.

Drop Variables Generated by Program

DELETE VARIABLES b1 b2 b3 b4 b5 b6 b7 b8 vision hearing speech ambulation dexterity emotion cognition pain.
EXECUTE .

4. 15D ALGORITHM in SPSS

*** THIS ALGORITHM (CHE Version 1 dated 25 January 2012) IS AN INTERIM RELEASE AND

* MAY BE CHANGED WITHOUT NOTICE.

* It was supplied by **Prof. Harri Sintonen**, Professor of Health Economics (emeritus)*

Hjelt Institute/Department of Public Health, email harri.sintonen(at)helsinki.fi

25 January 2012

* It has been modified at the Centre for Health Economics*

*** Program was written with IBM SPSS Statistics 19*

* RESEARCHERS SHOULD CHECK WITH THE AQOL GROUP AT MONASH UNIVERSITY

* FOR ANY MODIFICATION www.aqol.com.au

* This file analyses the 15D instrument and produces an overall instrument utility score.

***Variable names: For this algorithm, the variables in your questionnaire or database should be named as*

*** " MOVE, SEE, HEAR, BREATH, SLEEP, EAT, SPEECH, ELIM, UACT, MENTAL, DISCO, DEPR, DISTR, VITAL and SEX **

Dimension	Variable Name	Range

Mobility	MOVE	1-5
Vision	SEE	1-5
Hearing	HEAR	1-5
Breathing	BREATH	1-5
Sleeping	SLEEP	1-5
Eating	EAT	1-5
Speech	SPEECH	1-5
Elimination	ELIM	1-5
Usual Activities	UACT	1-5
Mental Function	MENTAL	1-5
Discomfort and Symtoms	DISCO	1-5
Depression	DEPR	1-5
Distress	DISTR	1-5
Vitality	VITAL	1-5
Sexual Activity	SEX	1-5

COMPUTE MOVE1=MOVE.

COMPUTE SEE1=SEE.

COMPUTE HEAR1=HEAR.

COMPUTE BREATH1= BREATH.

COMPUTE SLEEP1= SLEEP.

COMPUTE EAT1= EAT.

COMPUTE SPEECH1= SPEECH.

COMPUTE ELIM1= ELIM.

COMPUTE UACT1= UACT.

COMPUTE MENTAL1= MENTAL.

COMPUTE DISCO1= DISCO.

COMPUTE DEPR1=DEPR.

COMPUTE DISTR1= DISTR.

COMPUTE VITAL1= VITAL.

COMPUTE SEX1= SEX.

RECODE MOVE1 (1=1) (2=0.7129) (3=0.4729) (4=0.2526) (5=0.0780).

RECODE SEE1 (1=1) (2=0.7840) (3=0.4901) (4=0.3137) (5=0.1089).

RECODE HEAR1 (1=1) (2=0.7497) (3=0.4611) (4=0.2353) (5=0.1003).

RECODE BREATH1 (1=1) (2=0.6976) (3=0.4771) (4=0.2581) (5=0.0879).

RECODE SLEEP1 (1=1) (2=0.7615) (3=0.5124) (4=0.3015) (5=0.1115).

RECODE EAT1 (1=1) (2=0.6462) (3=0.4267) (4=0.1984) (5=0.0710).

```
RECODE SPEECH1 (1=1) (2=0.7497) (3=0.4611) (4=0.2353) (5=0.1003).
RECODE ELIM1 (1=1) (2=0.6845) (3=0.3958) (4=0.1764) (5=0.0558).
RECODE UACT1 (1=1) (2=0.7210) (3=0.4133) (4=0.2182) (5=0.0785).
RECODE MENTAL1 (1=1) (2=0.6434) (3=0.3750) (4=0.1956) (5=0.0489).
RECODE DISCO1 (1=1) (2=0.7024) (3=0.3960) (4=0.2083) (5=0.0617).
RECODE DEPR1 (1=1) (2=0.7651) (3=0.5148) (4=0.3053) (5=0.1556).
RECODE DISTR1 (1=1) (2=0.7251) (3=0.4786) (4=0.2633) (5=0.1255).
RECODE VITAL1 (1=1) (2=0.7713) (3=0.5152) (4=0.2957) (5=0.1253).
RECODE SEX1 (1=1) (2=0.7095) (3=0.4424) (4=0.2486) (5=0.1318).
```

```
COMPUTE MOVE2=MOVE.
COMPUTE SEE2=SEE.
COMPUTE HEAR2=HEAR.
COMPUTE BREATH2=BREATH.
COMPUTE SLEEP2= SLEEP.
COMPUTE EAT2= EAT.
COMPUTE SPEECH2= SPEECH.
COMPUTE ELIM2= ELIM.
COMPUTE UACT2= UACT.
COMPUTE VITAL2= VITAL.
COMPUTE MENTAL2= MENTAL.
COMPUTE DISCO2= DISCO.
COMPUTE DEPR2= DEPR.
COMPUTE DISTR2= DISTR.
COMPUTE SEX2= SEX.
```

```
RECODE MOVE2 (1=0.0704) (2=0.0440) (3=0.0236) (4=0.0104) (5=0.0027).
RECODE SEE2 (1=0.0518) (2=0.0444) (3=0.0309) (4=0.0210) (5=0.0078).
RECODE HEAR2 (1=0.05901) (2=0.0540) (3=0.0401) (4=0.232) (5=0.0106).
RECODE BREATH2 (1=0.0839) (2=0.0562) (3=0.0373) (4=0.0195) (5=0.0065).
RECODE SLEEP2 (1=0.0695) (2=0.0555) (3=0.0391) (4=0.0239) (5=0.0091).
RECODE EAT2 (1=0.07071) (2=0.0384) (3=0.0224) (4=0.0090) (5=0.0029).
RECODE SPEECH2 (1=0.0664) (2=0.0459) (3=0.0277) (4=0.0156) (5=0.0081).
RECODE ELIM2 (1=0.0615) (2=0.0379) (3=0.0196) (4=0.0080) (5=0.0024).
RECODE UACT2 (1=0.0760) (2=0.0515) (3=0.0274) (4=0.0137) (5=0.0048).
RECODE VITAL2 (1=0.0756) (2=0.0596) (3=0.0408) (4=0.0239) (5=0.0111).
RECODE MENTAL2 (1=0.0852) (2=0.0445) (3=0.0214) (4=0.0096) (5=0.0021).
RECODE DISCO2 (1=0.0624) (2=0.0395) (3=0.0198) (4=0.0096) (5=0.0027).
RECODE DEPR2 (1=0.0520) (2=0.0458) (3=0.0350) (4=0.0229) (5=0.0125).
RECODE DISTR2 (1=0.0610) (2=0.0487) (3=0.0347) (4=0.0203) (5=0.0101).
RECODE SEX2 (1=0.0546) (2=0.0489) (3=0.0363) (4=0.0228) (5=0.0128).
COMPUTE D15SCORE =
MOVE2+SEE2+HEAR2+BREATH2+SLEEP2+EAT2+SPEECH2+ELIM2+UACT2+VITAL2+MENTAL2+DISCO2+DEPR2+DISTR2+SEX2.
EXECUTE.
VARIABLE LABELS D15SCORE '15D Utility Score'.
```

```
DELETE VARIABLES MOVE2 SEE2 HEAR2 BREATH2 SLEEP2 EAT2 SPEECH2 ELIM2 UACT2 MENTAL2, DISCO2 DEPR2
DISTR2 VITAL2 SEX2.
EXECUTE.
```

```
*****THE END*****
```

5. QWB ALGORITHM IN STATA

```
/* QWB-SA v1.04 scoring algorithm written February 2005 by Janel Hanmer
   coding was checked against an independently written program by Shani Herrington*/
/* fields named by the following scheme:
   QWB[section number][question letter][question part, if applicable]
   if the question part is yesterday, 2 days ago, 3 days ago
   the corresponding code is _1, _2, _3

for example, QWB1b = "speech problems such as stuttering, or being unable to speak clearly?"
   QWB2b_1 = "any eye pain, irritation, idscharge, or excessive sensitivity to light" yesterday
   QWB2b_2 = "any eye pain, irritation, idscharge, or excessive sensitivity to light" 2 days ago
   QWB2b_3 = "any eye pain, irritation, idscharge, or excessive sensitivity to light" 3 days ago

a copy of the QWB-SA v1.04 is available at http://www.openhealthmeasures.org

scoring is presumed to be 0=no and 1=yes
*/

/* scores are computed with any amount of missing data */

/*insert path location here */

clear
use 'C:\...'

gen CPX1=0
gen CPX2=0
gen CPX3=0
gen MOB1=0
gen MOB2=0
gen MOB3=0
gen PAC1=0
gen PAC2=0
gen PAC3=0
gen SAC1=0
gen SAC2=0
gen SAC3=0

replace CPX1=.066      if QWB1l4==1
replace CPX1=.148      if QWB1l5==1
replace CPX1=.153      if QWB1l1==1
replace CPX1=.160      if QWB3l_1==1
replace CPX1=.178      if QWB2f_1==1
replace CPX1=.187      if QWB1j==1
replace CPX1=.187      if QWB1k==1
replace CPX1=.189      if QWB2c_1==1
replace CPX1=.201      if QWB3m_1==1
replace CPX1=.204      if QWB1h==1
replace CPX1=.204      if QWB2g_1==1
replace CPX1=.208      if QWB2k_1==1
replace CPX1=.223      if QWB3n_1==1
replace CPX1=.225      if QWB1g==1
replace CPX1=.233      if QWB1f==1
replace CPX1=.255      if QWB3k_1==1
replace CPX1=.256      if QWB1e==1
replace CPX1=.259      if QWB2p_1==1
```

replace CPX1=.260	if QWB2m_1==1
replace CPX1=.271	if QWB2i_1==1
replace CPX1=.274	if QWB1i==1
replace CPX1=.278	if QWB2n_1==1
replace CPX1=.286	if QWB3b_1==1
replace CPX1=.293	if QWB2a_1==1
replace CPX1=.296	if QWB3a_1==1
replace CPX1=.297	if QWB1c2==1
replace CPX1=.297	if QWB3h_1==1
replace CPX1=.298	if QWB2h_1==1
replace CPX1=.299	if QWB2d_1==1
replace CPX1=.306	if QWB2v_1==1
replace CPX1=.307	if QWB3i_1==1
replace CPX1=.311	if QWB3f_1==1
replace CPX1=.318	if QWB2s_1==1
replace CPX1=.318	if QWB2u_1==1
replace CPX1=.320	if QWB2w_1==1
replace CPX1=.324	if QWB3d_1==1
replace CPX1=.327	if QWB3c_1==1
replace CPX1=.343	if QWB2l_1==1
replace CPX1=.350	if QWB2e_1==1
replace CPX1=.358	if QWB1a2==1
replace CPX1=.358	if QWB1b==1
replace CPX1=.365	if QWB2r_1==1
replace CPX1=.365	if QWB2t_1==1
replace CPX1=.369	if QWB2q_1==1
replace CPX1=.377	if QWB2y_1==1
replace CPX1=.378	if QWB3g_1==1
replace CPX1=.386	if QWB2j_1==1
replace CPX1=.389	if QWB2b_1==1
replace CPX1=.408	if QWB1d==1
replace CPX1=.423	if QWB1c1==1
replace CPX1=.424	if QWB2o_1==1
replace CPX1=.430	if QWB3e_1==1
replace CPX1=.517	if QWB2x_1==1
replace CPX1=.523	if QWB1a1==1
replace CPX1=.559	if QWB3j_1==1

replace CPX2=.066	if QWB1l4==1
replace CPX2=.148	if QWB1l5==1
replace CPX2=.153	if QWB1l1==1
replace CPX2=.160	if QWB3l_2==1
replace CPX2=.178	if QWB2f_2==1
replace CPX2=.187	if QWB1j==1
replace CPX2=.187	if QWB1k==1
replace CPX2=.189	if QWB2c_2==1
replace CPX2=.201	if QWB3m_2==1
replace CPX2=.204	if QWB1h==1
replace CPX2=.204	if QWB2g_2==1
replace CPX2=.208	if QWB2k_2==1
replace CPX2=.223	if QWB3n_2==1
replace CPX2=.225	if QWB1g==1
replace CPX2=.233	if QWB1f==1
replace CPX2=.255	if QWB3k_2==1
replace CPX2=.256	if QWB1e==1
replace CPX2=.259	if QWB2p_2==1
replace CPX2=.260	if QWB2m_2==1

replace CPX2=.271	if QWB2i_2==1
replace CPX2=.274	if QWB1i==1
replace CPX2=.278	if QWB2n_2==1
replace CPX2=.286	if QWB3b_2==1
replace CPX2=.293	if QWB2a_2==1
replace CPX2=.296	if QWB3a_2==1
replace CPX2=.297	if QWB1c2==1
replace CPX2=.297	if QWB3h_2==1
replace CPX2=.298	if QWB2h_2==1
replace CPX2=.299	if QWB2d_2==1
replace CPX2=.306	if QWB2v_2==1
replace CPX2=.307	if QWB3i_2==1
replace CPX2=.311	if QWB3f_2==1
replace CPX2=.318	if QWB2s_2==1
replace CPX2=.318	if QWB2u_2==1
replace CPX2=.320	if QWB2w_2==1
replace CPX2=.324	if QWB3d_2==1
replace CPX2=.327	if QWB3c_2==1
replace CPX2=.343	if QWB2l_2==1
replace CPX2=.350	if QWB2e_2==1
replace CPX2=.358	if QWB1a2==1
replace CPX2=.358	if QWB1b==1
replace CPX2=.365	if QWB2r_2==1
replace CPX2=.365	if QWB2t_2==1
replace CPX2=.369	if QWB2q_2==1
replace CPX2=.377	if QWB2y_2==1
replace CPX2=.378	if QWB3g_2==1
replace CPX2=.386	if QWB2j_2==1
replace CPX2=.389	if QWB2b_2==1
replace CPX2=.408	if QWB1d==1
replace CPX2=.423	if QWB1c1==1
replace CPX2=.424	if QWB2o_2==1
replace CPX2=.430	if QWB3e_2==1
replace CPX2=.517	if QWB2x_2==1
replace CPX2=.523	if QWB1a1==1
replace CPX2=.559	if QWB3j_2==1

replace CPX3=.066	if QWB1l4==1
replace CPX3=.148	if QWB1l5==1
replace CPX3=.153	if QWB1l1==1
replace CPX3=.160	if QWB3l_3==1
replace CPX3=.178	if QWB2f_3==1
replace CPX3=.187	if QWB1j==1
replace CPX3=.187	if QWB1k==1
replace CPX3=.189	if QWB2c_3==1
replace CPX3=.201	if QWB3m_3==1
replace CPX3=.204	if QWB1h==1
replace CPX3=.204	if QWB2g_3==1
replace CPX3=.208	if QWB2k_3==1
replace CPX3=.223	if QWB3n_3==1
replace CPX3=.225	if QWB1g==1
replace CPX3=.233	if QWB1f==1
replace CPX3=.255	if QWB3k_3==1
replace CPX3=.256	if QWB1e==1
replace CPX3=.259	if QWB2p_3==1
replace CPX3=.260	if QWB2m_3==1
replace CPX3=.271	if QWB2i_3==1

replace CPX3=.274	if QWB1i==1
replace CPX3=.278	if QWB2n_3==1
replace CPX3=.286	if QWB3b_3==1
replace CPX3=.293	if QWB2a_3==1
replace CPX3=.296	if QWB3a_3==1
replace CPX3=.297	if QWB1c2==1
replace CPX3=.297	if QWB3h_3==1
replace CPX3=.298	if QWB2h_3==1
replace CPX3=.299	if QWB2d_3==1
replace CPX3=.306	if QWB2v_3==1
replace CPX3=.307	if QWB3i_3==1
replace CPX3=.311	if QWB3f_3==1
replace CPX3=.318	if QWB2s_3==1
replace CPX3=.318	if QWB2u_3==1
replace CPX3=.320	if QWB2w_3==1
replace CPX3=.324	if QWB3d_3==1
replace CPX3=.327	if QWB3c_3==1
replace CPX3=.343	if QWB2l_3==1
replace CPX3=.350	if QWB2e_3==1
replace CPX3=.358	if QWB1a2==1
replace CPX3=.358	if QWB1b==1
replace CPX3=.365	if QWB2r_3==1
replace CPX3=.365	if QWB2t_3==1
replace CPX3=.369	if QWB2q_3==1
replace CPX3=.377	if QWB2y_3==1
replace CPX3=.378	if QWB3g_3==1
replace CPX3=.386	if QWB2j_3==1
replace CPX3=.389	if QWB2b_3==1
replace CPX3=.408	if QWB1d==1
replace CPX3=.423	if QWB1c1==1
replace CPX3=.424	if QWB2o_3==1
replace CPX3=.430	if QWB3e_3==1
replace CPX3=.517	if QWB2x_3==1
replace CPX3=.523	if QWB1a1==1
replace CPX3=.559	if QWB3j_3==1
replace MOB1=.031	if QWB6c_1==1
replace MOB1=.089	if QWB5a_1==1
replace MOB2=.031	if QWB6c_2==1
replace MOB2=.089	if QWB5a_2==1
replace MOB3=.031	if QWB6c_3==1
replace MOB3=.089	if QWB5a_3==1
replace PAC1=.072	if QWB7a_1==1
replace PAC1=.072	if QWB7b_1==1
replace PAC1=.072	if QWB7c_1==1
replace PAC1=.072	if QWB7d_1==1
replace PAC1=.072	if QWB7e_1==1
replace PAC1=.072	if QWB7f_1==1
replace PAC1=.102	if QWB7h_1==1
replace PAC1=.163	if QWB7g_1==1
replace PAC1=.163	if QWB7i_1==1
replace PAC2=.072	if QWB7a_2==1
replace PAC2=.072	if QWB7b_2==1
replace PAC2=.072	if QWB7c_2==1
replace PAC2=.072	if QWB7d_2==1

```
replace PAC2=.072      if QWB7e_2==1
replace PAC2=.072      if QWB7f_2==1
replace PAC2=.102      if QWB7h_2==1
replace PAC2=.163      if QWB7g_2==1
replace PAC2=.163      if QWB7i_2==1
```

```
replace PAC3=.072      if QWB7a_3==1
replace PAC3=.072      if QWB7b_3==1
replace PAC3=.072      if QWB7c_3==1
replace PAC3=.072      if QWB7d_3==1
replace PAC3=.072      if QWB7e_3==1
replace PAC3=.072      if QWB7f_3==1
replace PAC3=.102      if QWB7h_3==1
replace PAC3=.163      if QWB7g_3==1
replace PAC3=.163      if QWB7i_3==1
```

```
replace SAC1=.054      if QWB8a_1==1
replace SAC1=.054      if QWB8b_1==1
replace SAC1=.054      if QWB8c_1==1
replace SAC1=.096      if QWB5b_1==1
```

```
replace SAC2=.054      if QWB8a_2==1
replace SAC2=.054      if QWB8b_2==1
replace SAC2=.054      if QWB8c_2==1
replace SAC2=.096      if QWB5b_2==1
```

```
replace SAC3=.054      if QWB8a_3==1
replace SAC3=.054      if QWB8b_3==1
replace SAC3=.054      if QWB8c_3==1
replace SAC3=.096      if QWB5b_3==1
```

```
gen Score1= 1 - CPX1 - MOB1 - PAC1 - SAC1
gen Score2= 1 - CPX2 - MOB2 - PAC2 - SAC2
gen Score3= 1 - CPX3 - MOB3 - PAC3 - SAC3
gen TotalScore= Score1 + Score2 + Score3
gen QWB= TotalScore/3
```

```
*****THE END*****
```

6. QWB ALGORITHM IN SPSS

** Produced in SPSS by: Dr. Munir Khan, Centre for Health Economics, Monash University, Australia**

**/* QWB-SA v1.04 scoring algorithm written February 2005 by Janel Hanmer

** coding was checked against an independently written program by Shani Herrington*/

**/* fields named by the following scheme:

** QWB[section number][question letter][question part, if applicable]

** if the question part is yesterday, 2 days ago, 3 days ago

**the corresponding code is _1, _2, _3

**for example, QWB1b = "speech problems such as stuttering, or being unable to speak clearly?"

QWB2b_1 = "any eye pain, irritation, discharge, or excessive sensitivity to light"

yesterday

QWB2b_2 = "any eye pain, irritation, discharge, or excessive sensitivity to light" 2

days ago

QWB2b_3 = "any eye pain, irritation, discharge, or excessive sensitivity to light" 3

days ago

**a copy of the QWB-SA v1.04 is available at <http://www.openhealthmeasures.org>

**scoring is presumed to be 0=no and 1=yes

*/

/* scores are computed with any amount of missing data */

/*insert path location here */

compute CPX1=0.

compute CPX2=0.

compute CPX3=0.

compute MOB1=0.

compute MOB2=0.

compute MOB3=0.

compute PAC1=0.

compute PAC2=0.

compute PAC3=0.

compute SAC1=0.

compute SAC2=0.

compute SAC3=0.

EXECUTE.

if (QWB1I4=1) CPX1=.066.

if QWB1I5=1 CPX1=.148.

if QWB1I1=1 CPX1=.153.

if QWB3I_1=1 CPX1=.160.

if QWB2f_1=1 CPX1=.178.

if QWB1j=1 CPX1=.187.

```
if QWB1k=1 CPX1=.187.
if QWB2c_1=1 CPX1=.189.
if QWB3m_1=1 CPX1=.201.
if QWB1h=1 CPX1=.204.
if QWB2g_1=1 CPX1=.204.
if QWB2k_1=1 CPX1=.208.
if QWB3n_1=1 CPX1=.223.
if QWB1g=1 CPX1=.225.
if QWB1f=1 CPX1=.233 .
if QWB3k_1=1 CPX1=.255 .
if QWB1e=1 CPX1=.256.
if QWB2p_1=1 CPX1=.259.
if QWB2m_1=1 CPX1=.260.
if QWB2i_1=1 CPX1=.271.
if QWB1i=1 CPX1=.274.
if QWB2n_1=1 CPX1=.278.
if QWB3b_1=1 CPX1=.286.
if QWB2a_1=1 CPX1=.293.
if QWB3a_1=1 CPX1=.296 .
if QWB1c2=1 CPX1=.297 .
if QWB3h_1=1 CPX1=.297.
if QWB2h_1=1 CPX1=.298.
if QWB2d_1=1 CPX1=.299.
if QWB2v_1=1 CPX1=.306.
if QWB3i_1=1 CPX1=.307.
if QWB3f_1=1 CPX1=.311.
if QWB2s_1=1 CPX1=.318.
if QWB2u_1=1 CPX1=.318.
if QWB2w_1=1 CPX1=.320 .
if QWB3d_1=1 CPX1=.324 .
if QWB3c_1=1 CPX1=.327 .
if QWB2l_1=1 CPX1=.343 .
if QWB2e_1=1 CPX1=.350.
if QWB1a2=1 CPX1=.358 .
if QWB1b=1 CPX1=.358 .
if QWB2r_1=1 CPX1=.365 .
if QWB2t_1=1 CPX1=.365 .
if QWB2q_1=1 CPX1=.369.
if QWB2y_1=1 CPX1=.377.
if QWB3g_1=1 CPX1=.378.
if QWB2j_1=1 CPX1=.386 .
if QWB2b_1=1 CPX1=.389.
if QWB1d=1 CPX1=.408 .
if QWB1c1=1 CPX1=.423 .
if QWB2o_1=1 CPX1=.424.
if QWB3e_1=1 CPX1=.430.
if QWB2x_1=1 CPX1=.517.
if QWB1a1=1 CPX1=.523 .
if QWB3j_1=1 CPX1=.559 .
EXECUTE.
```

```

if QWB1l4=1 CPX2=.066 .
if QWB1l5=1 CPX2=.148.
if QWB1l1=1 CPX2=.153.
if QWB3l_2=1 CPX2=.160.
if QWB2f_2=1 CPX2=.178.
if QWB1j=1 CPX2=.187 .
if QWB1k=1 CPX2=.187.
if QWB2c_2=1 CPX2=.189 .
if QWB3m_2=1 CPX2=.201 .
if QWB1h=1 CPX2=.204.
if QWB2g_2=1 CPX2=.204 .
if QWB2k_2=1 CPX2=.208 .
if QWB3n_2=1 CPX2=.223 .
if QWB1g=1 CPX2=.225 .
if QWB1f=1 CPX2=.233 .
if QWB3k_2=1 CPX2=.255 .
if QWB1e=1 CPX2=.256 .
if QWB2p_2=1 CPX2=.259 .
if QWB2m_2=1 CPX2=.260 .
if QWB2i_2=1 CPX2=.271 .
if QWB1i=1 CPX2=.274 .
if QWB2n_2=1 CPX2=.278 .
if QWB3b_2=1 CPX2=.286 .
    if QWB2a_2=1 CPX2=.293.
if QWB3a_2=1 CPX2=.296 .
if QWB1c2=1 CPX2=.297 .
if QWB3h_2=1 CPX2=.297 .
if QWB2h_2=1 CPX2=.298 .
if QWB2d_2=1 CPX2=.299 .
if QWB2v_2=1 CPX2=.306 .
if QWB3i_2=1 CPX2=.307 .
if QWB3f_2=1 CPX2=.311 .
if QWB2s_2=1 CPX2=.318 .
if QWB2u_2=1 CPX2=.318 .
if QWB2w_2=1 CPX2=.320 .
if QWB3d_2=1 CPX2=.324 .
if QWB3c_2=1 CPX2=.327 .
if QWB2l_2=1 CPX2=.343 .
if QWB2e_2=1 CPX2=.350.
if QWB1a2=1 CPX2=.358 .
if QWB1b=1 CPX2=.358 .
if QWB2r_2=1 CPX2=.365 .
if QWB2t_2=1 CPX2=.365 .
if QWB2q_2=1 CPX2=.369 .
if QWB2y_2=1 CPX2=.377 .
if QWB3g_2=1 CPX2=.378 .
if QWB2j_2=1 CPX2=.386 .
if QWB2b_2=1 CPX2=.389 .
if QWB1d=1 CPX2=.408 .
if QWB1c1=1 CPX2=.423 .
if QWB2o_2=1 CPX2=.424 .

```

if QWB3e_2=1 CPX2=.430 .
if QWB2x_2=1 CPX2=.517 .
if QWB1a1=1 CPX2=.523 .
if QWB3j_2=1 CPX2=.559 .
EXECUTE.

if QWB1l4=1 CPX3=.066 .
if QWB1l5=1 CPX3=.148 .
if QWB1l1=1 CPX3=.153 .
if QWB3l_3=1 CPX3=.160 .
if QWB2f_3=1 CPX3=.178 .
if QWB1j=1 CPX3=.187 .
if QWB1k=1 CPX3=.187 .
if QWB2c_3=1 CPX3=.189 .
if QWB3m_3=1 CPX3=.201 .
if QWB1h=1 CPX3=.204 .
if QWB2g_3=1 CPX3=.204 .
if QWB2k_3=1 CPX3=.208 .
if QWB3n_3=1 CPX3=.223 .
if QWB1g=1 CPX3=.225 .
if QWB1f=1 CPX3=.233 .
if QWB3k_3=1 CPX3=.255 .
if QWB1e=1 CPX3=.256 .
if QWB2p_3=1 CPX3=.259 .
if QWB2m_3=1 CPX3=.260 .
if QWB2i_3=1 CPX3=.271 .
if QWB1i=1 CPX3=.274 .
if QWB2n_3=1 CPX3=.278 .
if QWB3b_3=1 CPX3=.286 .
if QWB2a_3=1 CPX3=.293 .
if QWB3a_3=1 CPX3=.296 .
if QWB1c2=1 CPX3=.297 .
if QWB3h_3=1 CPX3=.297 .
if QWB2h_3=1 CPX3=.298 .
if QWB2d_3=1 CPX3=.299 .
if QWB2v_3=1 CPX3=.306 .
if QWB3i_3=1 CPX3=.307 .
if QWB3f_3=1 CPX3=.311 .
if QWB2s_3=1 CPX3=.318 .
if QWB2u_3=1 CPX3=.318 .
if QWB2w_3=1 CPX3=.320 .
if QWB3d_3=1 CPX3=.324 .
if QWB3c_3=1 CPX3=.327 .
if QWB2l_3=1 CPX3=.343 .
if QWB2e_3=1 CPX3=.350 .
if QWB1a2=1 CPX3=.358 .
if QWB1b=1 CPX3=.358 .
if QWB2r_3=1 CPX3=.365 .
if QWB2t_3=1 CPX3=.365 .
if QWB2q_3=1 CPX3=.369 .
if QWB2y_3=1 CPX3=.377 .

```

if QWB3g_3=1 CPX3=.378.
if QWB2j_3=1 CPX3=.386.
if QWB2b_3=1 CPX3=.389.
if QWB1d=1 CPX3=.408.
if QWB1c1=1 CPX3=.423.
if QWB2o_3=1 CPX3=.424.
if QWB3e_3=1 CPX3=.430.
if QWB2x_3=1 CPX3=.517.
if QWB1a1=1 CPX3=.523.
if QWB3j_3=1 CPX3=.559.
if QWB6c_1=1 MOB1=.031.
if QWB5a_1=1 MOB1=.089.

if QWB6c_2=1 MOB2=.031.
if QWB5a_2=1 MOB2=.089.

if QWB6c_3=1 MOB3=.031.
if QWB5a_3=1 MOB3=.089.

if QWB7a_1=1 PAC1=.072.
if QWB7b_1=1 PAC1=.072.
if QWB7c_1=1 PAC1=.072.
if QWB7d_1=1 PAC1=.072.
if QWB7e_1=1 PAC1=.072.
if QWB7f_1=1 PAC1=.072.
if QWB7h_1=1 PAC1=.102.
if QWB7g_1=1 PAC1=.163.
if QWB7i_1=1 PAC1=.163.

if QWB7a_2=1 PAC2=.072.
if QWB7b_2=1 PAC2=.072.
if QWB7c_2=1 PAC2=.072.
if QWB7d_2=1 PAC2=.072.
if QWB7e_2=1 PAC2=.072.
if QWB7f_2=1 PAC2=.072.
if QWB7h_2=1 PAC2=.102.
if QWB7g_2=1 PAC2=.163.
if QWB7i_2=1 PAC2=.163.

if QWB7a_3=1 PAC3=.072.
if QWB7b_3=1 PAC3=.072.
if QWB7c_3=1 PAC3=.072.
if QWB7d_3=1 PAC3=.072.
if QWB7e_3=1 PAC3=.072.
if QWB7f_3=1 PAC3=.072.
if QWB7h_3=1 PAC3=.102.
if QWB7g_3=1 PAC3=.163.
if QWB7i_3=1 PAC3=.163.

if QWB8a_1=1 SAC1=.054.
if QWB8b_1=1 SAC1=.054.

```

```
if QWB8c_1=1 SAC1=.054 .  
if QWB5b_1=1 SAC1=.096 .
```

```
if QWB8a_2=1 SAC2=.054 .  
if QWB8b_2=1 SAC2=.054 .  
if QWB8c_2=1 SAC2=.054 .  
if QWB5b_2=1 SAC2=.096 .
```

```
if QWB8a_3=1 SAC3=.054 .  
if QWB8b_3=1 SAC3=.054 .  
if QWB8c_3=1 SAC3=.054 .  
if QWB5b_3=1 SAC3=.096 .  
EXECUTE.
```

```
Compute Score1= 1 - CPX1 - MOB1 - PAC1 - SAC1.  
Compute Score2= 1 - CPX2 - MOB2 - PAC2 - SAC2.  
Compute Score3= 1 - CPX3 - MOB3 - PAC3 - SAC3.  
Compute TotalScore= Score1 + Score2 + Score3.  
Compute QWB= TotalScore/3.  
EXECUTE.
```

```
VARIABLE LABELS QWB 'QWB Score' TotalScore 'Total Score'.
```

```
*Drop Variables Generated by Program*
```

6. Algorithm for SF6D (SPSS) based on UK version of SF-36 Questionnaire.

*Authors: John Brazier and Stephen Walters.

*Date: 24 October 2003.

Weighting of domain scores from Brazier JE, Roberts JR, (2004) The estimation of a preference-based index from the SF-12. Medical Care, 42: 851-859.

Please note the following before proceeding with the programme

* ASSUMPTIONS.

* 1. SF-36 items are named sf1 to sf36.

* 2. All responses to the questions should be coded from 1 to n.

* E.g. for question sf1 "1. In general would you say your health is":.

* Excellent = 1.

* Very Good = 2.

* Good = 3.

* Fair = 4.

* Poor = 5.

* 3. Missing values are coded 7 or 8 or 9 OR are left blank (system missing).

*THE syntax WILL NOT work if other values are defined as missing e.g. 999.

* 4. The programme uses raw (i.e. unrecoded) SF-36 item responses.

* 5. Designed for UK SF-36 Version 2.

* The SF-6D has 6 dimensions (based on 11 items of the SF-36):.

* 1. Physical (3 items SF3, SF4 & SF12) with 6 levels.

* 2. Role (2 items SF15, SF18) with 4 levels.

* 3. Social (1 item SF32) with 5 levels.

* 4. Pain (2 items SF21 & SF22) with 6 levels.

* 5. Mental (2 items SF24 & SF28) with 5 levels.

* 6. Vitality (1 item SF27) with 5 levels.

*,

*SF-6D - Derived from SF-36 Version 2 UK.

*1. Physical functioning dimension.

IF (sf3=3) AND (sf4=3) AND (sf12=3) SFPhys = 1 .

IF ((sf3=1) OR (sf3=2)) AND (sf4=3) AND (sf12=3) SFPhys = 2 .

IF (sf4=2) AND (sf12=3) SFPhys = 3.

IF (sf4=1) AND (sf12=3) SFPhys = 4.

IF (sf12=2) SFPhys = 5.

IF (sf12=1) SFPhys = 6.

IF ((sf3<1) OR (sf3>3)) AND ((sf4<1) OR (sf4>3)) AND ((sf12<1) OR (sf12>3)) SFPhys=9.

Execute.

*2. Role limitations dimension.

IF ((sf15=5) AND (sf18=5)) SFRole = 1 .

IF ((sf15=1) OR (sf15=2) OR (sf15=3) OR (sf15=4)) AND (sf18=5) SFRole = 2 .

IF ((sf18=1) OR (SF18=2) OR (Sf18=3) OR (sf18=4)) AND (sf15=5) SFRole = 3 .
IF ((sf15=1) OR (sf15=2) OR (sf15=3) OR (sf15=4)) AND ((sf18=1) OR (sf18=2) OR (sf18=3) OR (sf18=4)) SFRole = 4.
IF ((sf15<1) OR (sf15>5)) AND ((sf18<1) OR (sf18>5)) SFRole=9.
EXECUTE .

*3. Social functioning dimension.

IF (sf32=5) SFSocial = 1 .
IF (sf32=4) SFSocial = 2 .
IF (sf32=3) SFSocial = 3 .
IF (sf32=2) SFSocial = 4 .
IF (sf32=1) SFSocial = 5 .
IF ((sf32<1) OR (sf32>5)) SFSocial=9.
EXECUTE .

*4. Bodily pain dimension.

IF (sf21=1) AND (sf22=1) SFPain = 1 .
IF ((sf21=2) OR (sf21=3) OR (sf21=4) OR (sf21=5) OR (sf21=6)) AND (sf22=1) SFPain = 2 .
IF (sf22=2) SFPain = 3 .
IF (sf22=3) SFPain = 4 .
IF (sf22=4) SFPain = 5 .
IF (sf22=5) SFPain = 6 .
IF ((sf22<1) OR (sf22>5)) AND ((sf21<1) OR (sf21>6)) SFPain=9.
Execute.

* 5. Mental health dimension.

IF (sf24=5) AND (sf28=5) SFMental = 1 .
IF (sf24=4) AND (sf28=5) SFMental = 2 .
IF (sf24=4) AND (sf28=4) SFMental = 2 .
IF (sf24=5) AND (sf28=4) SFMental = 2 .
IF (sf24=3) AND ((sf28=3) OR (sf28=4) OR (sf28=5)) SFMental = 3 .
IF (sf28=3) AND ((sf24=4) OR (sf24=5)) SFMental = 3 .
IF (sf24=2) AND ((sf28=2) OR (sf28=3) OR (sf28=4) OR (sf28=5)) SFMental = 4 .
IF (sf28=2) AND ((sf24=3) OR (sf24=4) OR (sf24=5)) SFMental = 4 .
IF (sf24=1) SFMental = 5 .
IF (sf28=1) SFMental = 5 .
IF ((sf24<1) OR (sf24>5)) AND ((sf28<1) OR (sf28>5)) SFMental=9.
Execute.

* 6. Vitality dimension.

IF (sf27=1) SFVital = 1 .
IF (sf27=2) SFVital = 2 .
IF (sf27=3) SFVital = 3 .
IF (sf27=4) SFVital = 4 .
IF (sf27=5) SFVital = 5 .
IF (sf27<1) OR (sf27>5) SFVital=9.
EXECUTE.

*Interaction term.

COMPUTE Most=0.
IF (SFPhys=4) Most=1.
IF (SFPhys=5) Most=1.
IF (SFPhys=6) Most=1.
IF (SFRole=3) Most =1.

IF (SFRole=4) Most=1.
IF (SFSocial=4) Most=1.
IF (SFSocial=5) Most=1.
IF (SFPain=5) Most=1.
IF (SFPain=6) Most=1.
IF (SFMental=4) Most=1.
IF (SFMental=5) Most=1.
IF (SFVital=4) Most=1.
IF (SFVital=5) Most=1.
Execute.

*Weighting of domain scores from Brazier JE, Roberts JR, (2004) The estimation of a preference-based index from the SF-12. Medical Care, 42: 851-859.

If (SFPhys=1) pf1=0 .
IF (SFPhys=2) pf1 = -.035 .
IF (SFPhys=3) pf1 = -.035 .
IF (SFPhys=4) pf1 = -.044 .
IF (SFPhys=5) pf1 = -.056 .
If (SFPhys=6) pf1=-.117 .
Execute.

If (SFRole=1) rl1=0 .
IF (SFRole=2) rl1 = -.053 .
IF (SFRole=3) rl1 = -.053 .
IF (SFRole=4) rl1 = -.053 .
Execute.

IF (SFSocial=1) sc1=0 .
IF (SFSocial=2) sc1=-.057 .
IF (SFSocial=3) sc1=-.059 .
IF (SFSocial=4) sc1=-.072 .
IF (SFSocial=5) sc1=-.087 .
Execute.

If (SFPain=1) pn1=0 .
IF (SFPain=2) pn1 = -.042 .
IF (SFPain=3) pn1 = -.042 .
IF (SFPain=4) pn1 = -.065 .
IF (SFPain=5) pn1 = -.102 .
If (SFPain=6) pn1=-.171 .
Execute.

If (SFMental=1) mh1=0 .
IF (SFMental=2) mh1 = -.042 .
IF (SFMental=3) mh1 = -.042 .
IF (SFMental=4) mh1 = -.100 .
IF (SFMental=5) mh1 = -.118 .
Execute.

IF (SFVital=1) v1 =0 .
IF (SFVital=2) v1 = -.071.
IF (SFVital=3) v1 = -.071 .
IF (SFVital=4) v1 = -.071 .
IF (SFVital=5) v1 = -.092.
Execute .

```
If (Most=0) mst1=0 .
If (most=1) mst1=-.061.
Execute.
```

```
COMPUTE sf_6dv2 = 1 + pf1+rl1+sc1+pn1+mh1+v1+mst1.
VARIABLE LABELS sf_6dv2 "SF-6D preference-based measured of health".
EXECUTE.
```

Algorithm for SF6D (SPSS) based on US version of SF-36 Questionnaire.

Deriving the SF-6D health state classification from the SF-36v1 US version.

*Revised by Donna Rowen in accordance with changes agreed by Qualitymetric Inc., John Brazier and Dennis Fryback on 17th January 2007.

*Date: 27 February 2008

*Author: John Brazier

*Date: 8 September 2001

*Weighting of domain scores from Brazier JE, Roberts JR, (2004) The estimation of a preference-based index from the SF-12. Medical Care, 42: 851-859.

Please note the following before proceeding with the programme

*SF-36 items are numbered 1-36 rather than the original 1-10.

*Programme uses raw (i.e. uncoded) SF-36 item responses.

*Designed for SF-36 version 1 or 2. For version 1 you will need to convert the response choice scales

*of SF-24, 27 and 28 onto the version II scale which does not have a 'good bit of the time'. The syntax

*for doing this is presented below. For those using the developmental form of version 1 (the most commonly used

*version in the UK until 1998) where SF-32 is in the 'Your Feelings' grid - will have to apply the same conversion

to remove the a 'good bit of the time' from the scale, but this is not included in this algorithm

Converting sf24, sf27 and sf28 to version two.

```
Compute rand1 = Rv.Uniform(0,1) .
```

```
Compute SF24r=sf24.
```

```
IF (sf24=2) sf24r=2 .
```

```
IF (sf24=3 and rand1 <0.5) sf24r=2 .
```

```
IF (sf24=3 and rand1 >=0.5) sf24r=3.
```

```
IF (sf24=4) sf24r=3 .
```

```
IF (sf24=5) sf24r=4 .
```

```
IF (sf24=6) sf24r=5 .
```

```
IF (sf24<1) OR (sf24>6) sf24r=9.
```

```
Execute .
```

```
Compute rand2 = Rv.Uniform(0,1) .
```

```
Compute SF27r=sf27.
```

```
IF (sf27=2) sf27r=2 .
```

```
IF (sf27=3 and rand2 <0.5) sf27r=2 .
```

```
IF (sf27=3 and rand2 >=0.5) sf27r=3.
```

IF (sf27=4) sf27r=3 .
IF (sf27=5) sf27r=4.
IF (sf27=6) sf27r=5 .
IF (sf27<1) OR (sf27>6) sf27r=9.
Execute .

Compute rand3 = Rv.Uniform(0,1) .
Compute SF28r=sf28.
IF (sf28=2) sf28r=2 .
IF (sf28=3 and rand3 <0.5) sf28r=2 .
IF (sf28=3 and rand3>=0.5) sf28r=3.
IF (sf28=4) sf28r=3 .
IF (sf28=5) sf28r=4 .
IF (sf28=6) sf28r=5 .
IF (sf28<1) OR (sf28>6) sf28r=9.
Execute .

***SF6D**

*1. Physical functioning dimension.

IF (sf3=3) AND (sf4=3) AND (sf12=3) SFPhys = 1 .
IF ((sf3=1) OR (sf3=2)) AND (sf4=3) AND (sf12=3) SFPhys = 2 .
IF (sf4=2) AND (sf12=3) SFPhys = 3.
IF (sf4=1) AND (sf12=3) SFPhys = 4.
IF (sf12=2) SFPhys = 5.
IF (sf12=1) SFPhys = 6.
IF ((sf3<1) OR (sf3>3)) AND ((sf4<1) OR (sf4>3)) AND ((sf12<1) OR (sf12>3)) SFPhys=9.
Execute.

*2. Role limitations dimension.

IF ((sf15=2) AND (sf18=2)) SFRole = 1 .
IF (sf15=1) AND (sf18=2) SFRole = 2 .
IF (sf15=2) AND (sf18=1) SFRole = 3 .
IF (sf15=1) AND (sf18=1) SFRole = 4 .
IF ((sf15<1) OR (sf15>2)) AND ((sf18<1) OR (sf18>2)) SFRole=9.
Execute .

*3. Social functioning dimension.

IF (sf32=5) SFSocial = 1 .
IF (sf32=4) SFSocial = 2 .
IF (sf32=3) SFSocial = 3 .
IF (sf32=2) SFSocial = 4 .
IF (sf32=1) SFSocial = 5 .
IF ((sf32<1) OR (sf32>5)) SFSocial=9.
Execute .

*4. Bodily pain dimension.

IF (sf21=1) AND (sf22=1) SFPain = 1 .
IF ((sf21=2) OR (sf21=3) OR (sf21=4) OR (sf21=5) OR (sf21=6)) AND (sf22=1) SFPain = 2 .

IF (sf22=2) SFPain = 3 .
IF (sf22=3) SFPain = 4 .
IF (sf22=4) SFPain = 5 .
IF (sf22=5) SFPain = 6 .
IF ((sf22<1) OR (sf22>5)) AND ((sf21<1) OR (sf21>6)) SFPain=9.
Execute.

* 5. Mental health dimension.

IF (sf24r=5) AND (sf28r=5) SFMental = 1 .
IF (sf24r=4) AND (sf28r=5) SFMental = 2 .
IF (sf24r=4) AND (sf28r=4) SFMental = 2 .
IF (sf24r=5) AND (sf28r=4) SFMental = 2 .
IF (sf24r=3) AND ((sf28r=3) OR (sf28r=4) OR (sf28r=5)) SFMental = 3 .
IF (sf28r=3) AND ((sf24r=4) OR (sf24r=5)) SFMental = 3 .
IF (sf24r=2) AND ((sf28r=2) OR (sf28r=3) OR (sf28r=4) OR (sf28r=5)) SFMental = 4 .
IF (sf28r=2) AND ((sf24r=3) OR (sf24r=4) OR (sf24r=5)) SFMental = 4 .
IF (sf24r=1) SFMental = 5 .
IF (sf28r=1) SFMental = 5 .
IF ((sf24r<1) OR (sf24r>5)) AND ((sf28r<1) OR (sf28r>5)) SFMental=9.
Execute.

* 6. Vitality dimension.

IF (sf27r=1) SFVital = 1 .
IF (sf27r=2) SFVital = 2 .
IF (sf27r=3) SFVital = 3 .
IF (sf27r=4) SFVital = 4 .
IF (sf27r=5) SFVital = 5 .
IF (sf27r<1) OR (sf27r>5) SFVital=9.
Execute.

*Interaction term.

COMPUTE Most=0.
IF (SFPhys=4) Most=1.
IF (SFPhys=5) Most=1.
IF (SFPhys=6) Most=1.
IF (SFRole=3) Most =1.
IF (SFRole=4) Most=1.
IF (SFSocial=4) Most=1.
IF (SFSocial=5) Most=1.
IF (SFPain=5) Most=1.
IF (SFPain=6) Most=1.
IF (SFMental=4) Most=1.
IF (SFMental=5) Most=1.
IF (SFVital=4) Most=1.
IF (SFVital=5) Most=1.
Execute.

*Weighting of domain scores from Brazier JE, Roberts JR, (2004) The estimation of a preference-based index from the SF-12. Medical Care, 42: 851-859.

```
IF (SFPhys=1) pf1=0 .
IF (SFPhys=2) pf1 = -.035 .
IF (SFPhys=3) pf1 = -.035 .
IF (SFPhys=4) pf1 = -.044 .
IF (SFPhys=5) pf1 = -.056 .
IF (SFPhys=6) pf1= -.117 .
Execute.
```

```
IF (SFRole=1) rl1=0 .
IF (SFRole=2) rl1 = -.053 .
IF (SFRole=3) rl1 = -.053 .
IF (SFRole=4 ) rl1 = -.053 .
```

```
IF (SFSocial=1) sc1=0 .
IF (SFSocial=2) sc1=-.057 .
IF (SFSocial=3) sc1=-.059 .
IF (SFSocial=4) sc1=-.072 .
IF (SFsocial=5) sc1=-.087.
```

```
IF (SFPain=1) pn1=0 .
IF (SFPain=2) pn1 = -.042 .
IF (SFPain=3) pn1 = -.042 .
IF (SFPain=4 ) pn1 = -.065 .
IF (SFPain=5) pn1 = -.102.
IF (SFPain=6) pn1=-.171.
```

```
IF (SFMental=1) mh1=0 .
IF (SFMental=2) mh1 = -.042.
IF (SFMental=3) mh1 = -.042.
IF (SFMental=4 ) mh1 = -.100 .
IF (SFMental=5) mh1 = -.118.
```

```
IF (SFVital=1) v1 =0 .
IF (SFVital=2) v1 = -.071.
IF (SFVital=3) v1 = -.071 .
IF (SFVital=4 ) v1 = -.071 .
IF (SFVital=5) v1 = -.092.
Execute.
```

```
IF (Most=0) mst1=0 .
IF (Most=1) mst1=-.061.
```

```
Compute SFindexr = 1 + pf1+rl1+sc1+pn1+mh1+v1+mst1.
VARIABLE LABELS SFindexr "SF-6D preference-based measured of health".
Execute.
```

For Non-MAU instruments

1. PWI

**** PWIa Summary Score**

**** This item is routinely included in surveys conducted in Australia (Australian Unity Wellbeing Surveys) and other countries. This item was administered as the FIRST item in the questionnaire, prior to the core PWI items.**

**** This standardization procedure ensures that prior items, including the Personal Wellbeing Index domains, cannot influence this global response.**

**** However this item is NOT part of the PWI score. It may be usefully added to the core index items to test the construct validity of the PWI. This is achieved by regressing the index domains against 'satisfaction with life as a whole' to determine whether they each contribute unique variance. This procedure can also inform whether a new item should be considered as an additional domain.**

**** Scoring information is taken from the 4th edition of the PWI manual found at <http://www.deakin.edu.au/research/acqol/instruments/wellbeing-index/pwi-a-english.pdf>**

COMPUTE PWI_a_0_1=PWI_a/10.
EXECUTE.

**** Total PWI Score of variables PWI_b to PWI_i - This is the summed score of the 8 core questions of the PWI****

COMPUTE Tot_PWI_btoi=PWI_b + PWI_c + PWI_d+ PWI_e + PWI_f + PWI_g + PWI_h + PWI_i.
EXECUTE.

**** Average PWI Score of PWI_b to PWI_i - This is the average of the summed score****

COMPUTE Ave_PWI_Score=(PWI_b + PWI_c + PWI_d+ PWI_e + PWI_f + PWI_g + PWI_h + PWI_i)/8.
EXECUTE.

**** PWI Score on a '0' to 1 scale - This is the normalised score used for analysis, on a ZERO to ONE scale ****

COMPUTE PWI_0_1 = (1/80)*Tot_PWI_btoi.
EXECUTE.

2. SWLS Instrument – corrected scoring

****SWLS_0_1 This is the normalised score used for analysis, on a ZERO to ONE scale ****

COMPUTE Tot_SWLS_Score =SWLS_a+ SWLS_b+SWLS_c+SWLS_d+SWLS_e.
EXECUTE.
COMPUTE SWLS_0_1 = (Tot_SWLS_Score-5)/30.
EXECUTE.

3. IHS Instrument (ONS)

**** IHS_0_1 - This is the normalised score used for analysis, on a ZERO to ONE scale ****

**** Note that the final IHS question raw score was reversed - 0 was best, not worst**

COMPUTE Tot_IHS_Score =IHSi+ IHSj+IHSk+IHSI.
EXECUTE.

```
COMPUTE IHS_0_1 = (1/40)*Tot_IHS_Score.  
EXECUTE.  
***
```

4. ** Self TTO**

```
COMPUTE SelfTTO_Score=selfTTO/10.  
EXECUTE.
```

** Descriptive Statistics for Non MAU Instruments**

```
DESCRIPTIVES VARIABLES=PWI_a_0_1 PWI_0_1 SWLS_0_1 IHS_0_1 ICECAP_Capability SelfTTO_Score SF36_Score  
/STATISTICS=MEAN SEMEAN STDDEV MIN MAX.
```

** Pearson Correlation MAU vs MAU**

```
CORRELATIONS  
/VARIABLES=EQ_5D_utility SFindex HUI3_Utility D15SCORE QWB_utility aqol4D_utility AQoL8D_Utility  
/PRINT=TWOTAIL NOSIG  
/MISSING=PAIRWISE.
```

** Pearson Correlation MAU vs Non MAU**

```
CORRELATIONS  
/VARIABLES=EQ_5D_utility SFindex HUI3_Utility D15SCORE QWB_utility aqol4D_utility AQoL8D_Utility  
PWI_a_0_1 PWI_0_1 SWLS_0_1 IHS_0_1 ICECAP_Capability SelfTTO_Score SF36_Score  
/PRINT=TWOTAIL NOSIG  
/MISSING=PAIRWISE.
```

** Pearson Correlation Non MAU vs Non MAU**

```
CORRELATIONS  
/VARIABLES=PWI_a_0_1 PWI_0_1 SWLS_0_1 IHS_0_1 ICECAP_Capability SelfTTO_Score SF36_Score  
/PRINT=TWOTAIL NOSIG  
/MISSING=PAIRWISE.
```

** Frequencies for MAU Instruments**

```
FREQUENCIES VARIABLES=EQ_5D_utility SFindex HUI3_Utility D15SCORE QWB_utility aqol4D_utility  
AQoL8D_Utility  
/HISTOGRAM  
/ORDER=ANALYSIS.
```

** Descriptive Stats for MAU Instruments**

```
DESCRIPTIVES VARIABLES=EQ5D_Score_MK sf_6dv2 HUI3_Utility D15SCORE QWB uAQOL4D AQoL8D_Utility  
/STATISTICS=MEAN SEMEAN STDDEV MIN MAX.
```

** Descriptive Statistics for Non MAU Instruments for Patients**

DESCRIPTIVES VARIABLES=PWI_a_0_1 PWI_0_1 SWLS_0_1 IHS_0_1 ICECAP_Capability SelfTTO_Score
/STATISTICS=MEAN SEMEAN STDDEV MIN MAX.

5. ICECAP-A Capability Algorithm in STATA and SPSS

Note that response level 1 is scored as 4, response level 2 is scored as 3, response level 3 is scored as 2, response level 4 is scored as 1.

The STATA scoring algorithm presented below was sent by Hareth Al-Janabi to CHE in January 2012.

* It has been adapted to SPSS by Munir Khan at CHE*

*The **STATA scoring** mechanism from Hareth Al-Janabi is as follows:*

```
matrix UTILS=(-0.001,0.101,0.191,0.222\/*
*/-0.024,0.096,0.189,0.228\/*
*/0.006, 0.084, 0.156, 0.188\/*
*/0.021, 0.091, 0.159, 0.181\/*
*/ -0.003, 0.069, 0.154, 0.181)
gen sta_index=UTILS[1,stability[_n]]
gen att_index=UTILS[2,attachment[_n]]
gen aut_index=UTILS[3,autonomy[_n]]
gen ach_index=UTILS[4,achievement[_n]]
gen enj_index=UTILS[5,enjoyment[_n]]
gen tariff=sta_index+att_index+aut_index+ach_index+enj_index
```

*The **SPSS scoring** mechanism prepared by Munir A. Khan, Centre for Health Economics (CHE), Monash University (January 2012)*is as follows*

Program was written with PASW Version 17.0 for Windows

It is presumed that the data set includes the following five variables:

Dimension	Variable Name	Range

Feeling settled and secure	ic01	1-4
Love, friendship, and support	ic02	1-4
Being independent	ic03	1-4
Achievement and progress	ic04	1-4
Employment and pleasure	ic05	1-4

***Variable names: For this algorithm, the variables in your questionnaire or database should be named as*

*** "ic01, ic02, ic03, ic04 and ic05**

***ICECAP Utility score of a health state is based on a scale from a worse health where utility is -0.001 to perfect health where utility is 1.00*

Compute stability = ic01.

Compute attachment = ic02.

Compute autonomy = ic03.

Compute achievement = ic04.

Compute enjoyment =ic05.

Execute.

*****Dimension 1. Stability ic01*****

```

if (stability=1) b1 = -0.001.
if (stability=2) b1 = 0.101.
if (stability=3) b1 = 0.191.
if (stability=4) b1 = 0.222.
Execute.
*****Dimension 2. Attachment ic02*****

if (attachment=1) b2 = -0.024.
if (attachment=2) b2 = 0.096.
if (attachment=3) b2 = 0.189.
if (attachment=4) b2 = 0.228.
Execute.

*****Dimension 3. Autonomy ic03*****

if (autonomy=1) b3 = 0.006.
if (autonomy=2) b3 = 0.084.
if (autonomy=3) b3 = 0.156.
if (autonomy=4) b3 = 0.188.
Execute.

*****Dimension 4. Achievement ic04*****

if (achievement=1) b4 = 0.021.
if (achievement=2) b4 = 0.091.
if (achievement=3) b4 = 0.159.
if (achievement=4) b4 = 0.181.
Execute.

*****Dimension 5. Enjoyment ic05*****

if (enjoyment=1) b5 = -0.003.
if (enjoyment=2) b5 = 0.069.
if (enjoyment=3) b5 = 0.154.
if (enjoyment=4) b5 = 0.181.
Execute.

COMPUTE ICECAP_Capability=(b1+b2+b3+b4+b5).
EXECUTE.

VARIABLE LABELS ICECAP_Capability 'ICECAP_A Capability Score'.

*Drop Variables Generated by Program*

DELETE VARIABLES b1 b2 b3 b4 b5.
EXECUTE.

*****THE END*****gen
sta_index=UTILS[1,stability[_n]]
gen att_index=UTILS[2,attachment[_n]]
gen aut_index=UTILS[3,autonomy[_n]]
gen ach_index=UTILS[4,achievement[_n]]
gen enj_index=UTILS[5,enjoyment[_n]]
gen tariff=sta_index+att_index+aut_index+ach_index+enj_index

```

B. For Disease Instruments

***The developers of the following disease instruments created the algorithms to obtain global scale scores**

Macnew (heart disease)

K10 (depression)

AQLQ-30 (asthma)

APHAB (hearing)

Algorithms to obtain global scale scores were created and calculated for the following

QLQ C-30 (cancer)

AIMS2-SF (arthritis)

D39 (diabetes)

See each algorithm for the computations and subscale vs whole scale correlations.

No whole scale score is available for the DASS21.

1. DASS21 scoring algorithm (SPSS)

*created by Aimee Maxwell - 7/05/2012 - Centre for Health Economics Monash University Australia

```
compute DASS_S=(DASS21_1 + DASS21_6 + DASS21_8 + DASS21_11 + DASS21_12 +DASS21_14 +  
DASS21_18)*2.
```

```
execute.
```

```
compute DASS_D=(DASS21_3 + DASS21_5 + DASS21_10 + DASS21_13 + DASS21_16 + DASS21_17 +  
DASS21_21)*2.
```

```
EXECUTE.
```

```
compute DASS_A=(DASS21_2 + DASS21_4 + DASS21_7 + DASS21_9 + DASS21_15 + DASS21_19 +  
DASS21_20)*2.
```

```
EXECUTE.
```

```
VARIABLE LABELS DASS_S 'DASS_21 stress score 0=best 42=worst '
```

```
DASS_D 'DASS_21 depression score 0=best 42=worst'
```

```
DASS_A 'DASS_21 anxiety score 0=best 42=worst'.
```

```
EXECUTE.
```

```
compute DASS_S_0to1 = 1-(DASS_S/42).
```

```
compute DASS_D_0to1 = 1-(DASS_D/42).
```

```
compute DASS_A_0to1 = 1-(DASS_A/42).
```

```
execute.
```

```
VARIABLE LABELS DASS_S_0to1 'DASS_21 stress score 0=worst 1=best'.
```

```
VARIABLE LABELS DASS_D_0to1 'DASS_21 depression score 0=worst 1=best'.
```

```
VARIABLE LABELS DASS_A_0to1 'DASS_21 anxiety score 0=worst 1=best'.
```

```
EXECUTE.
```

2. K10 scoring algorithm (SPSS)

*created by Aimee Maxwell - 8/05/2012 - Centre for Health Economics Monash University Australia

```
compute K10_score= (K10_1 + K10_2 + K10_3 + K10_4 + K10_5 + K10_6 + K10_7 + K10_8 + K10_9 + K10_10).  
EXECUTE.
```

```
VARIABLE LABELS K10_score 'K10 depression score 10-50'.  
EXECUTE.
```

```
compute K10_0to1 = 1-((K10_score-10)/40).  
EXECUTE.
```

```
VARIABLE LABELS K10_0to1 'K10 depression score 0=worst 1=best'.  
EXECUTE.
```

3. APHAB scoring algorithm (SPSS)

*APHAB scoring algorithm - ABBREVIATED PROFILE OF HEARING AID BENEFIT - FORM A

*(2 hearing aid questions, 1 employment question + 24 hearing questions)

*scoring algorithm created by Aimee Maxwell - 13/10/2014 - Centre for Health Economics Monash University Australia from

**<http://www.harlmemphis.org/index.php/clinical-applications/aphab/>

NOTES

un refers to the questions that asks for a rating without using a hearing aid

aided refers to the corresponding questions that ask for the rating when using a hearing aid

in all but Norway respondents were asked to answer both without a hearing aid and with a hearing aid.

*Reponses were 1=Always, 2=Almost always, 3=Generally, 4=Half-the-time, 5=Occasionally, 6=Seldom, 7=Never and 8=No idea.

*This section will create new variables for recoding old-new values

```
compute APHAB_1_unR = APHAB_1_un.  
compute APHAB_1_aidedR = APHAB_1_aided.  
compute APHAB_16_unR = APHAB_16_un.  
compute APHAB_16_aidedR = APHAB_16_aided .  
compute APHAB_19_unR = APHAB_19_un.  
compute APHAB_19_aidedR = APHAB_19_aided.  
compute APHAB_9_unR = APHAB_9_un.  
compute APHAB_9_aidedR = APHAB_9_aided.  
compute APHAB_11_unR = APHAB_11_un.  
compute APHAB_11_aidedR = APHAB_11_aided.  
compute APHAB_21_unR = APHAB_21_un.  
compute APHAB_21_aidedR = APHAB_21_aided.
```

```

compute APHAB_2_unF=APHAB_2_un.
compute APHAB_2_aidedF=APHAB_2_aided .
compute APHAB_3_unF=APHAB_3_un.
compute APHAB_3_aidedF=APHAB_3_aided .
compute APHAB_4_unF=APHAB_4_un.
compute APHAB_4_aidedF=APHAB_4_aided.
compute APHAB_5_unF=APHAB_5_un.
compute APHAB_5_aidedF=APHAB_5_aided.
compute APHAB_6_unF=APHAB_6_un.
compute APHAB_6_aidedF=APHAB_6_aided .
compute APHAB_7_unF=APHAB_7_un.
compute APHAB_7_aidedF=APHAB_7_aided.
compute APHAB_8_unF=APHAB_8_un.
compute APHAB_8_aidedF=APHAB_8_aided.
compute APHAB_10_unF=APHAB_10_un.
compute APHAB_10_aidedF=APHAB_10_aided.
compute APHAB_12_unF=APHAB_12_un.
compute APHAB_12_aidedF=APHAB_12_aided.
compute APHAB_13_unF=APHAB_13_un.
compute APHAB_13_aidedF=APHAB_13_aided.
compute APHAB_14_unF=APHAB_14_un.
compute APHAB_14_aidedF=APHAB_14_aided.
compute APHAB_15_unF=APHAB_15_un.
compute APHAB_15_aidedF=APHAB_15_aided.
compute APHAB_17_unF=APHAB_17_un.
compute APHAB_17_aidedF=APHAB_17_aided.
compute APHAB_18_unF=APHAB_18_un.
compute APHAB_18_aidedF=APHAB_18_aided.
compute APHAB_20_unF=APHAB_20_un.
compute APHAB_20_aidedF=APHAB_20_aided.
compute APHAB_22_unF=APHAB_22_un.
compute APHAB_22_aidedF=APHAB_22_aided.
compute APHAB_23_unF=APHAB_23_un.
compute APHAB_23_aidedF=APHAB_23_aided.
compute APHAB_24_unF=APHAB_24_un.
compute APHAB_24_aidedF=APHAB_24_aided.
EXECUTE.

```

*Recode all new variables with raw scores (in percentages)

*Reverse (1=1) (2=12) (3=25) (4=50) (5=75) (6=87) (7=99) (8=SYSMISS) NOTE THAT 8=NO IDEA and SO IS RECODED AS MISSING

```

recode

```

```

APHAB_1_unR APHAB_16_unR APHAB_19_unR APHAB_9_unR APHAB_11_unR APHAB_21_unR (1=1) (2=12)
(3=25) (4=50) (5=75) (6=87) (7=99) (8=SYSMISS).

```

```

execute.

```

```

recode

```

```

APHAB_1_aidedR APHAB_16_aidedR APHAB_19_aidedR APHAB_9_aidedR APHAB_11_aidedR
APHAB_21_aidedR (1=1) (2=12) (3=25) (4=50) (5=75) (6=87) (7=99) (8=SYSMISS).

```

```

execute.

```

***Recode all new variables with raw scores (in percentages) NOTE THAT 8=NO IDEA and SO IS RECODED AS
*MISSING Forward (1=99) (2=87) (3=75) (4=50) (5=25) (6=12) (7=1) (8=SYSMISS).**

recode

APHAB_2_unF APHAB_2_aidedF APHAB_3_unF APHAB_3_aidedF APHAB_4_unF APHAB_4_aidedF
APHAB_5_unF APHAB_5_aidedF APHAB_6_unF APHAB_6_aidedF (1=99) (2=87) (3=75) (4=50) (5=25) (6=12)
(7=1) (8=SYSMISS).

execute.

recode

APHAB_7_unF APHAB_7_aidedF APHAB_8_unF APHAB_8_aidedF APHAB_10_unF APHAB_10_aidedF
APHAB_12_unF APHAB_12_aidedF APHAB_13_unF APHAB_13_aidedF (1=99) (2=87) (3=75) (4=50) (5=25)
(6=12) (7=1) (8=SYSMISS).

execute.

recode

APHAB_14_unF APHAB_14_aidedF APHAB_15_unF APHAB_15_aidedF APHAB_17_unF APHAB_17_aidedF
APHAB_18_unF APHAB_18_aidedF APHAB_20_unF (1=99) (2=87) (3=75) (4=50) (5=25) (6=12) (7=1)
(8=SYSMISS).

execute.

recode

APHAB_20_aidedF APHAB_22_unF APHAB_22_aidedF APHAB_23_unF APHAB_23_aidedF APHAB_24_unF
APHAB_24_aidedF (1=99) (2=87) (3=75) (4=50) (5=25) (6=12) (7=1) (8=SYSMISS).

execute.

***COMPUTATIONS OF THE MEANS OF THE SUBSCALES**

COMPUTE APHAB_EC_UNav=(APHAB_4_unF + APHAB_10_unF + APHAB_12_unF + APHAB_14_unF +
APHAB_15_unF + APHAB_23_unF)/6.

VARIABLE LABELS APHAB_EC_UNav 'APHAB_Ease of Communication _UNAIDED subscale average'.

EXECUTE.

COMPUTE APHAB_EC_AIDav=(APHAB_4_aidedF + APHAB_10_aidedF + APHAB_12_aidedF +
APHAB_14_aidedF + APHAB_15_aidedF + APHAB_23_aidedF)/6.

VARIABLE LABELS APHAB_EC_AIDav 'APHAB_Ease of Communication _AIDED subscale average'.

EXECUTE.

COMPUTE APHAB_BN_UNav=(APHAB_1_unR + APHAB_6_unF + APHAB_7_unF + APHAB_16_unR +
APHAB_19_unR + APHAB_24_unF)/6.

VARIABLE LABELS APHAB_BN_UNav 'APHAB Background Noise _UNAIDED subscale average'.

EXECUTE.

COMPUTE APHAB_BN_AIDav=(APHAB_1_aidedR + APHAB_6_aidedF + APHAB_7_aidedF +
APHAB_16_aidedR + APHAB_19_aidedR + APHAB_24_aidedF)/6.

VARIABLE LABELS APHAB_BN_AIDav 'APHAB Background Noise _AIDED subscale average'.

EXECUTE.

COMPUTE APHAB_RV_UNav=(APHAB_2_unF + APHAB_5_unF + APHAB_9_unR + APHAB_11_unR +
APHAB_18_unF + APHAB_21_unR)/6.

VARIABLE LABELS APHAB_RV_UNav 'APHAB Reverberation _UNAIDED subscale average'.

EXECUTE.

```
COMPUTE APHAB_RV_AIDav=(APHAB_2_aidedF + APHAB_5_aidedF + APHAB_9_aidedR +  
APHAB_11_aidedR + APHAB_18_aidedF + APHAB_21_aidedR)/6.  
VARIABLE LABELS APHAB_RV_AIDav 'APHAB Reverberation_AIDED subscale average'.  
EXECUTE.
```

```
COMPUTE APHAB_AV_UNav=(APHAB_3_unF + APHAB_8_unF + APHAB_13_unF + APHAB_17_unF +  
APHAB_20_unF + APHAB_22_unF)/6.  
VARIABLE LABELS APHAB_AV_UNav 'APHAB Aversiveness_UNAIDED subscale average'.  
EXECUTE.
```

```
COMPUTE APHAB_AV_AIDav=(APHAB_3_aidedF + APHAB_8_aidedF + APHAB_13_aidedF +  
APHAB_17_aidedF + APHAB_20_aidedF + APHAB_22_aidedF)/6.  
VARIABLE LABELS APHAB_AV_AIDav 'APHAB Aversiveness_AIDED subscale average'.  
EXECUTE.
```

***Compute transformed 0-1 subscale scores - the original scores were on a 1-99 scale max-min=98**

```
COMPUTE APHAB_ECu_0_1=1-((APHAB_EC_UNav-1)/98).  
VARIABLE LABELS APHAB_ECu_0_1 'APHAB_Ease of Communication_UNAIDED subscale average 0=worst  
to 1=best scale'.  
EXECUTE.  
FORMATS APHAB_ECu_0_1 (F8.2).
```

```
COMPUTE APHAB_ECa__0_1=1-((APHAB_EC_AIDav-1)/98).  
VARIABLE LABELS APHAB_ECa__0_1 'APHAB_Ease of Communication_AIDED subscale average 0=worst to  
1=best scale'.  
EXECUTE.  
FORMATS APHAB_ECa__0_1 (F8.2).
```

```
COMPUTE APHAB_BNu_0_1=1-((APHAB_BN_UNav-1)/98).  
VARIABLE LABELS APHAB_BNu_0_1 'APHAB Background Noise_UNAIDED subscale average 0=worst to  
1=best scale'.  
EXECUTE.  
FORMATS APHAB_BNu_0_1 (F8.2).
```

```
COMPUTE APHAB_BNa_0_1=1-((APHAB_BN_AIDav -1)/98).  
VARIABLE LABELS APHAB_BNa_0_1 'APHAB Background Noise_AIDED subscale average 0=worst to 1=best  
scale'.  
EXECUTE.  
FORMATS APHAB_BNa_0_1 (F8.2).
```

```
COMPUTE APHAB_RVu_0_1=1-((APHAB_RV_UNav-1)/98).  
VARIABLE LABELS APHAB_RVu_0_1 'APHAB Reverberation_UNAIDED subscale average 0=worst to 1=best  
scale'.  
EXECUTE.  
FORMATS APHAB_RVu_0_1 (F8.2).
```

```
COMPUTE APHAB_RVa_0_1=1-((APHAB_RV_AIDav-1)/98).  
VARIABLE LABELS APHAB_RVa_0_1 'APHAB Reverberation_AIDED subscale average 0=worst to 1=best  
scale'.  
EXECUTE.  
FORMATS APHAB_RVa_0_1 (F8.2).
```

```
COMPUTE APHAB_AVu_0_1=1-((APHAB_AV_UNav-1)/98).
VARIABLE LABELS APHAB_AVu_0_1 'APHAB Aversiveness _UNAIDED subscale average 0=worst to 1=best
scale'.
EXECUTE.
FORMATS APHAB_AVu_0_1 (F8.2).
```

```
COMPUTE APHAB_AVa_0_1=1-((APHAB_AV_AIDav-1)/98).
VARIABLE LABELS APHAB_AVa_0_1 'APHAB Aversiveness _AIDED subscale average 0=worst to 1=best
scale'.
EXECUTE.
FORMATS APHAB_AVa_0_1 (F8.2).
```

***The Global Score is the mean of the scores for all the items in the EC, RV and BN subscales. Global aided and global unaided are calculated**

```
COMPUTE APHAB_GLOBALunaided=(APHAB_4_unF + APHAB_10_unF + APHAB_12_unF + APHAB_14_unF +
APHAB_15_unF + APHAB_23_unF + APHAB_1_unR + APHAB_6_unF + APHAB_7_unF + APHAB_16_unR +
APHAB_19_unR
+ APHAB_24_unF + APHAB_2_unF + APHAB_5_unF + APHAB_9_unR + APHAB_11_unR + APHAB_18_unF +
APHAB_21_unR)/18.
VARIABLE LABELS APHAB_GLOBALunaided 'APHAB Global unaided score - mean of the scores for all the
items in the unaided EC, RV and BN subscales'.
execute.
```

```
COMPUTE APHAB_GLOBALaided=(APHAB_4_aidedF + APHAB_10_aidedF + APHAB_12_aidedF +
APHAB_14_aidedF + APHAB_15_aidedF + APHAB_23_aidedF
+APHAB_1_aidedR + APHAB_6_aidedF + APHAB_7_aidedF + APHAB_16_aidedR + APHAB_19_aidedR +
APHAB_24_aidedF + APHAB_2_aidedF + APHAB_5_aidedF + APHAB_9_aidedR + APHAB_11_aidedR +
APHAB_18_aidedF + APHAB_21_aidedR)/18.
VARIABLE LABELS APHAB_GLOBALaided 'APHAB Global AIDED score - mean of the scores for all the items
in the AIDED EC, RV and BN subscales'.
execute.
```

***Compute transformed 0-1 subscale scores - the original scores were on a 1-99 scale max-min=98**

```
COMPUTE APHAB_GLOBAL_0_1unaided=1-((APHAB_GLOBALunaided-1)/(99-1)).
VARIABLE LABELS APHAB_GLOBAL_0_1unaided 'APHAB Global unaided score on 0=worst to 1=best scale -
mean of the scores for all the items in the EC, RV and BN subscales'.
execute.
FORMATS APHAB_GLOBAL_0_1unaided (F8.2).
```

```
COMPUTE APHAB_GLOBAL_0_1aided=1-((APHAB_GLOBALaided-1)/(99-1)).
VARIABLE LABELS APHAB_GLOBAL_0_1aided 'APHAB Global aided score on 0=worst to 1=best scale - mean
of the scores for all the items in the EC, RV and BN subscales'.
execute.
FORMATS APHAB_GLOBAL_0_1aided (F8.2).
```

```

DELETE VARIABLES APHAB_1_unR APHAB_16_unR APHAB_19_unR APHAB_9_unR APHAB_11_unR
APHAB_21_unR APHAB_1_aidedR APHAB_16_aidedR APHAB_19_aidedR APHAB_9_aidedR
APHAB_11_aidedR APHAB_21_aidedR.
EXECUTE.
DELETE VARIABLES APHAB_2_unF APHAB_2_aidedF APHAB_3_unF APHAB_3_aidedF APHAB_4_unF
APHAB_4_aidedF APHAB_5_unF APHAB_5_aidedF.
EXECUTE.
DELETE VARIABLES APHAB_6_unF APHAB_6_aidedF APHAB_7_unF APHAB_7_aidedF APHAB_8_unF
APHAB_8_aidedF APHAB_10_unF APHAB_10_aidedF APHAB_12_unF APHAB_12_aidedF APHAB_13_unF
APHAB_13_aidedF.
EXECUTE.
DELETE VARIABLES APHAB_14_unF APHAB_14_aidedF APHAB_15_unF APHAB_15_aidedF APHAB_17_unF
APHAB_17_aidedF APHAB_18_unF APHAB_18_aidedF APHAB_20_unF.
EXECUTE.
DELETE VARIABLES APHAB_20_aidedF APHAB_22_unF APHAB_22_aidedF APHAB_23_unF
APHAB_23_aidedF APHAB_24_unF APHAB_24_aidedF.
execute.

```

*Note that APHAB_GLOBAL_0_1 is a merged column of the UNAIDED scores for people who reported NO HEARING AID USE

*AND the AIDED scores for the people who reported ANY HEARING AID USE

**APHAB_GLOBAL_0_1unaided (n=616)

**APHAB_GLOBAL_0_1aided (n=309)

**APHAB_GLOBAL_0_1 (n=615)

4. Algorithm for DIABETES-39 (SPSS)

(39 questions)

*created by Aimee Maxwell - 12/06/2012 - Centre for Health Economics Monash University Australia

* We used a 1 – 7 scale for each question, no half points.

*raw energy and mobility scale score

```

COMPUTE d39_energmob =
(DIABETES_3+DIABETES_7+DIABETES_9+DIABETES_10+DIABETES_11+DIABETES_12+DIABETES_13+DIABETE
S_16+DIABETES_25+DIABETES_29+DIABETES_32+DIABETES_33+DIABETES_34+DIABETES_35+DIABETES_36).
VARIABLE LABELS d39_energmob 'Diabetes-39 Energy and Mobility scale RAW score - questions
3+7+9+10+11+12+13+16+25+29+32+33+34+35+36'.
EXECUTE.

```

* raw diabetes control scale score

```

COMPUTE d39_control = (DIABETES_1 + DIABETES_4 + DIABETES_5 + DIABETES_14 + DIABETES_15 +
DIABETES_17 + DIABETES_18 + DIABETES_24 + DIABETES_27 + DIABETES_28 + DIABETES_31 +
DIABETES_39).
VARIABLE LABELS d39_control 'Diabetes-39 Control scale RAW score - questions
1+4+5+14+15+17+18+24+27+28+31+39'.
EXECUTE.

```

*** raw anxiety and worry scale score**

```
COMPUTE d39_anxworr = (DIABETES_2 + DIABETES_6 + DIABETES_8 + DIABETES_22).  
VARIABLE LABELS d39_anxworr 'Diabetes-39 Anxiety and Worry scale RAW score - questions 2+6+8+22'.  
EXECUTE.
```

*** raw social burden scale score**

```
COMPUTE d39_socburd = (DIABETES_19 + DIABETES_20+DIABETES_26+DIABETES_37+DIABETES_38).  
VARIABLE LABELS d39_socburd 'Diabetes-39 Social Burden scale RAW score - questions 19+20+26+37+38'.  
EXECUTE.
```

*** raw sexual functioning scale score**

```
COMPUTE d39_sexfunc = (DIABETES_21+DIABETES_23+DIABETES_30).  
VARIABLE LABELS d39_sexfunc 'Diabetes-39 Sexual functioning scale RAW score - questions 21+23+30'.  
EXECUTE.
```

***transform dimension scores into scaled 0-100 scores - where 0 is best and 100 is worst**

```
COMPUTE d39_energmob_trans = ((d39_energmob-15)/(105-15))*100.  
VARIABLE LABELS d39_energmob_trans 'Diabetes-39 Energy and Mobility scale transformed 0-100 score -  
0 is best and 100 is worst'.  
EXECUTE.
```

```
COMPUTE d39_control_trans = ((d39_control-12)/(84-12))*100.  
VARIABLE LABELS d39_control_trans 'Diabetes-39 Diabetes Control scale transformed 0-100 score - 0 is  
best and 100 is worst'.  
EXECUTE.
```

```
COMPUTE d39_anxworr_trans = ((d39_anxworr-4)/(28-4))*100.  
VARIABLE LABELS d39_anxworr_trans 'Diabetes-39 Anxiety and Worry scale transformed 0-100 score - 0 is  
best and 100 is worst'.  
EXECUTE.
```

```
COMPUTE d39_socburd_trans = ((d39_socburd-5)/(35-5))*100.  
VARIABLE LABELS d39_socburd_trans 'Diabetes-39 Social Burden scale transformed 0-100 score - 0 is best  
and 100 is worst'.  
execute.
```

```
COMPUTE d39_sexfunc_trans = ((d39_sexfunc-3)/(21-3))*100.  
VARIABLE LABELS d39_sexfunc_trans 'Diabetes-39 Sexual functioning scale transformed 0-100 score - 0 is  
best and 100 is worst'.  
EXECUTE.
```

***transform dimension scores into scaled 0-1 scores where 1 is best and 0 is worst**

```
COMPUTE d39_energmob__0_1 = 1-((d39_energmob-15)/(105-15)).
VARIABLE LABELS d39_energmob__0_1 'Diabetes-39 Energy and Mobility scale transformed 0-1 score -
transformed 0 worst 1 best'.
EXECUTE.
```

```
COMPUTE d39_control__0_1 = 1-((d39_control-12)/(84-12)).
VARIABLE LABELS d39_control__0_1 'Diabetes-39 Diabetes Control scale transformed 0-1 score -
transformed 0 worst 1 best'.
EXECUTE.
```

```
COMPUTE d39_anxworr__0_1 = 1-((d39_anxworr-4)/(28-4)).
VARIABLE LABELS d39_anxworr__0_1 'Diabetes-39 Anxiety and Worry scale transformed 0-1 score -
transformed 0 worst 1 best'.
EXECUTE.
```

```
COMPUTE d39_socburd__0_1 = 1-((d39_socburd-5)/(35-5)).
VARIABLE LABELS d39_socburd__0_1 'Diabetes-39 Social Burden scale transformed 0-1 score -
transformed 0 worst 1 best'.
execute.
```

```
COMPUTE d39_sexfunc__0_1 = 1-((d39_sexfunc-3)/(21-3)).
VARIABLE LABELS d39_sexfunc__0_1 'Diabetes-39 Sexual functioning scale transformed 0-1 score -
transformed 0 worst 1 best'.
EXECUTE.
```

```
DELETE VARIABLES d39_sexfunc_trans d39_socburd_trans d39_anxworr_trans d39_control_trans
d39_energmob_trans.
EXECUTE.
```

*No global scoring is provided by the APHAB group. below are two ways to create a global score – additive and weighted.

*Create an ADDITIVE whole scale score

```
COMPUTE
diabetes_whole_scale_added=(DIABETES_1+DIABETES_2+DIABETES_3+DIABETES_4+DIABETES_5+DIABETE
S_6+DIABETES_7+DIABETES_8
+DIABETES_9+DIABETES_10+DIABETES_11+DIABETES_12+DIABETES_13+DIABETES_14+DIABETES_15+DIAB
ETES_16+DIABETES_17+DIABETES_18+
DIABETES_19 +DIABETES_20 +DIABETES_21 +DIABETES_22 +DIABETES_23
+DIABETES_24+DIABETES_25+DIABETES_26+DIABETES_27+DIABETES_28
+DIABETES_29+DIABETES_30+DIABETES_31+DIABETES_32+DIABETES_33+DIABETES_34+DIABETES_35+DIA
BETES_36+DIABETES_37+DIABETES_38
+DIABETES_39).
EXECUTE.
```

**transform the ADDITIVE whole scale onto a 0 (worst) to 1 (best) scale. Scale max = 273, scale min = 39
range = 234

```
COMPUTE diabetes_whole_scale_0_1=1-((diabetes_whole_scale_added - 39)/234).
EXECUTE.
```

****creates a WEIGHTED whole scale score, already on 0=worst 1=best scale from the subscales**
****this WEIGHTED whole scale score equalises the dimensions as they each have a different number of questions**

```
COMPUTE D39_weighted_global_0_1 = (d39_energmob__0_1 + d39_control__0_1 + d39_anxworr__0_1 +  
d39_socburd__0_1 + d39_sexfunc__0_1)/5.  
EXECUTE.
```

```
VARIABLE LABELS D39_weighted_global 'diabetes WEIGHTED global score 0=worst to 1=best'.  
diabetes_whole_scale_0_1 'diabetes ADDITIVE global score 0=worst to 1=best'.  
EXECUTE.
```

****Correlations between the Diabetes domain scores and the ADDITIVE global score were all significant, p <.01**

```
**diabetes_whole_scale_0_1 with Mobility domain r = .913  
**diabetes_whole_scale_0_1 with Diabetes Control domain r = .899  
**diabetes_whole_scale_0_1 with Anxiety and Worry domain r = .735  
**diabetes_whole_scale_0_1 with Social Burden domain r = .833  
**diabetes_whole_scale_0_1 with Sexual function domain r = .637
```

****Correlations between the Diabetes domain scores and the WEIGHTED global score were all significant, p <.01**

```
**D39_weighted_global_0_1 with Mobility domain r = .855  
**D39_weighted_global_0_1 with Diabetes Control domain r = .867  
**D39_weighted_global_0_1 with Anxiety and Worry domain r = .767  
**D39_weighted_global_0_1 with Social Burden domain r = .843  
**D39_weighted_global_0_1 with Sexual function domain r = .742
```

****Correlation between the ADDITIVE global score and the WEIGHTED global score was significant, p <.01**
****diabetes_whole_scale_0_1 with D39_weighted_global_0_1 r = 0.98**

5. Algorithm for AIMS2-SF(SPSS) - Arthritis

26 questions

*created by Aimee Maxwell - 8/05/2012 - Centre for Health Economics Monash University Australia from the AIMS2-SF manual

*Create new variables for recoding old-new values

```
compute AIMS2_2r = AIMS2_2.  
COMPUTE AIMS2_3r = AIMS2_3.  
compute AIMS2_4r = AIMS2_4.  
compute AIMS2_5r = AIMS2_5.  
compute AIMS2_11r = AIMS2_11.  
compute AIMS2_12r = AIMS2_12.  
compute AIMS2_13r = AIMS2_13.  
compute AIMS2_14r = AIMS2_14.  
compute AIMS2_15r = AIMS2_15.  
compute AIMS2_16r = AIMS2_16.
```

```
compute AIMS2_17r = AIMS2_17.  
compute AIMS2_18r = AIMS2_18.  
compute AIMS2_20r = AIMS2_20.  
compute AIMS2_25r = AIMS2_25.  
compute AIMS2_26r = AIMS2_26.  
execute.
```

*Recode those new variables old-new (1=5) (2=4) (4=2) (5=1).

```
recode  
AIMS2_2r AIMS2_3r AIMS2_4r AIMS2_5r AIMS2_11r AIMS2_12r AIMS2_13r AIMS2_14r AIMS2_15r  
AIMS2_16r AIMS2_17r AIMS2_18r AIMS2_20r AIMS2_25r AIMS2_26r (1=5) (2=4) (4=2) (5=1).  
execute.
```

*Compute raw subscales scores

```
compute AIMS2_PHYS=(AIMS2_1 + AIMS2_2r + AIMS2_3r + AIMS2_4r + AIMS2_5r + AIMS2_6 + AIMS2_7 +  
AIMS2_8 + AIMS2_9 + AIMS2_10 + AIMS2_11r + AIMS2_12r).  
execute.
```

```
compute AIMS2_SYM=(AIMS2_13r + AIMS2_14r + AIMS2_15r).  
EXECUTE.
```

```
compute AIMS2_AFF=(AIMS2_19 + AIMS2_16r + AIMS2_17r + AIMS2_18r + AIMS2_20r).  
EXECUTE.
```

```
compute AIMS2_SOC=(AIMS2_21 + AIMS2_22 + AIMS2_23 + AIMS2_24).  
EXECUTE.
```

```
compute AIMS2_WORK=(AIMS2_25r + AIMS2_26r).  
EXECUTE.
```

*Compute normalised subscales scores where 0=worst health and 10 = best health

```
compute AIMS2_P_normed= (AIMS2_PHYS - 12) * 0.209.  
execute.
```

```
compute AIMS2_Sy_normed= (AIMS2_SYM - 3) *0.833.  
execute.
```

```
compute AIMS2_A_normed=(AIMS2_AFF - 5) * 0.5.  
execute.
```

```
compute AIMS2_So_normed=(AIMS2_SOC - 4) * 0.625.  
execute.
```

```
compute AIMS2_W_normed=(AIMS2_WORK - 2) * 1.25.  
execute.
```

*delete created variables

DELETE VARIABLES

AIMS2_2r AIMS2_3r AIMS2_4r AIMS2_5r AIMS2_11r AIMS2_12r AIMS2_13r AIMS2_14r AIMS2_15r
AIMS2_16r AIMS2_17r AIMS2_18r AIMS2_20r AIMS2_25r AIMS2_26r.
execute.

*label variables

VARIABLE LABELS

AIMS2_PHYS 'AIMS2 Physical RAW subscale score range 12-60 high is worse'
AIMS2_SYM 'AIMS2 Symptom RAW subscale score range 3-15 high is worse '
AIMS2_AFF 'AIMS2 Affect RAW subscale score range 5-25 high is worse '
AIMS2_SOC 'AIMS2 Social RAW subscale score range 4-20 high is worse '
AIMS2_WORK 'AIMS2 Work RAW subscale score range 2-10 high is worse '
EXECUTE.

compute AIMS2_Physical_0to1= 1-(AIMS2_P_normed/10).
execute.

compute AIMS2_Symptom_0to1= 1-(AIMS2_Sy_normed/10).
execute.

compute AIMS2_Affect_0to1= 1-(AIMS2_A_normed/10).
execute.

compute AIMS2_Social_0to1= 1-(AIMS2_So_normed/10).
execute.

compute AIMS2_Work_0to1= 1-(AIMS2_W_normed/10).
execute.

DELETE VARIABLES

AIMS2_P_normed AIMS2_Sy_normed AIMS2_A_normed AIMS2_So_normed AIMS2_W_normed .
EXECUTE.

VARIABLE LABELS

AIMS2_Physical_0to1 'AIMS2 Physical subscale 0=worst 1=best'
AIMS2_Symptom_0to1 'AIMS2 Symptom subscale 0=worst 1=best'
AIMS2_Affect_0to1 'AIMS2 Affect subscale 0=worst 1=best'
AIMS2_Social_0to1 'AIMS2 Social subscale 0=worst 1=best'
AIMS2_Work_0to1 'AIMS2 Work subscale 0=worst 1=best'.
EXECUTE.

**AIMS2 whole scale computation – ONLY 4 subscales used Physical, Symptom, Affect and Social
**(Work was only answered if participant was employed, so was missing for 559 respondents).

COMPUTE AIMS2_raw_scales_summed=AIMS2_PHYS+AIMS2_SYM+AIMS2_AFF+AIMS2_SOC.
VARIABLE LABELS AIMS2_raw_scales_summed
'AIMS2_raw_scales_summed=AIMS2_PHYS+AIMS2_SYM+AIMS2_AFF+AIMS2_SOC'.
EXECUTE.

COMPUTE AIMS2_whole_scale_0_1 = 1-(AIMS2_raw_scales_summed-24)/(120-24).

EXECUTE.

**Correlations between Arthritis subscales and Whole scale were all significant, $p < .01$, $N=929$

**Whole scale and Physical $r = .875$

**Whole scale and Symptom $r = .745$

**Whole scale and Affect $r = .747$

**Whole scale and Social $r = .354$

** NB: Social subscale had low correlations with whole scale and also with all other subscales, but all

**significant, $p < .01$

**Social and Physical $r = .083$

**Social and Symptom $r = .099$

**Social and Affect $r = .189$

6. Algorithm for QLQ-C30 (SPSS) - Cancer

(30 questions)

*created by Aimee Maxwell - 02/07/2012 - Centre for Health Economics Monash University Australia from the document EORTC QLQ-C30 Scoring Manual

"The EORTC Quality of Life Group ... recommends using scales based upon unweighted summed scores. Also, it should be noted that we caution strongly against the use of a total, global score based upon the sum of all items".

*****Technical Summary from the scoring manual*****

In practical terms, if items I1, I2, ... In are included in a scale, the procedure is as follows:

Raw score

Calculate the raw score

RawScore = $RS (I1 + I2 + \dots + In)/n$

Linear transformation

Apply the linear transformation to 0-100 to obtain the score S,

Functional scales: $S = \{1 - (RS - 1)/range\} \times 100$

Symptom scales / items: $S = \{(RS - 1) range\} \times 100$

Global health status / QoL: $S = \{(RS - 1) range\} \times 100$

Range is the difference between the maximum possible value of RS and the minimum possible value. The QLQ-C30 has been designed so that all items in any scale take the same range of values. Therefore, the range of RS equals the range of the item values. Most items are scored 1 to 4, giving range = 3. The exceptions are the items contributing to the global health status / QoL, which are 7-point questions with range = 6

This syntax does not make the x100 calculation, but leaves everything on 0=worst to 1=best scales.

*The Global health status / QoL scale (based upon 2 questions Q29 and Q30 in the QLQ-C30(V3)) should be used as the overall summary measure.

*[29 - How would you rate your overall health during the PAST WEEK?] and [30 - How would you rate your quality of life health during the PAST WEEK?] high scores are good

compute CANCER_QLQ2 = $((CANCER_29 + CANCER_30)/2 - 1)/6$.

execute.

VARIABLE LABELS CANCER_QLQ2 'CANCER_Global Health Status/QoL - from questions Q29 + Q30 so is not a whole instrument score 0=worst 1=best'.

EXECUTE.

FORMATS CANCER_QLQ2 (F8.4).

*Physical functioning scale derived from 5 questions - low scores are good

[1 - Do you have any trouble doing strenuous activities, like carrying a heavy shopping bag or a suitcase?]

[2 - Do you have any trouble taking a long walk?]

[3 - Do you have any trouble taking a short walk outside of the house?]

[4 - Do you need to stay in bed or a chair during the day?]

[5 - Do you need help with eating, dressing, washing yourself or using the toilet?]

compute CANCER_PF = 1-(((CANCER_1 +CANCER_2+CANCER_3+CANCER_4+CANCER_5)/5-1)/3).

execute.

VARIABLE LABELS CANCER_PF 'CANCER_Physical Function scale from questions 1+2+3+4+5 0=worst 1=best'.

EXECUTE.

FORMATS CANCER_PF (F8.4).

*Role functioning scale derived from 2 questions

[6 - Were you limited in doing either your work or other daily activities?]

[7 - Were you limited in pursuing your hobbies or other leisure time activities?]

compute CANCER_RF = 1-(((CANCER_6+CANCER_7)/2-1)/3).

execute.

VARIABLE LABELS CANCER_RF 'CANCER_Role Function scale from questions 6+7 0=worst 1=best'.

EXECUTE.

FORMATS CANCER_RF (F8.4).

*Emotional functioning scale derived from 4 questions

[21 - Did you feel tense?]

[22 - Did you worry?]

[23 - Did you feel irritable?]

[24 - Did you feel depressed?]

compute CANCER_EF = 1-(((CANCER_21+CANCER_22+CANCER_23+CANCER_24)/4-1)/3).

execute.

VARIABLE LABELS CANCER_EF 'CANCER_Emotional Functioning scale from questions 21+22+23+24 0=worst 1=best'.

EXECUTE.

FORMATS CANCER_EF (F8.4).

*Cognitive functioning scale derived from 2 questions

[20 - Have you had difficulty in concentrating on things, like reading a newspaper or watching television?]

[25 - Have you had difficulty remembering things?]

compute CANCER_CF = 1-(((CANCER_20+CANCER_25)/2-1)/3).

execute.

VARIABLE LABELS CANCER_CF 'CANCER_Cognitive Functioning scale from questions 20 + 25 0=worst 1=best'.

EXECUTE.
FORMATS CANCER_CF (F8.4).

*Social functioning scale derived from 2 questions

[26 - Has your physical condition or medical treatment interfered with your family life?]

[27 - Has your physical condition or medical treatment interfered with your social activities?]

compute CANCER_SF = 1-(((CANCER_26+CANCER_27)/2-1)/3).

execute.

VARIABLE LABELS CANCER_SF 'CANCER_Social Functioning scale from questions 26+27 0=worst 1=best'.

EXECUTE.

FORMATS CANCER_SF (F8.4).

*Pain subscale derived from 2 questions

[9 - Have you had pain?]

[19 - Did pain interfere with your daily activities?]

compute CANCER_PAIN = 1-(((CANCER_9+CANCER_19)/2-1)/3).

execute.

VARIABLE LABELS CANCER_PAIN 'CANCER_Pain subscale from questions 9 + 19 0=worst 1=best no pain'.

EXECUTE.

FORMATS CANCER_PAIN (F8.4).

*Fatigue subscale derived from 3 questions

[10 - Did you need to rest?]

[12 - Have you felt weak?]

[18 - Were you tired?]

compute CANCER_FATIGUE = 1-(((CANCER_10+CANCER_12+CANCER_18)/3-1)/3).

execute.

VARIABLE LABELS CANCER_FATIGUE 'CANCER_Fatigue subscale from questions 10+12+18 0=worst 1=best no fatigue'.

EXECUTE.

FORMATS CANCER_FATIGUE (F8.4).

**Cancer Whole scale score was computed

COMPUTE cancer_whole_score_0_1 =(CANCER_PF + CANCER_RF +CANCER_EF+ CANCER_CF+ CANCER_SF+
CANCER_PAIN+CANCER_FATIGUE) / 7.

EXECUTE.

**Correlations between the Cancer domain scores and the new Whole scale score were all significant, $p < .01$

**cancer-whole-score with Global Health Status/QoL $r = .748$

**cancer-whole-score with Physical Function $r = .797$

**cancer-whole-score with Role Function $r = .829$

**cancer-whole-score with Emotional Functioning $r = .705$

**cancer-whole-score with Cognitive Functioning $r = .722$

**cancer-whole-score with Social Functioning $r = .829$

**cancer-whole-score with Pain $r = .813$

**cancer-whole-score with Fatigue $r = .866$

7. Algorithm for ASTHMA (SPSS)

(20 questions)

*created by Aimee Maxwell - 12/06/2012 - Centre for Health Economics Monash University Australia

Each item is scored 0 (not at all) to 4 (worst)

*The total score is the mean of all 20 item scores

*Four subscale scores are also available

breathlessness - mean of items 1 to 5

mood disturbance - mean of items 6 to 10

social disruption - mean of items 11 to 17

concerns for health - mean of items 9, 11, 14, and 17 to 20

```
COMPUTE AsthmaTotalScore = (ASTHMA_1 +ASTHMA_2 +ASTHMA_3 +ASTHMA_4 +ASTHMA_5  
+ASTHMA_6 +ASTHMA_7+ ASTHMA_8 +ASTHMA_9 +ASTHMA_10+  
ASTHMA_11+ASTHMA_12+ASTHMA_13+ASTHMA_14+ASTHMA_15+ASTHMA_16+ASTHMA_17+ASTHMA_1  
8+ASTHMA_19+ASTHMA_20)/20.  
EXECUTE.
```

```
COMPUTE AsthmaBreath = (ASTHMA_1 +ASTHMA_2 +ASTHMA_3 +ASTHMA_4 +ASTHMA_5)/5.  
EXECUTE.
```

```
COMPUTE AsthmaMood = (ASTHMA_6 +ASTHMA_7 +ASTHMA_8 +ASTHMA_9 +ASTHMA_10)/5.  
EXECUTE.
```

```
COMPUTE AsthmaSoc = (ASTHMA_11 +ASTHMA_12 +ASTHMA_13 +ASTHMA_14  
+ASTHMA_15+ASTHMA_16+ASTHMA_17)/7.  
EXECUTE.
```

```
COMPUTE AsthmaCon = (ASTHMA_9+ASTHMA_11 +ASTHMA_14 +ASTHMA_17  
+ASTHMA_18+ASTHMA_19+ASTHMA_20)/7.  
EXECUTE.
```

```
VARIABLE LABELS AsthmaTotalScore 'AsthmaTotalScore - mean of all items'  
AsthmaBreath 'Asthma Breathlessness mean of 1+2+3+4+5'  
AsthmaMood 'Asthma Mood Disruption mean of 6+7+8+9+10'  
AsthmaSoc 'Asthma Social Disruption mean of 11+12+13+14+15+16+17'  
AsthmaCon 'Asthma Concerns For Health mean of 9+11+14+17+18+19+20'.  
EXECUTE.
```

*calculations to recode from 4=worst to 4=best etc and then produce a 0-1 scaled score

```
RECODE ASTHMA_1 ASTHMA_2 ASTHMA_3 ASTHMA_4 ASTHMA_5 ASTHMA_6 ASTHMA_7 ASTHMA_8  
ASTHMA_9 ASTHMA_10  
ASTHMA_11 ASTHMA_12 ASTHMA_13 ASTHMA_14 ASTHMA_15 ASTHMA_16 ASTHMA_17 ASTHMA_18  
ASTHMA_19 ASTHMA_20 (0=4) (1=3) (2=2) (3=1) (4=0)  
INTO ASTHMA_1t ASTHMA_2t ASTHMA_3t ASTHMA_4t ASTHMA_5t ASTHMA_6t ASTHMA_7t ASTHMA_8t  
ASTHMA_9t ASTHMA_10t
```

```
ASTHMA_11t ASTHMA_12t ASTHMA_13t ASTHMA_14t ASTHMA_15t ASTHMA_16t ASTHMA_17t
ASTHMA_18t ASTHMA_19t ASTHMA_20t.
EXECUTE.
```

```
COMPUTE AsthmaTotalScore_0_1 = (MEAN(ASTHMA_1t, ASTHMA_2t, ASTHMA_3t, ASTHMA_4t,
ASTHMA_5t, ASTHMA_6t, ASTHMA_7t, ASTHMA_8t, ASTHMA_9t, ASTHMA_10t,
ASTHMA_11t, ASTHMA_12t, ASTHMA_13t, ASTHMA_14t, ASTHMA_15t, ASTHMA_16t, ASTHMA_17t,
ASTHMA_18t, ASTHMA_19t, ASTHMA_20t))/4.
EXECUTE.
```

```
COMPUTE AsthmaBreath_0_1 = (MEAN(ASTHMA_1t, ASTHMA_2t, ASTHMA_3t, ASTHMA_4t,
ASTHMA_5t))/4.
EXECUTE.
```

```
COMPUTE AsthmaMood_0_1 = (MEAN(ASTHMA_6t, ASTHMA_7t, ASTHMA_8t, ASTHMA_9t,
ASTHMA_10t))/4.
EXECUTE.
```

```
COMPUTE AsthmaSoc_0_1 = (MEAN (ASTHMA_11t, ASTHMA_12t, ASTHMA_13t, ASTHMA_14t,
ASTHMA_15t, ASTHMA_16t, ASTHMA_17t))/4.
EXECUTE.
```

```
COMPUTE AsthmaCon_0_1 = (MEAN(ASTHMA_9t, ASTHMA_11t, ASTHMA_14t, ASTHMA_17t, ASTHMA_18t,
ASTHMA_19t, ASTHMA_20t))/4.
EXECUTE.
```

```
VARIABLE LABELS AsthmaTotalScore_0_1 'Asthma total score - mean of all items - transformed 0 worst 1
best'
AsthmaBreath_0_1 'Asthma breathlessness score - mean of 1+2+3+4+5 - transformed 0 worst 1 best'
AsthmaMood_0_1 'Asthma mood disruption score - mean of 6+7+8+9+10 - transformed 0 worst 1 best'
AsthmaSoc_0_1 'Asthma social disruption score - mean of 11+12+13+14+15+16+17 - transformed 0 worst 1
best'
AsthmaCon_0_1 'Asthma Concerns for health score - mean of 9+11+14+17+18+19+20 - transformed 0
worst 1 best'.
EXECUTE.
```

```
DELETE VARIABLES ASTHMA_1t ASTHMA_2t ASTHMA_3t ASTHMA_4t ASTHMA_5t ASTHMA_6t ASTHMA_7t
ASTHMA_8t ASTHMA_9t ASTHMA_10t
ASTHMA_11t ASTHMA_12t ASTHMA_13t ASTHMA_14t ASTHMA_15t ASTHMA_16t ASTHMA_17t
ASTHMA_18t ASTHMA_19t ASTHMA_20t.
EXECUTE.
```

8. MACNEW scoring algorithm - HEART

```
(27 questions)
* #####.
* Scoring the Macnew .
* .
* incl. checking for missing data .
* .
```

* PLEASE NOTE: .

*.

* All MacNew items need to be named "macnew1, macnew2, macnew3 ... macnew27" to use the scoring syntax correctly.

*.

* #####.

*.

* Recode Missing data for macnew variables.

*.

* #####.

Recode

macnew1 to macnew27 (lowest thru 0 =9) (8 thru highest=9).

Execute.

* #####.

*.

* Set value "9" Missing for MacNew-variables.

*.

* #####.

Missing values macnew1 to macnew27 (9).

Execute.

COMPUTE m_emo =

mean.7(macnew1,macnew2,macnew3,macnew4,macnew5,macnew6,macnew7,macnew8
,macnew10,macnew12,macnew13,macnew15,macnew18,macnew23) .

VARIABLE LABELS m_emo 'MacNew emotional scale' .

EXECUTE .

COMPUTE m_phys = mean.6(macnew6, macnew9, macnew12, macnew14, macnew16, macnew17,
macnew19,macnew20,macnew21,macnew24,macnew25,macnew26,macnew27).

VARIABLE LABELS m_phys 'MacNew physical scale' .

EXECUTE .

COMPUTE m_soc =mean.6(macnew2,macnew11, macnew12, macnew13, macnew15, macnew17,
macnew20,

macnew21, macnew22, macnew23, macnew24, macnew25, macnew26) .

VARIABLE LABELS m_soc 'MacNew social scale' .

EXECUTE .

* Global score.

*.

*.

COMPUTE macnew_global=mean.13(macnew1,macnew2,macnew3,macnew4,macnew5, macnew6,
macnew7, macnew8,
macnew9, macnew10, macnew11, macnew12, macnew13, macnew14, macnew15, macnew16,
macnew17, macnew18, macnew19,macnew20,macnew21,macnew22, macnew23, macnew24,
macnew25, macnew26, macnew27) .

VARIABLE LABELS macnew_global 'MacNew global score' .
EXECUTE.

*.
*© by macnew.org 2003 - 2007.
*.
*transform 0-1 scale modification

RECODE macnew1 macnew2 macnew3 macnew4 macnew5 macnew6 macnew7 macnew8 macnew9
macnew10
macnew11 macnew12 macnew13 macnew14 macnew15 macnew16 macnew17 macnew18 macnew19
macnew20
macnew21 macnew22 macnew23 macnew24 macnew25 macnew26 macnew27 (1=0) (2=1) (3=2) (4=3)
(5=4) (6=5) (7=6) (9=9)
INTO macnew1t macnew2t macnew3t macnew4t macnew5t macnew6t macnew7t macnew8t macnew9t
macnew10t
macnew11t macnew12t macnew13t macnew14t macnew15t macnew16t macnew17t macnew18t
macnew19t macnew20t
macnew21t macnew22t macnew23t macnew24t macnew25t macnew26t macnew27t.
EXECUTE.

Recode
 macnew1t to macnew27t (8 thru highest=9).
Execute.

Missing values macnew1t to macnew27t (9).
Execute.

COMPUTE m_emo_0_6 =
mean.7(macnew1t,macnew2t,macnew3t,macnew4t,macnew5t,macnew6t,macnew7t,macnew8t,
macnew10t,macnew12t,macnew13t,macnew15t,macnew18t,macnew23t) .
VARIABLE LABELS m_emo_0_6 'MacNew emotional scale_0_6' .
EXECUTE .

COMPUTE m_phys_0_6 = mean.6(macnew6t, macnew9t, macnew12t, macnew14t, macnew16t,
macnew17t,
macnew19t,macnew20t,macnew21t,macnew24t,macnew25t,macnew26t,macnew27t).
VARIABLE LABELS m_phys_0_6 'MacNew physical scale_0_6' .
EXECUTE .

COMPUTE m_soc_0_6 =mean.6(macnew2t,macnew11t, macnew12t, macnew13t, macnew15t, macnew17t,
macnew20t,
macnew21t, macnew22t, macnew23t, macnew24t, macnew25t, macnew26t) .
VARIABLE LABELS m_soc_0_6 'MacNew social scale_0_6' .
EXECUTE .

* Global score 0-6 scale.

```
* .  
COMPUTE macnew_global_0_6 = mean.13(macnew1t, macnew2t, macnew3t, macnew4t, macnew5t,  
macnew6t, macnew7t, macnew8t, macnew9t, macnew10t,  
macnew11t, macnew12t, macnew13t, macnew14t, macnew15t, macnew16t, macnew17t, macnew18t,  
macnew19t, macnew20t,  
macnew21t, macnew22t, macnew23t, macnew24t, macnew25t, macnew26t, macnew27t) .  
VARIABLE LABELS macnew_global_0_6 'MacNew global score_0_6' .  
EXECUTE.
```

```
*transform scores into a 0 worst 1 best scale
```

```
COMPUTE macnew_emo_0_1 = m_emo_0_6/6.  
VARIABLE LABELS macnew_emo_0_1 'MacNew emotional scale 0=worst 1=best' .  
EXECUTE.
```

```
COMPUTE macnew_phys_0_1 = m_phys_0_6/6.  
VARIABLE LABELS macnew_phys_0_1 'MacNew physical scale 0=worst 1=best' .  
EXECUTE.
```

```
COMPUTE macnew_soc_0_1 = m_soc_0_6/6.  
VARIABLE LABELS macnew_soc_0_1 'MacNew social scale 0=worst 1=best' .  
EXECUTE.
```

```
COMPUTE macnew_global_0_1 = macnew_global_0_6/6.  
VARIABLE LABELS macnew_global_0_1 'MacNew GLOBAL score 0=worst 1=best' .  
EXECUTE.
```

```
DELETE VARIABLES macnew1t macnew2t macnew3t macnew4t macnew5t macnew6t macnew7t macnew8t  
macnew9t macnew10t  
macnew11t macnew12t macnew13t macnew14t macnew15t macnew16t macnew17t macnew18t  
macnew19t macnew20t  
macnew21t macnew22t macnew23t macnew24t macnew25t macnew26t macnew27t m_emo_0_6  
m_phys_0_6 m_soc_0_6 macnew_global_0_6.  
EXECUTE.
```