
11 – Respiratory Health

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11.1 SPIROMETRY INSTRUCTIONS

Appendix 11A : OfficeMedic Spirocard set up for lung function testing

The following instructions were provided to guide the use of SPIROCARD software and the conduct of the tests.

PLEASE NOTE: Lung function tests should not be carried out within 1 hour of the last cigarette smoked. If the participant has had a cigarette within the previous hour please perform the Lung Function Test at a later point in the examination.

SPIROCARD software set-up procedures

Note: There are certain parameters which need to be entered in to the Spirocard software. Once entered, these parameters should remain unchanged (you should not need to enter them again).

To check (or set up) the parameters -

1. Open the Spirocard program and select OPTIONS from the menu items at the top of your screen.
2. Within the resulting drop-down menu, select SPIROMETRY
3. The SPIROMETRY OPTIONS screen should appear. This screen has four menu items; they are **General, Printing, Predictors, and Optional Parameters**. The information under the menu item **General** should be visible.
4. Select the option '**Metric**' to go in to the field called *Units*
'**Export File Off**' should be selected under *Export File Options*
The *Incentive* field option is your choice (this field determines the type of image seen by the person when they blow in to the spirometer; for example with **Balloon** selected, participants see an expanding balloon).
5. Select **Printing**, the next menu item within Spirometry Options.

Appendix 11A continued...

6. All tick boxes visible on the Printing screen should be ticked.
You may click on Edit Report Header to edit the information which will appear on the top of the print out of the participant's results (For example, Line 1 = Health Services Australia, Line 2 = your centre street address, Line 3 = your centre city/state/postcode address)
7. Select **Predictors**, the next menu item within Spirometry Options.
8. The option for *Adult FVC Predictors, First Choice* MUST be set to **KNUDSON**
The option for *Adult FVC Predictors, Second Choice* MUST be set to **ECCS**
Minimum Adult Age should be set to **18**
Adult MVV Predictor should be set to **Cherniak**
Ignore the *Pediatric Predictor* fields – they are not relevant to this study
9. Select **Optional Parameters**, the next menu item within Spirometry Options.
10. Tick the boxes to **PEFR, FEF 50%, FEF25-75%, Ext. Vol, MTV** and **RR**.
Please ensure none of the remaining options are ticked.
11. Select OK to close the Spirometry options screen.

Check periodically to ensure that spirometry options remain as set up above.

Appendix 11B : Calibration procedures for lung function testing

Sessional Calibration of the Spirometer

The spirometer should be calibrated **at the start of any day** of SHOAMP testing.

Equipment required

3 litre syringe: If you have more than one syringe, please choose one and use it for EVERY calibration – you may need to label the syringe to ensure that the correct one is used each time.

Spirocard mouthpiece: You should use the same mouthpiece for each calibration. This should be a previously unused mouthpiece. Please label the mouthpiece so that it is easily identified for each calibration (For example; write **SHOAMP Calibration** on the side – be sure to use a soft marking pen which will not disfigure the sides of the mouthpiece).

To calibrate the Spirocard

- Open the spirocard program and select TOOLS from the menu items at the top of your screen.
- Within the resulting drop-down menu, select CALIBRATION
- The SPIROMETRY OPTIONS screen should appear. This screen has one menu item; it is **Calibration Check**.
- Select the option called **Standard** and click on **Begin Stnd**.
- The resulting screen should be titled *Prepare for Standard Calibration*: enter the number of the mouthpiece that you are using for calibrating (the barcode number on the side of the mouthpiece). You do not need to enter the dash between the 4th and 5th digits – the software will do this for you. Enter the syringe volume as '3'.
- Ensure that the plunger, on the syringe, is all of the way OUT.
- Select OK to begin the calibration test.
- A Reminder message will appear – select OK when ready to continue.
- Please keep the syringe stable on a table, or held very still, while the red and yellow circles flash, followed by two green circles.

Appendix 11B continued...

- When the green circles disappear and are replaced by a plain line graph – slowly press the plunger of the syringe all of the way in, taking approximately 3 seconds to complete the plunge (this is 3 ticks along the bottom of the graph). Try to ensure a smooth steady slope on the resulting graph.
- After a short wait, the resulting calibration reading should appear.
- If the **recorded volume** is between 2.800 and 3.200 this calibration is satisfactory. Press OK to discontinue the calibration test and return to the Spirocard main menu.
- If the recorded volume is less than 2.800 or greater than 3.200 try the calibration test again by clicking in **Begin Std.**
- Click YES at the prompt which asks if you wish to overwrite the previous calibration test – and repeat the calibration test – being careful to take at least 3 seconds to complete the full plunge with smooth steady pressure.
- If subsequent attempts at calibration do not result in a **recorded volume** of between 2.800 and 3.200 , store the last calibration attempt by clicking OK and inform the Monash Study team as soon as possible of a failed calibration reading. Continue to use the spirometer for lung function testing of participants until the problem can be remedied.

11.2 OBSTRUCTIVE AIRWAYS DISEASE

Appendix 11C : Obstructive airways disease: Multiple logistic regression summary for all exposed

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.74	0.42	1.29
Richmond vs Exposed	0.76	0.44	1.30
AGE CATEGORY			
25-29yrs vs 60-64yrs	1.46	0.25	8.50
30-34yrs vs 60-64yrs	0.38	0.09	1.61
35-39yrs vs 60-64yrs	0.50	0.15	1.70
40-44yrs vs 60-64yrs	0.44	0.15	1.31
45-49yrs vs 60-64yrs	0.45	0.16	1.27
50-54yrs vs 60-64yrs	0.93	0.34	2.57
55-59yrs vs 60-64yrs	0.84	0.28	2.48
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.34	0.76	2.38
1985-1989 vs 1975-1979	0.98	0.48	2.03
1990-1994 vs 1975-1979	0.57	0.20	1.64
1995-1999 vs 1975-1979	0.61	0.14	2.57
RANK CATEGORY			
Civilian vs Enlisted	1.22	0.25	5.95
Non Comm Officer vs Enlisted	1.13	0.64	2.01
Officer vs Enlisted	0.59	0.13	2.79
Unknown vs Enlisted	0.50	0.06	4.18
SMOKER CATEGORY			
Current smoker vs Never smoked	2.21	1.24	3.94
Ex smoker vs Never smoked	1.62	0.95	2.76
OS EXPOSURE			
OS Exposure vs No OS exposure	0.62	0.38	1.04

Appendix 11C continued...

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
H.S.A. CENTRE			
Adelaide vs Brisbane	0.72	0.24	2.14
Canberra vs Brisbane	0.87	0.25	3.03
Ipswich vs Brisbane	1.12	0.59	2.09
Melbourne vs Brisbane	1.54	0.63	3.72
Newcastle vs Brisbane	0.18	0.02	1.38
Parramatta vs Brisbane	1.21	0.67	2.18
Perth vs Brisbane	2.17	0.89	5.31

**Appendix 11D : Obstructive airways disease: Most parsimonious model obtained
by logistic regression for all exposed**

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.78	0.46	1.34
Richmond vs Exposed	0.77	0.46	1.27
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.78	0.22	2.84
30-34yrs vs 60-64yrs	0.30	0.09	0.99
35-39yrs vs 60-64yrs	0.49	0.17	1.40
40-44yrs vs 60-64yrs	0.47	0.17	1.26
45-49yrs vs 60-64yrs	0.44	0.16	1.21
50-54yrs vs 60-64yrs	0.95	0.35	2.56
55-59yrs vs 60-64yrs	0.90	0.31	2.63
SMOKER CATEGORY			
Current smoker vs Never smoked	2.21	1.25	3.92
Ex smoker vs Never smoked	1.59	0.94	2.69
OS EXPOSURE			
OS Exposure vs No OS exposure	0.65	0.39	1.07

Appendix 11E : Obstructive airways disease: Multiple logistic regression with confidence intervals computed using robust standard error estimates derived after clustering for HSA centre

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley	0.74	0.48	1.13
Richmond	0.76	0.46	1.24
Exposed	1.00	1.00	1.00
AGE CATEGORY			
25-29yrs	1.46	0.58	3.67
30-34yrs	0.38	0.17	0.83
35-39yrs	0.50	0.21	1.18
40-44yrs	0.44	0.17	1.18
45-49yrs	0.45	0.23	0.87
50-54yrs	0.93	0.37	2.36
55-59yrs	0.84	0.30	2.37
60-64yrs	1.00	1.00	1.00
POSTING CATEGORY			
1980-1984	1.34	0.70	2.58
1985-1989	0.98	0.34	2.88
1990-1994	0.57	0.16	2.01
1995-1999	0.61	0.15	2.45
9975-1979	1.00	1.00	1.00
RANK CATEGORY			
Civilian	1.22	0.32	4.71
Non Comm Officer	1.13	0.72	1.77
Officer	0.59	0.17	2.14
Unknown	0.50	0.19	1.34
Enlisted	1.00	1.00	1.00
SMOKER CATEGORY			
Current smoker	2.21	1.68	2.91
Ex smoker	1.62	1.26	2.09
Never smoked	1.00	1.00	1.00

Appendix 11E continued...

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
OS EXPOSURE			
OS Exposure	0.62	0.48	0.81
No OS exposure	1.00	1.00	1.00
H.S.A. CENTRE			
Adelaide	0.75	0.66	0.84
Canberra	0.87	0.77	0.99
Ipswich	1.17	1.10	1.24
Melbourne	1.53	1.26	1.85
Newcastle	0.18	0.15	0.21
Parramatta	1.20	1.04	1.39
Perth	2.19	1.95	2.45
Brisbane	1.00	1.00	1.00

**Appendix 11F : Obstructive airways disease: Multiple logistic regression where
the exposed are all those in Program 1**

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	1.04	0.53	2.06
Richmond vs Exposed	1.12	0.58	2.18
AGE CATEGORY			
25-29yrs vs 60-64yrs	1.20	0.07	21.71
30-34yrs vs 60-64yrs	0.37	0.06	2.21
35-39yrs vs 60-64yrs	0.37	0.09	1.45
40-44yrs vs 60-64yrs	0.33	0.10	1.05
45-49yrs vs 60-64yrs	0.31	0.10	0.92
50-54yrs vs 60-64yrs	0.80	0.28	2.26
55-59yrs vs 60-64yrs	0.66	0.21	2.02
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.46	0.80	2.68
1985-1989 vs 1975-1979	0.74	0.30	1.87
1990-1994 vs 1975-1979	0.27	0.05	1.46
1995-1999 vs 1975-1979	0.23	0.02	3.00
RANK CATEGORY			
Non Comm Officer vs Enlisted	0.92	0.47	1.81
Officer vs Enlisted	0.80	0.16	3.98
Unknown vs Enlisted	2.37	0.54	10.46
SMOKER CATEGORY			
Current smoker vs Never smoked	3.04	1.53	6.04
Ex smoker vs Never smoked	2.04	1.09	3.82
OS EXPOSURE			
OS Exposure vs No OS exposure	0.57	0.31	1.03

Appendix 11F continued...

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
H.S.A. CENTRE			
Adelaide vs Brisbane	0.65	0.18	2.28
Canberra vs Brisbane	1.16	0.31	4.29
Ipswich vs Brisbane	1.79	0.85	3.76
Melbourne vs Brisbane	1.69	0.63	4.51
Newcastle vs Brisbane	0.25	0.03	1.89
Parramatta vs Brisbane	1.30	0.66	2.57
Perth vs Brisbane	2.67	1.05	6.82

**Appendix 11G : Obstructive airways disease: Multiple logistic regression where
the exposed are all those in Program 2**

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.60	0.29	1.25
Richmond vs Exposed	0.63	0.31	1.31
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.46	0.05	4.13
30-34yrs vs 60-64yrs	0.32	0.07	1.52
35-39yrs vs 60-64yrs	0.30	0.08	1.18
40-44yrs vs 60-64yrs	0.20	0.06	0.68
45-49yrs vs 60-64yrs	0.24	0.08	0.74
50-54yrs vs 60-64yrs	0.63	0.21	1.89
55-59yrs vs 60-64yrs	0.50	0.15	1.64
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.25	0.63	2.48
1985-1989 vs 1975-1979	0.71	0.31	1.65
1990-1994 vs 1975-1979	0.56	0.17	1.78
1995-1999 vs 1975-1979	0.46	0.07	2.99
RANK CATEGORY			
Non Comm Officer vs Enlisted	1.16	0.59	2.26
Officer vs Enlisted	0.93	0.18	4.78
Unknown vs Enlisted	0.36	0.04	3.16
SMOKER CATEGORY			
Current smoker vs Never smoked	2.50	1.27	4.95
Ex smoker vs Never smoked	1.75	0.94	3.27
OS EXPOSURE			
OS Exposure vs No OS exposure	0.56	0.30	1.07

Appendix 11G continued...

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
H.S.A. CENTRE			
Adelaide vs Brisbane	0.44	0.10	1.98
Canberra vs Brisbane	1.04	0.28	3.85
Ipswich vs Brisbane	1.30	0.61	2.74
Melbourne vs Brisbane	1.76	0.70	4.46
Newcastle vs Brisbane	0.23	0.03	1.76
Parramatta vs Brisbane	1.14	0.57	2.31
Perth vs Brisbane	1.68	0.53	5.32

Appendix 11H : Obstructive airways disease: Multiple logistic regression where exposed are classified by dose and contrasted to the unexposed

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
EXPOSURE			
Mild exposure vs Unexposed	1.28	0.63	2.63
Moderate exposure vs Unexposed	1.85	0.99	3.43
Prolonged exposure vs Unexposed	0.78	0.36	1.67
AGE CATEGORY			
25-29yrs vs 60-64yrs	1.24	0.19	8.17
30-34yrs vs 60-64yrs	0.33	0.07	1.51
35-39yrs vs 60-64yrs	0.46	0.13	1.62
40-44yrs vs 60-64yrs	0.35	0.11	1.08
45-49yrs vs 60-64yrs	0.40	0.14	1.18
50-54yrs vs 60-64yrs	0.90	0.32	2.50
55-59yrs vs 60-64yrs	0.69	0.23	2.09
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.38	0.77	2.49
1985-1989 vs 1975-1979	1.02	0.48	2.14
1990-1994 vs 1975-1979	0.55	0.18	1.72
1995-1999 vs 1975-1979	0.57	0.12	2.66
RANK CATEGORY			
Civilian vs Enlisted	0.91	0.11	7.83
Non Comm Officer vs Enlisted	1.07	0.59	1.95
Officer vs Enlisted	0.60	0.13	2.84
Unknown vs Enlisted	0.59	0.07	5.00
SMOKER CATEGORY			
Current smoker vs Never smoked	2.23	1.22	4.05
Ex smoker vs Never smoked	1.71	0.99	2.94
OS EXPOSURE			
OS Exposure vs No OS exposure	0.68	0.40	1.14

Appendix 11H continued...

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
H.S.A. CENTRE			
Adelaide vs Brisbane	0.36	0.08	1.56
Canberra vs Brisbane	0.93	0.26	3.30
Ipswich vs Brisbane	1.26	0.67	2.39
Melbourne vs Brisbane	1.55	0.64	3.78
Newcastle vs Brisbane	0.18	0.02	1.34
Parramatta vs Brisbane	1.17	0.64	2.13
Perth vs Brisbane	2.17	0.88	5.35

11.3 SELF-REPORTED SYMPTOMS

11.3.1 SHORTNESS OF BREATH AND WHEEZING

Appendix 11I : Self-reported shortness of breath and wheezing: Multiple logistic regression summary for all exposed

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.58	0.44	0.76
Richmond vs Exposed	0.50	0.39	0.65
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.15	0.05	0.39
30-34yrs vs 60-64yrs	0.35	0.17	0.72
35-39yrs vs 60-64yrs	0.37	0.19	0.72
40-44yrs vs 60-64yrs	0.26	0.14	0.49
45-49yrs vs 60-64yrs	0.39	0.21	0.71
50-54yrs vs 60-64yrs	0.50	0.27	0.92
55-59yrs vs 60-64yrs	0.79	0.41	1.51
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.10	0.81	1.49
1985-1989 vs 1975-1979	0.83	0.58	1.17
1990-1994 vs 1975-1979	1.16	0.74	1.81
1995-1999 vs 1975-1979	1.09	0.60	1.98
RANK CATEGORY			
Civilian vs Enlisted	0.59	0.28	1.27
Non Comm Officer vs Enlisted	0.90	0.68	1.20
Officer vs Enlisted	0.64	0.32	1.29
Unknown vs Enlisted	5.43	1.50	19.70

Appendix 11I continued...

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
SMOKER CATEGORY			
Current smoker vs Never smoked	2.58	1.93	3.44
Ex smoker vs Never smoked	1.36	1.06	1.75
OS EXPOSURE			
OS Exposure vs No OS exposure	1.40	1.10	1.77

Appendix 11J : Self-reported shortness of breath and wheezing: Most parsimonious model obtained by logistic regression for all exposed

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.58	0.44	0.76
Richmond vs Exposed	0.50	0.38	0.64
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.16	0.07	0.38
30-34yrs vs 60-64yrs	0.34	0.18	0.66
35-39yrs vs 60-64yrs	0.37	0.20	0.68
40-44yrs vs 60-64yrs	0.27	0.15	0.49
45-49yrs vs 60-64yrs	0.40	0.22	0.72
50-54yrs vs 60-64yrs	0.50	0.27	0.93
55-59yrs vs 60-64yrs	0.80	0.42	1.53
RANK CATEGORY			
Civilian vs Enlisted	0.64	0.31	1.32
Non Comm Officer vs Enlisted	0.92	0.71	1.20
Officer vs Enlisted	0.64	0.32	1.25
Unknown vs Enlisted	5.33	1.48	19.24
SMOKER CATEGORY			
Current smoker vs Never smoked	2.56	1.92	3.41
Ex smoker vs Never smoked	1.35	1.05	1.73
OS EXPOSURE			
OS Exposure vs No OS exposure	1.40	1.10	1.77

Appendix 11K : Self-reported shortness of breath and wheezing: Multiple logistic regression where the exposed group are all those in Program 1

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.52	0.37	0.73
Richmond vs Exposed	0.46	0.33	0.63
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.27	0.08	0.90
30-34yrs vs 60-64yrs	0.35	0.15	0.84
35-39yrs vs 60-64yrs	0.39	0.18	0.83
40-44yrs vs 60-64yrs	0.25	0.13	0.50
45-49yrs vs 60-64yrs	0.36	0.19	0.69
50-54yrs vs 60-64yrs	0.49	0.25	0.96
55-59yrs vs 60-64yrs	0.73	0.36	1.47
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.10	0.80	1.52
1985-1989 vs 1975-1979	0.82	0.55	1.24
1990-1994 vs 1975-1979	0.89	0.50	1.57
1995-1999 vs 1975-1979	1.06	0.50	2.26
RANK CATEGORY			
Civilian vs Enlisted	0.19	0.02	2.05
Non Comm Officer vs Enlisted	0.95	0.69	1.32
Officer vs Enlisted	0.70	0.32	1.51
Unknown vs Enlisted	14.03	1.78	110.78
SMOKER CATEGORY			
Current smoker vs Never smoked	2.88	2.07	4.00
Ex smoker vs Never smoked	1.45	1.09	1.92
OS EXPOSURE			
OS Exposure vs No OS exposure	1.38	1.05	1.80

Appendix 11L : Self-reported shortness of breath and wheezing: Multiple logistic regression where the exposed group are all those in Program 2

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.63	0.44	0.91
Richmond vs Exposed	0.55	0.39	0.79
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.18	0.06	0.56
30-34yrs vs 60-64yrs	0.36	0.15	0.82
35-39yrs vs 60-64yrs	0.38	0.17	0.82
40-44yrs vs 60-64yrs	0.26	0.12	0.53
45-49yrs vs 60-64yrs	0.36	0.18	0.72
50-54yrs vs 60-64yrs	0.52	0.25	1.07
55-59yrs vs 60-64yrs	0.92	0.43	1.98
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.02	0.71	1.47
1985-1989 vs 1975-1979	0.85	0.57	1.26
1990-1994 vs 1975-1979	1.10	0.66	1.82
1995-1999 vs 1975-1979	1.10	0.53	2.31
RANK CATEGORY			
Civilian vs Enlisted	0.60	0.25	1.45
Non Comm Officer vs Enlisted	0.87	0.63	1.22
Officer vs Enlisted	0.55	0.24	1.28
Unknown vs Enlisted	1.62	0.25	10.45
SMOKER CATEGORY			
Current smoker vs Never smoked	2.93	2.11	4.08
Ex smoker vs Never smoked	1.34	1.00	1.80
OS EXPOSURE			
OS Exposure vs No OS exposure	1.40	1.06	1.86

Appendix 11M : Self-reported shortness of breath and wheezing: Multiple logistic regression where exposed are classified by dose and contrasted to the unexposed

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
EXPOSURE			
Mild exposure vs Unexposed	1.52	1.06	2.18
Moderate exposure vs Unexposed	1.99	1.42	2.80
Prolonged exposure vs Unexposed	2.01	1.45	2.79
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.17	0.06	0.47
30-34yrs vs 60-64yrs	0.37	0.18	0.79
35-39yrs vs 60-64yrs	0.40	0.20	0.81
40-44yrs vs 60-64yrs	0.28	0.15	0.53
45-49yrs vs 60-64yrs	0.41	0.22	0.75
50-54yrs vs 60-64yrs	0.53	0.28	0.98
55-59yrs vs 60-64yrs	0.83	0.42	1.61
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.06	0.78	1.45
1985-1989 vs 1975-1979	0.80	0.56	1.14
1990-1994 vs 1975-1979	1.13	0.71	1.79
1995-1999 vs 1975-1979	1.16	0.62	2.17
RANK CATEGORY			
Civilian vs Enlisted	0.64	0.27	1.49
Non Comm Officer vs Enlisted	0.91	0.68	1.22
Officer vs Enlisted	0.62	0.30	1.26
Unknown vs Enlisted	5.44	1.47	20.09
SMOKER CATEGORY			
Current smoker vs Never smoked	2.68	2.00	3.60
Ex smoker vs Never smoked	1.40	1.09	1.81
OS EXPOSURE			
OS Exposure vs No OS exposure	1.34	1.05	1.70

11.3.2 ASTHMA

Appendix 11N : Self-reported physician diagnosis of asthma: Multiple logistic regression summary for all exposed

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.81	0.55	1.21
Richmond vs Exposed	1.00	0.70	1.43
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.21	0.05	0.85
30-34yrs vs 60-64yrs	0.66	0.26	1.68
35-39yrs vs 60-64yrs	0.59	0.25	1.37
40-44yrs vs 60-64yrs	0.49	0.23	1.05
45-49yrs vs 60-64yrs	0.49	0.24	1.03
50-54yrs vs 60-64yrs	0.50	0.23	1.07
55-59yrs vs 60-64yrs	0.50	0.22	1.16
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.12	0.72	1.73
1985-1989 vs 1975-1979	1.00	0.61	1.65
1990-1994 vs 1975-1979	1.43	0.78	2.62
1995-1999 vs 1975-1979	1.01	0.44	2.36
RANK CATEGORY			
Civilian vs Enlisted	0.95	0.33	2.70
Non Comm Officer vs Enlisted	1.20	0.81	1.79
Officer vs Enlisted	0.87	0.32	2.35
Unknown vs Enlisted	1.78	0.55	5.76
SMOKER CATEGORY			
Current smoker vs Never smoked	0.70	0.45	1.07
Ex smoker vs Never smoked	0.85	0.60	1.19
OS EXPOSURE			
OS Exposure vs No OS exposure	1.01	0.72	1.41

Appendix 11O : Self-reported physician diagnosis of asthma: Most parsimonious model obtained by logistic regression for all exposed

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.78	0.54	1.14
Richmond vs Exposed	0.97	0.69	1.37

Appendix 11P : Self-reported physician diagnosis of asthma: Multiple logistic regression where the exposed group are all those in Program 1

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	1.00	0.60	1.67
Richmond vs Exposed	1.20	0.75	1.92
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.24	0.04	1.49
30-34yrs vs 60-64yrs	0.77	0.26	2.30
35-39yrs vs 60-64yrs	0.47	0.18	1.23
40-44yrs vs 60-64yrs	0.50	0.22	1.16
45-49yrs vs 60-64yrs	0.43	0.19	0.97
50-54yrs vs 60-64yrs	0.48	0.21	1.11
55-59yrs vs 60-64yrs	0.52	0.21	1.26
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.19	0.75	1.87
1985-1989 vs 1975-1979	0.90	0.50	1.62
1990-1994 vs 1975-1979	1.02	0.47	2.20
1995-1999 vs 1975-1979	0.73	0.24	2.23
RANK CATEGORY			
Civilian vs Enlisted	1.96	0.18	21.40
Non Comm Officer vs Enlisted	1.05	0.66	1.66
Officer vs Enlisted	0.89	0.29	2.73
Unknown vs Enlisted	2.81	0.81	9.66
SMOKER CATEGORY			
Current smoker vs Never smoked	0.68	0.41	1.12
Ex smoker vs Never smoked	0.82	0.56	1.21
OS EXPOSURE			
OS Exposure vs No OS exposure	1.04	0.71	1.53

Appendix 11Q : Self-reported physician diagnosis of asthma: Multiple logistic regression where the exposed group are all those in Program 2

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.65	0.40	1.06
Richmond vs Exposed	0.77	0.49	1.22
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.23	0.05	1.01
30-34yrs vs 60-64yrs	0.48	0.17	1.35
35-39yrs vs 60-64yrs	0.34	0.13	0.90
40-44yrs vs 60-64yrs	0.36	0.15	0.87
45-49yrs vs 60-64yrs	0.36	0.15	0.83
50-54yrs vs 60-64yrs	0.51	0.21	1.23
55-59yrs vs 60-64yrs	0.55	0.21	1.41
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.16	0.71	1.91
1985-1989 vs 1975-1979	1.02	0.59	1.77
1990-1994 vs 1975-1979	1.38	0.70	2.73
1995-1999 vs 1975-1979	0.79	0.27	2.36
RANK CATEGORY			
Civilian vs Enlisted	0.44	0.11	1.66
Non Comm Officer vs Enlisted	0.87	0.55	1.38
Officer vs Enlisted	0.71	0.23	2.20
Unknown vs Enlisted	0.69	0.07	6.63
SMOKER CATEGORY			
Current smoker vs Never smoked	0.74	0.45	1.20
Ex smoker vs Never smoked	0.88	0.60	1.30
OS EXPOSURE			
OS Exposure vs No OS exposure	1.16	0.80	1.71

Appendix 11R : Self-reported physician diagnosis of asthma: Multiple logistic regression where exposed are classified by dose and contrasted to the unexposed

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
EXPOSURE			
Mild exposure vs Unexposed	0.76	0.43	1.35
Moderate exposure vs Unexposed	1.42	0.90	2.24
Prolonged exposure vs Unexposed	1.05	0.65	1.68
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.21	0.05	0.89
30-34yrs vs 60-64yrs	0.63	0.25	1.63
35-39yrs vs 60-64yrs	0.47	0.20	1.11
40-44yrs vs 60-64yrs	0.41	0.19	0.91
45-49yrs vs 60-64yrs	0.43	0.20	0.90
50-54yrs vs 60-64yrs	0.47	0.22	1.02
55-59yrs vs 60-64yrs	0.48	0.21	1.12
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.13	0.73	1.76
1985-1989 vs 1975-1979	1.06	0.64	1.76
1990-1994 vs 1975-1979	1.32	0.70	2.49
1995-1999 vs 1975-1979	0.99	0.41	2.40
RANK CATEGORY			
Civilian vs Enlisted	1.13	0.38	3.38
Non Comm Officer vs Enlisted	1.12	0.74	1.69
Officer vs Enlisted	0.69	0.23	2.07
Unknown vs Enlisted	2.03	0.61	6.71
SMOKER CATEGORY			
Current smoker vs Never smoked	0.66	0.42	1.03
Ex smoker vs Never smoked	0.81	0.57	1.14
OS EXPOSURE			
OS Exposure vs No OS exposure	1.07	0.76	1.50

11.3.3 BRONCHITIS/EMPHYSEMA

**Appendix 11S : Self-reported physician diagnosis of bronchitis/emphysema:
Multiple logistic regression summary for all exposed**

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.48	0.33	0.69
Richmond vs Exposed	0.55	0.40	0.77
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.22	0.06	0.88
30-34yrs vs 60-64yrs	0.41	0.17	1.04
35-39yrs vs 60-64yrs	0.72	0.32	1.60
40-44yrs vs 60-64yrs	0.71	0.35	1.48
45-49yrs vs 60-64yrs	0.61	0.31	1.24
50-54yrs vs 60-64yrs	0.84	0.41	1.71
55-59yrs vs 60-64yrs	0.43	0.19	1.00
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.12	0.76	1.66
1985-1989 vs 1975-1979	1.01	0.64	1.57
1990-1994 vs 1975-1979	1.26	0.72	2.22
1995-1999 vs 1975-1979	1.00	0.45	2.24
RANK CATEGORY			
Civilian vs Enlisted	0.72	0.27	1.91
Non Comm Officer vs Enlisted	1.17	0.81	1.69
Officer vs Enlisted	1.33	0.58	3.05
Unknown vs Enlisted	0.70	0.19	2.53
SMOKER CATEGORY			
Current smoker vs Never smoked	1.73	1.19	2.51
Ex smoker vs Never smoked	1.30	0.94	1.82
OS EXPOSURE			
OS Exposure vs No OS exposure	1.02	0.75	1.39

Appendix 11T : Self-reported physician diagnosis of bronchitis/emphysema: Most parsimonious model obtained by logistic regression for all exposed

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.50	0.35	0.71
Richmond vs Exposed	0.57	0.41	0.79
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.23	0.07	0.77
30-34yrs vs 60-64yrs	0.41	0.19	0.89
35-39yrs vs 60-64yrs	0.72	0.36	1.44
40-44yrs vs 60-64yrs	0.70	0.36	1.36
45-49yrs vs 60-64yrs	0.60	0.31	1.19
50-54yrs vs 60-64yrs	0.87	0.43	1.76
55-59yrs vs 60-64yrs	0.45	0.19	1.03
SMOKER CATEGORY			
Current smoker vs Never smoked	1.71	1.18	2.48
Ex smoker vs Never smoked	1.31	0.94	1.82

**Appendix 11U : Self-reported physician diagnosis of bronchitis/emphysema:
Multiple logistic regression where the exposed group are all those in Program 1**

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.52	0.34	0.82
Richmond vs Exposed	0.60	0.40	0.90
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.92	0.19	4.35
30-34yrs vs 60-64yrs	0.43	0.12	1.50
35-39yrs vs 60-64yrs	1.19	0.47	3.04
40-44yrs vs 60-64yrs	0.90	0.39	2.08
45-49yrs vs 60-64yrs	0.76	0.34	1.70
50-54yrs vs 60-64yrs	1.12	0.50	2.51
55-59yrs vs 60-64yrs	0.51	0.20	1.29
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.17	0.77	1.77
1985-1989 vs 1975-1979	0.93	0.54	1.60
1990-1994 vs 1975-1979	0.80	0.36	1.75
1995-1999 vs 1975-1979	0.97	0.34	2.73
RANK CATEGORY			
Civilian vs Enlisted	1.69	0.16	17.47
Non Comm Officer vs Enlisted	1.32	0.87	2.02
Officer vs Enlisted	1.74	0.70	4.30
Unknown vs Enlisted	1.15	0.30	4.35
SMOKER CATEGORY			
Current smoker vs Never smoked	1.95	1.26	3.01
Ex smoker vs Never smoked	1.40	0.95	2.05
OS EXPOSURE			
OS Exposure vs No OS exposure	1.09	0.76	1.55

**Appendix 11V : Self-reported physician diagnosis of bronchitis/emphysema:
Multiple logistic regression where the exposed group are all those in Program 2**

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
GROUP			
Amberley vs Exposed	0.43	0.27	0.68
Richmond vs Exposed	0.51	0.33	0.78
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.29	0.07	1.31
30-34yrs vs 60-64yrs	0.43	0.15	1.25
35-39yrs vs 60-64yrs	0.62	0.24	1.63
40-44yrs vs 60-64yrs	0.75	0.31	1.81
45-49yrs vs 60-64yrs	0.65	0.28	1.53
50-54yrs vs 60-64yrs	0.85	0.35	2.04
55-59yrs vs 60-64yrs	0.36	0.12	1.07
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.11	0.69	1.80
1985-1989 vs 1975-1979	1.01	0.60	1.70
1990-1994 vs 1975-1979	1.36	0.71	2.60
1995-1999 vs 1975-1979	1.26	0.47	3.36
RANK CATEGORY			
Civilian vs Enlisted	0.50	0.15	1.68
Non Comm Officer vs Enlisted	1.07	0.69	1.64
Officer vs Enlisted	1.76	0.70	4.42
Unknown vs Enlisted	0.75	0.08	7.18
SMOKER CATEGORY			
Current smoker vs Never smoked	1.95	1.26	3.03
Ex smoker vs Never smoked	1.47	0.99	2.19
OS EXPOSURE			
OS Exposure vs No OS exposure	0.88	0.60	1.29

**Appendix 11W : Self-reported physician diagnosis of bronchitis/emphysema:
Multiple logistic regression where exposed are classified by dose and contrasted
to the unexposed**

EFFECT	ODDS RATIO	95% CONFIDENCE LIMITS	
EXPOSURE			
Mild exposure vs Unexposed	1.57	0.98	2.50
Moderate exposure vs Unexposed	2.76	1.85	4.11
Prolonged exposure vs Unexposed	1.59	1.03	2.44
AGE CATEGORY			
25-29yrs vs 60-64yrs	0.23	0.06	0.94
30-34yrs vs 60-64yrs	0.43	0.17	1.11
35-39yrs vs 60-64yrs	0.64	0.28	1.46
40-44yrs vs 60-64yrs	0.65	0.31	1.39
45-49yrs vs 60-64yrs	0.60	0.29	1.24
50-54yrs vs 60-64yrs	0.85	0.41	1.76
55-59yrs vs 60-64yrs	0.36	0.15	0.88
POSTING CATEGORY			
1980-1984 vs 1975-1979	1.16	0.78	1.73
1985-1989 vs 1975-1979	1.09	0.69	1.73
1990-1994 vs 1975-1979	1.27	0.70	2.31
1995-1999 vs 1975-1979	1.04	0.45	2.41
RANK CATEGORY			
Civilian vs Enlisted	0.73	0.25	2.15
Non Comm Officer vs Enlisted	1.13	0.77	1.65
Officer vs Enlisted	1.42	0.61	3.29
Unknown vs Enlisted	0.52	0.11	2.40
SMOKER CATEGORY			
Current smoker vs Never smoked	1.57	1.07	2.30
Ex smoker vs Never smoked	1.27	0.91	1.78
OS EXPOSURE			
OS Exposure vs No OS exposure	0.99	0.72	1.36

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