CHAPTER 4 ONLINE APPENDIX: ESTIMATED COEFFICIENTS

Table 4.1. Estimation for primary care consumption, implementation in SESIM-LEV (neg. bin.). Estimation performed in STATA version 8.1.

Variables	Coefficients static	Coefficients dynamic I
Intercept	-3.07682	1.99914
Male	-0.12218	-0.12958
Age	0.089601	-0.070584
Age2	-0.000581	0.000575
Health 1	0.80366	0.80638
Health 2	0.80988	0.74223
Health 3	0.3803	0.60905
Upper secondary school education	0.21751	0.030311
University education	0.057742	-0.048767
# prim. care visits previous year	---	0.093308
Relative income	0.000265	-0.04777
Cohabiting	-0.00928	0.060333
Born in Sweden	-0.097773	0.11817
lnalpha	-0.17068	-0.21483

Table 4.2. Estimation of outpatient care visits age 16-59, implementation in SESIM-LEV. Estimation performed in STATA version 8.1.

Variables 16-59	Coefficients static	Coefficients dynamic I
Intercept	1.35146	0.62868
Male	-0.31484	-0.23420
Age	-0.032115	-0.03420
Age^2	0.000419	0.00042
Health 2	-0.25968	-0.23536
Health 3	-0.92978	-0.74403
Health 4	-1.67193	-1.27980
1 OP vis prev. year	---	0.73088
>1 OP vis. prev. year	---	1.42795
Cohabiting	0.00993	0.00993
Baby	0.19088	0.19088
Upper secondary school education	0.10533	0.10533
University education	-0.019502	-0.01950
Relative income	0.016612	0.01661
Metropolitan	0.17239	0.17239
Urban	0.13068	0.13068
Born in Sweden	-0.096147	-0.09615
lnalpha	1.1372	0.86976

Table 4.3. Estimation of outpatient care visits age 60+, as implemented in SESIM-LEV. Estimation performed in STATA version 8.1.

Variables 60+	Coefficients static	Coefficients dynamic I (logit)
Intercept	-8.13686	-4.62433
Male	0.02784	0.03362
Age	0.24083	0.14653
Age2	-0.00169	-0.00109
Health 2	-0.39588	-0.29209
Health 3	-0.68833	-0.43449
Health 4	-1.30861	-0.71993
ADL	-0.39266	-0.18834
1 OP vis. prev. year	---	0.16309
>1 OP vis. previous year	---	0.81251
Special housing		
Cohabiting	0.00788	-0.43328
Upper secondary school education	0.09306	-0.05694
University education	0.14536	0.06341
Relative income	0.07584	0.12623
Metropolitan	0.29158	0.02738
Urban	0.09685	0.19300
Born in Sweden	0.17470	0.03882
lnalpha	1.1372	0.040785

Table 4.4. Estimation of outpatient care visits, dynamic model II for the group 60+, implementation in SESIM-LEV. Estimation performed in STATA version 8.1.

Variables 60+	Coefficients dynamic II (inflate)
Intercept	1.18078
Age	-0.02420
Health 2	0.29738
Health 3	0.24729
Health 4	0.64162
ADL	-0.12573
1 OP vis. prev. year	-2.41332
>1 OP vis. prev. year	-22.42990
Special housing	0.26891

Table 4.5. Estimation of days of inpatient care, group 16-59, static I and dynamic I, as implemented in SESIM-LEV. Estimation performed in STATA version 8.1.

Variables 16-59	Coefficients static I	Coefficients dynamic I
Intercept	0.02201	0.56742
Male	0.17467	0.15281
Age	0.01055	0.00537
Age2	-0.00009	-0.00006
Health 2	-0.07000	-0.21945
Health 3	-0.74283	-0.94317
Health 4	-0.79459	-1.05732
1 OP vis. prev. year	0.29865	0.25361
>1 OP vis. prev. year	1.16976	1.16764
1 IP day prev. year	---	0.05963
>1 IP day prev. year	---	-0.51851
Cohabiting	-0.16598	-0.18212
Baby	0.11129	0.09949
Upper secondary school education	0.27818	0.24082
University education	0.38486	0.34860
Relative income	-0.19288	-0.19749
Metropolitan	0.12736	0.11279
Urban	-0.06136	-0.08000
Born in Sweden	0.36496	0.34162
lnalpha	1.46507	1.4403

Table 4.6. Estimation of days of inpatient care, group 60+, static I and dynamic I, as implemented in SESIM-LEV. Estimation performed in STATA version 8.1.

Variables 60+	Coefficients static I	Coefficients dynamic I
Intercept	1.79900	1.72700
Male	0.24600	0.25400
Age	0.01490	0.01500
Health 2	-0.50100	-0.47200
Health 3	-0.37900	-0.35500
Health 4	-0.46600	-0.39800
ADL	0.05000	0.10300
1 OP vis. prev. year	0.10300	0.07440
>1 OP vis. prev. year	0.39600	0.35200
>0 IP days prev. year	---	0.23200
Special housing	---	-0.36000
Cohabiting	-0.46800	-0.51200
Upper secondary school education	-0.06950	-0.08170
University education	-0.01500	-0.00696
Relative income	-0.24800	-0.24600
Metropolitan	-0.10200	-0.08980
Urban	-0.03410	0.00004
Born in Sweden	-0.43800	-0.41500
lnalpha	1.04100	1.02800

Table 4.7. Estimation of days of inpatient care age 16-59, the inflate portion, as implemented in SESIM-LEV. Estimation performed in STATA version 8.1.

Variables 16-59	Coefficients static II inflate	Coefficients dynamic II inflate
Intercept	2.24493	2.71221
Male	0.31575	0.30918
Age	-0.00890	-0.01095
Health 2	0.62789	0.47307
Health 3	0.83593	0.60467
Health 4	0.93198	0.60542
1 OP vis. prev. year	-1.64929	-1.67328
>1 OP vis. prev. year	-2.73828	-2.67824
1 IP day prev. year	---	-0.42097
>1 IP day prev. year	---	-2.02475
Baby	-5.69071	-25.64720

Table 4.8. Estimation of days of inpatient care age 60+, the inflate portion, as implemented in SESIM-LEV. Estimation performed in STATA version 8.1.

Variables 60+	Coefficients static II inflate	Coefficients dynamic II inflate
Intercept	5.21600	3.21900
Male	-0.16500	-0.11800
Age	-0.04730	0.01070
Age2	-0.00010	-0.00049
Health 2	0.46100	0.49200
Health 3	1.10200	1.04800
Health 4	1.38600	1.28800
ADL	-0.24700	-0.62700
1 OP vis. prev. year	-1.07800	-1.03000
>1 OP vis. prev. year	-2.39900	-2.32600
>0 IP days prev. year	---	-0.71900
Special housing	---	0.95400

Table 4.9. Estimation of consumption of prescribed drugs age 16-59, as implemented in SESIM-LEV. Estimation performed in STATA version 8.1.

Variables 16-59	Coefficients static I Women, logit consume?	Coefficients static I Men, logit consume?	Coefficients static II Women and men, linear how much?
Intercept	3.76120	0.52001	6.62232
Age	-0.12307	-0.00830	0.06683
Age2	0.00156	0.00041	-0.00062
Cohabiting	-0.33637	-0.02039	-0.28010
Health 2	0.09104	0.05825	-0.12576
Health 3	-0.52609	-0.26528	-0.33468
Health 4	-0.91832	-0.65307	-0.81359
1 IP day prev. year	-1.75420	-1.58466	-1.77704
>1 IP day prev. year	-0.01623	0.89997	0.09633
1 OP vis. prev. year	-0.17879	1.38673	0.33779
>1 OP vis. prev. year	0.65364	1.12573	0.39448
Child aged 0-5	1.37914	1.73175	1.13777
Upper secondary school education	0.48120	-0.11344	0.01924
Male	---	---	0.25856
University education	0.49563	0.02945	0.22089
Male * University ed.	---	---	-0.57684
Relative income	0.24728	0.09367	0.11304
Metropolitan	0.14897	0.12167	0.24116
Urban	0.05798	-0.03262	0.12581
Born in Sweden	0.23641	0.05409	0.10394
A			6.664293

Table 4.10. Estimation of consumption of prescribed drugs age 60+, as implemented in SESIM-LEV. Estimation performed in STATA version 8.1.

Variables 60+	Coefficients static I Women, logit consume?	Coefficients static I Men, logit consume?	Coefficients static II Women, linear how much?	Coefficients static II Men, linear how much?
Intercept	-12.22000	-9.03000	5.92900	-3.01700
Age	0.37100	0.23100	0.06880	0.31700
Age2	-0.00229	-0.00116	-0.00043	-0.00214
Cohabiting	0.16300	0.71100	0.11200	0.00876
Health 2	-1.18600	0.21100	-0.30100	-0.21900
Health 3	-1.10900	-0.57900	-0.75200	-0.39100
Health 4	-2.83100	-1.89800	-1.29600	-1.10800
ADL	0.22900	1.20000	0.10700	0.39300
1 IP day prev. year	1.49300	1.02800	0.19000	0.24100
>1 IP day prev. year	0.63700	0.85800	0.26800	0.46300
1 OP vis. prev. year	1.11500	0.92400	0.20100	0.17300
>1 OP vis. prev. year	1.17600	0.76600	0.52900	0.54100
Upper secondary school education	0.12300	0.33600	0.07300	0.01510
University education	0.19300	0.44200	0.08150	0.08940
Relative income	0.28700	0.56800	0.00266	-0.01350
Metropolitan	0.15400	-0.38400	0.30300	0.22200
Urban	-0.18200	-0.46600	0.15500	0.09720
Born in Sweden	0.67000	-0.37200	-0.00398	0.06240
A			1.566544	1.667226

Table 4.11. Results, estimation of dementia, implemented in SESIM-LEV. Estimation performed in SAS. The model estimates the probability of the individual not having dementia. Statistical estimation only.

Variable	Coefficient	Standard error	Wald Chi2	p-value
Intercept	7.97	1.33	35.89	<0.0001
ADL	-1.86	0.15	147.30	<0.0001
Age	-0.08	0.02	25.00	<0.0001
Cohabiting	0.298	0.18	2.83	0.0925
Upper secondary school ed.	0.77	0.14	29.95	<0.0001
University education	1.10	0.31	12.64	0.0004

Table 4.12. Results, estimation of ADL dependence, from the BabyBoom project (2006), which has been implemented in SESIM-LEV. Age was classified into four groups: -65 = ageg1, 65-74=ageg2, 75-84=ageg3, 85+=ageg4. Health status was represented at 4 levels where H1=full health H4=severe ill-health.

Variable	Coefficient
ageg2 * H2	0.32
ageg2 * H3	1.42
ageg2 * H4	3.38
ageg3 * H1	1.20
ageg3 * H2	1.48
ageg3 * H3	2.79
ageg3 * H4	4.79
ageg4 * H1	2.49
ageg4 * H2	3.03
ageg4 * H3	4.62
ageg4 * H4	6.15
female	0.34

The following cut-offs were used: -4.42, -6.36, and -7.60.

Table 4.13. Results, initial estimation of home help service and special housing. "Does the individual receive any intervention from the municipality?". Estimated in SAS.

Variable	Coefficient
Intercept	14.503
ADL/DEM_thisyear=1	-1.276
ADL/DEM_thisyear=2	-1.596
ADL/DEM_thisyear=3	-3.020
Age	-0.150
Gender	-0.152
Cohabiting	1.213
Upper secondary school ed.	-0.145
University education	-0.704

Table 4.14. Results, estimation of intervention level, initial estimation. "Which type of intervention?". Estimated in SAS.

Variable	Coefficient
Intercept	6.303
ADL/DEM_thisyear=1	-1.909
ADL/DEM_thisyear=2	-1.879
ADL/DEM_thisyear=3	-4.082
Age	-0.042
Gender	0.409
Upper secondary school ed.	-0.394
University education	-0.459

Table 4.15. Results, dynamic estimate of intervention level at current intervention level = 0 ("no intervention"). Estimated in SAS.

Variables	Coefficients 'To level 1' *home help service*	Coefficients 'To level 2' *special housing*
Intercept	5.30	-1.26
ADL/DEM_lag=1	-1.41	-0.99
ADL/DEM_lag=2	-1.00	-0.42
ADL/DEM_lag=3	-1.89	-1.52
Age	-0.08	-0.01
Gender	0.05	0.46
Cohabiting	0.24	0.01
Upper secondary school ed.	0.10	0.10
University education	0.03	-0.10

Table 4.16. Results, dynamic estimate of intervention level at current status = 1 ("home help service"). Estimated in SAS.

Variables	Coefficients 'To level 0' no intervention	p-value	Coefficients 'To level 2' special housing	p-value
Intercept	18.54		4.21	
ADL/DEM_lag=1	-1.47	0.0001	-1.23	<0.0001
ADL/DEM_lag=2	-0.54	0.237	0.16	0.572
ADL/DEM_lag=3	-1.48	0.009	-1.83	<0.0001
Age	-0.24	0.0003	-0.04	0.360
Gender	-0.88	0.293	-1.50	0.027
Cohabiting	0.99	0.239	0.71	0.321
Upper secondary school ed.	-0.38	0.185	-0.45	0.033
University education	-0.22	0.610	-0.88	0.013

Table 4.17. Coefficients for transition to ADL/DEM = 0 at ADL/DEM = 0 or 2 and intervention level > 0 (home help service or special housing).

Variables	Coefficient
intercept	2.2894
ADL/DEM_1 = 0	1.0149
special housing	-0.9555
age	-0.0282
gender	-0.0182
cohabiting	0.3166
medium-length educational career	0.1721
long educational career	0.886

Table 4.18. Coefficients for transition to ADL/DEM = 1 at ADL/DEM = 0 or 2 and intervention level >0 (home help service and special housing).

Variables	Coefficient
intercept	9.1978
ADL/DEM_1 = 0	0.5266
special housing	-1.1782
age	-0.1283
gender	0.2269
cohabiting	-0.518
medium-length education	-0.0004
long education	0.6156

The probability of going to ADL/DEM = 3 was identified by calculating the complement to the summed probability of ADL/DEM =0, ADL/DEM =1 and ADL/DEM =2.1

[1] Denominator = 1 + Xbeta(ADL/DEM0)+ Xbeta(ADL/DEM1)+Xbeta(ADL/DEM3)
P(ADL/DEM0) = Xbeta(ADL/DEM0)/Denominator
P(ADL/DEM1) = Xbeta(ADL/DEM0)/Denominator
P(ADL/DEM2) = Xbeta(ADL/DEM0)/Denominator
P(ADL/DEM3)= 1 – (P(ADL/DEM0)+ P(ADL/DEM1)+ P(ADL/DEM2))

Table 4.19. Coefficients for transition to ADL/DEM = 2 at ADL/DEM = 0 or 2 and intervention level > 0 (home help service or special housing).

Variables	Coefficient
intercept	5.3339
ADL/DEM_1 = 0	-0.04
special housing	-0.6759
age	-0.067
pay	0.3846
cohabiting	-0.095
medium-length educational career	0.2421
long educational career	0.6509

Table 4.20. Coefficients for transition to ADL/DEM = 0 at ADL/DEM = 0 or 2 and intervention level = 0.

Variables	Coefficient
intercept	19.120
ADL/DEM_1 = 0	0.7591
age	-0.2272
gender	2.6971
cohabiting	-1.0265
medium-length education	0.2127
long education	-0.2497

Table 4.21. Coefficients for transition to ADL/DEM = 1 at ADL/DEM = 0 or 2 and intervention level = 0.

Variables	Coefficient
intercept	8.8556
ADL/DEM_1 = 0	0.5795
age	-0.136
gender	2.35
cohabiting	-0.9267
medium-length educational career	0.00642
long educational career	-0.9846

Table 4.22. Coefficients for transition to ADL/DEM = 2 at ADL/DEM = 0 or 2 and intervention level = 0.

Variables	Coefficient
intercept	7.4873
ADL/DEM_1 = 0	0.2865
age	-0.1227
gender	3.0895
cohabiting	-0.0407
medium-length educational career	0.0963
long educational career	-0.2765

Table 4.23. Coefficients at ADL/DEM = 1.

Variables	Coefficient
intercept	-7.4029
home help service	1.0152
special housing	2.1383
age	0.1113
gender	-1.3659
medium-length or long educational career	0.0601

Table 4.24. Estimated coefficients for annual mortality risk, *without.*

Variables	Coefficient
intercept	-8.88105
male	0.99522
age	0.073816
cohabiting	-0.56527
Health = 2	-0.60003
Health = 3	-1.01959
Health = 4	-1.69726
Number of OP visits	0.039582
Number of IP days	0.043348
Upper secondary school education	-0.33290
University education	-1.06633

Table 4.25. Estimated coefficients for annual mortality risk, mortality model *with*

Variables	Coefficient	p-value
intercept	12.91	0
home help service	-0.245	0.028
special housing	-0.582	0.001
ADL/DEM = 1	-0.487	0
ADL/DEM = 2	-0.405	0.015
ADL/DEM = 3	-0.847	0
age	-0.066	0
gender	0.569	0
cohabiting	0.0044	0.972
Upper secondary school education	0.179	0.056
University education	0.334	0.080