



APPENDIX 12.4
Results for the NAIVE T1 population

**Assessment of association between severe hypoglycemia and
use of Detemir Glargine and NPH insulins**

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2 List of abbreviations

Table 1: List of abbreviations

S.No.	Abbreviation	2. Abbrev Cox's model	Expansion
1	Gender	gender	Gender (Male or Female)
2	Age-group	agegroup	Age-group at start of follow-up (10 years intervals)
3	Diagnose	typedm	Diagnose as given in the reimbursement decision (T1, T2, or Undefined)
4	First Insulin		Insulin at start of follow-up, (detemir, glargine, NPH, or none of these (no DGN))
5	Calender year	calyear	Calender year at start of follow-up (00-05, 06, 07, 08, 09)
6	Year of diagnose		Year of diagnose (5 year intervals)
7	Time since diagnose	time2diag	Time since diagnose at start of follow-up, (under 1, 1-2, 2-5, over 5 years)
8	A10BB hist	BB.stfup	History use of oral diabetes medication, (ICD10 code A10BB) at start of follow-up
9	A10A hist	A10A.stfup	History use of insulins (ICD10 codes A10A) at start of follow-up
10	Hosp hist	hosph.stfup	History of hospitalizations due to severe hypoglycaemic coma at start of follow-up
11		useBB	Present use of oral diabetes medication (A10BB)
12		useA10A	Present use of insulins (A10A) other than glargine , detemir and NPH-insulins
13	Hospital district		Hospital district at start of follow-up
14	DGN		Detemir, Glargine or NPH

A Appendix 1: Study population description

Table A.2: Number of individuals stratified by first insulin at start of follow-up and by study cohort.

S.No.	Insulin	Naive		Non-naive		Other		Total	
		N	%	N	%	N	%	N	%
1	A10AA01	0	0.0	0	0.0	0	0.0	0	0.0
2	A10AB01	0	0.0	0	0.0	23	5.6	23	0.1
3	A10AB04	0	0.0	0	0.0	23	5.6	23	0.1
4	A10AB05	0	0.0	0	0.0	30	7.2	30	0.2
5	A10AB06	0	0.0	0	0.0	1	0.2	1	0.0
6	A10AC01	7110	57.4	4818	98.8	0	0.0	11928	67.5
7	A10AC30	0	0.0	0	0.0	1	0.2	1	0.0
8	A10AD01	0	0.0	0	0.0	171	41.3	171	1.0
9	A10AD04	0	0.0	0	0.0	15	3.6	15	0.1
10	A10AD05	0	0.0	0	0.0	150	36.2	150	0.8
11	A10AE01	0	0.0	0	0.0	0	0.0	0	0.0
12	A10AE02	0	0.0	0	0.0	0	0.0	0	0.0
13	A10AE04	3359	27.1	55	1.1	0	0.0	3414	19.3
14	A10AE05	1909	15.4	5	0.1	0	0.0	1914	10.8
15	Total	12378	100.0	4878	100.0	414	100.0	17670	100.0

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Table A.3: Number of individuals stratified by gender and by study cohort.

S.No.	Gender	Naive		Non-naive		Other		Total	
		N	%	N	%	N	%	N	%
1	Male	7658	61.9	2890	59.2	270	65.2	10818	61.2
2	Female	4720	38.1	1988	40.8	144	34.8	6852	38.8
3	Total	12378	100.0	4878	100.0	414	100.0	17670	100.0
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Table A.4: Number of individuals stratified by gender and by first insulin in the naive cohort.

S.No.	Gender	NPH		Detemir		Glargine		Total	
		N	%	N	%	N	%	N	%
1	Male	4299	60.5	1186	62.1	2173	64.7	7658	61.9
2	Female	2811	39.5	723	37.9	1186	35.3	4720	38.1
3	Total	7110	100.0	1909	100.0	3359	100.0	12378	100.0
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Table A.5: Number of individuals stratified by age at start of follow-up (10-year age groups) and by study cohort.

S.No.	Age group	Naive		Non-naive		Other		Total	
		N	%	N	%	N	%	N	%
1	0-9	3249	26.2	789	16.2	8	1.9	4046	22.9
2	10-19	2907	23.5	1489	30.5	14	3.4	4410	25.0
3	20-29	1435	11.6	719	14.7	24	5.8	2178	12.3
4	30-39	1293	10.4	705	14.5	33	8.0	2031	11.5
5	40-49	1266	10.2	532	10.9	48	11.6	1846	10.4
6	50-59	1199	9.7	358	7.3	106	25.6	1663	9.4
7	60-69	659	5.3	190	3.9	87	21.0	936	5.3
8	70-79	254	2.1	80	1.6	74	17.9	408	2.3
9	80+	116	0.9	16	0.3	20	4.8	152	0.9
10	Total	12378	100.0	4878	100.0	414	100.0	17670	100.0
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Table A.6: Number of individuals stratified by age at start of follow-up (10-year age groups) and by first insulin in the naive cohort.

S.No.	Age group	NPH		Detemir		Glargine		Total	
		N	%	N	%	N	%	N	%
1	0-9	2391	33.6	492	25.8	366	10.9	3249	26.2
2	10-19	1378	19.4	652	34.2	877	26.1	2907	23.5
3	20-29	665	9.4	228	11.9	542	16.1	1435	11.6
4	30-39	691	9.7	161	8.4	441	13.1	1293	10.4
5	40-49	702	9.9	165	8.6	399	11.9	1266	10.2
6	50-59	679	9.5	115	6.0	405	12.1	1199	9.7
7	60-69	382	5.4	60	3.1	217	6.5	659	5.3
8	70-79	154	2.2	25	1.3	75	2.2	254	2.1
9	80+	68	1.0	11	0.6	37	1.1	116	0.9
10	Total	7110	100.0	1909	100.0	3359	100.0	12378	100.0
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Table A.7: Number of individuals stratified by calendar year at start of follow-up and by study cohort.

S.No.	Calendar year	Naive		Non-naive		Other		Total	
		N	%	N	%	N	%	N	%
1	2000	1073	8.7	4634	95.0	138	33.3	5845	33.1
2	2001	1150	9.3	81	1.7	36	8.7	1267	7.2
3	2002	1120	9.0	31	0.6	23	5.6	1174	6.6
4	2003	1177	9.5	40	0.8	24	5.8	1241	7.0
5	2004	1288	10.4	31	0.6	26	6.3	1345	7.6
6	2005	1283	10.4	18	0.4	27	6.5	1328	7.5
7	2006	1345	10.9	14	0.3	34	8.2	1393	7.9
8	2007	1450	11.7	19	0.4	45	10.9	1514	8.6
9	2008	1275	10.3	6	0.1	31	7.5	1312	7.4
10	2009	1217	9.8	4	0.1	30	7.2	1251	7.1
11	Total	12378	100.0	4878	100.0	414	100.0	17670	100.0
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Table A.8: Number of individuals stratified by calendar year at start of follow-up and by first insulin in the naive cohort.

S.No.	Calendar year	NPH		Detemir		Glargine		Total	
		N	%	N	%	N	%	N	%
1	2000	1073	15.1	0	0.0	0	0.0	1073	8.7
2	2001	1150	16.2	0	0.0	0	0.0	1150	9.3
3	2002	1120	15.8	0	0.0	0	0.0	1120	9.0
4	2003	1042	14.7	0	0.0	135	4.0	1177	9.5
5	2004	738	10.4	2	0.1	548	16.3	1288	10.4
6	2005	627	8.8	86	4.5	570	17.0	1283	10.4
7	2006	513	7.2	389	20.4	443	13.2	1345	10.9
8	2007	436	6.1	438	22.9	576	17.1	1450	11.7
9	2008	260	3.7	468	24.5	547	16.3	1275	10.3
10	2009	151	2.1	526	27.6	540	16.1	1217	9.8
11	Total	7110	100.0	1909	100.0	3359	100.0	12378	100.0
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Table A.9: Number of individuals stratified by calendar year of reimbursement decision (5-year age groups) and by study cohort.

S.No.	Year of diagnose	Naive		Non-naive		Other		Total	
		N	%	N	%	N	%	N	%
1	1960-1964	1	0.0	0	0.0	0	0.0	1	0.0
2	1965-1969	0	0.0	8	0.2	0	0.0	8	0.0
3	1970-1974	1	0.0	8	0.2	0	0.0	9	0.1
4	1975-1979	4	0.0	20	0.4	0	0.0	24	0.1
5	1980-1984	3	0.0	27	0.6	2	0.5	32	0.2
6	1985-1989	4	0.0	23	0.5	0	0.0	27	0.2
7	1990-1994	83	0.7	828	17.0	16	3.9	927	5.2
8	1995-1999	428	3.5	3904	80.0	105	25.4	4437	25.1
9	2000-2004	5597	45.2	44	0.9	127	30.7	5768	32.6
10	2005-2009	6200	50.1	15	0.3	153	37.0	6368	36.0
11	2010	57	0.5	1	0.0	11	2.7	69	0.4
12	Total	12378	100.0	4878	100.0	414	100.0	17670	100.0

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Table A.10: Number of individuals stratified by calendar year of reimbursement decision (5-year age groups) and by first insulin in the naive cohort.

S.No.	Year of diagnose	NPH		Detemir		Glargine		Total	
		N	%	N	%	N	%	N	%
1	1960-1964	0	0.0	1	0.1	0	0.0	1	0.0
2	1970-1974	1	0.0	0	0.0	0	0.0	1	0.0
3	1975-1979	2	0.0	0	0.0	2	0.1	4	0.0
4	1980-1984	3	0.0	0	0.0	0	0.0	3	0.0
5	1985-1989	2	0.0	0	0.0	2	0.1	4	0.0
6	1990-1994	59	0.8	5	0.3	19	0.6	83	0.7
7	1995-1999	321	4.5	21	1.1	86	2.6	428	3.5
8	2000-2004	4822	67.8	37	1.9	738	22.0	5597	45.2
9	2005-2009	1884	26.5	1827	95.7	2489	74.1	6200	50.1
10	2010	16	0.2	18	0.9	23	0.7	57	0.5
11	Total	7110	100.0	1909	100.0	3359	100.0	12378	100.0

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Table A.11: Number of individuals stratified by hospital district at start of follow-up and by study cohort.

S.No.	Hosp. District	Naive		Non-naive		Other		Total	
		N	%	N	%	N	%	N	%
1	Unknown	2253	18.2	4717	96.7	175	42.3	7145	40.4
2	HUS	2784	22.5	35	0.7	57	13.8	2876	16.3
3	Varsinais-Suomi	788	6.4	11	0.2	10	2.4	809	4.6
4	Satakunta	501	4.0	3	0.1	7	1.7	511	2.9
5	Kantahame	356	2.9	4	0.1	12	2.9	372	2.1
6	Pirkanmaa	817	6.6	20	0.4	13	3.1	850	4.8
7	Paijat-Hame	417	3.4	7	0.1	11	2.7	435	2.5
8	Kymenlaakso	364	2.9	9	0.2	8	1.9	381	2.2
9	Etela-Karjala	294	2.4	9	0.2	2	0.5	305	1.7
10	Etela-Savo	208	1.7	3	0.1	2	0.5	213	1.2
11	Ita-Savo	103	0.8	1	0.0	2	0.5	106	0.6
12	Pohjois-Karjala	331	2.7	8	0.2	12	2.9	351	2.0
13	Pohjois-Savo	428	3.5	7	0.1	19	4.6	454	2.6
14	Keski-Suomi	550	4.4	9	0.2	16	3.9	575	3.3
15	Etela-Pohjanmaa	342	2.8	3	0.1	9	2.2	354	2.0
16	Vaasa	259	2.1	7	0.1	20	4.8	286	1.6
17	Keski-Pohjanmaa	142	1.1	2	0.0	2	0.5	146	0.8
18	Pohjois-Pohjanmaa	848	6.9	9	0.2	16	3.9	873	4.9
19	Kainuu	177	1.4	8	0.2	2	0.5	187	1.1
20	Lansi-Pohja	129	1.0	4	0.1	9	2.2	142	0.8
21	Lappi	219	1.8	1	0.0	5	1.2	225	1.3
22	Ahvenanmaa	68	0.5	1	0.0	5	1.2	74	0.4
23	Total	12378	100.0	4878	100.0	414	100.0	17670	100.0

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Table A.12: Number of individuals stratified by hospital district at start of follow-up and by first insulin in the naive cohort.

S.No.	Hosp. District	NPH		Detemir		Glargine		Total	
		N	%	N	%	N	%	N	%
1	Unknown	2232	31.4	3	0.2	18	0.5	2253	18.2
2	HUS	1376	19.4	469	24.6	939	28.0	2784	22.5
3	Varsinais-Suomi	385	5.4	152	8.0	251	7.5	788	6.4
4	Satakunta	281	4.0	129	6.8	91	2.7	501	4.0
5	Kantahame	131	1.8	124	6.5	101	3.0	356	2.9
6	Pirkanmaa	436	6.1	119	6.2	262	7.8	817	6.6
7	Paijat-Hame	286	4.0	49	2.6	82	2.4	417	3.4
8	Kymenlaakso	186	2.6	49	2.6	129	3.8	364	2.9
9	Etela-Karjala	103	1.4	99	5.2	92	2.7	294	2.4
10	Etela-Savo	128	1.8	41	2.1	39	1.2	208	1.7
11	Ita-Savo	51	0.7	29	1.5	23	0.7	103	0.8
12	Pohjois-Karjala	156	2.2	52	2.7	123	3.7	331	2.7
13	Pohjois-Savo	161	2.3	49	2.6	218	6.5	428	3.5
14	Keski-Suomi	194	2.7	144	7.5	212	6.3	550	4.4
15	Etela-Pohjanmaa	154	2.2	83	4.3	105	3.1	342	2.8
16	Vaasa	112	1.6	60	3.1	87	2.6	259	2.1
17	Keski-Pohjanmaa	83	1.2	18	0.9	41	1.2	142	1.1
18	Pohjois-Pohjanmaa	366	5.1	120	6.3	362	10.8	848	6.9
19	Kainuu	115	1.6	23	1.2	39	1.2	177	1.4
20	Lansi-Pohja	65	0.9	13	0.7	51	1.5	129	1.0
21	Lappi	81	1.1	75	3.9	63	1.9	219	1.8
22	Ahvenanmaa	28	0.4	9	0.5	31	0.9	68	0.5
23	Total	7110	100.0	1909	100.0	3359	100.0	12378	100.0

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B Appendix 2: Crude rate estimates for *first* severe hypoglycemic coma event

Table B.13: The number/risk time/incidence rate (95% CI) of first hypoglycemic coma event for detemir insulin, glargine insulin, and NPH-insulin stratified by gender.

S.No.	Gender	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	Male	glargine	4080	168	11931	14.08	12.10	16.38
2	Male	detemir	2871	58	5276	10.99	8.50	14.22
3	Male	NPH	4336	271	12468	21.74	19.30	24.48
4	Male	no DGN	5792	60	3643	16.47	12.79	21.21
5	Female	glargine	2539	104	6919	15.03	12.40	18.22
6	Female	detemir	2275	58	4244	13.67	10.57	17.68
7	Female	NPH	2858	183	7094	25.80	22.32	29.82
8	Female	no DGN	3648	40	2442	16.38	12.01	22.33
9	Total	glargine	6619	272	18850	14.43	12.81	16.25
10	Total	detemir	5146	116	9520	12.18	10.16	14.62
11	Total	NPH	7194	454	19563	23.21	21.17	25.44
12	Total	no DGN	9440	100	6085	16.43	13.51	19.99

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Table B.14: The number/risk time/incidence rate (95% CI) of first hypoglycemic coma event for detemir insulin, glargine insulin, and NPH-insulin stratified by age at start of follow up.

S.No.	Age group	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	0-9	glargine	1176	32	2858	11.20	7.92	15.83
2	0-9	detemir	2029	42	3579	11.73	8.67	15.88
3	0-9	NPH	2437	176	6189	28.44	24.53	32.96
4	0-9	no DGN	2602	29	1880	15.42	10.72	22.19
5	10-19	glargine	1837	73	6089	11.99	9.53	15.08
6	10-19	detemir	1299	39	2565	15.20	11.11	20.81
7	10-19	NPH	1390	55	3438	16.00	12.28	20.84
8	10-19	no DGN	2388	25	1302	19.20	12.97	28.41
9	20-29	glargine	945	41	2828	14.50	10.67	19.69
10	20-29	detemir	557	7	1132	6.18	2.95	12.97
11	20-29	NPH	670	33	2036	16.21	11.52	22.80
12	20-29	no DGN	1113	7	620	11.29	5.38	23.68
13	30-39	glargine	812	40	2405	16.63	12.20	22.68
14	30-39	detemir	431	6	829	7.24	3.25	16.12
15	30-39	NPH	698	41	2068	19.83	14.60	26.93
16	30-39	no DGN	980	11	691	15.92	8.82	28.75
17	40-49	glargine	719	32	1996	16.03	11.34	22.67
18	40-49	detemir	358	11	664	16.56	9.17	29.90
19	40-49	NPH	707	57	2000	28.50	21.98	36.95
20	40-49	no DGN	907	13	623	20.86	12.11	35.92
21	50-59	glargine	664	33	1696	19.46	13.83	27.37
22	50-59	detemir	275	7	496	14.12	6.73	29.61
23	50-59	NPH	682	49	2071	23.66	17.88	31.31
24	50-59	no DGN	807	12	511	23.47	13.33	41.32
25	60-69	glargine	315	15	665	22.56	13.60	37.42
26	60-69	detemir	137	2	192	10.39	2.60	41.55
27	60-69	NPH	385	24	1219	19.69	13.20	29.38
28	60-69	no DGN	417	2	309	6.46	1.62	25.85
29	70-79	glargine	106	4	240	16.68	6.26	44.43
30	70-79	detemir	48	2	52	38.75	9.69	154.93
31	70-79	NPH	155	12	415	28.92	16.42	50.92
32	70-79	no DGN	151	0	96	NA	NA	NA
33	80+	glargine	45	2	72	27.62	6.91	110.45
34	80+	detemir	12	0	11	NA	NA	NA
35	80+	NPH	70	7	128	54.74	26.09	114.82
36	80+	no DGN	75	1	53	18.99	2.67	134.76
37	Total	glargine	6619	272	18850	14.43	12.81	16.25
38	Total	detemir	5146	116	9520	12.18	10.16	14.62
39	Total	NPH	7194	454	19563	23.21	21.17	25.44
40	Total	no DGN	9440	100	6085	16.43	13.51	19.99

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Table B.15: The number/risk time/incidence rate (95% CI) of first hypoglycemic coma event for detemir insulin, glargine insulin, and NPH-insulin stratified by calendar year at start of follow-up.

S.No.	Calender year	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	00-05	glargine	4194	209	15010	13.92	12.16	15.95
2	00-05	detemir	2545	73	5718	12.77	10.15	16.06
3	00-05	NPH	5791	414	17670	23.43	21.28	25.80
4	00-05	no DGN	6389	88	5169	17.02	13.81	20.98
5	06	glargine	599	24	1496	16.04	10.75	23.93
6	06	detemir	715	17	1628	10.44	6.49	16.80
7	06	NPH	532	23	903	25.46	16.92	38.32
8	06	no DGN	1072	5	445	11.25	4.68	27.02
9	07	glargine	676	22	1348	16.32	10.75	24.78
10	07	detemir	710	15	1216	12.34	7.44	20.46
11	07	NPH	445	11	642	17.13	9.49	30.93
12	07	no DGN	1008	5	296	16.90	7.03	40.60
13	08	glargine	591	9	743	12.12	6.31	23.29
14	08	detemir	609	8	725	11.04	5.52	22.08
15	08	NPH	272	3	281	10.68	3.44	33.11
16	08	no DGN	657	2	127	15.76	3.94	63.00
17	09	glargine	559	8	253	31.59	15.80	63.17
18	09	detemir	567	3	234	12.83	4.14	39.79
19	09	NPH	154	3	66	45.34	14.62	140.59
20	09	no DGN	314	0	49	NA	NA	NA
21	Total	glargine	6619	272	18850	14.43	12.81	16.25
22	Total	detemir	5146	116	9520	12.18	10.16	14.62
23	Total	NPH	7194	454	19563	23.21	21.17	25.44
24	Total	no DGN	9440	100	6085	16.43	13.51	19.99

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Table B.16: The number/risk time/incidence rate (95% CI) of first hypoglycemic coma event for detemir insulin, glargine insulin, and NPH-insulin stratified by calendar time since diagnose (first reimbursement decision or purchase).

S.No.	Time since diag	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	-1	glargine	6097	247	17517	14.10	12.45	15.97
2	-1	detemir	4890	112	9086	12.33	10.24	14.83
3	-1	NPH	6623	419	17748	23.61	21.45	25.98
4	-1	no DGN	8722	86	5500	15.64	12.66	19.32
5	1-2	glargine	105	4	302	13.26	4.98	35.33
6	1-2	detemir	64	0	132	NA	NA	NA
7	1-2	NPH	106	9	299	30.13	15.68	57.91
8	1-2	no DGN	146	3	132	22.71	7.32	70.41
9	2-5	glargine	167	6	463	12.96	5.82	28.84
10	2-5	detemir	73	1	127	7.86	1.11	55.80
11	2-5	NPH	204	13	711	18.28	10.61	31.48
12	2-5	no DGN	250	5	211	23.73	9.88	57.02
13	5-10	glargine	178	13	418	31.09	18.05	53.54
14	5-10	detemir	80	2	126	15.91	3.98	63.60
15	5-10	NPH	205	12	688	17.45	9.91	30.72
16	5-10	no DGN	244	6	201	29.83	13.40	66.39
17	10-	glargine	72	2	151	13.28	3.32	53.09
18	10-	detemir	39	1	49	20.55	2.89	145.91
19	10-	NPH	56	1	117	8.56	1.21	60.75
20	10-	no DGN	78	0	41	NA	NA	NA
21	Total	glargine	6619	272	18850	14.43	12.81	16.25
22	Total	detemir	5146	116	9520	12.18	10.16	14.62
23	Total	NPH	7194	454	19563	23.21	21.17	25.44
24	Total	no DGN	9440	100	6085	16.43	13.51	19.99

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Table B.17: The number/risk time/incidence rate (95% CI) of first hypoglycemic coma event for detemir insulin, glargine insulin, and NPH-insulin stratified by history use of oral diabetes medication (A10BB) at start of follow-up.

S.No.	A10BB hist	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	No	glargine	6195	253	17771	14.24	12.59	16.10
2	No	detemir	4964	111	9228	12.03	9.99	14.49
3	No	NPH	6660	414	17858	23.18	21.05	25.53
4	No	no DGN	8815	84	5633	14.91	12.04	18.47
5	Yes	glargine	424	19	1079	17.61	11.23	27.60
6	Yes	detemir	182	5	292	17.13	7.13	41.16
7	Yes	NPH	534	40	1704	23.47	17.22	32.00
8	Yes	no DGN	625	16	452	35.38	21.68	57.76
9	Total	glargine	6619	272	18850	14.43	12.81	16.25
10	Total	detemir	5146	116	9520	12.18	10.16	14.62
11	Total	NPH	7194	454	19563	23.21	21.17	25.44
12	Total	no DGN	9440	100	6085	16.43	13.51	19.99

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Table B.18: The number/risk time/incidence rate (95% CI) of first hypoglycemic coma event for detemir insulin, glargine insulin, and NPH-insulin stratified by history use of insulin medication (A10A) at start of follow-up.

S.No.	A10A hist	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	No	glargine	5851	246	16743	14.69	12.97	16.65
2	No	detemir	4670	103	8654	11.90	9.81	14.44
3	No	NPH	6707	425	18279	23.25	21.14	25.57
4	No	no DGN	8532	86	5495	15.65	12.67	19.34
5	Yes	glargine	768	26	2107	12.34	8.40	18.12
6	Yes	detemir	476	13	867	15.00	8.71	25.84
7	Yes	NPH	487	29	1283	22.60	15.70	32.52
8	Yes	no DGN	908	14	591	23.70	14.04	40.01
9	Total	glargine	6619	272	18850	14.43	12.81	16.25
10	Total	detemir	5146	116	9520	12.18	10.16	14.62
11	Total	NPH	7194	454	19563	23.21	21.17	25.44
12	Total	no DGN	9440	100	6085	16.43	13.51	19.99

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Table B.19: The number/risk time/incidence rate (95% CI) of first hypoglycemic coma event for detemir insulin, glargine insulin, and NPH-insulin stratified by hospitalization history at start of follow-up.

S.No.	Hosp hist	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	No	glargine	5785	186	16410	11.33	9.82	13.09
2	No	detemir	4641	85	8538	9.96	8.05	12.31
3	No	NPH	6267	262	17443	15.02	13.31	16.95
4	No	no DGN	8376	81	5471	14.80	11.91	18.41
5	Yes	glargine	834	86	2440	35.25	28.53	43.54
6	Yes	detemir	505	31	983	31.55	22.19	44.86
7	Yes	NPH	927	192	2120	90.58	78.64	104.35
8	Yes	no DGN	1064	19	614	30.94	19.74	48.51
9	Total	glargine	6619	272	18850	14.43	12.81	16.25
10	Total	detemir	5146	116	9520	12.18	10.16	14.62
11	Total	NPH	7194	454	19563	23.21	21.17	25.44
12	Total	no DGN	9440	100	6085	16.43	13.51	19.99
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Table B.20: The number/risk time/incidence rate (95% CI) of first hypoglycemic coma event for detemir insulin, glargine insulin, and NPH-insulin stratified by hospital district at start of follow-up.

S.No.	Hosp. District	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	Unknown	glargine	1281	62	4617	13.43	10.47	17.22
2	Unknown	detemir	748	18	1743	10.32	6.50	16.39
3	Unknown	NPH	2232	186	8913	20.87	18.08	24.09
4	Unknown	no DGN	2124	43	2285	18.82	13.96	25.38
5	HUS	glargine	1511	61	4114	14.83	11.54	19.06
6	HUS	detemir	1248	29	2180	13.30	9.24	19.14
7	HUS	NPH	1385	86	2627	32.73	26.50	40.44
8	HUS	no DGN	2111	17	1206	14.10	8.77	22.68
9	Varsinais-Suomi	glargine	410	5	1092	4.58	1.91	11.00
10	Varsinais-Suomi	detemir	352	2	564	3.55	0.89	14.18
11	Varsinais-Suomi	NPH	397	18	902	19.96	12.58	31.68
12	Varsinais-Suomi	no DGN	555	1	231	4.33	0.61	30.77
13	Satakunta	glargine	178	2	435	4.60	1.15	18.40
14	Satakunta	detemir	274	0	516	NA	NA	NA
15	Satakunta	NPH	284	20	720	27.77	17.92	43.05
16	Satakunta	no DGN	363	1	166	6.02	0.85	42.71
17	Kantahame	glargine	155	12	348	34.46	19.57	60.67
18	Kantahame	detemir	192	10	479	20.86	11.22	38.76
19	Kantahame	NPH	132	11	267	41.19	22.81	74.38
20	Kantahame	no DGN	249	2	118	16.99	4.25	67.94
21	Pirkanmaa	glargine	418	14	1081	12.96	7.67	21.87
22	Pirkanmaa	detemir	350	7	524	13.36	6.37	28.03
23	Pirkanmaa	NPH	465	8	1053	7.60	3.80	15.20
24	Pirkanmaa	no DGN	581	3	318	9.44	3.04	29.26
25	Paijat-Hame	glargine	193	17	486	34.97	21.74	56.25
26	Paijat-Hame	detemir	145	6	226	26.53	11.92	59.05
27	Paijat-Hame	NPH	288	24	590	40.68	27.27	60.69
28	Paijat-Hame	no DGN	273	5	109	45.87	19.09	110.21
29	Kymenlaakso	glargine	201	10	482	20.76	11.17	38.58
30	Kymenlaakso	detemir	129	0	186	NA	NA	NA
31	Kymenlaakso	NPH	193	6	405	14.80	6.65	32.95
32	Kymenlaakso	no DGN	257	5	117	42.61	17.74	102.38
33	Etela-Karjala	glargine	152	5	449	11.14	4.63	26.75
34	Etela-Karjala	detemir	135	3	250	12.01	3.87	37.23
35	Etela-Karjala	NPH	104	6	179	33.47	15.04	74.50
36	Etela-Karjala	no DGN	198	0	91	NA	NA	NA
37	Etela-Savo	glargine	75	4	220	18.16	6.82	48.38
38	Etela-Savo	detemir	97	4	181	22.15	8.32	59.02
39	Etela-Savo	NPH	129	4	283	14.15	5.31	37.69
40	Etela-Savo	no DGN	155	0	88	NA	NA	NA
41	Ita-Savo	glargine	54	0	179	NA	NA	NA
42	Ita-Savo	detemir	44	0	73	NA	NA	NA
43	Ita-Savo	NPH	52	3	117	25.68	8.28	79.63
44	Ita-Savo	no DGN	74	0	37	NA	NA	NA
45	Pohjois-Karjala	glargine	214	3	577	5.20	1.68	16.13
46	Pohjois-Karjala	detemir	143	2	260	7.68	1.92	30.69
47	Pohjois-Karjala	NPH	159	3	360	8.34	2.69	25.87
48	Pohjois-Karjala	no DGN	248	0	96	NA	NA	NA
49	Pohjois-Savo	glargine	318	14	859	16.29	9.65	27.51
50	Pohjois-Savo	detemir	105	5	177	28.28	11.77	67.95
51	Pohjois-Savo	NPH	164	12	279	42.96	24.40	75.65
52	Pohjois-Savo	no DGN	304	8	184	43.46	21.73	86.90
53	Keski-Suomi	glargine	309	12	919	13.06	7.42	23.00
54	Keski-Suomi	detemir	251	8	529	15.12	7.56	30.22
55	Keski-Suomi	NPH	196	16	458	34.91	21.39	56.99
56	Keski-Suomi	no DGN	413	5	183	27.29	11.36	65.55
57	Etela-Pohjanmaa	glargine	173	8	464	17.24	8.62	34.48
58	Etela-Pohjanmaa	detemir	167	4	315	12.69	4.76	33.82
59	Etela-Pohjanmaa	NPH	155	3	372	8.06	2.60	25.00
60	Etela-Pohjanmaa	no DGN	246	2	96	20.85	5.21	83.35
61	Vaasa	glargine	116	13	273	47.63	27.66	82.03
62	Vaasa	detemir	146	1	263	3.80	0.54	27.00
63	Vaasa	NPH	113	13	243	53.54	31.09	92.21
64	Vaasa	no DGN	183	2	107	18.61	4.65	74.41
65	Keski-Pohjanmaa	glargine	66	0	185	NA	NA	NA
66	Keski-Pohjanmaa	detemir	68	0	99	NA	NA	NA
67	Keski-Pohjanmaa	NPH	83	1	224	4.47	0.63	31.71
68	Keski-Pohjanmaa	no DGN	111	0	70	NA	NA	NA
69	Pohjois-Pohjanmaa	glargine	496	19	1368	13.89	8.86	21.77
70	Pohjois-Pohjanmaa	detemir	312	9	519	17.33	9.02	33.30
71	Pohjois-Pohjanmaa	NPH	370	18	891	20.20	12.73	32.06
72	Pohjois-Pohjanmaa	no DGN	575	4	255	15.66	5.88	41.72
73	Kainuu	glargine	74	3	162	18.48	5.96	57.30
74	Kainuu	detemir	70	2	132	15.11	3.78	60.43
75	Kainuu	NPH	115	6	265	22.63	10.16	50.36
76	Kainuu	no DGN	123	0	82	NA	NA	NA
77	Lansi-Pohja	glargine	83	5	191	26.21	10.91	62.96
78	Lansi-Pohja	detemir	26	1	45	22.32	3.14	158.47
79	Lansi-Pohja	NPH	65	8	160	50.15	25.08	100.28
80	Lansi-Pohja	no DGN	80	1	32	31.73	4.47	225.23
81	Lappi	glargine	100	3	229	13.09	4.22	40.57
82	Lappi	detemir	130	5	233	21.49	8.95	51.64
83	Lappi	NPH	85	1	185	5.39	0.76	38.28
84	Lappi	no DGN	162	1	172	5.82	0.82	41.28
85	Ahvenanmaa	glargine	42	0	119	NA	NA	NA
86	Ahvenanmaa	detemir	14	0	24	NA	NA	NA
87	Ahvenanmaa	NPH	28	1	70	14.32	2.02	101.67
88	Ahvenanmaa	no DGN	55	0	43	NA	NA	NA
89	Total	glargine	6619	272	18850	14.43	12.81	16.25
90	Total	detemir	5146	116	9520	12.18	10.16	14.62
91	Total	NPH	7194	454	19563	23.21	21.17	25.44
92	Total	no DGN	9440	100	6085	16.43	13.51	19.99

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C Appendix 3: Crude rate estimates for *recurrence* of hypoglycemic coma events

Table C.21: The number/risk time/incidence rate (95% CI) for recurrence of hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by gender.

S.No.	Gender	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	Male	glargine	288	154	736	209.27	178.69	245.07
2	Male	detemir	213	33	455	72.51	51.55	101.98
3	Male	NPH	287	197	668	294.74	256.32	338.91
4	Male	no DGN	404	42	270	155.28	114.76	210.11
5	Female	glargine	225	151	584	258.60	220.48	303.32
6	Female	detemir	184	84	351	239.31	193.23	296.37
7	Female	NPH	195	146	415	351.55	298.91	413.46
8	Female	no DGN	304	53	235	225.69	172.42	295.42
9	Total	glargine	513	305	1320	231.09	206.56	258.54
10	Total	detemir	397	117	806	145.14	121.08	173.97
11	Total	NPH	482	343	1084	316.51	284.73	351.84
12	Total	no DGN	708	95	505	188.00	153.75	229.87

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Table C.22: The number/risk time/incidence rate (95% CI) for recurrence of hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by age at start of follow up.

S.No.	Age group	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	0-9	glargine	124	41	310	132.27	97.39	179.64
2	0-9	detemir	175	37	360	102.85	74.52	141.95
3	0-9	NPH	181	118	405	291.57	243.44	349.22
4	0-9	no DGN	241	20	231	86.68	55.92	134.36
5	10-19	glargine	125	99	354	279.53	229.55	340.38
6	10-19	detemir	94	41	190	216.06	159.08	293.43
7	10-19	NPH	63	46	118	389.77	291.95	520.37
8	10-19	no DGN	149	16	93	172.96	105.96	282.32
9	20-29	glargine	59	37	166	222.77	161.40	307.46
10	20-29	detemir	28	3	56	53.47	17.24	165.78
11	20-29	NPH	36	26	105	248.67	169.31	365.23
12	20-29	no DGN	63	12	38	316.30	179.64	556.94
13	30-39	glargine	65	54	172	314.76	241.07	410.97
14	30-39	detemir	29	8	59	134.54	67.28	269.02
15	30-39	NPH	45	49	117	417.44	315.49	552.32
16	30-39	no DGN	74	6	44	137.84	61.93	306.81
17	40-49	glargine	53	16	120	133.24	81.63	217.49
18	40-49	detemir	37	26	81	319.67	217.65	469.51
19	40-49	NPH	61	53	150	353.74	270.25	463.03
20	40-49	no DGN	78	24	50	480.99	322.39	717.61
21	50-59	glargine	54	38	136	280.39	204.03	385.34
22	50-59	detemir	23	1	44	22.59	3.18	160.33
23	50-59	NPH	51	27	101	266.58	182.82	388.73
24	50-59	no DGN	61	12	28	423.27	240.38	745.32
25	60-69	glargine	22	17	41	416.73	259.06	670.35
26	60-69	detemir	7	1	13	76.28	10.75	541.44
27	60-69	NPH	24	14	51	276.09	163.53	466.15
28	60-69	no DGN	27	5	14	368.49	153.37	885.33
29	70-79	glargine	7	3	11	271.70	87.63	842.43
30	70-79	detemir	3	0	2	NA	NA	NA
31	70-79	NPH	13	8	30	267.68	133.87	535.26
32	70-79	no DGN	10	0	8	NA	NA	NA
33	80+	glargine	4	0	11	NA	NA	NA
34	80+	detemir	1	0	0	NA	NA	NA
35	80+	NPH	8	2	7	272.88	68.25	1091.11
36	80+	no DGN	5	0	1	NA	NA	NA
37	Total	glargine	513	305	1320	231.09	206.56	258.54
38	Total	detemir	397	117	806	145.14	121.08	173.97
39	Total	NPH	482	343	1084	316.51	284.73	351.84
40	Total	no DGN	708	95	505	188.00	153.75	229.87

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Table C.23: The number/risk time/incidence rate (95% CI) for recurrence of hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by calendar year at start of follow-up.

S.No.	Calender year	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	00-05	glargine	449	267	1226	217.70	193.09	245.44
2	00-05	detemir	328	92	711	129.31	105.41	158.63
3	00-05	NPH	442	316	1037	304.63	272.83	340.14
4	00-05	no DGN	622	87	472	184.43	149.48	227.56
5	06	glargine	27	11	46	237.79	131.69	429.39
6	06	detemir	28	12	54	223.10	126.70	392.83
7	06	NPH	25	19	35	539.60	344.18	845.96
8	06	no DGN	44	6	17	357.85	160.77	796.55
9	07	glargine	20	20	32	616.98	398.05	956.32
10	07	detemir	27	7	32	217.45	103.67	456.11
11	07	NPH	9	4	7	551.32	206.92	1468.97
12	07	no DGN	34	1	15	64.90	9.14	460.60
13	08	glargine	10	3	12	252.54	81.45	783.02
14	08	detemir	10	5	8	625.00	260.14	1501.61
15	08	NPH	4	4	3	1365.42	512.49	3637.85
16	08	no DGN	6	1	1	1373.12	193.42	9748.22
17	09	glargine	7	4	3	1435.17	538.64	3823.92
18	09	detemir	4	1	1	1404.81	197.88	9973.15
19	09	NPH	2	0	1	NA	NA	NA
20	09	no DGN	2	0	1	NA	NA	NA
21	Total	glargine	513	305	1320	231.09	206.56	258.54
22	Total	detemir	397	117	806	145.14	121.08	173.97
23	Total	NPH	482	343	1084	316.51	284.73	351.84
24	Total	no DGN	708	95	505	188.00	153.75	229.87

Naive T1 cohort. Data 28th December 2011

Table C.24: The number/risk time/incidence rate (95% CI) for recurrence of hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by calendar time since diagnose (first reimbursement decision or purchase).

S.No.	Time since diag	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	-1	glargine	473	285	1252	227.71	202.75	255.75
2	-1	detemir	380	113	772	146.33	121.69	175.96
3	-1	NPH	440	330	999	330.30	296.51	367.93
4	-1	no DGN	659	87	473	184.04	149.16	227.07
5	1-2	glargine	7	0	21	NA	NA	NA
6	1-2	detemir	2	1	5	212.73	29.96	1510.21
7	1-2	NPH	11	2	15	134.14	33.55	536.34
8	1-2	no DGN	12	1	8	128.70	18.13	913.68
9	2-5	glargine	12	6	16	376.03	168.93	837.01
10	2-5	detemir	8	2	13	156.56	39.15	626.00
11	2-5	NPH	16	5	41	123.45	51.38	296.58
12	2-5	no DGN	18	6	16	378.30	169.95	842.07
13	5-10	glargine	19	5	25	199.83	83.18	480.10
14	5-10	detemir	6	1	14	71.52	10.07	507.73
15	5-10	NPH	14	5	28	176.50	73.46	424.05
16	5-10	no DGN	18	1	9	111.66	15.73	792.44
17	10-	glargine	2	9	7	1333.03	693.61	2561.93
18	10-	detemir	1	0	2	NA	NA	NA
19	10-	NPH	1	1	1	1182.04	166.50	8391.66
20	10-	no DGN	1	0	0	NA	NA	NA
21	Total	glargine	513	305	1320	231.09	206.56	258.54
22	Total	detemir	397	117	806	145.14	121.08	173.97
23	Total	NPH	482	343	1084	316.51	284.73	351.84
24	Total	no DGN	708	95	505	188.00	153.75	229.87
Naive T1 cohort. Data 28th December 2011								

Table C.25: The number/risk time/incidence rate (95% CI) for recurrence of hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by history use of oral diabetes medication (A10BB) at start of follow-up.

S.No.	A10BB hist	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	No	glargine	480	295	1239	238.02	212.35	266.80
2	No	detemir	380	112	787	142.25	118.20	171.20
3	No	NPH	433	330	988	334.10	299.93	372.17
4	No	no DGN	660	89	474	187.67	152.46	231.00
5	Yes	glargine	33	10	80	124.32	66.89	231.05
6	Yes	detemir	17	5	19	265.75	110.61	638.49
7	Yes	NPH	49	13	96	135.45	78.65	233.27
8	Yes	no DGN	48	6	31	193.10	86.75	429.83
9	Total	glargine	513	305	1320	231.09	206.56	258.54
10	Total	detemir	397	117	806	145.14	121.08	173.97
11	Total	NPH	482	343	1084	316.51	284.73	351.84
12	Total	no DGN	708	95	505	188.00	153.75	229.87

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Table C.26: The number/risk time/incidence rate (95% CI) for recurrence of hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by hospitalization history at start of follow-up.

S.No.	Hosp hist	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	No	glargine	323	151	750	201.22	171.55	236.01
2	No	detemir	264	81	505	160.25	128.89	199.24
3	No	NPH	289	163	598	272.61	233.81	317.84
4	No	no DGN	442	42	298	140.92	104.15	190.69
5	Yes	glargine	190	154	569	270.47	230.95	316.75
6	Yes	detemir	133	36	301	119.73	86.37	165.99
7	Yes	NPH	193	180	486	370.55	320.19	428.84
8	Yes	no DGN	266	53	207	255.69	195.34	334.68
9	Total	glargine	513	305	1320	231.09	206.56	258.54
10	Total	detemir	397	117	806	145.14	121.08	173.97
11	Total	NPH	482	343	1084	316.51	284.73	351.84
12	Total	no DGN	708	95	505	188.00	153.75	229.87

Naive T1 cohort. Data 28th December 2011

Table C.27: The number/risk time/incidence rate (95% CI) for recurrence of hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by history use of insulin medication (A10A) at start of follow-up.

S.No.	A10A hist	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	No	glargine	466	273	1216	224.53	199.42	252.81
2	No	detemir	363	107	738	145.04	120.01	175.30
3	No	NPH	446	317	999	317.35	284.27	354.28
4	No	no DGN	644	78	464	168.17	134.70	209.96
5	Yes	glargine	47	32	104	307.81	217.67	435.26
6	Yes	detemir	34	10	68	146.11	78.62	271.55
7	Yes	NPH	36	26	85	306.66	208.81	450.36
8	Yes	no DGN	64	17	42	409.55	254.61	658.80
9	Total	glargine	513	305	1320	231.09	206.56	258.54
10	Total	detemir	397	117	806	145.14	121.08	173.97
11	Total	NPH	482	343	1084	316.51	284.73	351.84
12	Total	no DGN	708	95	505	188.00	153.75	229.87
Naive T1 cohort. Data 28th December 2011								

Table C.28: The number/risk time/incidence rate (95% CI) for recurrence of hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by hospital district at start of follow-up.

S.No.	Hosp. District	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	Unknown	glargine	179	89	498	178.54	145.05	219.77
2	Unknown	detemir	128	33	285	115.66	82.22	162.68
3	Unknown	NPH	201	145	559	259.29	220.34	305.13
4	Unknown	no DGN	248	56	235	238.18	183.30	309.49
5	HUS	glargine	101	64	257	248.55	194.54	317.55
6	HUS	detemir	96	18	184	98.00	61.75	155.53
7	HUS	NPH	86	37	139	265.99	192.72	367.12
8	HUS	no DGN	155	7	112	62.66	29.87	131.43
9	Varsinais-Suomi	glargine	14	3	34	87.81	28.32	272.28
10	Varsinais-Suomi	detemir	13	4	36	112.25	42.13	299.07
11	Varsinais-Suomi	NPH	17	3	29	102.64	33.10	318.23
12	Varsinais-Suomi	no DGN	20	0	7	NA	NA	NA
13	Satakunta	glargine	8	15	23	653.79	394.14	1084.48
14	Satakunta	detemir	8	0	15	NA	NA	NA
15	Satakunta	NPH	20	15	43	350.93	211.57	582.10
16	Satakunta	no DGN	15	8	7	1083.43	541.81	2166.46
17	Kantahame	glargine	17	31	42	739.42	520.01	1051.41
18	Kantahame	detemir	17	15	41	362.18	218.35	600.76
19	Kantahame	NPH	10	14	27	524.25	310.48	885.18
20	Kantahame	no DGN	26	4	11	359.59	134.96	958.09
21	Pirkanmaa	glargine	17	3	37	80.35	25.91	249.14
22	Pirkanmaa	detemir	15	14	20	714.97	423.44	1207.22
23	Pirkanmaa	NPH	8	0	11	NA	NA	NA
24	Pirkanmaa	no DGN	17	2	10	200.08	50.04	800.03
25	Paijat-Hame	glargine	26	21	62	341.14	222.43	523.22
26	Paijat-Hame	detemir	15	4	24	164.99	61.93	439.59
27	Paijat-Hame	NPH	29	38	64	590.14	429.41	811.04
28	Paijat-Hame	no DGN	39	11	23	470.24	260.42	849.13
29	Kymenlaakso	glargine	13	2	35	56.40	14.11	225.48
30	Kymenlaakso	detemir	5	0	12	NA	NA	NA
31	Kymenlaakso	NPH	11	3	9	344.25	111.03	1067.38
32	Kymenlaakso	no DGN	15	2	8	237.79	59.47	950.75
33	Etela-Karjala	glargine	7	2	5	433.79	108.49	1734.39
34	Etela-Karjala	detemir	5	1	9	117.56	16.56	834.58
35	Etela-Karjala	NPH	6	0	20	NA	NA	NA
36	Etela-Karjala	no DGN	8	0	6	NA	NA	NA
37	Etela-Savo	glargine	4	3	14	208.12	67.12	645.30
38	Etela-Savo	detemir	6	0	17	NA	NA	NA
39	Etela-Savo	NPH	4	1	14	69.92	9.85	496.33
40	Etela-Savo	no DGN	10	0	4	NA	NA	NA
41	Ita-Savo	glargine	1	0	0	NA	NA	NA
42	Ita-Savo	detemir	2	0	4	NA	NA	NA
43	Ita-Savo	NPH	3	3	7	448.16	144.54	1389.57
44	Ita-Savo	no DGN	2	0	0	NA	NA	NA
45	Pohjois-Karjala	glargine	5	1	12	83.72	11.79	594.23
46	Pohjois-Karjala	detemir	3	3	8	356.34	114.93	1104.88
47	Pohjois-Karjala	NPH	3	2	4	510.13	127.58	2039.75
48	Pohjois-Karjala	no DGN	4	0	1	NA	NA	NA
49	Pohjois-Savo	glargine	28	8	84	95.06	47.54	190.08
50	Pohjois-Savo	detemir	9	1	13	76.32	10.75	541.74
51	Pohjois-Savo	NPH	13	13	25	526.36	305.63	906.47
52	Pohjois-Savo	no DGN	28	0	23	NA	NA	NA
53	Keski-Suomi	glargine	22	15	62	241.10	145.35	399.93
54	Keski-Suomi	detemir	17	8	41	194.48	97.26	388.88
55	Keski-Suomi	NPH	16	27	23	1171.79	803.59	1708.69
56	Keski-Suomi	no DGN	32	1	13	77.30	10.89	548.65
57	Etela-Pohjanmaa	glargine	11	1	18	56.05	7.90	397.82
58	Etela-Pohjanmaa	detemir	8	1	6	158.53	22.33	1125.45
59	Etela-Pohjanmaa	NPH	5	15	9	1703.59	1027.09	2825.69
60	Etela-Pohjanmaa	no DGN	12	0	4	NA	NA	NA
61	Vaasa	glargine	14	22	30	723.59	476.45	1098.94
62	Vaasa	detemir	14	7	26	274.48	130.85	575.75
63	Vaasa	NPH	13	15	23	653.40	393.91	1083.83
64	Vaasa	no DGN	22	2	12	169.96	42.51	679.60
65	Keski-Pohjanmaa	glargine	0	0	0	NA	NA	NA
66	Keski-Pohjanmaa	detemir	0	0	0	NA	NA	NA
67	Keski-Pohjanmaa	NPH	1	2	0	5534.09	1384.03	22128.27
68	Keski-Pohjanmaa	no DGN	0	0	0	NA	NA	NA
69	Pohjois-Pohjanmaa	glargine	31	17	81	210.67	130.96	338.88
70	Pohjois-Pohjanmaa	detemir	24	5	46	108.52	45.17	260.72
71	Pohjois-Pohjanmaa	NPH	18	8	34	234.36	117.20	468.63
72	Pohjois-Pohjanmaa	no DGN	34	1	19	52.39	7.38	371.92
73	Kainuu	glargine	5	1	4	242.69	34.19	1722.62
74	Kainuu	detemir	3	0	4	NA	NA	NA
75	Kainuu	NPH	6	0	16	NA	NA	NA
76	Kainuu	no DGN	6	0	1	NA	NA	NA
77	Lansi-Pohja	glargine	7	4	11	349.61	131.22	931.42
78	Lansi-Pohja	detemir	3	0	6	NA	NA	NA
79	Lansi-Pohja	NPH	9	2	23	86.34	21.59	345.21
80	Lansi-Pohja	no DGN	8	0	1	NA	NA	NA
81	Lappi	glargine	3	3	8	368.07	118.71	1141.26
82	Lappi	detemir	6	3	10	296.15	95.51	918.25
83	Lappi	NPH	2	0	1	NA	NA	NA
84	Lappi	no DGN	6	1	6	169.10	23.82	1200.40
85	Ahvenanmaa	glargine	0	0	0	NA	NA	NA
86	Ahvenanmaa	detemir	0	0	0	NA	NA	NA
87	Ahvenanmaa	NPH	1	0	3	NA	NA	NA
88	Ahvenanmaa	no DGN	1	0	1	NA	NA	NA
89	Total	glargine	513	305	1320	231.09	206.56	258.54
90	Total	detemir	397	117	806	145.14	121.08	173.97
91	Total	NPH	482	343	1084	316.51	284.73	351.84
92	Total	no DGN	708	95	505	188.00	153.75	229.87

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D Appendix 4: Crude rate estimates for *all* severe hypoglycemic coma events

Table D.29: The number/risk time/incidence rate (95% CI) of all hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by gender.

S.No.	Gender	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	Male	glargine	4201	322	12677	25.40	22.77	28.33
2	Male	detemir	3019	91	5734	15.87	12.92	19.49
3	Male	NPH	4336	468	13153	35.58	32.50	38.96
4	Male	no DGN	5970	102	3919	26.03	21.44	31.60
5	Female	glargine	2651	255	7508	33.96	30.04	38.40
6	Female	detemir	2399	142	4598	30.88	26.20	36.40
7	Female	NPH	2858	329	7519	43.75	39.27	48.75
8	Female	no DGN	3794	93	2680	34.70	28.32	42.52
9	Total	glargine	6852	577	20185	28.59	26.35	31.02
10	Total	detemir	5418	233	10333	22.55	19.83	25.64
11	Total	NPH	7194	797	20672	38.55	35.97	41.33
12	Total	no DGN	9764	195	6599	29.55	25.68	34.00

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Table D.30: The number/risk time/incidence rate (95% CI) of all hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by age at start of follow up.

S.No.	Age group	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	0-9	glargine	1263	73	3169	23.04	18.31	28.97
2	0-9	detemir	2156	79	3941	20.05	16.08	24.99
3	0-9	NPH	2437	294	6604	44.52	39.71	49.91
4	0-9	no DGN	2702	49	2112	23.20	17.53	30.69
5	10-19	glargine	1884	172	6448	26.67	22.97	30.97
6	10-19	detemir	1352	80	2758	29.01	23.30	36.11
7	10-19	NPH	1390	101	3558	28.38	23.35	34.50
8	10-19	no DGN	2452	41	1396	29.36	21.62	39.88
9	20-29	glargine	964	78	2996	26.03	20.85	32.50
10	20-29	detemir	578	10	1188	8.41	4.53	15.64
11	20-29	NPH	670	59	2143	27.53	21.33	35.53
12	20-29	no DGN	1139	19	658	28.88	18.42	45.27
13	30-39	glargine	837	94	2579	36.45	29.78	44.62
14	30-39	detemir	454	14	888	15.76	9.33	26.61
15	30-39	NPH	698	90	2188	41.14	33.46	50.58
16	30-39	no DGN	1018	17	735	23.12	14.37	37.19
17	40-49	glargine	740	48	2119	22.66	17.07	30.06
18	40-49	detemir	384	37	746	49.58	35.92	68.43
19	40-49	NPH	707	110	2153	51.10	42.39	61.60
20	40-49	no DGN	945	37	675	54.79	39.69	75.61
21	50-59	glargine	684	71	1833	38.73	30.69	48.87
22	50-59	detemir	290	8	541	14.80	7.40	29.60
23	50-59	NPH	682	76	2174	34.95	27.91	43.76
24	50-59	no DGN	837	24	542	44.29	29.69	66.08
25	60-69	glargine	324	32	707	45.28	32.02	64.02
26	60-69	detemir	142	3	206	14.59	4.71	45.24
27	60-69	NPH	385	38	1271	29.91	21.76	41.10
28	60-69	no DGN	434	7	323	21.67	10.33	45.46
29	70-79	glargine	109	7	251	27.89	13.30	58.51
30	70-79	detemir	49	2	54	37.15	9.29	148.53
31	70-79	NPH	155	20	445	44.90	28.97	69.60
32	70-79	no DGN	159	0	104	NA	NA	NA
33	80+	glargine	47	2	83	24.05	6.02	96.17
34	80+	detemir	13	0	11	NA	NA	NA
35	80+	NPH	70	9	135	66.51	34.60	127.83
36	80+	no DGN	78	1	53	18.69	2.63	132.68
37	Total	glargine	6852	577	20185	28.59	26.35	31.02
38	Total	detemir	5418	233	10333	22.55	19.83	25.64
39	Total	NPH	7194	797	20672	38.55	35.97	41.33
40	Total	no DGN	9764	195	6599	29.55	25.68	34.00

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Table D.31: The number/risk time/incidence rate (95% CI) of all hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by calendar year at start of follow-up.

S.No.	Calender year	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	00-05	glargine	4425	476	16248	29.30	26.78	32.05
2	00-05	detemir	2796	165	6433	25.65	22.02	29.88
3	00-05	NPH	5791	730	18731	38.97	36.24	41.90
4	00-05	no DGN	6648	175	5649	30.98	26.71	35.93
5	06	glargine	601	35	1544	22.67	16.28	31.58
6	06	detemir	722	29	1683	17.24	11.98	24.80
7	06	NPH	532	42	939	44.71	33.04	60.49
8	06	no DGN	1103	11	462	23.83	13.20	43.03
9	07	glargine	676	42	1383	30.38	22.45	41.10
10	07	detemir	721	22	1249	17.61	11.60	26.75
11	07	NPH	445	15	650	23.08	13.92	38.29
12	07	no DGN	1036	6	311	19.26	8.65	42.88
13	08	glargine	591	12	755	15.90	9.03	28.00
14	08	detemir	611	13	733	17.74	10.30	30.55
15	08	NPH	272	7	284	24.66	11.75	51.72
16	08	no DGN	661	3	128	23.47	7.57	72.76
17	09	glargine	559	12	256	46.84	26.60	82.48
18	09	detemir	568	4	235	17.01	6.39	45.33
19	09	NPH	154	3	68	44.41	14.32	137.70
20	09	no DGN	316	0	50	NA	NA	NA
21	Total	glargine	6852	577	20185	28.59	26.35	31.02
22	Total	detemir	5418	233	10333	22.55	19.83	25.64
23	Total	NPH	7194	797	20672	38.55	35.97	41.33
24	Total	no DGN	9764	195	6599	29.55	25.68	34.00

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Table D.32: The number/risk time/incidence rate (95% CI) of all hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by calendar time since diagnose (first reimbursement decision or purchase).

S.No.	Time since diag	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	-1	glargine	6317	532	18782	28.32	26.02	30.84
2	-1	detemir	5150	225	9865	22.81	20.01	25.99
3	-1	NPH	6623	749	18772	39.90	37.14	42.86
4	-1	no DGN	9026	173	5979	28.93	24.93	33.58
5	1-2	glargine	108	4	322	12.41	4.66	33.06
6	1-2	detemir	66	1	137	7.29	1.03	51.75
7	1-2	NPH	106	11	314	34.99	19.38	63.18
8	1-2	no DGN	151	4	140	28.57	10.72	76.13
9	2-5	glargine	173	12	479	25.04	14.22	44.08
10	2-5	detemir	80	3	140	21.43	6.91	66.44
11	2-5	NPH	204	18	752	23.93	15.08	37.98
12	2-5	no DGN	257	11	227	48.54	26.88	87.66
13	5-10	glargine	182	18	444	40.57	25.56	64.39
14	5-10	detemir	83	3	140	21.47	6.93	66.56
15	5-10	NPH	205	17	716	23.73	14.75	38.18
16	5-10	no DGN	251	7	213	32.92	15.70	69.06
17	10-	glargine	72	11	157	69.89	38.71	126.20
18	10-	detemir	39	1	51	19.56	2.76	138.86
19	10-	NPH	56	2	118	16.99	4.25	67.94
20	10-	no DGN	79	0	41	NA	NA	NA
21	Total	glargine	6852	577	20185	28.59	26.35	31.02
22	Total	detemir	5418	233	10333	22.55	19.83	25.64
23	Total	NPH	7194	797	20672	38.55	35.97	41.33
24	Total	no DGN	9764	195	6599	29.55	25.68	34.00

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Table D.33: The number/risk time/incidence rate (95% CI) of all hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by history use of oral diabetes medication (A10BB) at start of follow-up.

S.No.	A10BB hist	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	No	glargine	6414	548	19025	28.80	26.49	31.32
2	No	detemir	5225	223	10022	22.25	19.51	25.37
3	No	NPH	6660	744	18870	39.43	36.69	42.36
4	No	no DGN	9123	173	6113	28.30	24.38	32.85
5	Yes	glargine	438	29	1160	25.00	17.37	35.97
6	Yes	detemir	193	10	311	32.16	17.31	59.78
7	Yes	NPH	534	53	1802	29.41	22.47	38.50
8	Yes	no DGN	641	22	487	45.20	29.76	68.65
9	Total	glargine	6852	577	20185	28.59	26.35	31.02
10	Total	detemir	5418	233	10333	22.55	19.83	25.64
11	Total	NPH	7194	797	20672	38.55	35.97	41.33
12	Total	no DGN	9764	195	6599	29.55	25.68	34.00

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Table D.34: The number/risk time/incidence rate (95% CI) of all hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by hospitalization history at start of follow-up.

S.No.	Hosp hist	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	No	glargine	5916	337	17170	19.63	17.64	21.84
2	No	detemir	4814	166	9047	18.35	15.76	21.36
3	No	NPH	6267	425	18052	23.54	21.41	25.89
4	No	no DGN	8499	123	5777	21.29	17.84	25.41
5	Yes	glargine	936	240	3015	79.61	70.15	90.34
6	Yes	detemir	604	67	1285	52.13	41.03	66.23
7	Yes	NPH	927	372	2620	142.00	128.28	157.19
8	Yes	no DGN	1265	72	822	87.54	69.49	110.29
9	Total	glargine	6852	577	20185	28.59	26.35	31.02
10	Total	detemir	5418	233	10333	22.55	19.83	25.64
11	Total	NPH	7194	797	20672	38.55	35.97	41.33
12	Total	no DGN	9764	195	6599	29.55	25.68	34.00

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Table D.35: The number/risk time/incidence rate (95% CI) of all hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by history use of insulin medication (A10A) at start of follow-up.

S.No.	A10A hist	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	No	glargine	6065	519	17973	28.88	26.50	31.47
2	No	detemir	4923	210	9397	22.35	19.52	25.58
3	No	NPH	6707	742	19303	38.44	35.77	41.31
4	No	no DGN	8823	164	5967	27.49	23.59	32.03
5	Yes	glargine	787	58	2212	26.21	20.27	33.91
6	Yes	detemir	495	23	935	24.59	16.34	37.00
7	Yes	NPH	487	55	1370	40.16	30.83	52.30
8	Yes	no DGN	941	31	633	49.01	34.47	69.69
9	Total	glargine	6852	577	20185	28.59	26.35	31.02
10	Total	detemir	5418	233	10333	22.55	19.83	25.64
11	Total	NPH	7194	797	20672	38.55	35.97	41.33
12	Total	no DGN	9764	195	6599	29.55	25.68	34.00

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Table D.36: The number/risk time/incidence rate (95% CI) of all hypoglycemic coma events for detemir insulin, glargine insulin, and NPH-insulin stratified by hospital district at start of follow-up.

S.No.	Hosp. District	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	Unknown	glargine	1393	151	5119	29.50	25.15	34.60
2	Unknown	detemir	857	51	2030	25.12	19.09	33.06
3	Unknown	NPH	2232	331	9480	34.91	31.35	38.89
4	Unknown	no DGN	2186	99	2524	39.23	32.21	47.77
5	HUS	glargine	1553	125	4375	28.57	23.98	34.05
6	HUS	detemir	1313	47	2365	19.87	14.93	26.45
7	HUS	NPH	1385	123	2773	44.36	37.18	52.94
8	HUS	no DGN	2194	24	1318	18.21	12.21	27.17
9	Varsinais-Suomi	glargine	420	8	1127	7.10	3.55	14.20
10	Varsinais-Suomi	detemir	361	6	600	10.00	4.49	22.27
11	Varsinais-Suomi	NPH	397	21	933	22.52	14.68	34.54
12	Varsinais-Suomi	no DGN	568	1	238	4.20	0.59	29.83
13	Satakunta	glargine	183	17	457	37.16	23.10	59.78
14	Satakunta	detemir	282	0	531	NA	NA	NA
15	Satakunta	NPH	284	35	764	45.79	32.88	63.78
16	Satakunta	no DGN	370	9	174	51.84	26.97	99.63
17	Kantahame	glargine	160	43	391	109.95	81.54	148.25
18	Kantahame	detemir	197	25	521	47.94	32.40	70.96
19	Kantahame	NPH	132	25	295	84.73	57.25	125.39
20	Kantahame	no DGN	265	6	129	46.54	20.91	103.60
21	Pirkanmaa	glargine	420	17	1119	15.19	9.44	24.44
22	Pirkanmaa	detemir	359	21	544	38.62	25.18	59.24
23	Pirkanmaa	NPH	465	8	1064	7.52	3.76	15.03
24	Pirkanmaa	no DGN	586	5	328	15.25	6.35	36.64
25	Paijat-Hame	glargine	202	38	549	69.22	50.37	95.13
26	Paijat-Hame	detemir	154	10	251	39.92	21.48	74.19
27	Paijat-Hame	NPH	288	62	657	94.39	73.59	121.06
28	Paijat-Hame	no DGN	300	16	133	120.74	73.97	197.08
29	Kymenlaakso	glargine	204	12	518	23.18	13.17	40.82
30	Kymenlaakso	detemir	133	0	198	NA	NA	NA
31	Kymenlaakso	NPH	193	9	414	21.73	11.31	41.76
32	Kymenlaakso	no DGN	264	7	127	55.03	26.24	115.44
33	Etela-Karjala	glargine	154	7	454	15.43	7.35	32.36
34	Etela-Karjala	detemir	137	4	258	15.48	5.81	41.24
35	Etela-Karjala	NPH	104	6	200	30.03	13.49	66.83
36	Etela-Karjala	no DGN	205	0	98	NA	NA	NA
37	Etela-Savo	glargine	76	7	235	29.78	14.20	62.46
38	Etela-Savo	detemir	99	4	198	20.24	7.60	53.92
39	Etela-Savo	NPH	129	5	297	16.82	7.00	40.42
40	Etela-Savo	no DGN	160	0	91	NA	NA	NA
41	Ita-Savo	glargine	55	0	180	NA	NA	NA
42	Ita-Savo	detemir	46	0	77	NA	NA	NA
43	Ita-Savo	NPH	52	6	124	48.58	21.82	108.13
44	Ita-Savo	no DGN	75	0	37	NA	NA	NA
45	Pohjois-Karjala	glargine	217	4	589	6.80	2.55	18.10
46	Pohjois-Karjala	detemir	144	5	269	18.59	7.74	44.67
47	Pohjois-Karjala	NPH	159	5	364	13.75	5.72	33.04
48	Pohjois-Karjala	no DGN	251	0	97	NA	NA	NA
49	Pohjois-Savo	glargine	328	22	944	23.31	15.35	35.40
50	Pohjois-Savo	detemir	109	6	190	31.58	14.19	70.30
51	Pohjois-Savo	NPH	164	25	305	82.07	55.46	121.45
52	Pohjois-Savo	no DGN	318	8	207	38.68	19.35	77.35
53	Keski-Suomi	glargine	317	27	982	27.51	18.86	40.11
54	Keski-Suomi	detemir	260	16	571	28.03	17.17	45.75
55	Keski-Suomi	NPH	196	43	482	89.28	66.21	120.37
56	Keski-Suomi	no DGN	432	6	197	30.53	13.72	67.96
57	Etela-Pohjanmaa	glargine	175	9	483	18.64	9.70	35.82
58	Etela-Pohjanmaa	detemir	171	5	322	15.53	6.46	37.31
59	Etela-Pohjanmaa	NPH	155	18	381	47.26	29.77	75.01
60	Etela-Pohjanmaa	no DGN	252	2	100	19.94	4.99	79.73
61	Vaasa	glargine	117	35	304	115.25	82.75	160.52
62	Vaasa	detemir	157	8	288	27.74	13.87	55.46
63	Vaasa	NPH	113	28	266	105.09	72.56	152.20
64	Vaasa	no DGN	198	4	119	33.50	12.57	89.27
65	Keski-Pohjanmaa	glargine	66	0	185	NA	NA	NA
66	Keski-Pohjanmaa	detemir	68	0	99	NA	NA	NA
67	Keski-Pohjanmaa	NPH	83	3	224	13.38	4.31	41.48
68	Keski-Pohjanmaa	no DGN	111	0	70	NA	NA	NA
69	Pohjois-Pohjanmaa	glargine	509	36	1450	24.82	17.91	34.41
70	Pohjois-Pohjanmaa	detemir	326	14	566	24.72	14.64	41.73
71	Pohjois-Pohjanmaa	NPH	370	26	927	28.06	19.11	41.22
72	Pohjois-Pohjanmaa	no DGN	598	5	276	18.10	7.54	43.50
73	Kainuu	glargine	76	4	166	24.03	9.02	64.01
74	Kainuu	detemir	71	2	137	14.61	3.65	58.44
75	Kainuu	NPH	115	6	282	21.30	9.57	47.41
76	Kainuu	no DGN	126	0	83	NA	NA	NA
77	Lansi-Pohja	glargine	85	9	202	44.49	23.15	85.51
78	Lansi-Pohja	detemir	28	1	50	19.87	2.80	141.01
79	Lansi-Pohja	NPH	65	10	183	54.71	29.44	101.68
80	Lansi-Pohja	no DGN	83	1	33	30.54	4.30	216.76
81	Lappi	glargine	100	6	238	25.23	11.33	56.15
82	Lappi	detemir	132	8	243	32.91	16.46	65.80
83	Lappi	NPH	85	1	187	5.36	0.75	38.04
84	Lappi	no DGN	166	2	178	11.24	2.81	44.94
85	Ahvenanmaa	glargine	42	0	119	NA	NA	NA
86	Ahvenanmaa	detemir	14	0	24	NA	NA	NA
87	Ahvenanmaa	NPH	28	1	73	13.76	1.94	97.67
88	Ahvenanmaa	no DGN	56	0	44	NA	NA	NA
89	Total	glargine	6852	577	20185	28.59	26.35	31.02
90	Total	detemir	5418	233	10333	22.55	19.83	25.64
91	Total	NPH	7194	797	20672	38.55	35.97	41.33
92	Total	no DGN	9764	195	6599	29.55	25.68	34.00

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E Appendix 5: Cox's proportional hazards models

E.1 First hypoglycemic coma event

Table E.37: The risk for the first hypoglycemic coma event estimated by the Cox's proportional hazards model. Hospital district as strata. Glargine insulin as reference

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulin detemir	-0.02	0.117	0.98	0.779	1.233	0.864
2	insulin NPH	0.205	0.101	1.228	1.007	1.497	0.043
3	insulin no DGN	0.227	0.129	1.255	0.976	1.615	0.077
4	gender Female	0.118	0.068	1.125	0.985	1.285	0.083
5	agegroup2 0-9	0.356	0.125	1.428	1.117	1.826	0.005
6	agegroup2 10-19	0.128	0.129	1.137	0.882	1.465	0.322
7	agegroup2 30-39	0.253	0.148	1.287	0.964	1.719	0.087
8	agegroup2 40-49	0.478	0.145	1.613	1.214	2.142	<0.001
9	agegroup2 50-59	0.389	0.15	1.476	1.099	1.981	0.01
10	agegroup2 60-69	0.313	0.195	1.368	0.932	2.006	0.109
11	agegroup2 70-79	0.502	0.271	1.652	0.972	2.809	0.064
12	agegroup2 80+	0.801	0.353	2.228	1.116	4.448	0.023
13	BB.stfup Yes	0.404	0.152	1.498	1.112	2.017	0.008
14	useBB Yes	-0.748	0.247	0.473	0.292	0.767	0.002
15	A10A.stfup Yes	0.001	0.127	1.001	0.78	1.285	0.991
16	useA10A Yes	-0.176	0.093	0.839	0.699	1.006	0.058
17	hosph.stfup Yes	1.363	0.071	3.909	3.4	4.493	<0.001
18	Switch YES	0.172	0.111	1.187	0.955	1.475	0.121
19	time2diag 1-2	-0.068	0.268	0.934	0.552	1.578	0.798
20	time2diag 2-5	-0.156	0.225	0.855	0.55	1.331	0.488
21	time2diag 5-10	0.133	0.205	1.142	0.764	1.709	0.517
22	time2diag 10-	-0.38	0.514	0.684	0.25	1.874	0.46
23	calyear2 06	-0.409	0.136	0.664	0.508	0.867	0.003
24	calyear2 07	-0.48	0.154	0.619	0.458	0.837	0.002
25	calyear2 08	-0.858	0.228	0.424	0.271	0.663	<0.001
26	calyear2 09	-0.634	0.284	0.53	0.304	0.926	0.026

Naive T1 cohort. Data 28th December 2011

Table E.38: The risk for the first hypoglycemic coma event estimated by the Cox's proportional hazards model. Hospital district as strata. NPH insulin as reference

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulinNPH detemir	-0.225	0.135	0.798	0.613	1.04	0.095
2	insulinNPH glargine	-0.205	0.101	0.814	0.668	0.993	0.043
3	insulinNPH no DGN	0.022	0.119	1.022	0.809	1.292	0.853
4	gender Female	0.118	0.068	1.125	0.985	1.285	0.083
5	agegroup2 0-9	0.356	0.125	1.428	1.117	1.826	0.005
6	agegroup2 10-19	0.128	0.129	1.137	0.882	1.465	0.322
7	agegroup2 30-39	0.253	0.148	1.287	0.964	1.719	0.087
8	agegroup2 40-49	0.478	0.145	1.613	1.214	2.142	<0.001
9	agegroup2 50-59	0.389	0.15	1.476	1.099	1.981	0.01
10	agegroup2 60-69	0.313	0.195	1.368	0.932	2.006	0.109
11	agegroup2 70-79	0.502	0.271	1.652	0.972	2.809	0.064
12	agegroup2 80+	0.801	0.353	2.228	1.116	4.448	0.023
13	BB.stfup Yes	0.404	0.152	1.498	1.112	2.017	0.008
14	useBB Yes	-0.748	0.247	0.473	0.292	0.767	0.002
15	A10A.stfup Yes	0.001	0.127	1.001	0.78	1.285	0.991
16	useA10A Yes	-0.176	0.093	0.839	0.699	1.006	0.058
17	hosph.stfup Yes	1.363	0.071	3.909	3.4	4.493	<0.001
18	Switch YES	0.172	0.111	1.187	0.955	1.475	0.121
19	time2diag 1-2	-0.068	0.268	0.934	0.552	1.578	0.798
20	time2diag 2-5	-0.156	0.225	0.855	0.55	1.331	0.488
21	time2diag 5-10	0.133	0.205	1.142	0.764	1.709	0.517
22	time2diag 10-	-0.38	0.514	0.684	0.25	1.874	0.46
23	calyear2 06	-0.409	0.136	0.664	0.508	0.867	0.003
24	calyear2 07	-0.48	0.154	0.619	0.458	0.837	0.002
25	calyear2 08	-0.858	0.228	0.424	0.271	0.663	<0.001
26	calyear2 09	-0.634	0.284	0.53	0.304	0.926	0.026

Naive T1 cohort. Data 28th December 2011

Table E.39: Sensitivity analysis for the risk of first hypoglycemic coma event estimated by the Cox's proportional hazards model. Hospital district as strata. NPH insulin as reference. I) Original estimates, II) Estimates assuming no gaps in use of detemir, glargine, and NPH-insulins, III) Estimates considering hypoglycemic events with main diagnose E10.00 or E11.00 only,IV) Periods with overlapping use of detemir, glargine, or NPH-insulins are removed, V) follow-up ends at first switch.

S.No.	Variables	I			II			III			IV			V		
		HR	lower	upper	HR	lower	upper	HR	lower	upper	HR	lower	upper	HR	lower	upper
1	insulinNPH detemir	0.798	0.613	1.04	0.791	0.609	1.029	0.872	0.664	1.143	0.846	0.645	1.11	0.662	0.504	0.868
2	insulinNPH glargine	0.814	0.668	0.993	0.796	0.653	0.97	0.841	0.684	1.033	0.831	0.676	1.021	0.839	0.683	1.031
3	insulinNPH no DGN	1.022	0.809	1.292	NA	NA	NA	0.993	0.774	1.274	1.033	0.805	1.326	1.059	0.825	1.359
4	gender Female	1.125	0.985	1.285	1.125	0.985	1.285	1.12	0.976	1.285	1.129	0.984	1.296	1.121	0.976	1.286
5	agegroup2 0-9	1.428	1.117	1.826	1.427	1.115	1.825	1.427	1.112	1.83	1.4	1.091	1.796	1.44	1.123	1.848
6	agegroup2 10-19	1.137	0.882	1.465	1.14	0.884	1.469	1.137	0.879	1.469	1.139	0.881	1.473	1.012	0.783	1.308
7	agegroup2 30-39	1.287	0.964	1.719	1.285	0.962	1.716	1.233	0.917	1.659	1.279	0.951	1.721	1.297	0.964	1.745
8	agegroup2 40-49	1.613	1.214	2.142	1.605	1.208	2.132	1.484	1.106	1.99	1.602	1.194	2.149	1.555	1.16	2.086
9	agegroup2 50-59	1.476	1.099	1.981	1.465	1.091	1.967	1.297	0.952	1.766	1.45	1.065	1.976	1.407	1.033	1.917
10	agegroup2 60-69	1.368	0.932	2.006	1.356	0.925	1.99	1.285	0.86	1.92	1.366	0.914	2.041	1.409	0.943	2.106
11	agegroup2 70-79	1.652	0.972	2.809	1.63	0.959	2.771	1.272	0.693	2.335	1.611	0.877	2.956	1.65	0.899	3.029
12	agegroup2 80+	2.228	1.116	4.448	2.22	1.112	4.435	0.948	0.338	2.661	2.319	0.826	6.509	2.364	0.842	6.634
13	BB.stfup Yes	1.498	1.112	2.017	1.495	1.11	2.013	1.41	1.016	1.955	1.393	1.004	1.932	1.562	1.126	2.167
14	useBB Yes	0.473	0.292	0.767	0.471	0.291	0.765	0.532	0.316	0.896	0.507	0.301	0.854	0.51	0.303	0.86
15	A10A.stfup Yes	1.001	0.78	1.285	1.007	0.785	1.293	1.039	0.802	1.345	1.012	0.782	1.311	1.098	0.848	1.422
16	useA10A Yes	0.839	0.699	1.006	0.825	0.692	0.984	0.849	0.701	1.029	0.833	0.687	1.009	0.8	0.66	0.969
17	hosph.stfup Yes	3.909	3.4	4.493	3.906	3.398	4.491	3.961	3.43	4.575	4.007	3.469	4.628	5.102	4.417	5.892
18	Switch YES	1.187	0.955	1.475	1.212	0.967	1.519	1.203	0.96	1.506	1.079	0.862	1.352	NA	NA	NA
19	time2diag 1-2	0.934	0.552	1.578	0.933	0.552	1.577	0.779	0.428	1.417	0.966	0.53	1.758	0.929	0.511	1.692
20	time2diag 2-5	0.855	0.55	1.331	0.854	0.549	1.328	0.802	0.492	1.305	0.887	0.545	1.443	0.89	0.547	1.449
21	time2diag 5-10	1.142	0.764	1.709	1.139	0.761	1.704	1.168	0.759	1.798	1.071	0.696	1.648	0.794	0.516	1.222
22	time2diag 10-	0.684	0.25	1.874	0.681	0.249	1.867	0.622	0.195	1.978	0.536	0.169	1.706	0.384	0.121	1.221
23	calyear2 06	0.664	0.508	0.867	0.669	0.511	0.876	0.64	0.485	0.845	0.62	0.47	0.819	0.668	0.506	0.882
24	calyear2 07	0.619	0.458	0.837	0.626	0.462	0.848	0.631	0.463	0.859	0.59	0.433	0.803	0.643	0.472	0.875
25	calyear2 08	0.424	0.271	0.663	0.428	0.273	0.671	0.383	0.238	0.619	0.427	0.265	0.69	0.421	0.261	0.68
26	calyear2 09	0.53	0.304	0.926	0.539	0.308	0.943	0.388	0.202	0.743	0.522	0.273	1.001	0.587	0.307	1.126

Naive T1 cohort. Data 28th December 2011

Table E.40: Sensitivity analysis for the risk of first hypoglycemic coma event estimated by the Cox's proportional hazards model. Hospital district as strata. NPH insulin as reference. I) Original estimates, II-IV) Inverse propensity score weighting (IPW). Individuals weighted by the inverse of the probability to start on their insulin conditional on covariates (gender, typedm, agegroup2, BB.stfup, A10A.stfup, hosp.stfup, time2diag), truncation points givenin paranthesis, III) IPW-weights with no truncation.

S.No.	Variables	I			II [0.1/0.9]			III [0.01/0.99]			IV [0.001/0.999]			V [0/1]		
		HR	lower	upper	HR	lower	upper	HR	lower	upper	HR	lower	upper	HR	lower	upper
1	insulinNPH detemir	0.798	0.613	1.04	0.737	0.55	0.988	0.795	0.508	1.243	0.821	0.525	1.285	0.836	0.534	1.307
2	insulinNPH glargine	0.814	0.668	0.993	0.789	0.638	0.976	0.736	0.581	0.932	0.734	0.58	0.929	0.732	0.578	0.927
3	insulinNPH no DGN	1.022	0.809	1.292	1.006	0.764	1.326	1.085	0.72	1.637	1.232	0.817	1.858	1.239	0.822	1.869
4	gender Female	1.125	0.985	1.285	1.12	0.959	1.308	0.998	0.797	1.248	0.941	0.752	1.178	0.936	0.748	1.171
5	agegroup2 0-9	1.428	1.117	1.826	1.292	0.984	1.697	1.314	0.928	1.862	1.425	1.006	2.019	1.444	1.019	2.046
6	agegroup2 10-19	1.137	0.882	1.465	1.058	0.8	1.4	1.196	0.865	1.655	1.447	1.046	2.002	1.453	1.05	2.01
7	agegroup2 30-39	1.287	0.964	1.719	1.252	0.905	1.734	1.219	0.87	1.709	1.162	0.829	1.628	1.163	0.83	1.629
8	agegroup2 40-49	1.613	1.214	2.142	1.473	1.067	2.034	1.507	1.063	2.136	1.36	0.96	1.928	1.352	0.954	1.917
9	agegroup2 50-59	1.476	1.099	1.981	1.479	1.065	2.054	1.684	1.166	2.433	2.135	1.479	3.084	2.156	1.493	3.114
10	agegroup2 60-69	1.368	0.932	2.006	1.524	0.98	2.371	1.689	1.02	2.797	1.538	0.929	2.548	1.423	0.859	2.356
11	agegroup2 70-79	1.652	0.972	2.809	1.496	0.834	2.686	1.627	0.843	3.141	1.526	0.791	2.945	1.528	0.792	2.949
12	agegroup2 80+	2.228	1.116	4.448	1.201	0.542	2.663	1.098	0.468	2.578	1.083	0.461	2.542	1.065	0.454	2.5
13	BB.stfup Yes	1.498	1.112	2.017	1.371	0.954	1.97	1.18	0.764	1.821	1.003	0.65	1.548	1.013	0.656	1.564
14	useBB Yes	0.473	0.292	0.767	0.512	0.291	0.899	0.487	0.259	0.918	0.535	0.284	1.007	0.539	0.286	1.016
15	A10A.stfup Yes	1.001	0.78	1.285	0.955	0.72	1.266	0.976	0.642	1.483	1.201	0.79	1.827	1.212	0.797	1.843
16	useA10A Yes	0.839	0.699	1.006	0.805	0.653	0.993	0.792	0.587	1.069	0.752	0.558	1.015	0.758	0.562	1.022
17	hosph.stfup Yes	3.909	3.4	4.493	4.081	3.43	4.856	3.998	3.125	5.114	4.815	3.764	6.159	4.925	3.85	6.3
18	Switch YES	1.187	0.955	1.475	1.292	1.019	1.638	1.444	1.054	1.977	1.45	1.059	1.986	1.453	1.061	1.989
19	time2diag 1-2	0.934	0.552	1.578	0.907	0.524	1.571	0.835	0.465	1.499	0.774	0.431	1.39	0.768	0.428	1.379
20	time2diag 2-5	0.855	0.55	1.331	0.91	0.545	1.518	1.18	0.583	2.386	1.218	0.602	2.465	1.225	0.606	2.479
21	time2diag 5-10	1.142	0.764	1.709	1.287	0.813	2.038	1.536	0.869	2.717	1.665	0.942	2.944	1.696	0.959	2.999
22	time2diag 10-	0.684	0.25	1.874	0.7	0.226	2.17	0.656	0.208	2.067	0.702	0.223	2.214	0.712	0.226	2.244
23	calyear2 06	0.664	0.508	0.867	0.688	0.511	0.927	0.66	0.457	0.954	0.657	0.455	0.949	0.655	0.453	0.946
24	calyear2 07	0.619	0.458	0.837	0.599	0.432	0.83	0.586	0.399	0.861	0.564	0.383	0.828	0.559	0.38	0.821
25	calyear2 08	0.424	0.271	0.663	0.418	0.259	0.674	0.419	0.236	0.746	0.412	0.232	0.732	0.409	0.23	0.727
26	calyear2 09	0.53	0.304	0.926	0.507	0.282	0.914	0.519	0.26	1.038	0.475	0.238	0.949	0.47	0.235	0.939

Naive T1 cohort. Data 28th December 2011

Table E.41: sensitivity analysis for the risk for the first hypoglycemic coma event estimated by the Cox's proportional hazards model. The probability conditional on covariates (gender, typedm, agegroup2, calyear2, BB.stfup, A10A.stfup, hosph.stfup, time2diag) to initiate treatment with detemir and glargine as two additional covariates. Hospital district as strata. NPH insulin as reference

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulinNPH detemir	-0.219	0.136	0.804	0.616	1.049	0.107
2	insulinNPH glargine	-0.204	0.102	0.815	0.668	0.995	0.044
3	insulinNPH no DGN	0.023	0.12	1.024	0.81	1.294	0.844
4	gender Female	0.117	0.07	1.124	0.981	1.289	0.093
5	agegroup2 0-9	0.352	0.374	1.423	0.683	2.963	0.346
6	agegroup2 10-19	0.14	0.135	1.151	0.884	1.498	0.297
7	agegroup2 30-39	0.247	0.168	1.281	0.921	1.78	0.141
8	agegroup2 40-49	0.47	0.2	1.6	1.081	2.37	0.019
9	agegroup2 50-59	0.375	0.209	1.455	0.966	2.193	0.073
10	agegroup2 60-69	0.294	0.276	1.341	0.781	2.305	0.287
11	agegroup2 70-79	0.481	0.356	1.618	0.805	3.249	0.176
12	agegroup2 80+	0.783	0.388	2.188	1.024	4.678	0.043
13	BB.stfup Yes	0.408	0.152	1.504	1.116	2.026	0.007
14	useBB Yes	-0.745	0.247	0.475	0.293	0.77	0.003
15	A10A.stfup Yes	0.007	0.263	1.007	0.602	1.686	0.978
16	useA10A Yes	-0.176	0.093	0.839	0.699	1.006	0.057
17	hosph.stfup Yes	1.359	0.077	3.891	3.349	4.521	<0.001
18	Switch YES	0.167	0.111	1.182	0.95	1.471	0.133
19	calyear2 06	-0.308	0.544	0.735	0.253	2.136	0.572
20	calyear2 07	-0.372	0.652	0.689	0.192	2.476	0.569
21	calyear2 08	-0.727	0.788	0.484	0.103	2.268	0.357
22	calyear2 09	-0.478	0.908	0.62	0.105	3.675	0.598
23	time2diag 1-2	-0.059	0.275	0.942	0.549	1.616	0.829
24	time2diag 2-5	-0.163	0.243	0.849	0.527	1.369	0.503
25	time2diag 5-10	0.122	0.218	1.13	0.738	1.732	0.574
26	time2diag 10-	-0.401	0.519	0.67	0.242	1.851	0.44
27	Pdet	-0.406	1.333	0.666	0.049	9.075	0.76
28	Pgla	0.002	1.413	1.002	0.063	15.97	0.999

Naive T1 cohort. Data 28th December 2011

Table E.42: The risk for the first hypoglycemic coma event estimated by the Cox's proportional hazards model. Hospital district as strata. Glargine insulin as reference. Data before 2006 censored

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulin detemir	-0.206	0.21	0.814	0.54	1.228	0.327
2	insulin NPH	0.238	0.236	1.269	0.799	2.016	0.312
3	insulin no DGN	0.238	0.333	1.268	0.66	2.435	0.475
4	gender Female	-0.022	0.171	0.978	0.699	1.368	0.896
5	agegroup2 0-9	-0.174	0.326	0.841	0.444	1.591	0.594
6	agegroup2 10-19	0.231	0.306	1.26	0.692	2.294	0.45
7	agegroup2 30-39	-0.014	0.387	0.986	0.462	2.105	0.971
8	agegroup2 40-49	0.091	0.346	1.095	0.556	2.158	0.792
9	agegroup2 50-59	0.121	0.348	1.129	0.57	2.235	0.727
10	agegroup2 60-69	0.027	0.419	1.028	0.452	2.338	0.948
11	agegroup2 70-79	0.532	0.466	1.703	0.682	4.247	0.254
12	agegroup2 80+	-0.718	1.069	0.488	0.06	3.961	0.502
13	BB.stfup Yes	1.143	0.367	3.136	1.528	6.438	0.002
14	useBB Yes	-0.572	0.55	0.565	0.192	1.659	0.299
15	A10A.stfup Yes	-0.413	0.3	0.662	0.367	1.191	0.169
16	useA10A Yes	-0.257	0.219	0.773	0.504	1.187	0.24
17	hosph.stfup Yes	1.671	0.173	5.316	3.784	7.468	<0.001
18	Switch YES	0.618	0.258	1.855	1.12	3.074	0.016
19	time2diag 1-2	-0.274	0.737	0.76	0.179	3.221	0.71
20	time2diag 2-5	-0.794	0.739	0.452	0.106	1.925	0.283
21	time2diag 5-10	0.054	0.412	1.056	0.47	2.37	0.895
22	time2diag 10-	-0.78	0.76	0.459	0.103	2.033	0.305
23	calyear3 07	-0.025	0.193	0.976	0.669	1.423	0.899
24	calyear3 08	-0.427	0.259	0.652	0.393	1.084	0.099
25	calyear3 09	-0.084	0.319	0.92	0.492	1.718	0.793

Naive T1 cohort. Data 28th December 2011

Table E.43: The risk for the first hypoglycemic coma event estimated by the Cox's proportional hazards model. Hospital district as strata. NPH insulin as reference. Data before 2006 censored

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulinNPH detemir	-0.444	0.254	0.641	0.39	1.054	0.08
2	insulinNPH glargine	-0.238	0.236	0.788	0.496	1.251	0.312
3	insulinNPH no DGN	-0.001	0.354	0.999	0.499	2	0.998
4	gender Female	-0.022	0.171	0.978	0.699	1.368	0.896
5	agegroup2 0-9	-0.174	0.326	0.841	0.444	1.591	0.594
6	agegroup2 10-19	0.231	0.306	1.26	0.692	2.294	0.45
7	agegroup2 30-39	-0.014	0.387	0.986	0.462	2.105	0.971
8	agegroup2 40-49	0.091	0.346	1.095	0.556	2.158	0.792
9	agegroup2 50-59	0.121	0.348	1.129	0.57	2.235	0.727
10	agegroup2 60-69	0.027	0.419	1.028	0.452	2.338	0.948
11	agegroup2 70-79	0.532	0.466	1.703	0.682	4.247	0.254
12	agegroup2 80+	-0.718	1.069	0.488	0.06	3.961	0.502
13	BB.stfup Yes	1.143	0.367	3.136	1.528	6.438	0.002
14	useBB Yes	-0.572	0.55	0.565	0.192	1.659	0.299
15	A10A.stfup Yes	-0.413	0.3	0.662	0.367	1.191	0.169
16	useA10A Yes	-0.257	0.219	0.773	0.504	1.187	0.24
17	hosph.stfup Yes	1.671	0.173	5.316	3.784	7.468	<0.001
18	Switch YES	0.618	0.258	1.855	1.12	3.074	0.016
19	time2diag 1-2	-0.274	0.737	0.76	0.179	3.221	0.71
20	time2diag 2-5	-0.794	0.739	0.452	0.106	1.925	0.283
21	time2diag 5-10	0.054	0.412	1.056	0.47	2.37	0.895
22	time2diag 10-	-0.78	0.76	0.459	0.103	2.033	0.305
23	calyear3 07	-0.025	0.193	0.976	0.669	1.423	0.899
24	calyear3 08	-0.427	0.259	0.652	0.393	1.084	0.099
25	calyear3 09	-0.084	0.319	0.92	0.492	1.718	0.793
Naive T1 cohort. Data 28th December 2011							

E.2 Recurrence of hypoglycemic coma events

Table E.44: The risk for recurrence of hypoglycemic coma events estimated by the Cox's proportional hazards model. Hospital district as strata. Glargine insulin as reference

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulin detemir	-0.207	0.245	0.813	0.503	1.315	0.399
2	insulin NPH	-0.146	0.216	0.864	0.566	1.319	0.498
3	insulin no DGN	-0.246	0.269	0.782	0.461	1.325	0.36
4	gender Female	0.395	0.146	1.484	1.114	1.977	0.007
5	agegroup2 0-9	-0.342	0.288	0.71	0.404	1.249	0.235
6	agegroup2 10-19	-0.01	0.292	0.99	0.558	1.755	0.971
7	agegroup2 30-39	0.189	0.322	1.208	0.642	2.272	0.558
8	agegroup2 40-49	0.243	0.352	1.275	0.639	2.543	0.491
9	agegroup2 50-59	0.079	0.337	1.082	0.559	2.095	0.815
10	agegroup2 60-69	0.418	0.456	1.518	0.621	3.709	0.36
11	agegroup2 70-79	-0.644	0.623	0.525	0.155	1.781	0.301
12	agegroup2 80+	-0.957	0.808	0.384	0.079	1.87	0.236
13	BB.stfup Yes	-0.63	0.405	0.533	0.241	1.179	0.12
14	useBB Yes	-0.45	0.663	0.637	0.174	2.339	0.497
15	A10A.stfup Yes	0.34	0.26	1.404	0.844	2.338	0.191
16	useA10A Yes	-0.055	0.191	0.946	0.651	1.376	0.773
17	hosph.stfup Yes	-0.286	0.184	0.751	0.524	1.076	0.119
18	Switch YES	0.135	0.235	1.144	0.722	1.813	0.566
19	time2diag 1-2	-0.996	0.525	0.369	0.132	1.033	0.058
20	time2diag 2-5	0.047	0.348	1.048	0.53	2.075	0.892
21	time2diag 5-10	-0.874	0.578	0.417	0.135	1.295	0.131
22	time2diag 10-	2.194	1.398	8.975	0.579	139.02	0.116
23	calyear2 06	-0.427	0.306	0.652	0.358	1.188	0.162
24	calyear2 07	-0.372	0.384	0.689	0.325	1.462	0.332
25	calyear2 08	-0.521	0.367	0.594	0.29	1.219	0.156
26	calyear2 09	-0.247	0.579	0.781	0.251	2.429	0.67

Naive T1 cohort. Data 28th December 2011

Table E.45: The risk for recurrence of hypoglycemic coma events estimated by the Cox's proportional hazards model. Hospital district as strata. NPH insulin as reference

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulinNPH detemir	-0.061	0.325	0.941	0.497	1.781	0.851
2	insulinNPH glargine	0.146	0.216	1.157	0.758	1.766	0.498
3	insulinNPH no DGN	-0.1	0.247	0.905	0.557	1.468	0.685
4	gender Female	0.395	0.146	1.484	1.114	1.977	0.007
5	agegroup2 0-9	-0.342	0.288	0.71	0.404	1.249	0.235
6	agegroup2 10-19	-0.01	0.292	0.99	0.558	1.755	0.971
7	agegroup2 30-39	0.189	0.322	1.208	0.642	2.272	0.558
8	agegroup2 40-49	0.243	0.352	1.275	0.639	2.543	0.491
9	agegroup2 50-59	0.079	0.337	1.082	0.559	2.095	0.815
10	agegroup2 60-69	0.418	0.456	1.518	0.621	3.709	0.36
11	agegroup2 70-79	-0.644	0.623	0.525	0.155	1.781	0.301
12	agegroup2 80+	-0.957	0.808	0.384	0.079	1.87	0.236
13	BB.stfup Yes	-0.63	0.405	0.533	0.241	1.179	0.12
14	useBB Yes	-0.45	0.663	0.637	0.174	2.339	0.497
15	A10A.stfup Yes	0.34	0.26	1.404	0.844	2.338	0.191
16	useA10A Yes	-0.055	0.191	0.946	0.651	1.376	0.773
17	hosph.stfup Yes	-0.286	0.184	0.751	0.524	1.076	0.119
18	Switch YES	0.135	0.235	1.144	0.722	1.813	0.566
19	time2diag 1-2	-0.996	0.525	0.369	0.132	1.033	0.058
20	time2diag 2-5	0.047	0.348	1.048	0.53	2.075	0.892
21	time2diag 5-10	-0.874	0.578	0.417	0.135	1.295	0.131
22	time2diag 10-	2.194	1.398	8.975	0.579	139.02	0.116
23	calyear2 06	-0.427	0.306	0.652	0.358	1.188	0.162
24	calyear2 07	-0.372	0.384	0.689	0.325	1.462	0.332
25	calyear2 08	-0.521	0.367	0.594	0.29	1.219	0.156
26	calyear2 09	-0.247	0.579	0.781	0.251	2.429	0.67

Naive T1 cohort. Data 28th December 2011

Table E.46: Sensitivity analysis of the risk for recurrence of hypoglycemic coma events estimated by the Cox's proportional hazards model. Hospital district as strata. NPH insulin as reference. I) Original estimates, II) Estimates assuming no gaps in use of detemir, glargine, and NPH-insulins, III) Estimates considering hypoglycemic events with main diagnose E10.00 or E11.00 only, IV) Periods with overlapping use of detemir, glargine, or NPH-insulins are removed, V) follow-up ends at first switch.

S.No.	Variables	I			II			III			IV			V		
		HR	lower	upper	HR	lower	upper	HR	lower	upper	HR	lower	upper	HR	lower	upper
1	insulinNPH detemir	0.941	0.497	1.781	1.017	0.522	1.984	1.061	0.544	2.071	0.963	0.493	1.878	1.253	0.642	2.444
2	insulinNPH glargine	1.157	0.758	1.766	1.135	0.735	1.753	1.308	0.843	2.03	1.07	0.69	1.661	0.974	0.627	1.512
3	insulinNPH no DGN	0.905	0.557	1.468	NA	NA	NA	0.988	0.6	1.628	0.87	0.528	1.434	0.78	0.473	1.284
4	gender Female	1.484	1.114	1.977	1.477	1.106	1.971	1.522	1.131	2.049	1.536	1.141	2.068	1.179	0.876	1.587
5	agegroup2 0-9	0.71	0.404	1.249	0.696	0.399	1.217	0.745	0.414	1.343	0.717	0.398	1.291	0.778	0.432	1.402
6	agegroup2 10-19	0.99	0.558	1.755	0.978	0.549	1.743	1.026	0.567	1.857	1.017	0.562	1.84	0.915	0.505	1.656
7	agegroup2 30-39	1.208	0.642	2.272	1.203	0.639	2.266	1.246	0.649	2.395	1.216	0.633	2.337	1.242	0.646	2.386
8	agegroup2 40-49	1.275	0.639	2.543	1.26	0.634	2.503	1.163	0.554	2.442	1.25	0.595	2.626	1.238	0.589	2.6
9	agegroup2 50-59	1.082	0.559	2.095	1.078	0.553	2.104	1.13	0.564	2.264	1.107	0.553	2.218	1.31	0.654	2.625
10	agegroup2 60-69	1.518	0.621	3.709	1.489	0.612	3.625	1.644	0.649	4.161	1.5	0.592	3.796	1.368	0.541	3.464
11	agegroup2 70-79	0.525	0.155	1.781	0.528	0.158	1.766	0.541	0.151	1.937	0.487	0.136	1.743	0.589	0.165	2.108
12	agegroup2 80+	0.384	0.079	1.87	0.397	0.083	1.906	0.266	0.042	1.682	0.414	0.065	2.613	0.649	0.103	4.099
13	BB.stfup Yes	0.533	0.241	1.179	0.539	0.243	1.194	0.539	0.225	1.289	0.494	0.206	1.181	0.646	0.27	1.545
14	useBB Yes	0.637	0.174	2.339	0.633	0.173	2.32	0.789	0.214	2.905	0.669	0.182	2.463	0.91	0.247	3.35
15	A10A.stfup Yes	1.404	0.844	2.338	1.39	0.833	2.321	1.386	0.813	2.362	1.405	0.824	2.395	1.033	0.606	1.761
16	useA10A Yes	0.946	0.651	1.376	0.972	0.692	1.367	1.051	0.741	1.49	0.917	0.647	1.3	0.896	0.632	1.27
17	hosph.stfup Yes	0.751	0.524	1.076	0.751	0.522	1.081	0.814	0.568	1.167	0.739	0.516	1.06	0.764	0.533	1.099
18	Switch YES	1.144	0.722	1.813	1.132	0.713	1.796	1.147	0.712	1.848	1.154	0.716	1.859	NA	NA	NA
19	time2diag 1-2	0.369	0.132	1.033	0.371	0.135	1.024	0.301	0.094	0.958	0.393	0.123	1.253	0.63	0.198	2.007
20	time2diag 2-5	1.048	0.53	2.075	1.041	0.525	2.066	1.018	0.488	2.12	0.849	0.407	1.768	0.965	0.463	2.015
21	time2diag 5-10	0.417	0.135	1.295	0.418	0.134	1.306	0.334	0.092	1.217	0.395	0.109	1.438	0.362	0.099	1.316
22	time2diag 10-	8.975	0.579	139.02	9.405	0.594	148.832	9.466	0.576	155.498	14.169	0.863	232.75	1.918	0.117	31.57
23	calyear2 06	0.652	0.358	1.188	0.635	0.343	1.177	0.699	0.382	1.28	0.659	0.36	1.205	0.775	0.423	1.41
24	calyear2 07	0.689	0.325	1.462	0.678	0.312	1.472	0.724	0.341	1.537	0.712	0.335	1.512	0.69	0.325	1.46
25	calyear2 08	0.594	0.29	1.219	0.585	0.284	1.207	0.359	0.168	0.765	0.651	0.306	1.388	0.704	0.33	1.5
26	calyear2 09	0.781	0.251	2.429	0.77	0.241	2.462	0.646	0.182	2.301	0.785	0.22	2.792	0.781	0.219	2.77

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Table E.47: Sensitivity analysis of the risk for recurrence of hypoglycemic coma events estimated by the Cox's proportional hazards model. Hospital district as strata. NPH insulin as reference. I) Original estimates, II-IV) Inverse propensity score weighting (IPW). Individuals weighted by the inverse of the probability to start on their insulin conditional on covariates (gender, typedm, agegroup2, BB.stfup, A10A.stfup, hosph.stfup, time2diag), truncation points givenin paranthesis, III) IPW-weights with no truncation.

S.No.	Variables	I		II [0.1/0.9]		III [0.01/0.99]		IV [0.001/0.999]		V [0/1]					
		HR	lower	upper	HR	lower	upper	HR	lower	upper	HR	lower	upper		
1	insulinNPH detemir	0.941	0.497	1.781	1.119	2.098	1.112	0.594	2.084	1.089	0.581	2.04	1.093	0.583	2.047
2	insulinNPH glargine	1.157	0.758	1.766	1.217	1.836	1.207	0.799	1.821	1.194	0.791	1.803	1.202	0.796	1.815
3	insulinNPH no DGN	0.905	0.557	1.468	0.843	0.49	0.87	0.509	1.485	0.886	0.519	1.512	0.889	0.521	1.518
4	gender Female	1.484	1.114	1.977	1.406	1.039	1.394	1.031	1.884	1.398	1.034	1.89	1.397	1.033	1.889
5	agegroup2 0-9	0.71	0.404	1.249	0.798	0.427	0.802	0.428	1.504	0.798	0.426	1.497	0.799	0.426	1.498
6	agegroup2 10-19	0.99	0.558	1.755	0.943	0.486	0.931	0.478	1.813	0.923	0.474	1.797	0.915	0.47	1.782
7	agegroup2 30-39	1.208	0.642	2.272	1.189	0.6	1.207	0.608	2.396	1.195	0.602	2.374	1.196	0.602	2.374
8	agegroup2 40-49	1.275	0.639	2.543	1.387	0.65	1.431	0.668	3.066	1.426	0.665	3.055	1.424	0.665	3.052
9	agegroup2 50-59	1.082	0.559	2.095	1.22	0.588	1.273	0.618	2.621	1.308	0.635	2.695	1.315	0.638	2.708
10	agegroup2 60-69	1.518	0.621	3.709	1.407	0.511	1.479	0.551	3.974	1.479	0.551	3.972	1.474	0.549	3.96
11	agegroup2 70-79	0.525	0.155	1.781	0.499	0.106	0.434	0.078	2.397	0.433	0.078	2.395	0.434	0.078	2.399
12	agegroup2 80+	0.384	0.079	1.87	0.69	0.158	0.734	0.174	3.093	0.74	0.176	3.116	0.737	0.175	3.105
13	BB.stfup Yes	0.533	0.241	1.179	0.694	0.319	0.732	0.339	1.58	0.747	0.346	1.612	0.745	0.345	1.609
14	useBB Yes	0.637	0.174	2.339	0.769	0.192	0.779	0.195	3.108	0.79	0.198	3.152	0.793	0.199	3.163
15	A10A.stfup Yes	1.404	0.844	2.338	1.602	0.945	1.646	0.996	2.72	1.652	1	2.729	1.653	1	2.731
16	useA10A Yes	0.946	0.651	1.376	1.047	0.734	1.063	0.743	1.519	1.079	0.754	1.542	1.077	0.754	1.54
17	hosph.stfup Yes	0.751	0.524	1.076	0.767	0.513	0.755	0.502	1.135	0.744	0.495	1.119	0.743	0.494	1.117
18	Switch YES	1.144	0.722	1.813	0.954	0.597	0.941	0.59	1.502	0.944	0.592	1.507	0.942	0.59	1.504
19	time2diag 1-2	0.369	0.132	1.033	0.272	0.074	0.259	0.07	0.956	0.255	0.069	0.942	0.255	0.069	0.941
20	time2diag 2-5	1.048	0.53	2.075	0.867	0.436	1.724	0.82	1.577	0.81	0.421	1.557	0.81	0.421	1.557
21	time2diag 5-10	0.417	0.135	1.295	0.349	0.118	0.343	0.117	1.007	0.356	0.121	1.044	0.358	0.122	1.049
22	time2diag 10-	8.975	0.579	139.02	2.899	0.236	35.667	2.973	38.426	2.894	0.224	37.409	2.872	0.222	37.118
23	calyear2 06	0.652	0.358	1.188	0.575	0.259	0.56	0.244	1.288	0.557	0.242	1.281	0.555	0.241	1.275
24	calyear2 07	0.689	0.325	1.462	0.571	0.264	1.237	0.575	1.241	0.57	0.264	1.231	0.544	0.252	1.175
25	calyear2 08	0.594	0.29	1.219	0.629	0.24	1.649	0.665	1.8	0.669	0.247	1.809	0.639	0.236	1.73
26	calyear2 09	0.781	0.251	2.429	0.378	0.076	1.879	0.044	1.658	0.197	0.032	1.202	0.195	0.032	1.191

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Table E.48: sensitivity analysis of the risk for recurrence of hypoglycemic coma events estimated by the Cox's proportional hazards model. The probability, conditional on covariates (gender, typedm, agegroup2, calyear2, BB.stfup, A10A.stfup, hosph.stfup, time2diag) to initiate treatment with detemir and glargine as two additional covariates. Hospital district as strata. NPH insulin as reference

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulinNPH detemir	-0.086	0.326	0.918	0.484	1.74	0.793
2	insulinNPH glargine	0.123	0.217	1.131	0.739	1.731	0.57
3	insulinNPH no DGN	-0.131	0.249	0.877	0.539	1.428	0.598
4	gender Female	0.786	0.25	2.195	1.344	3.586	0.002
5	agegroup2 0-9	-2.148	1.055	0.117	0.015	0.923	0.042
6	agegroup2 10-19	0.062	0.369	1.064	0.517	2.191	0.867
7	agegroup2 30-39	-0.506	0.442	0.603	0.253	1.436	0.253
8	agegroup2 40-49	-0.866	0.671	0.421	0.113	1.568	0.197
9	agegroup2 50-59	-0.937	0.617	0.392	0.117	1.312	0.129
10	agegroup2 60-69	-1.363	0.985	0.256	0.037	1.763	0.166
11	agegroup2 70-79	-2.844	1.175	0.058	0.006	0.582	0.015
12	agegroup2 80+	-3.298	1.499	0.037	0.002	0.697	0.028
13	BB.stfup Yes	-1.389	0.595	0.249	0.078	0.801	0.02
14	useBB Yes	-0.458	0.68	0.632	0.167	2.396	0.5
15	A10A.stfup Yes	1.326	0.545	3.765	1.293	10.961	0.015
16	useA10A Yes	-0.073	0.191	0.93	0.639	1.353	0.704
17	hosph.stfup Yes	-1.219	0.447	0.296	0.123	0.71	0.006
18	Switch YES	0.164	0.237	1.178	0.74	1.875	0.491
19	calyear2 06	1.392	0.843	4.022	0.771	20.982	0.099
20	calyear2 07	1.675	1.031	5.338	0.708	40.256	0.104
21	calyear2 08	2.011	1.19	7.467	0.724	76.995	0.091
22	calyear2 09	3.226	1.701	25.174	0.897	706.56	0.058
23	time2diag 1-2	-2.006	0.721	0.135	0.033	0.552	0.005
24	time2diag 2-5	-0.479	0.457	0.619	0.253	1.517	0.295
25	time2diag 5-10	-0.331	0.739	0.719	0.169	3.057	0.655
26	time2diag 10-	4.448	1.653	85.414	3.344	2181.428	0.007
27	Pdet	-7.367	3.482	0.001	0	0.581	0.034
28	Pgla	-6.56	3.423	0.001	0	1.16	0.055

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Table E.49: The risk for recurrence of severe hypoglycemic events estimated by the Cox's proportional hazards model. Hospital district as strata. Glargine insulin as reference. Data before 2006 censored

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper
1	insulin detemir	0.547	0.511	1.728	0.634	4.707
2	insulin NPH	0.883	0.559	2.419	0.808	7.242
3	insulin no DGN	0.523	0.532	1.688	0.594	4.792
4	gender Female	0.026	0.409	1.026	0.46	2.287
5	agegroup2 0-9	-1.016	0.715	0.362	0.089	1.469
6	agegroup2 10-19	1.032	0.548	2.808	0.959	8.226
7	agegroup2 30-39	0.299	0.424	1.348	0.587	3.097
8	agegroup2 40-49	0.461	0.554	1.585	0.535	4.697
9	agegroup2 50-59	1.137	0.641	3.116	0.887	10.951
10	agegroup2 60-69	0.034	0.653	1.034	0.287	3.722
11	agegroup2 70-79	0.588	1.641	1.801	0.072	44.936
12	agegroup2 80+	-13.003	5.105	0	0	0.05
13	BB.stfup Yes	-3.369	4.609	0.034	0	288.417
14	useBB Yes	-16.428	3.087	0	0	0
15	A10A.stfup Yes	-2.041	2.109	0.13	0.002	8.1
16	useA10A Yes	-0.132	0.453	0.877	0.361	2.129
17	hosph.stfup Yes	-0.605	0.35	0.546	0.275	1.084
18	Switch YES	-1.272	0.834	0.28	0.055	1.436
19	time2diag 1-2	2.535	4.756	12.621	0.001	140961.669
20	time2diag 2-5	38.575	0	56598701404227048	56598701404227048	56598701404227048
21	time2diag 5-10	1.56	2.578	4.758	0.03	744.435
22	time2diag 10-	2.817	5.046	16.726	0.001	330076.179
23	calyear3 07	-0.403	0.464	0.668	0.269	1.659
24	calyear3 08	-0.46	0.478	0.631	0.247	1.613
25	calyear3 09	-1.117	0.964	0.327	0.049	2.163

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Table E.50: The risk for recurrence of severe hypoglycemic events estimated by the Cox's proportional hazards model. Hospital district as strata. NPH insulin as reference. Data before 2006 censored

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulinNPH detemir	-0.337	0.543	0.714	0.246	2.071	0.535
2	insulinNPH glargine	-0.883	0.559	0.413	0.138	1.237	0.114
3	insulinNPH no DGN	-0.36	0.482	0.698	0.271	1.793	0.455
4	gender Female	0.026	0.409	1.026	0.46	2.287	0.95
5	agegroup2 0-9	-1.016	0.715	0.362	0.089	1.469	0.155
6	agegroup2 10-19	1.032	0.548	2.808	0.959	8.226	0.06
7	agegroup2 30-39	0.299	0.424	1.348	0.587	3.097	0.481
8	agegroup2 40-49	0.461	0.554	1.585	0.535	4.697	0.406
9	agegroup2 50-59	1.137	0.641	3.116	0.887	10.951	0.076
10	agegroup2 60-69	0.034	0.653	1.034	0.287	3.722	0.959
11	agegroup2 70-79	0.588	1.641	1.801	0.072	44.936	0.72
12	agegroup2 80+	-15.165	4.537	0	0	0.002	<0.001
13	BB.stfup Yes	-3.369	4.609	0.034	0	288.411	0.465
14	useBB Yes	-18.237	2.381	0	0	0	<0.001
15	A10A.stfup Yes	-2.041	2.109	0.13	0.002	8.1	0.333
16	useA10A Yes	-0.132	0.453	0.877	0.361	2.129	0.771
17	hosph.stfup Yes	-0.605	0.35	0.546	0.275	1.084	0.084
18	Switch YES	-1.272	0.834	0.28	0.055	1.436	0.127
19	time2diag 1-2	2.535	4.756	12.621	0.001	140956.119	0.594
20	time2diag 2-5	18.532	1.805	111754234.289	3247255.24	3846020086.828	<0.001
21	time2diag 5-10	1.56	2.578	4.758	0.03	744.42	0.545
22	time2diag 10-	2.817	5.046	16.726	0.001	330058.352	0.577
23	calyear3 07	-0.403	0.464	0.668	0.269	1.659	0.385
24	calyear3 08	-0.46	0.478	0.631	0.247	1.613	0.336
25	calyear3 09	-1.117	0.964	0.327	0.049	2.163	0.246

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E.3 All hypoglycemic coma events

Table E.51: The risk for all hypoglycemic coma events estimated by the Cox's proportional hazards model. Hospital district as strata. Glargine insulin as reference

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulin detemir	-0.096	0.156	0.909	0.67	1.234	0.54
2	insulin NPH	0.114	0.128	1.12	0.872	1.438	0.374
3	insulin no DGN	0.116	0.162	1.123	0.818	1.542	0.472
4	gender Female	0.318	0.094	1.375	1.144	1.652	<0.001
5	agegroup2 0-9	0.26	0.17	1.297	0.928	1.811	0.127
6	agegroup2 10-19	0.203	0.175	1.226	0.87	1.727	0.245
7	agegroup2 30-39	0.414	0.21	1.513	1.002	2.284	0.049
8	agegroup2 40-49	0.613	0.202	1.847	1.243	2.744	0.002
9	agegroup2 50-59	0.43	0.193	1.537	1.053	2.243	0.026
10	agegroup2 60-69	0.456	0.25	1.578	0.967	2.575	0.068
11	agegroup2 70-79	0.419	0.336	1.521	0.787	2.938	0.212
12	agegroup2 80+	0.549	0.346	1.732	0.88	3.409	0.112
13	BB.stfup Yes	0.08	0.184	1.083	0.756	1.552	0.663
14	useBB Yes	-0.686	0.266	0.503	0.299	0.847	0.01
15	A10A.stfup Yes	0.153	0.167	1.165	0.84	1.616	0.36
16	useA10A Yes	-0.154	0.109	0.857	0.692	1.061	0.157
17	hosph.stfup Yes	1.472	0.105	4.356	3.547	5.351	<0.001
18	Switch YES	0.265	0.137	1.303	0.996	1.706	0.054
19	time2diag 1-2	-0.441	0.278	0.643	0.373	1.109	0.112
20	time2diag 2-5	-0.136	0.245	0.873	0.54	1.411	0.578
21	time2diag 5-10	-0.02	0.249	0.98	0.602	1.596	0.934
22	time2diag 10-	0.483	0.758	1.621	0.367	7.163	0.524
23	calyear2 06	-0.523	0.177	0.592	0.419	0.838	0.003
24	calyear2 07	-0.608	0.219	0.544	0.354	0.836	0.006
25	calyear2 08	-0.926	0.255	0.396	0.24	0.653	<0.001
26	calyear2 09	-0.772	0.319	0.462	0.248	0.863	0.015

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Table E.52: The risk for all hypoglycemic coma events estimated by the Cox's proportional hazards model. Hospital district as strata. NPH insulin as reference

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulinNPH detemir	-0.209	0.185	0.811	0.565	1.165	0.257
2	insulinNPH glargine	-0.114	0.128	0.893	0.695	1.146	0.374
3	insulinNPH no DGN	0.003	0.144	1.003	0.756	1.331	0.985
4	gender Female	0.318	0.094	1.375	1.144	1.652	<0.001
5	agegroup2 0-9	0.26	0.17	1.297	0.928	1.811	0.127
6	agegroup2 10-19	0.203	0.175	1.226	0.87	1.727	0.245
7	agegroup2 30-39	0.414	0.21	1.513	1.002	2.284	0.049
8	agegroup2 40-49	0.613	0.202	1.847	1.243	2.744	0.002
9	agegroup2 50-59	0.43	0.193	1.537	1.053	2.243	0.026
10	agegroup2 60-69	0.456	0.25	1.578	0.967	2.575	0.068
11	agegroup2 70-79	0.419	0.336	1.521	0.787	2.938	0.212
12	agegroup2 80+	0.549	0.346	1.732	0.88	3.409	0.112
13	BB.stfup Yes	0.08	0.184	1.083	0.756	1.552	0.663
14	useBB Yes	-0.686	0.266	0.503	0.299	0.847	0.01
15	A10A.stfup Yes	0.153	0.167	1.165	0.84	1.616	0.36
16	useA10A Yes	-0.154	0.109	0.857	0.692	1.061	0.157
17	hosph.stfup Yes	1.472	0.105	4.356	3.547	5.351	<0.001
18	Switch YES	0.265	0.137	1.303	0.996	1.706	0.054
19	time2diag 1-2	-0.441	0.278	0.643	0.373	1.109	0.112
20	time2diag 2-5	-0.136	0.245	0.873	0.54	1.411	0.578
21	time2diag 5-10	-0.02	0.249	0.98	0.602	1.596	0.934
22	time2diag 10-	0.483	0.758	1.621	0.367	7.163	0.524
23	calyear2 06	-0.523	0.177	0.592	0.419	0.838	0.003
24	calyear2 07	-0.608	0.219	0.544	0.354	0.836	0.006
25	calyear2 08	-0.926	0.255	0.396	0.24	0.653	<0.001
26	calyear2 09	-0.772	0.319	0.462	0.248	0.863	0.015

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F Appendix 6: Duration of hospitalizations and secondary care visits

Table F.53: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by insulin at start of follow-up and by present insulin. The number of visits and the distribution of the length of the visits.

S.No.	Variables		All (N)	Days (%)				
	First Insulin	Insulin	N	0-1	2-3	4-5	6-7	7-
1	glargine	glargine	244	84.84	7.79	2.87	1.23	3.28
2	glargine	detemir	38	76.32	10.53	0.00	0.00	13.16
3	glargine	NPH	1	100.00	0.00	0.00	0.00	0.00
4	glargine	no DGN	21	95.24	0.00	4.76	0.00	0.00
5	detemir	glargine	1	100.00	0.00	0.00	0.00	0.00
6	detemir	detemir	63	87.30	0.00	1.59	1.59	9.52
7	detemir	NPH	0	NaN	NaN	NaN	NaN	NaN
8	detemir	no DGN	10	100.00	0.00	0.00	0.00	0.00
9	NPH	glargine	332	88.55	6.63	2.11	0.90	1.81
10	NPH	detemir	132	87.88	3.79	3.03	3.03	2.27
11	NPH	NPH	796	83.04	7.79	3.64	2.01	3.52
12	NPH	no DGN	164	83.54	7.32	2.44	2.44	4.27
13	Total	glargine	577	87.00	7.11	2.43	1.04	2.43
14	Total	detemir	233	85.84	3.86	2.15	2.15	6.01
15	Total	NPH	797	83.06	7.78	3.64	2.01	3.51
16	Total	no DGN	195	85.64	6.15	2.56	2.05	3.59

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Table F.54: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by insulin at start of follow-up and by present insulin. The number of visits and the distribution of visit length (Days) described by the minimum, the 25% quantile, the median, the mean, the 75% quantile and the maximum.

S.No.	Variables		All (N)	Duration (Days)					
	First Insulin	Insulin		Min	25%	Median	Mean	75%	Max
1	glargine	glargine	244	1	1	1	1.934	1	47
2	glargine	detemir	38	1	1	1	13.210	1	307
3	glargine	NPH	1	1	1	1	1.000	1	1
4	glargine	no DGN	21	1	1	1	1.143	1	4
5	detemir	glargine	1	1	1	1	1.000	1	1
6	detemir	detemir	63	1	1	1	3.365	1	57
7	detemir	NPH	0	NA	NA	NA	NaN	NA	NA
8	detemir	no DGN	10	1	1	1	1.000	1	1
9	NPH	glargine	332	1	1	1	1.437	1	22
10	NPH	detemir	132	1	1	1	1.652	1	24
11	NPH	NPH	796	1	1	1	1.863	1	61
12	NPH	no DGN	164	1	1	1	2.811	1	176
13	Total	glargine	577	1	1	1	1.646	1	47
14	Total	detemir	233	1	1	1	4.000	1	307
15	Total	NPH	797	1	1	1	1.862	1	61
16	Total	no DGN	195	1	1	1	2.538	1	176

Naive T1 cohort. Data 28th December 2011

Table F.55: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by reimbursement diagnose and by insulin. The number of visits and the distribution of the length of the visits.

S.No.	Variables		All (N)	Days (%)				
	Diagnose	Insulin		N	0-1	2-3	4-5	6-7
1	T1	glargine	577	87.00	7.11	2.43	1.04	2.43
2	T1	detemir	233	85.84	3.86	2.15	2.15	6.01
3	T1	NPH	797	83.06	7.78	3.64	2.01	3.51
4	T1	no DGN	195	85.64	6.15	2.56	2.05	3.59
5	T2	glargine	0	NaN	NaN	NaN	NaN	NaN
6	T2	detemir	0	NaN	NaN	NaN	NaN	NaN
7	T2	NPH	0	NaN	NaN	NaN	NaN	NaN
8	T2	no DGN	0	NaN	NaN	NaN	NaN	NaN
9	Undefined	glargine	0	NaN	NaN	NaN	NaN	NaN
10	Undefined	detemir	0	NaN	NaN	NaN	NaN	NaN
11	Undefined	NPH	0	NaN	NaN	NaN	NaN	NaN
12	Undefined	no DGN	0	NaN	NaN	NaN	NaN	NaN
13	Total	glargine	577	87.00	7.11	2.43	1.04	2.43
14	Total	detemir	233	85.84	3.86	2.15	2.15	6.01
15	Total	NPH	797	83.06	7.78	3.64	2.01	3.51
16	Total	no DGN	195	85.64	6.15	2.56	2.05	3.59

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Table F.56: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by reimbursement diagnose and by insulin. The number of visits and the distribution of visit length (Days) described by the minimum, the 25% quantile, the median, the mean, the 75% quantile and the maximum.

S.No.	Variables		All (N)	Duration (Days)					
	Diagnose	Insulin		N	Min	25%	Median	Mean	75%
1	T1	glargine	577	1	1	1	1.646	1	47
2	T1	detemir	233	1	1	1	4.000	1	307
3	T1	NPH	797	1	1	1	1.862	1	61
4	T1	no DGN	195	1	1	1	2.538	1	176
5	T2	glargine	0	NA	NA	NA	NaN	NA	NA
6	T2	detemir	0	NA	NA	NA	NaN	NA	NA
7	T2	NPH	0	NA	NA	NA	NaN	NA	NA
8	T2	no DGN	0	NA	NA	NA	NaN	NA	NA
9	Undefined	glargine	0	NA	NA	NA	NaN	NA	NA
10	Undefined	detemir	0	NA	NA	NA	NaN	NA	NA
11	Undefined	NPH	0	NA	NA	NA	NaN	NA	NA
12	Undefined	no DGN	0	NA	NA	NA	NaN	NA	NA
13	Total	glargine	577	1	1	1	1.646	1	47
14	Total	detemir	233	1	1	1	4.000	1	307
15	Total	NPH	797	1	1	1	1.862	1	61
16	Total	no DGN	195	1	1	1	2.538	1	176

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Table F.57: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by gender and by insulin. The number of visits and the distribution of the length of the visits.

S.No.	Variables		All (N)	Days (%)				
	Gender	Insulin	N	0-1	2-3	4-5	6-7	7-
1	Male	glargine	322	83.54	9.01	2.80	1.24	3.42
2	Male	detemir	91	90.11	3.30	4.40	1.10	1.10
3	Male	NPH	468	79.70	9.19	4.91	2.78	3.42
4	Male	no DGN	102	81.37	9.80	3.92	0.98	3.92
5	Female	glargine	255	91.37	4.71	1.96	0.78	1.18
6	Female	detemir	142	83.10	4.23	0.70	2.82	9.15
7	Female	NPH	329	87.84	5.78	1.82	0.91	3.65
8	Female	no DGN	93	90.32	2.15	1.08	3.23	3.23
9	Total	glargine	577	87.00	7.11	2.43	1.04	2.43
10	Total	detemir	233	85.84	3.86	2.15	2.15	6.01
11	Total	NPH	797	83.06	7.78	3.64	2.01	3.51
12	Total	no DGN	195	85.64	6.15	2.56	2.05	3.59

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Table F.58: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by gender and by insulin. The number of visits and the distribution of visit length (Days) described by the minimum, the 25% quantile, the median, the mean, the 75% quantile and the maximum.

S.No.	Variables		All (N)	Duration (Days)					
	Gender	Insulin		N	Min	25%	Median	Mean	75%
1	Male	glargine	322	1	1	1	1.801	1	47
2	Male	detemir	91	1	1	1	1.407	1	11
3	Male	NPH	468	1	1	1	1.959	1	61
4	Male	no DGN	102	1	1	1	1.725	1	13
5	Female	glargine	255	1	1	1	1.451	1	43
6	Female	detemir	142	1	1	1	5.662	1	307
7	Female	NPH	329	1	1	1	1.723	1	39
8	Female	no DGN	93	1	1	1	3.430	1	176
9	Total	glargine	577	1	1	1	1.646	1	47
10	Total	detemir	233	1	1	1	4.000	1	307
11	Total	NPH	797	1	1	1	1.862	1	61
12	Total	no DGN	195	1	1	1	2.538	1	176

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Table F.59: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by age at start of follow-up and by insulin. The number of visits and the distribution of the length of the visits.

S.No.	Variables		All (N)	Days (%)				
	Age group	Insulin		N	0-1	2-3	4-5	6-7
1	0-9	glargine	73	91.78	5.48	1.37	1.37	0.00
2	0-9	detemir	79	96.20	2.53	0.00	1.27	0.00
3	0-9	NPH	294	88.10	7.14	2.72	0.34	1.70
4	0-9	no DGN	49	91.84	4.08	4.08	0.00	0.00
5	10-19	glargine	172	90.70	6.98	0.58	0.00	1.74
6	10-19	detemir	80	87.50	1.25	2.50	1.25	7.50
7	10-19	NPH	101	87.13	7.92	0.99	1.98	1.98
8	10-19	no DGN	41	90.24	0.00	2.44	4.88	2.44
9	20-29	glargine	78	89.74	6.41	1.28	0.00	2.56
10	20-29	detemir	10	80.00	20.00	0.00	0.00	0.00
11	20-29	NPH	59	84.75	6.78	5.08	1.69	1.69
12	20-29	no DGN	19	89.47	5.26	0.00	0.00	5.26
13	30-39	glargine	94	90.43	5.32	3.19	0.00	1.06
14	30-39	detemir	14	92.86	0.00	0.00	7.14	0.00
15	30-39	NPH	90	86.67	5.56	3.33	2.22	2.22
16	30-39	no DGN	17	88.24	11.76	0.00	0.00	0.00
17	40-49	glargine	48	83.33	10.42	4.17	0.00	2.08
18	40-49	detemir	37	72.97	8.11	2.70	0.00	16.22
19	40-49	NPH	110	81.82	6.36	5.45	2.73	3.64
20	40-49	no DGN	37	75.68	10.81	5.41	2.70	5.41
21	50-59	glargine	71	73.24	9.86	7.04	5.63	4.23
22	50-59	detemir	8	62.50	0.00	12.50	25.00	0.00
23	50-59	NPH	76	73.68	15.79	2.63	0.00	7.89
24	50-59	no DGN	24	83.33	8.33	0.00	4.17	4.17
25	60-69	glargine	32	84.38	3.12	3.12	0.00	9.38
26	60-69	detemir	3	33.33	33.33	33.33	0.00	0.00
27	60-69	NPH	38	57.89	7.89	10.53	13.16	10.53
28	60-69	no DGN	7	71.43	14.29	0.00	0.00	14.29
29	70-79	glargine	7	57.14	14.29	0.00	14.29	14.29
30	70-79	detemir	2	0.00	0.00	0.00	0.00	100.00
31	70-79	NPH	20	70.00	0.00	5.00	10.00	15.00
32	70-79	no DGN	0	NaN	NaN	NaN	NaN	NaN
33	80+	glargine	2	50.00	50.00	0.00	0.00	0.00
34	80+	detemir	0	NaN	NaN	NaN	NaN	NaN
35	80+	NPH	9	55.56	22.22	11.11	0.00	11.11
36	80+	no DGN	1	0.00	0.00	0.00	0.00	100.00
37	Total	glargine	577	87.00	7.11	2.43	1.04	2.43
38	Total	detemir	233	85.84	3.86	2.15	2.15	6.01
39	Total	NPH	797	83.06	7.78	3.64	2.01	3.51
40	Total	no DGN	195	85.64	6.15	2.56	2.05	3.59

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Table F.60: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by age at start of follow-up and by insulin. The number of visits and the distribution of visit length (Days) described by the minimum, the 25% quantile, the median, the mean, the 75% quantile and the maximum.

S.No.	Variables		All (N)	Duration (Days)					
	Age group	Insulin		Min	25%	Median	Mean	75%	Max
1	0-9	glargine	73	1	1.00	1.0	1.205	1.00	7
2	0-9	detemir	79	1	1.00	1.0	1.089	1.00	6
3	0-9	NPH	294	1	1.00	1.0	1.541	1.00	39
4	0-9	no DGN	49	1	1.00	1.0	1.163	1.00	4
5	10-19	glargine	172	1	1.00	1.0	1.256	1.00	9
6	10-19	detemir	80	1	1.00	1.0	2.900	1.00	57
7	10-19	NPH	101	1	1.00	1.0	1.931	1.00	61
8	10-19	no DGN	41	1	1.00	1.0	5.634	1.00	176
9	20-29	glargine	78	1	1.00	1.0	1.821	1.00	47
10	20-29	detemir	10	1	1.00	1.0	1.300	1.00	3
11	20-29	NPH	59	1	1.00	1.0	1.814	1.00	28
12	20-29	no DGN	19	1	1.00	1.0	1.684	1.00	13
13	30-39	glargine	94	1	1.00	1.0	1.351	1.00	16
14	30-39	detemir	14	1	1.00	1.0	1.429	1.00	7
15	30-39	NPH	90	1	1.00	1.0	1.533	1.00	11
16	30-39	no DGN	17	1	1.00	1.0	1.176	1.00	3
17	40-49	glargine	48	1	1.00	1.0	1.792	1.00	26
18	40-49	detemir	37	1	1.00	1.0	13.890	2.00	307
19	40-49	NPH	110	1	1.00	1.0	1.818	1.00	18
20	40-49	no DGN	37	1	1.00	1.0	2.108	1.00	13
21	50-59	glargine	71	1	1.00	1.0	2.141	2.00	14
22	50-59	detemir	8	1	1.00	1.0	2.875	5.25	7
23	50-59	NPH	76	1	1.00	1.0	1.961	2.00	15
24	50-59	no DGN	24	1	1.00	1.0	1.708	1.00	10
25	60-69	glargine	32	1	1.00	1.0	3.531	1.00	43
26	60-69	detemir	3	1	2.00	3.0	3.000	4.00	5
27	60-69	NPH	38	1	1.00	1.0	3.921	5.00	23
28	60-69	no DGN	7	1	1.00	1.0	2.714	2.00	11
29	70-79	glargine	7	1	1.00	1.0	3.143	4.00	10
30	70-79	detemir	2	11	14.25	17.5	17.500	20.75	24
31	70-79	NPH	20	1	1.00	1.0	3.350	5.25	13
32	70-79	no DGN	0	NA	NA	NA	NaN	NA	NA
33	80+	glargine	2	1	1.50	2.0	2.000	2.50	3
34	80+	detemir	0	NA	NA	NA	NaN	NA	NA
35	80+	NPH	9	1	1.00	1.0	2.889	3.00	10
36	80+	no DGN	1	17	17.00	17.0	17.000	17.00	17
37	Total	glargine	577	1	1.00	1.0	1.646	1.00	47
38	Total	detemir	233	1	1.00	1.0	4.000	1.00	307
39	Total	NPH	797	1	1.00	1.0	1.862	1.00	61
40	Total	no DGN	195	1	1.00	1.0	2.538	1.00	176

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Table F.61: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by calendar year at start of follow-up and by insulin. The number of visits and the distribution of the length of the visits.

S.No.	Variables		All (N) N	Days (%)				
	Calender year	Insulin		0-1	2-3	4-5	6-7	7-
1	00-05	glargine	476	87.82	6.93	2.10	1.05	2.10
2	00-05	detemir	165	86.06	4.24	2.42	2.42	4.85
3	00-05	NPH	730	83.70	7.81	3.56	1.78	3.15
4	00-05	no DGN	175	84.57	6.86	2.29	2.29	4.00
5	06	glargine	35	74.29	8.57	11.43	0.00	5.71
6	06	detemir	29	89.66	6.90	0.00	3.45	0.00
7	06	NPH	42	71.43	9.52	2.38	7.14	9.52
8	06	no DGN	11	100.00	0.00	0.00	0.00	0.00
9	07	glargine	42	92.86	7.14	0.00	0.00	0.00
10	07	detemir	22	68.18	0.00	4.55	0.00	27.27
11	07	NPH	15	80.00	6.67	6.67	0.00	6.67
12	07	no DGN	6	100.00	0.00	0.00	0.00	0.00
13	08	glargine	12	66.67	16.67	0.00	8.33	8.33
14	08	detemir	13	100.00	0.00	0.00	0.00	0.00
15	08	NPH	7	85.71	0.00	14.29	0.00	0.00
16	08	no DGN	3	66.67	0.00	33.33	0.00	0.00
17	09	glargine	12	91.67	0.00	0.00	0.00	8.33
18	09	detemir	4	100.00	0.00	0.00	0.00	0.00
19	09	NPH	3	100.00	0.00	0.00	0.00	0.00
20	09	no DGN	0	NaN	NaN	NaN	NaN	NaN
21	Total	glargine	577	87.00	7.11	2.43	1.04	2.43
22	Total	detemir	233	85.84	3.86	2.15	2.15	6.01
23	Total	NPH	797	83.06	7.78	3.64	2.01	3.51
24	Total	no DGN	195	85.64	6.15	2.56	2.05	3.59

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Table F.62: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by calendar year at start of follow-up and by insulin. The number of visits and the distribution of visit length (Days) described by the minimum, the 25% quantile, the median, the mean, the 75% quantile and the maximum.

S.No.	Variables		All (N)	Duration (Days)					
	Calender year	Insulin	N	Min	25%	Median	Mean	75%	Max
1	00-05	glargine	476	1	1	1	1.639	1.0	47
2	00-05	detemir	165	1	1	1	4.321	1.0	307
3	00-05	NPH	730	1	1	1	1.807	1.0	61
4	00-05	no DGN	175	1	1	1	2.697	1.0	176
5	06	glargine	35	1	1	1	2.000	1.5	13
6	06	detemir	29	1	1	1	1.276	1.0	7
7	06	NPH	42	1	1	1	2.619	2.0	13
8	06	no DGN	11	1	1	1	1.000	1.0	1
9	07	glargine	42	1	1	1	1.119	1.0	3
10	07	detemir	22	1	1	1	7.500	8.0	57
11	07	NPH	15	1	1	1	2.733	1.0	23
12	07	no DGN	6	1	1	1	1.000	1.0	1
13	08	glargine	12	1	1	1	2.667	2.0	14
14	08	detemir	13	1	1	1	1.000	1.0	1
15	08	NPH	7	1	1	1	1.571	1.0	5
16	08	no DGN	3	1	1	1	2.000	2.5	4
17	09	glargine	12	1	1	1	1.750	1.0	10
18	09	detemir	4	1	1	1	1.000	1.0	1
19	09	NPH	3	1	1	1	1.000	1.0	1
20	09	no DGN	0	NA	NA	NA	NaN	NA	NA
21	Total	glargine	577	1	1	1	1.646	1.0	47
22	Total	detemir	233	1	1	1	4.000	1.0	307
23	Total	NPH	797	1	1	1	1.862	1.0	61
24	Total	no DGN	195	1	1	1	2.538	1.0	176

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Table F.63: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by time (Years) from year of diagnose (first reimbursement decision or purchase) at start of follow-up. The number of visits and the distribution of the length of the visits.

S.No.	Variables	All (N)	Days (%)					7-
			Insulin	N	0-1	2-3	4-5	
1	-1	glargine	532	87.59	6.95	2.44	0.94	2.07
2	-1	detemir	225	85.78	4.00	1.78	2.22	6.22
3	-1	NPH	749	85.18	7.08	3.60	1.07	3.07
4	-1	no DGN	173	87.86	5.20	2.31	1.73	2.89
5	1-2	glargine	4	100.00	0.00	0.00	0.00	0.00
6	1-2	detemir	1	100.00	0.00	0.00	0.00	0.00
7	1-2	NPH	11	63.64	27.27	0.00	9.09	0.00
8	1-2	no DGN	4	75.00	0.00	0.00	0.00	25.00
9	2-5	glargine	12	66.67	16.67	0.00	0.00	16.67
10	2-5	detemir	3	66.67	0.00	33.33	0.00	0.00
11	2-5	NPH	18	38.89	5.56	11.11	22.22	22.22
12	2-5	no DGN	11	63.64	27.27	0.00	9.09	0.00
13	5-10	glargine	18	77.78	5.56	5.56	5.56	5.56
14	5-10	detemir	3	100.00	0.00	0.00	0.00	0.00
15	5-10	NPH	17	58.82	29.41	0.00	11.76	0.00
16	5-10	no DGN	7	71.43	0.00	14.29	0.00	14.29
17	10-	glargine	11	90.91	9.09	0.00	0.00	0.00
18	10-	detemir	1	100.00	0.00	0.00	0.00	0.00
19	10-	NPH	2	0.00	0.00	0.00	50.00	50.00
20	10-	no DGN	0	NaN	NaN	NaN	NaN	NaN
21	Total	glargine	577	87.00	7.11	2.43	1.04	2.43
22	Total	detemir	233	85.84	3.86	2.15	2.15	6.01
23	Total	NPH	797	83.06	7.78	3.64	2.01	3.51
24	Total	no DGN	195	85.64	6.15	2.56	2.05	3.59

Naive T1 cohort. Data 28th December 2011

Table F.64: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by time (Years) from year of diagnose (first reimbursement decision or purchase) at start of follow-up. The number of visits and the distribution of visit length (Days) described by the minimum, the 25% quantile, the median, the mean, the 75% quantile and the maximum.

S.No.	Variables	All (N)	Duration (Days)						
			N	Min	25%	Median	Mean	75%	Max
1	-1	glargine	532	1	1.0	1.0	1.579	1.00	47
2	-1	detemir	225	1	1.0	1.0	4.089	1.00	307
3	-1	NPH	749	1	1.0	1.0	1.769	1.00	61
4	-1	no DGN	173	1	1.0	1.0	2.503	1.00	176
5	1-2	glargine	4	1	1.0	1.0	1.000	1.00	1
6	1-2	detemir	1	1	1.0	1.0	1.000	1.00	1
7	1-2	NPH	11	1	1.0	1.0	2.000	2.50	7
8	1-2	no DGN	4	1	1.0	1.0	4.000	4.00	13
9	2-5	glargine	12	1	1.0	1.0	4.417	2.25	26
10	2-5	detemir	3	1	1.0	1.0	2.333	3.00	5
11	2-5	NPH	18	1	1.0	4.5	4.500	6.75	12
12	2-5	no DGN	11	1	1.0	1.0	1.818	2.00	6
13	5-10	glargine	18	1	1.0	1.0	2.222	1.00	12
14	5-10	detemir	3	1	1.0	1.0	1.000	1.00	1
15	5-10	NPH	17	1	1.0	1.0	2.118	3.00	7
16	5-10	no DGN	7	1	1.0	1.0	3.714	2.50	17
17	10-	glargine	11	1	1.0	1.0	1.182	1.00	3
18	10-	detemir	1	1	1.0	1.0	1.000	1.00	1
19	10-	NPH	2	7	8.5	10.0	10.000	11.50	13
20	10-	no DGN	0	NA	NA	NA	NaN	NA	NA
21	Total	glargine	577	1	1.0	1.0	1.646	1.00	47
22	Total	detemir	233	1	1.0	1.0	4.000	1.00	307
23	Total	NPH	797	1	1.0	1.0	1.862	1.00	61
24	Total	no DGN	195	1	1.0	1.0	2.538	1.00	176

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Table F.65: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by hospital district at start of follow-up and by insulin.

S.No.	Variables		All (N)	Days (%)				
	Hosp. District	Insulin		N	0-1	2-3	4-5	6-7
1	Unknown	glargine	151	88.74	5.96	1.99	1.99	1.32
2	Unknown	detemir	51	84.31	3.92	5.88	3.92	1.96
3	Unknown	NPH	331	79.76	9.67	4.53	2.42	3.63
4	Unknown	no DGN	99	86.87	4.04	3.03	1.01	5.05
5	HUS	glargine	125	90.40	5.60	1.60	0.00	2.40
6	HUS	detemir	47	91.49	2.13	2.13	2.13	2.13
7	HUS	NPH	123	88.62	7.32	1.63	0.81	1.63
8	HUS	no DGN	24	83.33	16.67	0.00	0.00	0.00
9	Varsinais-Suomi	glargine	8	75.00	0.00	12.50	0.00	12.50
10	Varsinais-Suomi	detemir	6	100.00	0.00	0.00	0.00	0.00
11	Varsinais-Suomi	NPH	21	90.48	0.00	0.00	4.76	4.76
12	Varsinais-Suomi	no DGN	1	100.00	0.00	0.00	0.00	0.00
13	Satakunta	glargine	17	94.12	0.00	0.00	0.00	5.88
14	Satakunta	detemir	0	NaN	NaN	NaN	NaN	NaN
15	Satakunta	NPH	35	77.14	5.71	2.86	2.86	11.43
16	Satakunta	no DGN	9	88.89	0.00	0.00	11.11	0.00
17	Kantahame	glargine	43	93.02	4.65	0.00	0.00	2.33
18	Kantahame	detemir	25	96.00	4.00	0.00	0.00	0.00
19	Kantahame	NPH	25	92.00	0.00	8.00	0.00	0.00
20	Kantahame	no DGN	6	83.33	0.00	0.00	0.00	16.67
21	Pirkanmaa	glargine	17	82.35	11.76	0.00	0.00	5.88
22	Pirkanmaa	detemir	21	38.10	9.52	0.00	0.00	52.38
23	Pirkanmaa	NPH	8	87.50	12.50	0.00	0.00	0.00
24	Pirkanmaa	no DGN	5	100.00	0.00	0.00	0.00	0.00
25	Paijat-Hame	glargine	38	89.47	5.26	5.26	0.00	0.00
26	Paijat-Hame	detemir	10	80.00	20.00	0.00	0.00	0.00
27	Paijat-Hame	NPH	62	95.16	3.23	0.00	0.00	1.61
28	Paijat-Hame	no DGN	16	81.25	12.50	0.00	0.00	6.25
29	Kymenlaakso	glargine	12	41.67	41.67	0.00	16.67	0.00
30	Kymenlaakso	detemir	0	NaN	NaN	NaN	NaN	NaN
31	Kymenlaakso	NPH	9	66.67	0.00	11.11	0.00	22.22
32	Kymenlaakso	no DGN	7	71.43	14.29	14.29	0.00	0.00
33	Etela-Karjala	glargine	7	57.14	14.29	14.29	14.29	0.00
34	Etela-Karjala	detemir	4	100.00	0.00	0.00	0.00	0.00
35	Etela-Karjala	NPH	6	33.33	16.67	16.67	16.67	16.67
36	Etela-Karjala	no DGN	0	NaN	NaN	NaN	NaN	NaN
37	Etela-Savo	glargine	7	85.71	0.00	0.00	0.00	14.29
38	Etela-Savo	detemir	4	100.00	0.00	0.00	0.00	0.00
39	Etela-Savo	NPH	5	60.00	40.00	0.00	0.00	0.00
40	Etela-Savo	no DGN	0	NaN	NaN	NaN	NaN	NaN
41	Ita-Savo	glargine	0	NaN	NaN	NaN	NaN	NaN
42	Ita-Savo	detemir	0	NaN	NaN	NaN	NaN	NaN
43	Ita-Savo	NPH	6	100.00	0.00	0.00	0.00	0.00
44	Ita-Savo	no DGN	0	NaN	NaN	NaN	NaN	NaN
45	Pohjois-Karjala	glargine	4	75.00	0.00	25.00	0.00	0.00
46	Pohjois-Karjala	detemir	5	80.00	0.00	0.00	20.00	0.00
47	Pohjois-Karjala	NPH	5	100.00	0.00	0.00	0.00	0.00
48	Pohjois-Karjala	no DGN	0	NaN	NaN	NaN	NaN	NaN
49	Pohjois-Savo	glargine	22	81.82	9.09	4.55	0.00	4.55
50	Pohjois-Savo	detemir	6	100.00	0.00	0.00	0.00	0.00
51	Pohjois-Savo	NPH	25	84.00	12.00	4.00	0.00	0.00
52	Pohjois-Savo	no DGN	8	87.50	12.50	0.00	0.00	0.00
53	Keski-Suomi	glargine	27	77.78	11.11	3.70	0.00	7.41
54	Keski-Suomi	detemir	16	100.00	0.00	0.00	0.00	0.00
55	Keski-Suomi	NPH	43	81.40	4.65	6.98	4.65	2.33
56	Keski-Suomi	no DGN	6	83.33	0.00	16.67	0.00	0.00
57	Etela-Pohjanmaa	glargine	9	55.56	33.33	11.11	0.00	0.00
58	Etela-Pohjanmaa	detemir	5	60.00	0.00	20.00	0.00	20.00
59	Etela-Pohjanmaa	NPH	18	94.44	5.56	0.00	0.00	0.00
60	Etela-Pohjanmaa	no DGN	2	50.00	0.00	0.00	50.00	0.00
61	Vaasa	glargine	35	94.29	5.71	0.00	0.00	0.00
62	Vaasa	detemir	8	100.00	0.00	0.00	0.00	0.00
63	Vaasa	NPH	28	92.86	3.57	0.00	0.00	3.57
64	Vaasa	no DGN	4	100.00	0.00	0.00	0.00	0.00
65	Keski-Pohjanmaa	glargine	0	NaN	NaN	NaN	NaN	NaN
66	Keski-Pohjanmaa	detemir	0	NaN	NaN	NaN	NaN	NaN
67	Keski-Pohjanmaa	NPH	3	33.33	0.00	33.33	33.33	0.00
68	Keski-Pohjanmaa	no DGN	0	NaN	NaN	NaN	NaN	NaN
69	Pohjois-Pohjanmaa	glargine	36	100.00	0.00	0.00	0.00	0.00
70	Pohjois-Pohjanmaa	detemir	14	92.86	7.14	0.00	0.00	0.00
71	Pohjois-Pohjanmaa	NPH	26	88.46	3.85	3.85	0.00	3.85
72	Pohjois-Pohjanmaa	no DGN	5	100.00	0.00	0.00	0.00	0.00
73	Kainuu	glargine	4	75.00	0.00	0.00	0.00	25.00
74	Kainuu	detemir	2	100.00	0.00	0.00	0.00	0.00
75	Kainuu	NPH	6	100.00	0.00	0.00	0.00	0.00
76	Kainuu	no DGN	0	NaN	NaN	NaN	NaN	NaN
77	Lansi-Pohja	glargine	9	66.67	22.22	11.11	0.00	0.00
78	Lansi-Pohja	detemir	1	100.00	0.00	0.00	0.00	0.00
79	Lansi-Pohja	NPH	10	30.00	30.00	10.00	10.00	20.00
80	Lansi-Pohja	no DGN	1	0.00	0.00	0.00	100.00	0.00
81	Lappi	glargine	6	83.33	16.67	0.00	0.00	0.00
82	Lappi	detemir	8	87.50	0.00	0.00	12.50	0.00
83	Lappi	NPH	1	0.00	100.00	0.00	0.00	0.00
84	Lappi	no DGN	2	100.00	0.00	0.00	0.00	0.00
85	Ahvenanmaa	glargine	0	NaN	NaN	NaN	NaN	NaN
86	Ahvenanmaa	detemir	0	NaN	NaN	NaN	NaN	NaN
87	Ahvenanmaa	NPH	1	0.00	100.00	0.00	0.00	0.00
88	Ahvenanmaa	no DGN	0	NaN	NaN	NaN	NaN	NaN
89	Total	glargine	577	87.00	7.11	2.43	1.04	2.43
90	Total	detemir	233	85.84	3.86	2.15	2.15	6.01
91	Total	NPH	797	83.06	7.78	3.64	2.01	3.51
92	Total	no DGN	195	85.64	6.15	2.56	2.05	3.59

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Table F.66: Hospitalizations and secondary care visits due to severe hypoglycemic coma events stratified by hospital district at start of follow-up and by insulin.

S.No.	Variables		All (N)	Duration (Days)					
	Hosp. District	Insulin		Min	25%	Median	Mean	75%	Max
1	Unknown	glargine	151	1	1.00	1.0	1.377	1.00	9
2	Unknown	detemir	51	1	1.00	1.0	1.706	1.00	11
3	Unknown	NPH	331	1	1.00	1.0	1.819	1.00	28
4	Unknown	no DGN	99	1	1.00	1.0	3.414	1.00	176
5	HUS	glargine	125	1	1.00	1.0	1.768	1.00	47
6	HUS	detemir	47	1	1.00	1.0	1.723	1.00	24
7	HUS	NPH	123	1	1.00	1.0	1.780	1.00	61
8	HUS	no DGN	24	1	1.00	1.0	1.208	1.00	3
9	Varsinais-Suomi	glargine	8	1	1.00	1.0	2.500	1.75	10
10	Varsinais-Suomi	detemir	6	1	1.00	1.0	1.000	1.00	1
11	Varsinais-Suomi	NPH	21	1	1.00	1.0	1.762	1.00	11
12	Varsinais-Suomi	no DGN	1	1	1.00	1.0	1.000	1.00	1
13	Satakunta	glargine	17	1	1.00	1.0	1.882	1.00	16
14	Satakunta	detemir	0	NA	NA	NA	NaN	NA	NA
15	Satakunta	NPH	35	1	1.00	1.0	3.486	1.00	39
16	Satakunta	no DGN	9	1	1.00	1.0	1.556	1.00	6
17	Kantahame	glargine	43	1	1.00	1.0	1.349	1.00	14
18	Kantahame	detemir	25	1	1.00	1.0	1.080	1.00	3
19	Kantahame	NPH	25	1	1.00	1.0	1.240	1.00	4
20	Kantahame	no DGN	6	1	1.00	1.0	3.000	1.00	13
21	Pirkanmaa	glargine	17	1	1.00	1.0	2.647	1.00	26
22	Pirkanmaa	detemir	21	1	1.00	9.0	29.570	23.00	307
23	Pirkanmaa	NPH	8	1	1.00	1.0	1.250	1.00	3
24	Pirkanmaa	no DGN	5	1	1.00	1.0	1.000	1.00	1
25	Paijat-Hame	glargine	38	1	1.00	1.0	1.263	1.00	5
26	Paijat-Hame	detemir	10	1	1.00	1.0	1.300	1.00	3
27	Paijat-Hame	NPH	62	1	1.00	1.0	1.419	1.00	24
28	Paijat-Hame	no DGN	16	1	1.00	1.0	2.188	1.00	17
29	Kymenlaakso	glargine	12	1	1.00	2.0	2.500	3.00	6
30	Kymenlaakso	detemir	0	NA	NA	NA	NaN	NA	NA
31	Kymenlaakso	NPH	9	1	1.00	1.0	5.778	5.00	23
32	Kymenlaakso	no DGN	7	1	1.00	1.0	1.714	2.00	4
33	Etela-Karjala	glargine	7	1	1.00	1.0	2.429	3.50	6
34	Etela-Karjala	detemir	4	1	1.00	1.0	1.000	1.00	1
35	Etela-Karjala	NPH	6	1	1.25	3.0	4.000	5.50	10
36	Etela-Karjala	no DGN	0	NA	NA	NA	NaN	NA	NA
37	Etela-Savo	glargine	7	1	1.00	1.0	7.000	1.00	43
38	Etela-Savo	detemir	4	1	1.00	1.0	1.000	1.00	1
39	Etela-Savo	NPH	5	1	1.00	1.0	1.400	2.00	2
40	Etela-Savo	no DGN	0	NA	NA	NA	NaN	NA	NA
41	Ita-Savo	glargine	0	NA	NA	NA	NaN	NA	NA
42	Ita-Savo	detemir	0	NA	NA	NA	NaN	NA	NA
43	Ita-Savo	NPH	6	1	1.00	1.0	1.000	1.00	1
44	Ita-Savo	no DGN	0	NA	NA	NA	NaN	NA	NA
45	Pohjois-Karjala	glargine	4	1	1.00	1.0	2.000	2.00	5
46	Pohjois-Karjala	detemir	5	1	1.00	1.0	2.000	1.00	6
47	Pohjois-Karjala	NPH	5	1	1.00	1.0	1.000	1.00	1
48	Pohjois-Karjala	no DGN	0	NA	NA	NA	NaN	NA	NA
49	Pohjois-Savo	glargine	22	1	1.00	1.0	1.591	1.00	8
50	Pohjois-Savo	detemir	6	1	1.00	1.0	1.000	1.00	1
51	Pohjois-Savo	NPH	25	1	1.00	1.0	1.280	1.00	4
52	Pohjois-Savo	no DGN	8	1	1.00	1.0	1.125	1.00	2
53	Keski-Suomi	glargine	27	1	1.00	1.0	1.926	1.00	13
54	Keski-Suomi	detemir	16	1	1.00	1.0	1.000	1.00	1
55	Keski-Suomi	NPH	43	1	1.00	1.0	1.721	1.00	10
56	Keski-Suomi	no DGN	6	1	1.00	1.0	1.500	1.00	4
57	Etela-Pohjanmaa	glargine	9	1	1.00	1.0	2.000	3.00	4
58	Etela-Pohjanmaa	detemir	5	1	1.00	1.0	3.600	4.00	11
59	Etela-Pohjanmaa	NPH	18	1	1.00	1.0	1.056	1.00	2
60	Etela-Pohjanmaa	no DGN	2	1	2.25	3.5	3.500	4.75	6
61	Vaasa	glargine	35	1	1.00	1.0	1.086	1.00	3
62	Vaasa	detemir	8	1	1.00	1.0	1.000	1.00	1
63	Vaasa	NPH	28	1	1.00	1.0	1.500	1.00	13
64	Vaasa	no DGN	4	1	1.00	1.0	1.000	1.00	1
65	Keski-Pohjanmaa	glargine	0	NA	NA	NA	NaN	NA	NA
66	Keski-Pohjanmaa	detemir	0	NA	NA	NA	NaN	NA	NA
67	Keski-Pohjanmaa	NPH	3	1	3.00	5.0	4.333	6.00	7
68	Keski-Pohjanmaa	no DGN	0	NA	NA	NA	NaN	NA	NA
69	Pohjois-Pohjanmaa	glargine	36	1	1.00	1.0	1.000	1.00	1
70	Pohjois-Pohjanmaa	detemir	14	1	1.00	1.0	1.071	1.00	2
71	Pohjois-Pohjanmaa	NPH	26	1	1.00	1.0	1.692	1.00	15
72	Pohjois-Pohjanmaa	no DGN	5	1	1.00	1.0	1.000	1.00	1
73	Kainuu	glargine	4	1	1.00	1.0	3.250	3.25	10
74	Kainuu	detemir	2	1	1.00	1.0	1.000	1.00	1
75	Kainuu	NPH	6	1	1.00	1.0	1.000	1.00	1
76	Kainuu	no DGN	0	NA	NA	NA	NaN	NA	NA
77	Lansi-Pohja	glargine	9	1	1.00	1.0	1.667	2.00	4
78	Lansi-Pohja	detemir	1	1	1.00	1.0	1.000	1.00	1
79	Lansi-Pohja	NPH	10	1	1.50	3.0	4.500	6.50	12
80	Lansi-Pohja	no DGN	1	7	7.00	7.0	7.000	7.00	7
81	Lappi	glargine	6	1	1.00	1.0	1.167	1.00	2
82	Lappi	detemir	8	1	1.00	1.0	1.625	1.00	6
83	Lappi	NPH	1	3	3.00	3.0	3.000	3.00	3
84	Lappi	no DGN	2	1	1.00	1.0	1.000	1.00	1
85	Ahvenanmaa	glargine	0	NA	NA	NA	NaN	NA	NA
86	Ahvenanmaa	detemir	0	NA	NA	NA	NaN	NA	NA
87	Ahvenanmaa	NPH	1	3	3.00	3.0	3.000	3.00	3
88	Ahvenanmaa	no DGN	0	NA	NA	NA	NaN	NA	NA
89	Total	glargine	577	1	1.00	1.0	1.646	1.00	47
90	Total	detemir	233	1	1.00	1.0	4.000	1.00	307
91	Total	NPH	797	1	1.00	1.0	1.862	1.00	61
92	Total	no DGN	195	1	1.00	1.0	2.538	1.00	176

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G Appendix 7: All-cause mortality analysis

G.1 Crude estimates for risk of all-cause mortality

Table G.67: The number/risk time/incidence rate (95% CI) for all-cause mortality for detemir insulin, glargine insulin, and NPH-insulin stratified by gender.

S.No.	Gender	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	Male	glargine	4201	105	12677	8.28	6.84	10.03
2	Male	detemir	3019	21	5734	3.66	2.39	5.62
3	Male	NPH	4336	177	13153	13.46	11.61	15.59
4	Male	no DGN	5970	99	3919	25.26	20.75	30.76
5	Female	glargine	2651	24	7508	3.20	2.14	4.77
6	Female	detemir	2399	9	4598	1.96	1.02	3.76
7	Female	NPH	2858	70	7519	9.31	7.37	11.77
8	Female	no DGN	3794	69	2680	25.74	20.33	32.59
9	Total	glargine	6852	129	20185	6.39	5.38	7.59
10	Total	detemir	5418	30	10333	2.90	2.03	4.15
11	Total	NPH	7194	247	20672	11.95	10.55	13.54
12	Total	no DGN	9764	168	6599	25.46	21.89	29.61

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Table G.68: The number/risk time/incidence rate (95% CI) for all-cause mortality for detemir insulin, glargine insulin, and NPH-insulin stratified by age at start of follow up.

S.No.	Age group	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	0-9	glargine	1263	1	3169	0.32	0.04	2.24
2	0-9	detemir	2156	1	3941	0.25	0.04	1.80
3	0-9	NPH	2437	0	6604	NA	NA	NA
4	0-9	no DGN	2702	0	2112	NA	NA	NA
5	10-19	glargine	1884	5	6448	0.78	0.32	1.86
6	10-19	detemir	1352	2	2758	0.73	0.18	2.90
7	10-19	NPH	1390	1	3558	0.28	0.04	2.00
8	10-19	no DGN	2452	6	1396	4.30	1.93	9.56
9	20-29	glargine	964	7	2996	2.34	1.11	4.90
10	20-29	detemir	578	3	1188	2.52	0.81	7.83
11	20-29	NPH	670	5	2143	2.33	0.97	5.60
12	20-29	no DGN	1139	4	658	6.08	2.28	16.20
13	30-39	glargine	837	15	2579	5.82	3.51	9.65
14	30-39	detemir	454	6	888	6.75	3.03	15.03
15	30-39	NPH	698	15	2188	6.86	4.13	11.37
16	30-39	no DGN	1018	7	735	9.52	4.54	19.97
17	40-49	glargine	740	28	2119	13.22	9.13	19.14
18	40-49	detemir	384	5	746	6.70	2.79	16.10
19	40-49	NPH	707	42	2153	19.51	14.42	26.40
20	40-49	no DGN	945	28	675	41.46	28.63	60.05
21	50-59	glargine	684	31	1833	16.91	11.89	24.04
22	50-59	detemir	290	4	541	7.40	2.78	19.72
23	50-59	NPH	682	69	2174	31.73	25.06	40.18
24	50-59	no DGN	837	37	542	68.28	49.47	94.24
25	60-69	glargine	324	22	707	31.13	20.50	47.27
26	60-69	detemir	142	1	206	4.86	0.69	34.53
27	60-69	NPH	385	50	1271	39.35	29.82	51.92
28	60-69	no DGN	434	39	323	120.75	88.22	165.27
29	70-79	glargine	109	14	251	55.79	33.04	94.19
30	70-79	detemir	49	3	54	55.72	17.97	172.74
31	70-79	NPH	155	39	445	87.56	63.97	119.84
32	70-79	no DGN	159	22	104	212.37	139.84	322.53
33	80+	glargine	47	6	83	72.16	32.42	160.62
34	80+	detemir	13	5	11	452.38	188.30	1086.83
35	80+	NPH	70	26	135	192.14	130.82	282.19
36	80+	no DGN	78	25	53	467.33	315.78	691.62
37	Total	glargine	6852	129	20185	6.39	5.38	7.59
38	Total	detemir	5418	30	10333	2.90	2.03	4.15
39	Total	NPH	7194	247	20672	11.95	10.55	13.54
40	Total	no DGN	9764	168	6599	25.46	21.89	29.61

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Table G.69: The number/risk time/incidence rate (95% CI) for all-cause mortality for detemir insulin, glargine insulin, and NPH-insulin stratified by calendar year at start of follow-up.

S.No.	Calender year	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	00-05	glargine	4425	93	16248	5.72	4.67	7.01
2	00-05	detemir	2796	12	6433	1.87	1.06	3.28
3	00-05	NPH	5791	213	18731	11.37	9.94	13.01
4	00-05	no DGN	6648	136	5649	24.08	20.35	28.48
5	06	glargine	601	15	1544	9.72	5.86	16.12
6	06	detemir	722	7	1683	4.16	1.98	8.73
7	06	NPH	532	18	939	19.16	12.07	30.41
8	06	no DGN	1103	9	462	19.50	10.15	37.48
9	07	glargine	676	8	1383	5.79	2.89	11.57
10	07	detemir	721	5	1249	4.00	1.67	9.62
11	07	NPH	445	10	650	15.39	8.28	28.60
12	07	no DGN	1036	15	311	48.16	29.03	79.88
13	08	glargine	591	11	755	14.58	8.07	26.32
14	08	detemir	611	3	733	4.09	1.32	12.69
15	08	NPH	272	5	284	17.61	7.33	42.31
16	08	no DGN	661	5	128	39.11	16.28	93.96
17	09	glargine	559	2	256	7.81	1.95	31.21
18	09	detemir	568	3	235	12.76	4.12	39.56
19	09	NPH	154	1	68	14.80	2.09	105.09
20	09	no DGN	316	3	50	60.46	19.50	187.45
21	Total	glargine	6852	129	20185	6.39	5.38	7.59
22	Total	detemir	5418	30	10333	2.90	2.03	4.15
23	Total	NPH	7194	247	20672	11.95	10.55	13.54
24	Total	no DGN	9764	168	6599	25.46	21.89	29.61

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Table G.70: The number/risk time/incidence rate (95% CI) for all-cause mortality for detemir insulin, glargine insulin, and NPH-insulin stratified by calendar time since diagnose (first reimbursement decision or purchase).

S.No.	Time since diag	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	-1	glargine	6317	107	18782	5.70	4.71	6.89
2	-1	detemir	5150	24	9865	2.43	1.63	3.63
3	-1	NPH	6623	193	18772	10.28	8.93	11.84
4	-1	no DGN	9026	125	5979	20.91	17.54	24.91
5	1-2	glargine	108	2	322	6.20	1.55	24.81
6	1-2	detemir	66	0	137	NA	NA	NA
7	1-2	NPH	106	5	314	15.90	6.62	38.21
8	1-2	no DGN	151	7	140	50.00	23.84	104.89
9	2-5	glargine	173	6	479	12.52	5.62	27.86
10	2-5	detemir	80	2	140	14.29	3.57	57.13
11	2-5	NPH	204	21	752	27.92	18.20	42.82
12	2-5	no DGN	257	14	227	61.78	36.59	104.32
13	5-10	glargine	182	12	444	27.04	15.36	47.62
14	5-10	detemir	83	3	140	21.47	6.93	66.56
15	5-10	NPH	205	20	716	27.92	18.01	43.28
16	5-10	no DGN	251	19	213	89.36	57.00	140.10
17	10-	glargine	72	2	157	12.71	3.18	50.81
18	10-	detemir	39	1	51	19.56	2.76	138.87
19	10-	NPH	56	8	118	67.96	33.99	135.89
20	10-	no DGN	79	3	41	72.99	23.54	226.28
21	Total	glargine	6852	129	20185	6.39	5.38	7.59
22	Total	detemir	5418	30	10333	2.90	2.03	4.15
23	Total	NPH	7194	247	20672	11.95	10.55	13.54
24	Total	no DGN	9764	168	6599	25.46	21.89	29.61

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Table G.71: The number/risk time/incidence rate (95% CI) for all-cause mortality for detemir insulin, glargine insulin, and NPH-insulin stratified by history use of oral diabetes medication (A10BB) at start of follow-up.

S.No.	A10BB hist	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	No	glargine	6414	105	19025	5.52	4.56	6.68
2	No	detemir	5225	23	10022	2.29	1.53	3.45
3	No	NPH	6660	181	18870	9.59	8.29	11.10
4	No	no DGN	9123	110	6113	18.00	14.93	21.69
5	Yes	glargine	438	24	1160	20.69	13.87	30.86
6	Yes	detemir	193	7	311	22.52	10.73	47.23
7	Yes	NPH	534	66	1802	36.63	28.78	46.62
8	Yes	no DGN	641	58	487	119.16	92.12	154.14
9	Total	glargine	6852	129	20185	6.39	5.38	7.59
10	Total	detemir	5418	30	10333	2.90	2.03	4.15
11	Total	NPH	7194	247	20672	11.95	10.55	13.54
12	Total	no DGN	9764	168	6599	25.46	21.89	29.61

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Table G.72: The number/risk time/incidence rate (95% CI) for all-cause mortality for detemir insulin, glargine insulin, and NPH-insulin stratified by history use of insulin medication (A10A) at start of follow-up.

S.No.	A10A hist	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	No	glargine	6065	109	17973	6.06	5.03	7.32
2	No	detemir	4923	29	9397	3.09	2.14	4.44
3	No	NPH	6707	227	19303	11.76	10.33	13.39
4	No	no DGN	8823	143	5967	23.97	20.34	28.23
5	Yes	glargine	787	20	2212	9.04	5.83	14.01
6	Yes	detemir	495	1	935	1.07	0.15	7.59
7	Yes	NPH	487	20	1370	14.60	9.42	22.63
8	Yes	no DGN	941	25	633	39.52	26.71	58.49
9	Total	glargine	6852	129	20185	6.39	5.38	7.59
10	Total	detemir	5418	30	10333	2.90	2.03	4.15
11	Total	NPH	7194	247	20672	11.95	10.55	13.54
12	Total	no DGN	9764	168	6599	25.46	21.89	29.61

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Table G.73: The number/risk time/incidence rate (95% CI) for all-cause mortality for detemir insulin, glargine insulin, and NPH-insulin stratified by hospitalization history at start of follow-up.

S.No.	Hosp hist	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	No	glargine	5916	109	17170	6.35	5.26	7.66
2	No	detemir	4814	28	9047	3.09	2.14	4.48
3	No	NPH	6267	217	18052	12.02	10.52	13.73
4	No	no DGN	8499	158	5777	27.35	23.40	31.97
5	Yes	glargine	936	20	3015	6.63	4.28	10.28
6	Yes	detemir	604	2	1285	1.56	0.39	6.22
7	Yes	NPH	927	30	2620	11.45	8.01	16.38
8	Yes	no DGN	1265	10	822	12.16	6.54	22.60
9	Total	glargine	6852	129	20185	6.39	5.38	7.59
10	Total	detemir	5418	30	10333	2.90	2.03	4.15
11	Total	NPH	7194	247	20672	11.95	10.55	13.54
12	Total	no DGN	9764	168	6599	25.46	21.89	29.61
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Table G.74: The number/risk time/incidence rate (95% CI) for all-cause mortality for detemir insulin, glargine insulin, and NPH-insulin stratified by hospital district at start of follow-up.

S.No.	Hosp. District	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	Unknown	glargine	1393	23	5119	4.49	2.99	6.76
2	Unknown	detemir	857	3	2030	1.48	0.48	4.58
3	Unknown	NPH	2232	101	9480	10.65	8.77	12.95
4	Unknown	no DGN	2186	63	2524	24.96	19.50	31.95
5	HUS	glargine	1553	34	4375	7.77	5.55	10.88
6	HUS	detemir	1313	7	2365	2.96	1.41	6.21
7	HUS	NPH	1385	44	2773	15.87	11.81	21.33
8	HUS	no DGN	2194	16	1318	12.14	7.44	19.82
9	Varsinais-Suomi	glargine	420	5	1127	4.44	1.85	10.66
10	Varsinais-Suomi	detemir	361	4	600	6.67	2.50	17.77
11	Varsinais-Suomi	NPH	397	4	933	4.29	1.61	11.43
12	Varsinais-Suomi	no DGN	568	5	238	21.01	8.74	50.47
13	Satakunta	glargine	183	4	457	8.74	3.28	23.30
14	Satakunta	detemir	282	0	531	NA	NA	NA
15	Satakunta	NPH	284	7	764	9.16	4.37	19.21
16	Satakunta	no DGN	370	5	174	28.80	11.99	69.19
17	Kantahame	glargine	160	1	391	2.56	0.36	18.15
18	Kantahame	detemir	197	0	521	NA	NA	NA
19	Kantahame	NPH	132	4	295	13.56	5.09	36.12
20	Kantahame	no DGN	265	2	129	15.51	3.88	62.04
21	Pirkanmaa	glargine	420	9	1119	8.04	4.18	15.46
22	Pirkanmaa	detemir	359	3	544	5.52	1.78	17.11
23	Pirkanmaa	NPH	465	13	1064	12.22	7.09	21.04
24	Pirkanmaa	no DGN	586	6	328	18.30	8.22	40.74
25	Paijat-Hame	glargine	202	3	549	5.46	1.76	16.94
26	Paijat-Hame	detemir	154	0	251	NA	NA	NA
27	Paijat-Hame	NPH	288	9	657	13.70	7.13	26.33
28	Paijat-Hame	no DGN	300	3	133	22.64	7.30	70.20
29	Kymenlaakso	glargine	204	2	518	3.86	0.97	15.45
30	Kymenlaakso	detemir	133	2	198	10.10	2.52	40.37
31	Kymenlaakso	NPH	193	8	414	19.31	9.66	38.62
32	Kymenlaakso	no DGN	264	11	127	86.48	47.90	156.16
33	Etela-Karjala	glargine	154	7	454	15.43	7.35	32.36
34	Etela-Karjala	detemir	137	0	258	NA	NA	NA
35	Etela-Karjala	NPH	104	5	200	25.02	10.41	60.12
36	Etela-Karjala	no DGN	205	7	98	71.65	34.16	150.29
37	Etela-Savo	glargine	76	0	235	NA	NA	NA
38	Etela-Savo	detemir	99	1	198	5.06	0.71	35.92
39	Etela-Savo	NPH	129	4	297	13.46	5.05	35.86
40	Etela-Savo	no DGN	160	2	91	21.91	5.48	87.62
41	Ita-Savo	glargine	55	2	180	11.14	2.79	44.53
42	Ita-Savo	detemir	46	0	77	NA	NA	NA
43	Ita-Savo	NPH	52	1	124	8.10	1.14	57.47
44	Ita-Savo	no DGN	75	0	37	NA	NA	NA
45	Pohjois-Karjala	glargine	217	2	589	3.40	0.85	13.58
46	Pohjois-Karjala	detemir	144	1	269	3.72	0.52	26.40
47	Pohjois-Karjala	NPH	159	3	364	8.25	2.66	25.59
48	Pohjois-Karjala	no DGN	251	1	97	10.29	1.45	73.06
49	Pohjois-Savo	glargine	328	2	944	2.12	0.53	8.47
50	Pohjois-Savo	detemir	109	0	190	NA	NA	NA
51	Pohjois-Savo	NPH	164	7	305	22.98	10.96	48.20
52	Pohjois-Savo	no DGN	318	10	207	48.36	26.02	89.87
53	Keski-Suomi	glargine	317	5	982	5.09	2.12	12.24
54	Keski-Suomi	detemir	260	4	571	7.01	2.63	18.67
55	Keski-Suomi	NPH	196	7	482	14.53	6.93	30.49
56	Keski-Suomi	no DGN	432	10	197	50.89	27.38	94.58
57	Etela-Pohjanmaa	glargine	175	0	483	NA	NA	NA
58	Etela-Pohjanmaa	detemir	171	0	322	NA	NA	NA
59	Etela-Pohjanmaa	NPH	155	2	381	5.25	1.31	21.00
60	Etela-Pohjanmaa	no DGN	252	3	100	29.91	9.65	92.73
61	Vaasa	glargine	117	2	304	6.59	1.65	26.33
62	Vaasa	detemir	157	1	288	3.47	0.49	24.61
63	Vaasa	NPH	113	3	266	11.26	3.63	34.91
64	Vaasa	no DGN	198	3	119	25.13	8.10	77.91
65	Keski-Pohjanmaa	glargine	66	4	185	21.60	8.11	57.56
66	Keski-Pohjanmaa	detemir	68	2	99	20.24	5.06	80.94
67	Keski-Pohjanmaa	NPH	83	3	224	13.38	4.31	41.48
68	Keski-Pohjanmaa	no DGN	111	3	70	42.92	13.84	133.09
69	Pohjois-Pohjanmaa	glargine	509	17	1450	11.72	7.29	18.86
70	Pohjois-Pohjanmaa	detemir	326	1	566	1.77	0.25	12.53
71	Pohjois-Pohjanmaa	NPH	370	11	927	11.87	6.57	21.44
72	Pohjois-Pohjanmaa	no DGN	598	11	276	39.83	22.06	71.92
73	Kainuu	glargine	76	1	166	6.01	0.85	42.64
74	Kainuu	detemir	71	0	137	NA	NA	NA
75	Kainuu	NPH	115	2	282	7.10	1.78	28.39
76	Kainuu	no DGN	126	1	83	11.99	1.69	85.12
77	Lansi-Pohja	glargine	85	2	202	9.89	2.47	39.53
78	Lansi-Pohja	detemir	28	0	50	NA	NA	NA
79	Lansi-Pohja	NPH	65	3	183	16.41	5.29	50.89
80	Lansi-Pohja	no DGN	83	3	33	91.61	29.55	284.05
81	Lappi	glargine	100	4	238	16.82	6.31	44.81
82	Lappi	detemir	132	1	243	4.11	0.58	29.20
83	Lappi	NPH	85	5	187	26.79	11.15	64.38
84	Lappi	no DGN	166	1	178	5.62	0.79	39.90
85	Ahvenanmaa	glargine	42	0	119	NA	NA	NA
86	Ahvenanmaa	detemir	14	0	24	NA	NA	NA
87	Ahvenanmaa	NPH	28	1	73	13.76	1.94	97.67
88	Ahvenanmaa	no DGN	56	2	44	45.78	11.45	183.04
89	Total	glargine	6852	129	20185	6.39	5.38	7.59
90	Total	detemir	5418	30	10333	2.90	2.03	4.15
91	Total	NPH	7194	247	20672	11.95	10.53	13.54
92	Total	no DGN	9764	168	6599	25.46	21.89	29.61

Naive T1 cohort. Data 28th December 2011

G.2 Cox's proportional hazards model for risk of all-cause mortality analysis

Table G.75: The risk for all-cause mortality estimated by the Cox's proportional hazards model. Hospital district as strata. Glargine insulin as reference

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulin detemir	-0.291	0.208	0.747	0.497	1.124	0.162
2	insulin NPH	0.328	0.136	1.389	1.065	1.812	0.015
3	insulin no DGN	1.102	0.135	3.009	2.308	3.924	<0.001
4	gender Female	-0.472	0.098	0.624	0.515	0.755	<0.001
5	agegroupD 40-49	2.069	0.154	7.914	5.855	10.698	<0.001
6	agegroupD 50-59	2.49	0.148	12.064	9.03	16.117	<0.001
7	agegroupD 60-69	2.918	0.16	18.508	13.521	25.334	<0.001
8	agegroupD 70-79	3.604	0.176	36.747	26.044	51.848	<0.001
9	agegroupD 80+	4.551	0.197	94.715	64.398	139.304	<0.001
10	BB.stfup Yes	0.349	0.13	1.418	1.098	1.829	0.007
11	useBB Yes	-0.896	0.185	0.408	0.284	0.586	<0.001
12	A10A.stfup Yes	0.225	0.143	1.252	0.946	1.657	0.116
13	useA10A Yes	-0.838	0.099	0.433	0.356	0.525	<0.001
14	hosph.stfup Yes	-0.977	0.198	0.377	0.255	0.555	<0.001
15	nhosph2 1-2	0.911	0.161	2.488	1.816	3.408	<0.001
16	nhosph2 3+	1.488	0.277	4.427	2.574	7.614	<0.001
17	Switch YES	0.204	0.144	1.227	0.925	1.627	0.157
18	time2diag 1-2	-0.408	0.289	0.665	0.378	1.17	0.157
19	time2diag 2-5	-0.558	0.191	0.572	0.393	0.832	0.003
20	time2diag 5-10	-0.336	0.178	0.715	0.504	1.014	0.06
21	time2diag 10-	-0.331	0.299	0.718	0.4	1.289	0.267
22	calyear2 06	0.088	0.166	1.092	0.788	1.512	0.598
23	calyear2 07	-0.14	0.19	0.869	0.599	1.261	0.46
24	calyear2 08	0.096	0.236	1.101	0.693	1.749	0.685
25	calyear2 09	-0.091	0.365	0.913	0.447	1.867	0.803

Naive T1 cohort. Data 28th December 2011

Table G.76: The risk for all-cause mortality estimated by the Cox's proportional hazards model. Hospital district as strata. NPH insulin as reference

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulinNPH detemir	-0.62	0.223	0.538	0.347	0.834	0.006
2	insulinNPH glargine	-0.328	0.136	0.72	0.552	0.939	0.015
3	insulinNPH no DGN	0.773	0.108	2.167	1.754	2.678	<0.001
4	gender Female	-0.472	0.098	0.624	0.515	0.755	<0.001
5	agegroupD 40-49	2.069	0.154	7.914	5.855	10.698	<0.001
6	agegroupD 50-59	2.49	0.148	12.064	9.03	16.117	<0.001
7	agegroupD 60-69	2.918	0.16	18.508	13.521	25.334	<0.001
8	agegroupD 70-79	3.604	0.176	36.747	26.044	51.848	<0.001
9	agegroupD 80+	4.551	0.197	94.715	64.398	139.304	<0.001
10	BB.stfup Yes	0.349	0.13	1.418	1.098	1.829	0.007
11	useBB Yes	-0.896	0.185	0.408	0.284	0.586	<0.001
12	A10A.stfup Yes	0.225	0.143	1.252	0.946	1.657	0.116
13	useA10A Yes	-0.838	0.099	0.433	0.356	0.525	<0.001
14	hosph.stfup Yes	-0.977	0.198	0.377	0.255	0.555	<0.001
15	nhosph2 1-2	0.911	0.161	2.488	1.816	3.408	<0.001
16	nhosph2 3+	1.488	0.277	4.427	2.574	7.614	<0.001
17	Switch YES	0.204	0.144	1.227	0.925	1.627	0.157
18	time2diag 1-2	-0.408	0.289	0.665	0.378	1.17	0.157
19	time2diag 2-5	-0.558	0.191	0.572	0.393	0.832	0.003
20	time2diag 5-10	-0.336	0.178	0.715	0.504	1.014	0.06
21	time2diag 10-	-0.331	0.299	0.718	0.4	1.289	0.267
22	calyear2 06	0.088	0.166	1.092	0.788	1.512	0.598
23	calyear2 07	-0.14	0.19	0.869	0.599	1.261	0.46
24	calyear2 08	0.096	0.236	1.101	0.693	1.749	0.685
25	calyear2 09	-0.091	0.365	0.913	0.447	1.867	0.803

Naive T1 cohort. Data 28th December 2011

Table G.77: Sensitivity analysis for all-cause mortality estimated by the Cox's proportional hazards model. Hospital district as strata. NPH insulin as reference. I) Original estimates, II-IV) Inverse propensity score weighting (IPW). Individuals weighted by the inverse of the probability to start on their insulin conditional on covariates (gender, typedm, agegroup2, calyear2, BB.stfup, A10A.stfup, hosp.stfup, time2diag), truncation points given in paranthesis, III) IPW-weights with no truncation.

S.No.	Variables	I		II [0.1/0.9]		III [0.01/0.99]		IV [0.001/0.999]		V [0/1]			
		HR	lower	upper	HR	lower	upper	HR	lower	upper	HR	lower	upper
1	insulinNPH detemir	0.538	0.347	0.834	0.63	1.022	0.687	0.353	1.34	2.102	1.062	0.545	2.069
2	insulinNPH glargine	0.72	0.552	0.939	0.714	0.952	0.767	0.562	1.046	1.084	0.794	0.582	1.083
3	insulinNPH no DGN	2.167	1.754	2.678	2.057	1.608	2.099	1.602	2.75	3.225	2.459	1.877	3.222
4	gender Female	0.624	0.515	0.755	0.603	0.485	0.581	0.454	0.744	0.638	0.491	0.383	0.628
5	agegroupD 40-49	7.914	5.855	10.698	7.545	5.334	8.534	5.894	12.357	13.783	9.511	6.569	13.772
6	agegroupD 50-59	12.064	9.03	16.117	11.305	8.09	14.135	9.54	20.943	33.705	22.795	15.384	33.774
7	agegroupD 60-69	18.508	13.521	25.334	19.47	13.582	27.91	16.249	35.662	73.342	26.121	17.632	38.698
8	agegroupD 70-79	36.747	26.044	51.848	38.018	25.528	56.618	30.355	73.187	179.255	47.035	30.292	73.035
9	agegroupD 80+	94.715	64.398	139.304	90.749	57.059	144.329	104.609	63.011	173.667	135.332	81.518	224.673
10	BB.stfup Yes	1.418	1.098	1.829	1.259	0.937	1.691	1.163	1.626	1.482	1.061	0.759	1.484
11	useBB Yes	0.408	0.284	0.586	0.463	0.31	0.692	0.324	0.87	0.755	0.462	0.282	0.757
12	A10A.stfup Yes	1.252	0.946	1.657	1.215	0.89	1.661	1.305	1.927	1.835	1.043	0.741	1.467
13	useA10A Yes	0.433	0.356	0.525	0.409	0.324	0.518	0.4	0.302	0.53	0.332	0.251	0.439
14	hosp.stfup Yes	0.377	0.255	0.555	0.31	0.194	0.497	0.162	0.467	0.237	0.14	0.402	0.137
15	hospst2 1-2	2.488	1.816	3.408	2.801	1.923	4.079	2.983	1.963	4.534	2.733	1.798	4.154
16	hospst2 3+	4.427	2.574	7.614	4.562	2.439	8.532	4.052	1.973	8.324	3.606	1.756	7.408
17	Switch YES	1.227	0.925	1.627	1.204	0.876	1.654	1.122	1.576	1.115	0.794	0.742	1.577
18	time2diag 1-2	0.665	0.378	1.17	0.621	0.348	1.11	0.583	0.32	1.062	0.636	0.349	1.158
19	time2diag 2-5	0.572	0.393	0.832	0.645	0.408	1.018	0.663	0.387	1.137	0.688	0.401	1.18
20	time2diag 5-10	0.715	0.504	1.014	0.755	0.511	1.114	0.76	0.486	1.189	0.773	0.494	1.211
21	time2diag 10-	0.718	0.4	1.289	0.817	0.428	1.559	0.883	0.408	1.912	1.005	0.464	2.175
22	calyear2 06	1.092	0.788	1.512	1.03	0.727	1.459	0.97	0.656	1.434	0.797	0.539	1.179
23	calyear2 07	0.869	0.599	1.261	0.8	0.552	1.16	0.742	0.478	1.152	0.555	0.357	0.862
24	calyear2 08	1.101	0.693	1.749	1.14	0.687	1.892	1.139	0.63	2.059	0.789	0.436	1.426
25	calyear2 09	0.913	0.447	1.867	0.848	0.385	1.868	0.712	0.274	1.851	0.468	0.18	1.216

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