



APPENDIX 12.5
Results for the NAIVE T2 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	320	8.3	320	0.5
3	A10AB04	0	0.0	0	0.0	65	1.7	65	0.1
4	A10AB05	0	0.0	0	0.0	273	7.1	273	0.5
5	A10AB06	0	0.0	0	0.0	4	0.1	4	0.0
6	A10AC01	30450	63.5	6412	98.3	0	0.0	36862	63.2
7	A10AC30	0	0.0	0	0.0	1	0.0	1	0.0
8	A10AD01	0	0.0	0	0.0	1015	26.3	1015	1.7
9	A10AD04	0	0.0	0	0.0	104	2.7	104	0.2
10	A10AD05	0	0.0	0	0.0	2082	53.9	2082	3.6
11	A10AE01	0	0.0	0	0.0	0	0.0	0	0.0
12	A10AE02	0	0.0	0	0.0	1	0.0	1	0.0
13	A10AE04	12504	26.1	86	1.3	0	0.0	12590	21.6
14	A10AE05	4972	10.4	28	0.4	0	0.0	5000	8.6
15	Total	47926	100.0	6526	100.0	3865	100.0	58317	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	27247	56.9	3400	52.1	2017	52.2	32664	56
2	Female	20679	43.1	3126	47.9	1848	47.8	25653	44
3	Total	47926	100.0	6526	100.0	3865	100.0	58317	100
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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	16996	55.8	2920	58.7	7331	58.6	27247	56.9
2	Female	13454	44.2	2052	41.3	5173	41.4	20679	43.1
3	Total	30450	100.0	4972	100.0	12504	100.0	47926	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	49	0.1	9	0.1	0	0.0	58	0.1
2	10-19	99	0.2	34	0.5	0	0.0	133	0.2
3	20-29	350	0.7	77	1.2	15	0.4	442	0.8
4	30-39	1510	3.2	270	4.1	87	2.3	1867	3.2
5	40-49	4609	9.6	778	11.9	225	5.8	5612	9.6
6	50-59	12095	25.2	1816	27.8	596	15.4	14507	24.9
7	60-69	13010	27.1	1620	24.8	958	24.8	15588	26.7
8	70-79	10452	21.8	1419	21.7	1168	30.2	13039	22.4
9	80+	5752	12.0	503	7.7	816	21.1	7071	12.1
10	Total	47926	100.0	6526	100.0	3865	100.0	58317	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	35	0.1	5	0.1	9	0.1	49	0.1
2	10-19	53	0.2	19	0.4	27	0.2	99	0.2
3	20-29	236	0.8	35	0.7	79	0.6	350	0.7
4	30-39	1055	3.5	152	3.1	303	2.4	1510	3.2
5	40-49	2943	9.7	507	10.2	1159	9.3	4609	9.6
6	50-59	7920	26.0	1238	24.9	2937	23.5	12095	25.2
7	60-69	8192	26.9	1483	29.8	3335	26.7	13010	27.1
8	70-79	6633	21.8	1000	20.1	2819	22.5	10452	21.8
9	80+	3383	11.1	533	10.7	1836	14.7	5752	12.0
10	Total	30450	100.0	4972	100.0	12504	100.0	47926	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	2989	6.2	6037	92.5	638	16.5	9664	16.6
2	2001	3290	6.9	110	1.7	220	5.7	3620	6.2
3	2002	3612	7.5	69	1.1	213	5.5	3894	6.7
4	2003	4137	8.6	65	1.0	229	5.9	4431	7.6
5	2004	4707	9.8	63	1.0	268	6.9	5038	8.6
6	2005	4576	9.5	40	0.6	313	8.1	4929	8.5
7	2006	4321	9.0	44	0.7	434	11.2	4799	8.2
8	2007	6083	12.7	33	0.5	728	18.8	6844	11.7
9	2008	7071	14.8	39	0.6	492	12.7	7602	13.0
10	2009	7140	14.9	26	0.4	330	8.5	7496	12.9
11	Total	47926	100.0	6526	100.0	3865	100.0	58317	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	2989	9.8	0	0.0	0	0.0	2989	6.2
2	2001	3290	10.8	0	0.0	0	0.0	3290	6.9
3	2002	3612	11.9	0	0.0	0	0.0	3612	7.5
4	2003	3874	12.7	0	0.0	263	2.1	4137	8.6
5	2004	4002	13.1	0	0.0	705	5.6	4707	9.8
6	2005	3831	12.6	18	0.4	727	5.8	4576	9.5
7	2006	3779	12.4	63	1.3	479	3.8	4321	9.0
8	2007	2631	8.6	771	15.5	2681	21.4	6083	12.7
9	2008	1490	4.9	1763	35.5	3818	30.5	7071	14.8
10	2009	952	3.1	2357	47.4	3831	30.6	7140	14.9
11	Total	30450	100.0	4972	100.0	12504	100.0	47926	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	1965-1969	0	0.0	1	0.0	0	0.0	1	0.0
2	1970-1974	2	0.0	4	0.1	1	0.0	7	0.0
3	1975-1979	3	0.0	3	0.0	0	0.0	6	0.0
4	1980-1984	2	0.0	10	0.2	1	0.0	13	0.0
5	1985-1989	18	0.0	35	0.5	5	0.1	58	0.1
6	1990-1994	1410	2.9	1494	22.9	174	4.5	3078	5.3
7	1995-1999	11606	24.2	4475	68.6	1007	26.1	17088	29.3
8	2000-2004	20665	43.1	426	6.5	1438	37.2	22529	38.6
9	2005-2009	13170	27.5	69	1.1	1149	29.7	14388	24.7
10	2010	1050	2.2	9	0.1	90	2.3	1149	2.0
11	Total	47926	100.0	6526	100.0	3865	100.0	58317	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	1970-1974	2	0.0	0	0.0	0	0.0	2	0.0
2	1975-1979	2	0.0	0	0.0	1	0.0	3	0.0
3	1980-1984	2	0.0	0	0.0	0	0.0	2	0.0
4	1985-1989	16	0.1	0	0.0	2	0.0	18	0.0
5	1990-1994	1133	3.7	50	1.0	227	1.8	1410	2.9
6	1995-1999	9030	29.7	585	11.8	1991	15.9	11606	24.2
7	2000-2004	14195	46.6	1760	35.4	4710	37.7	20665	43.1
8	2005-2009	5748	18.9	2328	46.8	5094	40.7	13170	27.5
9	2010	322	1.1	249	5.0	479	3.8	1050	2.2
10	Total	30450	100.0	4972	100.0	12504	100.0	47926	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	6302	13.1	6151	94.3	862	22.3	13315	22.8
2	HUS	9388	19.6	101	1.5	477	12.3	9966	17.1
3	Varsinais-Suomi	2969	6.2	15	0.2	180	4.7	3164	5.4
4	Satakunta	1962	4.1	14	0.2	146	3.8	2122	3.6
5	Kantahame	1476	3.1	6	0.1	130	3.4	1612	2.8
6	Pirkanmaa	3801	7.9	19	0.3	251	6.5	4071	7.0
7	Paijat-Hame	1800	3.8	27	0.4	104	2.7	1931	3.3
8	Kymenlaakso	1652	3.4	14	0.2	95	2.5	1761	3.0
9	Etela-Karjala	1127	2.4	9	0.1	39	1.0	1175	2.0
10	Etela-Savo	982	2.0	9	0.1	65	1.7	1056	1.8
11	Ita-Savo	705	1.5	6	0.1	32	0.8	743	1.3
12	Pohjois-Karjala	1822	3.8	17	0.3	126	3.3	1965	3.4
13	Pohjois-Savo	2252	4.7	25	0.4	246	6.4	2523	4.3
14	Keski-Suomi	2128	4.4	37	0.6	178	4.6	2343	4.0
15	Etela-Pohjanmaa	2345	4.9	23	0.4	246	6.4	2614	4.5
16	Vaasa	823	1.7	9	0.1	270	7.0	1102	1.9
17	Keski-Pohjanmaa	727	1.5	6	0.1	104	2.7	837	1.4
18	Pohjois-Pohjanmaa	2880	6.0	21	0.3	148	3.8	3049	5.2
19	Kainuu	969	2.0	8	0.1	33	0.9	1010	1.7
20	Lansi-Pohja	701	1.5	2	0.0	64	1.7	767	1.3
21	Lappi	1031	2.2	6	0.1	50	1.3	1087	1.9
22	Ahvenanmaa	84	0.2	1	0.0	19	0.5	104	0.2
23	Total	47926	100.0	6526	100.0	3865	100.0	58317	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	6288	20.7	2	0.0	12	0.1	6302	13.1
2	HUS	5472	18.0	1034	20.8	2882	23.0	9388	19.6
3	Varsinais-Suomi	1468	4.8	375	7.5	1126	9.0	2969	6.2
4	Satakunta	1158	3.8	351	7.1	453	3.6	1962	4.1
5	Kantahame	823	2.7	130	2.6	523	4.2	1476	3.1
6	Pirkanmaa	2311	7.6	387	7.8	1103	8.8	3801	7.9
7	Paijat-Hame	1130	3.7	188	3.8	482	3.9	1800	3.8
8	Kymenlaakso	993	3.3	196	3.9	463	3.7	1652	3.4
9	Etela-Karjala	625	2.1	109	2.2	393	3.1	1127	2.4
10	Etela-Savo	640	2.1	123	2.5	219	1.8	982	2.0
11	Ita-Savo	438	1.4	70	1.4	197	1.6	705	1.5
12	Pohjois-Karjala	1150	3.8	268	5.4	404	3.2	1822	3.8
13	Pohjois-Savo	1139	3.7	256	5.1	857	6.9	2252	4.7
14	Keski-Suomi	1252	4.1	294	5.9	582	4.7	2128	4.4
15	Etela-Pohjanmaa	1255	4.1	437	8.8	653	5.2	2345	4.9
16	Vaasa	498	1.6	160	3.2	165	1.3	823	1.7
17	Keski-Pohjanmaa	439	1.4	114	2.3	174	1.4	727	1.5
18	Pohjois-Pohjanmaa	1574	5.2	260	5.2	1046	8.4	2880	6.0
19	Kainuu	618	2.0	84	1.7	267	2.1	969	2.0
20	Lansi-Pohja	421	1.4	45	0.9	235	1.9	701	1.5
21	Lappi	683	2.2	86	1.7	262	2.1	1031	2.2
22	Ahvenanmaa	75	0.2	3	0.1	6	0.0	84	0.2
23	Total	30450	100.0	4972	100.0	12504	100.0	47926	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	11633	386	19811	19.48	17.63	21.53
2	Male	detemir	5329	75	5784	12.97	10.34	16.26
3	Male	NPH	17111	1112	53663	20.72	19.54	21.98
4	Male	no DGN	18993	241	14210	16.96	14.95	19.24
5	Female	glargine	8455	274	14147	19.37	17.21	21.80
6	Female	detemir	3976	60	4337	13.84	10.74	17.82
7	Female	NPH	13596	825	42501	19.41	18.13	20.78
8	Female	no DGN	14795	233	13165	17.70	15.57	20.12
9	Total	glargine	20088	660	33958	19.44	18.01	20.98
10	Total	detemir	9305	135	10120	13.34	11.27	15.79
11	Total	NPH	30707	1937	96164	20.14	19.27	21.06
12	Total	no DGN	33788	474	27375	17.32	15.82	18.95

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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	23	0	49	NA	NA	NA
2	0-9	detemir	27	0	45	NA	NA	NA
3	0-9	NPH	37	1	106	9.44	1.33	67.01
4	0-9	no DGN	38	0	26	NA	NA	NA
5	10-19	glargine	51	4	141	28.44	10.68	75.79
6	10-19	detemir	36	0	53	NA	NA	NA
7	10-19	NPH	54	4	136	29.50	11.07	78.61
8	10-19	no DGN	76	3	94	31.81	10.26	98.64
9	20-29	glargine	145	4	271	14.77	5.54	39.34
10	20-29	detemir	85	0	115	NA	NA	NA
11	20-29	NPH	239	11	531	20.73	11.48	37.43
12	20-29	no DGN	281	9	570	15.80	8.22	30.37
13	30-39	glargine	620	22	1145	19.21	12.65	29.17
14	30-39	detemir	356	4	443	9.03	3.39	24.07
15	30-39	NPH	1064	56	2963	18.90	14.55	24.56
16	30-39	no DGN	1227	10	2114	4.73	2.54	8.79
17	40-49	glargine	2112	75	3938	19.05	15.19	23.88
18	40-49	detemir	1169	18	1427	12.61	7.95	20.02
19	40-49	NPH	2970	183	9672	18.92	16.37	21.87
20	40-49	no DGN	3532	51	3230	15.79	12.00	20.78
21	50-59	glargine	5381	161	10065	16.00	13.71	18.67
22	50-59	detemir	2710	38	3146	12.08	8.79	16.60
23	50-59	NPH	7986	458	28192	16.25	14.82	17.80
24	50-59	no DGN	8974	116	6989	16.60	13.84	19.91
25	60-69	glargine	5401	173	9153	18.90	16.28	21.94
26	60-69	detemir	2634	33	2800	11.79	8.38	16.58
27	60-69	NPH	8248	549	27773	19.77	18.18	21.49
28	60-69	no DGN	8957	119	6183	19.25	16.08	23.03
29	70-79	glargine	4072	145	6297	23.03	19.57	27.10
30	70-79	detemir	1592	31	1525	20.33	14.30	28.90
31	70-79	NPH	6691	475	19856	23.92	21.86	26.17
32	70-79	no DGN	7043	106	5474	19.37	16.01	23.43
33	80+	glargine	2283	76	2900	26.21	20.93	32.81
34	80+	detemir	696	11	566	19.42	10.76	35.06
35	80+	NPH	3418	200	6936	28.83	25.10	33.12
36	80+	no DGN	3660	60	2695	22.26	17.29	28.67
37	Total	glargine	20088	660	33958	19.44	18.01	20.98
38	Total	detemir	9305	135	10120	13.34	11.27	15.79
39	Total	NPH	30707	1937	96164	20.14	19.27	21.06
40	Total	no DGN	33788	474	27375	17.32	15.82	18.95

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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	7262	361	17841	20.23	18.25	22.43
2	00-05	detemir	2876	35	3775	9.27	6.66	12.91
3	00-05	NPH	21741	1654	81985	20.17	19.23	21.17
4	00-05	no DGN	20618	397	22862	17.36	15.74	19.16
5	06	glargine	1404	52	2629	19.78	15.07	25.96
6	06	detemir	675	11	880	12.50	6.92	22.57
7	06	NPH	3794	154	7898	19.50	16.65	22.83
8	06	no DGN	3360	36	2006	17.95	12.95	24.88
9	07	glargine	3300	120	6227	19.27	16.11	23.05
10	07	detemir	1246	27	1955	13.81	9.47	20.14
11	07	NPH	2668	77	4269	18.04	14.43	22.55
12	07	no DGN	4246	32	1497	21.38	15.12	30.23
13	08	glargine	4155	97	5334	18.18	14.90	22.19
14	08	detemir	2049	45	2450	18.37	13.71	24.60
15	08	NPH	1525	37	1612	22.95	16.63	31.67
16	08	no DGN	3746	7	777	9.01	4.30	18.91
17	09	glargine	3967	30	1927	15.57	10.89	22.27
18	09	detemir	2459	17	1060	16.03	9.97	25.79
19	09	NPH	979	15	399	37.58	22.66	62.34
20	09	no DGN	1818	2	233	8.57	2.14	34.28
21	Total	glargine	20088	660	33958	19.44	18.01	20.98
22	Total	detemir	9305	135	10120	13.34	11.27	15.79
23	Total	NPH	30707	1937	96164	20.14	19.27	21.06
24	Total	no DGN	33788	474	27375	17.32	15.82	18.95

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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	4673	147	7533	19.51	16.60	22.94
2	-1	detemir	2344	23	2574	8.94	5.94	13.45
3	-1	NPH	8605	550	25113	21.90	20.14	23.81
4	-1	no DGN	9046	132	11127	11.86	10.00	14.07
5	1-2	glargine	1549	51	2759	18.49	14.05	24.33
6	1-2	detemir	748	9	916	9.83	5.11	18.89
7	1-2	NPH	2610	193	8692	22.21	19.28	25.57
8	1-2	no DGN	2784	44	2213	19.88	14.80	26.72
9	2-5	glargine	5205	197	9632	20.45	17.79	23.52
10	2-5	detemir	2469	35	2740	12.77	9.17	17.79
11	2-5	NPH	8850	556	31188	17.83	16.41	19.37
12	2-5	no DGN	9627	132	6827	19.33	16.30	22.93
13	5-10	glargine	6679	214	11451	18.69	16.35	21.37
14	5-10	detemir	2950	42	3151	13.33	9.85	18.03
15	5-10	NPH	9203	569	28465	19.99	18.41	21.70
16	5-10	no DGN	10416	152	6430	23.64	20.17	27.71
17	10-	glargine	1982	51	2584	19.74	15.00	25.97
18	10-	detemir	794	26	739	35.18	23.95	51.67
19	10-	NPH	1439	69	2706	25.50	20.14	32.29
20	10-	no DGN	1915	14	778	17.99	10.66	30.38
21	Total	glargine	20088	660	33958	19.44	18.01	20.98
22	Total	detemir	9305	135	10120	13.34	11.27	15.79
23	Total	NPH	30707	1937	96164	20.14	19.27	21.06
24	Total	no DGN	33788	474	27375	17.32	15.82	18.95

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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	5404	161	7885	20.42	17.50	23.83
2	No	detemir	2907	33	2961	11.14	7.92	15.68
3	No	NPH	8433	470	23533	19.97	18.25	21.86
4	No	no DGN	9254	128	10356	12.36	10.39	14.70
5	Yes	glargine	14684	499	26073	19.14	17.53	20.89
6	Yes	detemir	6398	102	7159	14.25	11.73	17.30
7	Yes	NPH	22274	1467	72631	20.20	19.19	21.26
8	Yes	no DGN	24534	346	17018	20.33	18.30	22.59
9	Total	glargine	20088	660	33958	19.44	18.01	20.98
10	Total	detemir	9305	135	10120	13.34	11.27	15.79
11	Total	NPH	30707	1937	96164	20.14	19.27	21.06
12	Total	no DGN	33788	474	27375	17.32	15.82	18.95

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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	19086	608	32258	18.85	17.41	20.41
2	No	detemir	8756	124	9468	13.10	10.98	15.62
3	No	NPH	29471	1852	93314	19.85	18.96	20.77
4	No	no DGN	32352	449	25965	17.29	15.76	18.97
5	Yes	glargine	1002	52	1700	30.59	23.31	40.14
6	Yes	detemir	549	11	653	16.85	9.33	30.43
7	Yes	NPH	1236	85	2849	29.83	24.12	36.90
8	Yes	no DGN	1436	25	1409	17.74	11.99	26.25
9	Total	glargine	20088	660	33958	19.44	18.01	20.98
10	Total	detemir	9305	135	10120	13.34	11.27	15.79
11	Total	NPH	30707	1937	96164	20.14	19.27	21.06
12	Total	no DGN	33788	474	27375	17.32	15.82	18.95

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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	18645	515	31821	16.18	14.85	17.64
2	No	detemir	8778	106	9645	10.99	9.09	13.30
3	No	NPH	28631	1494	91671	16.30	15.49	17.15
4	No	no DGN	31778	419	25931	16.16	14.68	17.78
5	Yes	glargine	1443	145	2137	67.85	57.66	79.84
6	Yes	detemir	527	29	476	60.96	42.36	87.73
7	Yes	NPH	2076	443	4493	98.60	89.83	108.22
8	Yes	no DGN	2010	55	1444	38.09	29.24	49.61
9	Total	glargine	20088	660	33958	19.44	18.01	20.98
10	Total	detemir	9305	135	10120	13.34	11.27	15.79
11	Total	NPH	30707	1937	96164	20.14	19.27	21.06
12	Total	no DGN	33788	474	27375	17.32	15.82	18.95

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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	1557	73	3646	20.02	15.92	25.18
2	Unknown	detemir	696	10	967	10.35	5.57	19.23
3	Unknown	NPH	6289	578	29826	19.38	17.86	21.02
4	Unknown	no DGN	5745	155	8660	17.90	15.29	20.95
5	HUS	glargine	4441	187	7434	25.16	21.80	29.03
6	HUS	detemir	1895	34	2111	16.10	11.51	22.54
7	HUS	NPH	5533	377	14580	25.86	23.37	28.60
8	HUS	no DGN	6622	94	4487	20.95	17.11	25.64
9	Varsinais-Suomi	glargine	1591	44	2821	15.60	11.61	20.96
10	Varsinais-Suomi	detemir	603	11	650	16.92	9.37	30.56
11	Varsinais-Suomi	NPH	1499	94	4153	22.64	18.49	27.71
12	Varsinais-Suomi	no DGN	1962	20	1167	17.14	11.06	26.57
13	Satakunta	glargine	671	11	1027	10.72	5.93	19.35
14	Satakunta	detemir	555	6	585	10.26	4.61	22.85
15	Satakunta	NPH	1170	60	2882	20.82	16.17	26.82
16	Satakunta	no DGN	1266	10	978	10.22	5.50	19.00
17	Kantahame	glargine	739	28	1286	21.77	15.03	31.53
18	Kantahame	detemir	212	1	218	4.59	0.65	32.62
19	Kantahame	NPH	831	76	2328	32.65	26.08	40.88
20	Kantahame	no DGN	993	19	606	31.33	19.99	49.12
21	Pirkanmaa	glargine	1780	23	2779	8.28	5.50	12.46
22	Pirkanmaa	detemir	731	7	814	8.60	4.10	18.05
23	Pirkanmaa	NPH	2328	34	6715	5.06	3.62	7.09
24	Pirkanmaa	no DGN	2648	10	1779	5.62	3.02	10.45
25	Paijat-Hame	glargine	692	21	1134	18.52	12.08	28.41
26	Paijat-Hame	detemir	334	5	356	14.04	5.84	33.74
27	Paijat-Hame	NPH	1145	115	3069	37.47	31.21	44.99
28	Paijat-Hame	no DGN	1146	18	699	25.75	16.22	40.87
29	Kymenlaakso	glargine	688	22	1081	20.35	13.40	30.90
30	Kymenlaakso	detemir	311	4	307	13.05	4.90	34.77
31	Kymenlaakso	NPH	1004	62	2841	21.82	17.02	27.99
32	Kymenlaakso	no DGN	1133	20	711	28.13	18.15	43.60
33	Etela-Karjala	glargine	551	21	940	22.34	14.56	34.26
34	Etela-Karjala	detemir	192	5	203	24.58	10.23	59.06
35	Etela-Karjala	NPH	641	33	1773	18.61	13.23	26.18
36	Etela-Karjala	no DGN	731	10	478	20.92	11.26	38.89
37	Etela-Savo	glargine	336	7	481	14.54	6.93	30.50
38	Etela-Savo	detemir	197	2	208	9.63	2.41	38.52
39	Etela-Savo	NPH	646	32	1757	18.21	12.88	25.75
40	Etela-Savo	no DGN	674	6	460	13.03	5.85	29.01
41	Ita-Savo	glargine	289	3	420	7.15	2.31	22.17
42	Ita-Savo	detemir	118	0	97	NA	NA	NA
43	Ita-Savo	NPH	440	11	1236	8.90	4.93	16.07
44	Ita-Savo	no DGN	470	5	367	13.64	5.68	32.76
45	Pohjois-Karjala	glargine	614	5	906	5.52	2.30	13.26
46	Pohjois-Karjala	detemir	405	1	366	2.73	0.38	19.39
47	Pohjois-Karjala	NPH	1157	15	3453	4.34	2.62	7.20
48	Pohjois-Karjala	no DGN	1165	0	837	NA	NA	NA
49	Pohjois-Savo	glargine	1166	45	2051	21.94	16.38	29.39
50	Pohjois-Savo	detemir	426	7	481	14.56	6.94	30.55
51	Pohjois-Savo	NPH	1154	68	2967	22.92	18.07	29.06
52	Pohjois-Savo	no DGN	1506	20	999	20.01	12.91	31.02
53	Keski-Suomi	glargine	855	29	1415	20.50	14.25	29.50
54	Keski-Suomi	detemir	514	6	560	10.72	4.81	23.85
55	Keski-Suomi	NPH	1267	64	3318	19.29	15.10	24.64
56	Keski-Suomi	no DGN	1414	14	966	14.49	8.58	24.47
57	Etela-Pohjanmaa	glargine	958	31	1451	21.37	15.03	30.38
58	Etela-Pohjanmaa	detemir	721	13	701	18.55	10.77	31.95
59	Etela-Pohjanmaa	NPH	1265	102	3381	30.17	24.85	36.63
60	Etela-Pohjanmaa	no DGN	1497	22	1004	21.90	14.42	33.26
61	Vaasa	glargine	249	10	383	26.13	14.06	48.56
62	Vaasa	detemir	280	5	269	18.57	7.73	44.62
63	Vaasa	NPH	498	30	1400	21.43	14.99	30.66
64	Vaasa	no DGN	560	10	432	23.16	12.46	43.05
65	Keski-Pohjanmaa	glargine	237	3	300	10.00	3.22	31.00
66	Keski-Pohjanmaa	detemir	198	1	193	5.19	0.73	36.81
67	Keski-Pohjanmaa	NPH	441	6	1409	4.26	1.91	9.48
68	Keski-Pohjanmaa	no DGN	469	1	323	3.09	0.44	21.96
69	Pohjois-Pohjanmaa	glargine	1488	51	2531	20.15	15.31	26.51
70	Pohjois-Pohjanmaa	detemir	490	10	562	17.79	9.57	33.07
71	Pohjois-Pohjanmaa	NPH	1591	78	4185	18.64	14.93	23.27
72	Pohjois-Pohjanmaa	no DGN	1918	15	1261	11.89	7.17	19.73
73	Kainuu	glargine	397	11	646	17.02	9.43	30.74
74	Kainuu	detemir	180	0	203	NA	NA	NA
75	Kainuu	NPH	623	17	1692	10.05	6.25	16.17
76	Kainuu	no DGN	643	3	357	8.41	2.71	26.08
77	Lansi-Pohja	glargine	358	24	527	45.52	30.51	67.91
78	Lansi-Pohja	detemir	90	5	89	56.07	23.34	134.72
79	Lansi-Pohja	NPH	421	49	1058	46.31	35.00	61.27
80	Lansi-Pohja	no DGN	461	14	321	43.62	25.83	73.65
81	Lappi	glargine	416	11	680	16.17	8.95	29.20
82	Lappi	detemir	151	2	175	11.46	2.87	45.83
83	Lappi	NPH	687	34	1949	17.45	12.47	24.41
84	Lappi	no DGN	699	7	436	16.07	7.66	33.72
85	Ahvenanmaa	glargine	15	0	20	NA	NA	NA
86	Ahvenanmaa	detemir	6	0	8	NA	NA	NA
87	Ahvenanmaa	NPH	77	2	192	10.43	2.61	41.70
88	Ahvenanmaa	no DGN	66	1	46	21.52	3.03	152.73
89	Total	glargine	20088	660	33958	19.44	18.01	20.98
90	Total	detemir	9305	135	10120	13.34	11.27	15.79
91	Total	NPH	30707	1937	96164	20.14	19.27	21.06
92	Total	no DGN	33788	474	27375	17.32	15.82	18.95

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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	712	336	1116	301.03	270.51	335.00
2	Male	detemir	248	33	258	127.85	90.89	179.83
3	Male	NPH	1181	866	2534	341.77	319.74	365.30
4	Male	no DGN	1149	179	960	186.38	160.98	215.78
5	Female	glargine	509	133	851	156.27	131.84	185.22
6	Female	detemir	211	49	227	216.05	163.29	285.86
7	Female	NPH	882	511	2023	252.54	231.56	275.41
8	Female	no DGN	1005	164	893	183.64	157.58	214.01
9	Total	glargine	1221	469	1967	238.40	217.77	260.99
10	Total	detemir	459	82	485	169.10	136.19	209.96
11	Total	NPH	2063	1377	4557	302.15	286.60	318.54
12	Total	no DGN	2154	343	1853	185.06	166.48	205.72

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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	0	0	0	NA	NA	NA
2	0-9	detemir	1	0	2	NA	NA	NA
3	0-9	NPH	0	0	0	NA	NA	NA
4	0-9	no DGN	1	1	2	419.35	59.07	2977.06
5	10-19	glargine	7	14	21	681.16	403.42	1150.13
6	10-19	detemir	2	1	3	349.86	49.28	2483.66
7	10-19	NPH	5	11	8	1374.06	760.95	2481.17
8	10-19	no DGN	8	4	12	339.29	127.34	904.03
9	20-29	glargine	11	1	16	62.32	8.78	442.32
10	20-29	detemir	5	6	9	685.27	307.88	1525.29
11	20-29	NPH	16	21	34	619.77	404.09	950.55
12	20-29	no DGN	18	12	30	406.70	230.97	716.14
13	30-39	glargine	49	88	95	922.77	748.78	1137.19
14	30-39	detemir	25	6	33	181.13	81.37	403.18
15	30-39	NPH	63	87	163	534.28	433.02	659.22
16	30-39	no DGN	76	22	78	281.78	185.54	427.95
17	40-49	glargine	145	75	238	315.10	251.28	395.13
18	40-49	detemir	75	15	95	158.32	95.44	262.61
19	40-49	NPH	204	270	519	519.97	461.51	585.84
20	40-49	no DGN	227	52	229	226.63	172.70	297.41
21	50-59	glargine	328	118	563	209.70	175.08	251.16
22	50-59	detemir	148	22	167	131.75	86.75	200.09
23	50-59	NPH	502	268	1246	215.09	190.82	242.45
24	50-59	no DGN	513	94	401	234.30	191.42	286.79
25	60-69	glargine	315	88	509	172.99	140.37	213.19
26	60-69	detemir	109	14	108	130.01	77.00	219.51
27	60-69	NPH	571	385	1325	290.51	262.90	321.03
28	60-69	no DGN	571	75	508	147.66	117.75	185.16
29	70-79	glargine	263	56	402	139.15	107.09	180.82
30	70-79	detemir	75	12	58	205.29	116.59	361.49
31	70-79	NPH	491	256	916	279.33	247.12	315.73
32	70-79	no DGN	498	65	416	156.38	122.63	199.41
33	80+	glargine	103	29	123	234.98	163.29	338.14
34	80+	detemir	19	6	11	558.49	250.93	1243.01
35	80+	NPH	211	79	346	228.54	183.31	284.92
36	80+	no DGN	242	18	177	101.41	63.89	160.96
37	Total	glargine	1221	469	1967	238.40	217.77	260.99
38	Total	detemir	459	82	485	169.10	136.19	209.96
39	Total	NPH	2063	1377	4557	302.15	286.60	318.54
40	Total	no DGN	2154	343	1853	185.06	166.48	205.72

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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	865	355	1598	222.12	200.17	246.47
2	00-05	detemir	314	37	366	101.18	73.31	139.65
3	00-05	NPH	1774	1220	4212	289.62	273.82	306.34
4	00-05	no DGN	1767	301	1684	178.79	159.70	200.18
5	06	glargine	92	23	118	195.05	129.61	293.52
6	06	detemir	36	13	34	380.80	221.11	655.82
7	06	NPH	161	97	233	415.52	340.54	507.01
8	06	no DGN	167	26	95	273.09	185.94	401.09
9	07	glargine	138	54	164	328.80	251.82	429.31
10	07	detemir	39	15	41	363.36	219.06	602.73
11	07	NPH	79	40	84	477.87	350.53	651.47
12	07	no DGN	127	14	52	269.61	159.69	455.21
13	08	glargine	97	34	78	438.10	313.04	613.14
14	08	detemir	51	12	38	314.83	178.79	554.36
15	08	NPH	37	19	25	763.70	487.14	1197.28
16	08	no DGN	78	1	20	48.99	6.90	347.82
17	09	glargine	29	3	9	323.99	104.49	1004.59
18	09	detemir	19	5	6	877.58	365.27	2108.45
19	09	NPH	12	1	3	337.88	47.59	2398.71
20	09	no DGN	15	1	2	412.71	58.13	2929.98
21	Total	glargine	1221	469	1967	238.40	217.77	260.99
22	Total	detemir	459	82	485	169.10	136.19	209.96
23	Total	NPH	2063	1377	4557	302.15	286.60	318.54
24	Total	no DGN	2154	343	1853	185.06	166.48	205.72

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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	282	107	463	231.17	191.26	279.39
2	-1	detemir	121	26	145	178.82	121.76	262.64
3	-1	NPH	580	465	1337	347.70	317.49	380.79
4	-1	no DGN	584	140	661	211.70	179.38	249.83
5	1-2	glargine	129	61	221	275.90	214.67	354.60
6	1-2	detemir	46	8	41	195.61	97.82	391.15
7	1-2	NPH	212	119	469	253.67	211.95	303.60
8	1-2	no DGN	221	36	211	170.26	122.81	236.04
9	2-5	glargine	377	95	617	154.04	125.98	188.35
10	2-5	detemir	130	25	139	180.01	121.63	266.41
11	2-5	NPH	597	302	1358	222.44	198.71	249.00
12	2-5	no DGN	616	56	457	122.67	94.41	159.40
13	5-10	glargine	364	108	567	190.50	157.75	230.03
14	5-10	detemir	133	18	135	133.41	84.05	211.73
15	5-10	NPH	606	405	1274	317.79	288.30	350.30
16	5-10	no DGN	647	89	472	188.55	153.18	232.09
17	10-	glargine	69	98	100	983.64	806.95	1199.00
18	10-	detemir	29	5	25	201.48	83.87	484.04
19	10-	NPH	68	86	119	723.85	585.95	894.20
20	10-	no DGN	86	22	52	421.66	277.64	640.38
21	Total	glargine	1221	469	1967	238.40	217.77	260.99
22	Total	detemir	459	82	485	169.10	136.19	209.96
23	Total	NPH	2063	1377	4557	302.15	286.60	318.54
24	Total	no DGN	2154	343	1853	185.06	166.48	205.72

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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	272	184	382	481.16	416.43	555.96
2	No	detemir	118	31	136	227.72	160.15	323.80
3	No	NPH	499	424	1150	368.66	335.18	405.47
4	No	no DGN	511	126	547	230.48	193.56	274.45
5	Yes	glargine	949	285	1585	179.83	160.12	201.97
6	Yes	detemir	341	51	349	146.22	111.13	192.40
7	Yes	NPH	1564	953	3407	279.70	262.49	298.03
8	Yes	no DGN	1643	217	1307	166.06	145.37	189.69
9	Total	glargine	1221	469	1967	238.40	217.77	260.99
10	Total	detemir	459	82	485	169.10	136.19	209.96
11	Total	NPH	2063	1377	4557	302.15	286.60	318.54
12	Total	no DGN	2154	343	1853	185.06	166.48	205.72

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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	958	268	1494	179.33	159.10	202.14
2	No	detemir	351	66	380	173.62	136.41	220.99
3	No	NPH	1605	980	3371	290.70	273.06	309.49
4	No	no DGN	1671	260	1439	180.74	160.06	204.10
5	Yes	glargine	263	201	473	425.12	370.23	488.15
6	Yes	detemir	108	16	105	152.70	93.55	249.26
7	Yes	NPH	458	397	1186	334.67	303.32	369.27
8	Yes	no DGN	483	83	415	200.02	161.30	248.03
9	Total	glargine	1221	469	1967	238.40	217.77	260.99
10	Total	detemir	459	82	485	169.10	136.19	209.96
11	Total	NPH	2063	1377	4557	302.15	286.60	318.54
12	Total	no DGN	2154	343	1853	185.06	166.48	205.72

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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	1144	433	1850	234.00	212.96	257.11
2	No	detemir	427	73	447	163.21	129.75	205.29
3	No	NPH	1968	1261	4385	287.59	272.14	303.91
4	No	no DGN	2022	322	1736	185.49	166.30	206.90
5	Yes	glargine	77	36	117	308.21	222.32	427.29
6	Yes	detemir	32	9	38	239.12	124.42	459.58
7	Yes	NPH	95	116	173	672.08	560.25	806.22
8	Yes	no DGN	132	21	118	178.71	116.52	274.09
9	Total	glargine	1221	469	1967	238.40	217.77	260.99
10	Total	detemir	459	82	485	169.10	136.19	209.96
11	Total	NPH	2063	1377	4557	302.15	286.60	318.54
12	Total	no DGN	2154	343	1853	185.06	166.48	205.72
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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	261	79	532	148.45	119.07	185.07
2	Unknown	detemir	111	17	131	129.54	80.53	208.38
3	Unknown	NPH	629	427	1785	239.21	217.56	263.01
4	Unknown	no DGN	639	115	705	163.07	135.83	195.77
5	HUS	glargine	314	171	505	338.68	291.54	393.45
6	HUS	detemir	100	20	101	198.59	128.12	307.81
7	HUS	NPH	389	224	748	299.58	262.81	341.50
8	HUS	no DGN	458	69	363	190.34	150.33	240.99
9	Varsinais-Suomi	glargine	80	46	131	350.26	262.36	467.63
10	Varsinais-Suomi	detemir	27	10	29	349.66	188.13	649.85
11	Varsinais-Suomi	NPH	99	104	199	522.60	431.22	633.33
12	Varsinais-Suomi	no DGN	101	32	89	358.35	253.42	506.73
13	Satakunta	glargine	16	7	21	341.26	162.69	715.85
14	Satakunta	detemir	19	9	19	478.77	249.13	920.09
15	Satakunta	NPH	61	38	104	364.76	265.41	501.29
16	Satakunta	no DGN	54	7	40	173.22	82.58	363.36
17	Kantahame	glargine	45	22	64	345.03	227.19	524.01
18	Kantahame	detemir	8	2	6	353.92	88.51	1415.17
19	Kantahame	NPH	75	65	150	433.64	340.06	552.97
20	Kantahame	no DGN	75	12	68	176.66	100.32	311.06
21	Pirkanmaa	glargine	34	17	29	582.04	361.83	936.28
22	Pirkanmaa	detemir	12	0	11	NA	NA	NA
23	Pirkanmaa	NPH	37	8	49	164.94	82.49	329.83
24	Pirkanmaa	no DGN	44	2	29	68.67	17.17	274.57
25	Paijat-Hame	glargine	37	11	67	165.08	91.42	298.09
26	Paijat-Hame	detemir	17	2	19	104.85	26.22	419.24
27	Paijat-Hame	NPH	124	186	314	592.14	512.88	683.66
28	Paijat-Hame	no DGN	109	22	74	297.32	195.77	451.55
29	Kymenlaakso	glargine	41	3	65	45.81	14.77	142.04
30	Kymenlaakso	detemir	14	0	19	NA	NA	NA
31	Kymenlaakso	NPH	67	21	155	135.24	88.18	207.42
32	Kymenlaakso	no DGN	77	9	33	269.03	139.98	517.04
33	Etela-Karjala	glargine	29	5	48	103.54	43.10	248.75
34	Etela-Karjala	detemir	10	0	10	NA	NA	NA
35	Etela-Karjala	NPH	38	6	69	86.41	38.82	192.35
36	Etela-Karjala	no DGN	47	3	35	85.39	27.54	264.75
37	Etela-Savo	glargine	13	0	22	NA	NA	NA
38	Etela-Savo	detemir	7	0	7	NA	NA	NA
39	Etela-Savo	NPH	33	9	70	128.46	66.84	246.89
40	Etela-Savo	no DGN	32	8	21	381.11	190.59	762.08
41	Ita-Savo	glargine	6	8	11	754.84	377.49	1509.41
42	Ita-Savo	detemir	2	0	1	NA	NA	NA
43	Ita-Savo	NPH	12	4	16	247.12	92.77	658.33
44	Ita-Savo	no DGN	15	5	26	193.52	80.55	464.95
45	Pohjois-Karjala	glargine	8	2	5	423.48	105.91	1693.29
46	Pohjois-Karjala	detemir	1	0	0	NA	NA	NA
47	Pohjois-Karjala	NPH	13	19	15	1235.49	788.06	1936.96
48	Pohjois-Karjala	no DGN	8	0	6	NA	NA	NA
49	Pohjois-Savo	glargine	73	13	108	120.54	69.99	207.59
50	Pohjois-Savo	detemir	19	4	14	296.17	111.16	789.13
51	Pohjois-Savo	NPH	74	15	122	122.50	73.85	203.20
52	Pohjois-Savo	no DGN	75	6	56	108.08	48.55	240.57
53	Keski-Suomi	glargine	46	17	69	247.83	154.07	398.67
54	Keski-Suomi	detemir	20	8	26	311.68	155.88	623.22
55	Keski-Suomi	NPH	69	57	145	392.58	302.82	508.95
56	Keski-Suomi	no DGN	75	11	57	192.56	106.64	347.71
57	Etela-Pohjanmaa	glargine	57	17	88	193.31	120.17	310.96
58	Etela-Pohjanmaa	detemir	32	1	35	28.40	4.00	201.63
59	Etela-Pohjanmaa	NPH	110	57	220	258.60	199.47	335.25
60	Etela-Pohjanmaa	no DGN	101	10	59	168.91	90.88	313.93
61	Vaasa	glargine	15	18	18	984.35	620.18	1562.37
62	Vaasa	detemir	17	1	14	69.05	9.73	490.18
63	Vaasa	NPH	35	21	76	277.54	180.96	425.66
64	Vaasa	no DGN	35	7	24	294.49	140.39	617.73
65	Keski-Pohjanmaa	glargine	3	4	2	1737.22	652.06	4628.33
66	Keski-Pohjanmaa	detemir	3	2	2	908.58	227.25	3632.61
67	Keski-Pohjanmaa	NPH	6	0	5	NA	NA	NA
68	Keski-Pohjanmaa	no DGN	5	0	1	NA	NA	NA
69	Pohjois-Pohjanmaa	glargine	69	10	99	101.08	54.39	187.85
70	Pohjois-Pohjanmaa	detemir	20	2	22	89.37	22.35	357.28
71	Pohjois-Pohjanmaa	NPH	81	76	141	538.55	430.12	674.32
72	Pohjois-Pohjanmaa	no DGN	104	14	82	171.77	101.73	290.04
73	Kainuu	glargine	12	3	14	221.95	71.58	688.17
74	Kainuu	detemir	4	0	6	NA	NA	NA
75	Kainuu	NPH	20	7	30	229.63	109.47	481.69
76	Kainuu	no DGN	17	1	10	95.64	13.47	678.92
77	Lansi-Pohja	glargine	40	12	47	256.71	145.79	452.00
78	Lansi-Pohja	detemir	11	1	9	109.55	15.43	777.74
79	Lansi-Pohja	NPH	51	27	80	336.33	230.64	490.43
80	Lansi-Pohja	no DGN	50	8	46	175.51	87.77	350.95
81	Lappi	glargine	22	4	24	169.43	63.59	451.44
82	Lappi	detemir	5	3	5	552.85	178.32	1714.00
83	Lappi	NPH	38	6	61	98.18	44.11	218.53
84	Lappi	no DGN	31	2	29	69.67	17.42	278.57
85	Ahvenanmaa	glargine	0	0	0	NA	NA	NA
86	Ahvenanmaa	detemir	0	0	0	NA	NA	NA
87	Ahvenanmaa	NPH	2	0	1	NA	NA	NA
88	Ahvenanmaa	no DGN	2	0	0	NA	NA	NA
89	Total	glargine	1221	469	1967	238.40	217.77	260.99
90	Total	detemir	459	82	485	169.10	136.19	209.96
91	Total	NPH	2063	1377	4557	302.15	286.60	318.54
92	Total	no DGN	2154	343	1853	185.06	166.48	205.72

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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	11955	722	20943	34.47	32.05	37.08
2	Male	detemir	5504	108	6044	17.87	14.80	21.58
3	Male	NPH	17121	1978	56240	35.17	33.65	36.76
4	Male	no DGN	19413	420	15189	27.65	25.13	30.43
5	Female	glargine	8687	407	15008	27.12	24.61	29.89
6	Female	detemir	4126	109	4565	23.88	19.79	28.81
7	Female	NPH	13601	1336	44556	29.98	28.42	31.64
8	Female	no DGN	15142	397	14096	28.16	25.53	31.08
9	Total	glargine	20642	1129	35951	31.40	29.62	33.29
10	Total	detemir	9630	217	10609	20.45	17.91	23.36
11	Total	NPH	30722	3314	100796	32.88	31.78	34.02
12	Total	no DGN	34555	817	29285	27.90	26.05	29.88

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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	23	0	49	NA	NA	NA
2	0-9	detemir	28	0	47	NA	NA	NA
3	0-9	NPH	37	1	106	9.44	1.33	67.01
4	0-9	no DGN	39	1	29	34.69	4.89	246.29
5	10-19	glargine	54	18	161	111.59	70.30	177.11
6	10-19	detemir	37	1	56	17.93	2.53	127.31
7	10-19	NPH	54	15	144	104.45	62.97	173.25
8	10-19	no DGN	79	7	106	65.93	31.43	138.30
9	20-29	glargine	152	5	287	17.40	7.24	41.79
10	20-29	detemir	90	6	124	48.40	21.75	107.74
11	20-29	NPH	239	32	565	56.62	40.04	80.07
12	20-29	no DGN	286	21	609	34.48	22.48	52.88
13	30-39	glargine	646	110	1242	88.55	73.46	106.75
14	30-39	detemir	377	10	476	21.00	11.30	39.03
15	30-39	NPH	1065	143	3130	45.69	38.78	53.83
16	30-39	no DGN	1257	32	2197	14.56	10.30	20.59
17	40-49	glargine	2183	150	4180	35.88	30.58	42.11
18	40-49	detemir	1226	33	1523	21.67	15.40	30.47
19	40-49	NPH	2970	453	10200	44.41	40.50	48.69
20	40-49	no DGN	3609	103	3465	29.72	24.50	36.05
21	50-59	glargine	5543	279	10634	26.24	23.33	29.50
22	50-59	detemir	2820	60	3314	18.11	14.06	23.32
23	50-59	NPH	7990	726	29455	24.65	22.92	26.51
24	50-59	no DGN	9146	210	7405	28.36	24.77	32.46
25	60-69	glargine	5543	261	9668	27.00	23.91	30.48
26	60-69	detemir	2710	47	2908	16.16	12.14	21.51
27	60-69	NPH	8254	934	29120	32.07	30.08	34.20
28	60-69	no DGN	9163	194	6700	28.95	25.15	33.33
29	70-79	glargine	4187	201	6703	29.99	26.11	34.43
30	70-79	detemir	1636	43	1584	27.14	20.13	36.60
31	70-79	NPH	6692	731	20787	35.17	32.71	37.81
32	70-79	no DGN	7215	171	5898	28.99	24.96	33.68
33	80+	glargine	2311	105	3025	34.71	28.67	42.02
34	80+	detemir	706	17	577	29.45	18.31	47.37
35	80+	NPH	3421	279	7289	38.28	34.04	43.04
36	80+	no DGN	3761	78	2875	27.13	21.73	33.87
37	Total	glargine	20642	1129	35951	31.40	29.62	33.29
38	Total	detemir	9630	217	10609	20.45	17.91	23.36
39	Total	NPH	30722	3314	100796	32.88	31.78	34.02
40	Total	no DGN	34555	817	29285	27.90	26.05	29.88

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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.	Time since diag	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	00-05	glargine	7756	716	19452	36.81	34.21	39.61
2	00-05	detemir	3155	72	4143	17.38	13.80	21.90
3	00-05	NPH	21752	2874	86259	33.32	32.12	34.56
4	00-05	no DGN	21163	698	24593	28.38	26.35	30.57
5	06	glargine	1441	75	2749	27.28	21.76	34.21
6	06	detemir	699	24	914	26.25	17.59	39.16
7	06	NPH	3796	251	8138	30.84	27.25	34.90
8	06	no DGN	3438	62	2103	29.48	22.98	37.81
9	07	glargine	3319	174	6397	27.20	23.44	31.56
10	07	detemir	1257	42	1997	21.04	15.55	28.46
11	07	NPH	2670	117	4357	26.86	22.40	32.19
12	07	no DGN	4310	46	1553	29.61	22.18	39.53
13	08	glargine	4158	131	5416	24.19	20.38	28.70
14	08	detemir	2057	57	2489	22.90	17.66	29.68
15	08	NPH	1525	56	1639	34.17	26.29	44.40
16	08	no DGN	3813	8	799	10.01	5.01	20.01
17	09	glargine	3968	33	1937	17.04	12.11	23.97
18	09	detemir	2462	22	1067	20.63	13.58	31.33
19	09	NPH	979	16	403	39.72	24.33	64.83
20	09	no DGN	1831	3	236	12.73	4.10	39.46
21	Total	glargine	20642	1129	35951	31.40	29.62	33.29
22	Total	detemir	9630	217	10609	20.45	17.91	23.36
23	Total	NPH	30722	3314	100796	32.88	31.78	34.02
24	Total	no DGN	34555	817	29285	27.90	26.05	29.88

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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.	Calender year	Insulin	Npat	Events	Years	Rate	lower limit	upper limit
1	-1	glargine	4809	254	8004	31.73	28.06	35.89
2	-1	detemir	2439	49	2720	18.01	13.61	23.83
3	-1	NPH	8609	1015	26475	38.34	36.05	40.77
4	-1	no DGN	9284	272	11822	23.01	20.43	25.91
5	1-2	glargine	1623	112	2981	37.57	31.22	45.21
6	1-2	detemir	785	17	957	17.77	11.05	28.58
7	1-2	NPH	2613	312	9168	34.03	30.46	38.03
8	1-2	no DGN	2855	80	2426	32.97	26.48	41.05
9	2-5	glargine	5382	292	10256	28.47	25.39	31.93
10	2-5	detemir	2564	60	2880	20.83	16.18	26.83
11	2-5	NPH	8852	858	32566	26.35	24.64	28.17
12	2-5	no DGN	9819	188	7290	25.79	22.35	29.75
13	5-10	glargine	6827	322	12025	26.78	24.01	29.87
14	5-10	detemir	3043	60	3288	18.25	14.17	23.50
15	5-10	NPH	9209	974	29759	32.73	30.74	34.85
16	5-10	no DGN	10631	241	6914	34.86	30.72	39.55
17	10-	glargine	2001	149	2685	55.49	47.26	65.15
18	10-	detemir	799	31	764	40.55	28.52	57.66
19	10-	NPH	1439	155	2828	54.81	46.83	64.15
20	10-	no DGN	1966	36	832	43.26	31.21	59.98
21	Total	glargine	20642	1129	35951	31.40	29.62	33.29
22	Total	detemir	9630	217	10609	20.45	17.91	23.36
23	Total	NPH	30722	3314	100796	32.88	31.78	34.02
24	Total	no DGN	34555	817	29285	27.90	26.05	29.88

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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	5514	345	8276	41.69	37.51	46.32
2	No	detemir	2989	64	3098	20.66	16.17	26.39
3	No	NPH	8435	894	24704	36.19	33.89	38.64
4	No	no DGN	9480	254	10936	23.23	20.54	26.26
5	Yes	glargine	15128	784	27674	28.33	26.41	30.38
6	Yes	detemir	6641	153	7511	20.37	17.39	23.87
7	Yes	NPH	22287	2420	76091	31.80	30.56	33.10
8	Yes	no DGN	25075	563	18349	30.68	28.25	33.33
9	Total	glargine	20642	1129	35951	31.40	29.62	33.29
10	Total	detemir	9630	217	10609	20.45	17.91	23.36
11	Total	NPH	30722	3314	100796	32.88	31.78	34.02
12	Total	no DGN	34555	817	29285	27.90	26.05	29.88

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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	19079	783	33335	23.49	21.90	25.19
2	No	detemir	9024	172	10028	17.15	14.77	19.92
3	No	NPH	28643	2474	95097	26.02	25.01	27.06
4	No	no DGN	32220	679	27419	24.76	22.97	26.70
5	Yes	glargine	1563	346	2616	132.27	119.04	146.97
6	Yes	detemir	606	45	581	77.43	57.81	103.70
7	Yes	NPH	2079	840	5699	147.40	137.77	157.72
8	Yes	no DGN	2335	138	1866	73.95	62.59	87.38
9	Total	glargine	20642	1129	35951	31.40	29.62	33.29
10	Total	detemir	9630	217	10609	20.45	17.91	23.36
11	Total	NPH	30722	3314	100796	32.88	31.78	34.02
12	Total	no DGN	34555	817	29285	27.90	26.05	29.88

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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	19616	1041	34132	30.50	28.70	32.41
2	No	detemir	9060	197	9919	19.86	17.27	22.84
3	No	NPH	29485	3113	97771	31.84	30.74	32.98
4	No	no DGN	33070	771	27756	27.78	25.88	29.81
5	Yes	glargine	1026	88	1819	48.38	39.26	59.62
6	Yes	detemir	570	20	691	28.96	18.68	44.89
7	Yes	NPH	1237	201	3025	66.45	57.87	76.30
8	Yes	no DGN	1485	46	1529	30.09	22.54	40.17
9	Total	glargine	20642	1129	35951	31.40	29.62	33.29
10	Total	detemir	9630	217	10609	20.45	17.91	23.36
11	Total	NPH	30722	3314	100796	32.88	31.78	34.02
12	Total	no DGN	34555	817	29285	27.90	26.05	29.88

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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	1743	152	4181	36.36	31.01	42.62
2	Unknown	detemir	796	27	1098	24.59	16.86	35.86
3	Unknown	NPH	6289	1005	31631	31.77	29.87	33.80
4	Unknown	no DGN	5896	270	9384	28.77	25.54	32.42
5	HUS	glargine	4568	358	7947	45.05	40.62	49.97
6	HUS	detemir	1962	54	2213	24.40	18.69	31.86
7	HUS	NPH	5538	601	15344	39.17	36.16	42.43
8	HUS	no DGN	6811	163	4856	33.56	28.79	39.13
9	Varsinais-Suomi	glargine	1626	90	2954	30.46	24.78	37.46
10	Varsinais-Suomi	detemir	619	21	679	30.91	20.16	47.41
11	Varsinais-Suomi	NPH	1499	198	4355	45.46	39.55	52.26
12	Varsinais-Suomi	no DGN	2003	52	1260	41.28	31.46	54.17
13	Satakunta	glargine	675	18	1047	17.19	10.83	27.28
14	Satakunta	detemir	568	15	603	24.86	14.99	41.23
15	Satakunta	NPH	1170	98	2988	32.80	26.91	39.98
16	Satakunta	no DGN	1291	17	1019	16.68	10.37	26.83
17	Kantahame	glargine	757	50	1351	37.01	28.05	48.84
18	Kantahame	detemir	219	3	223	13.44	4.33	41.66
19	Kantahame	NPH	832	141	2481	56.84	48.19	67.04
20	Kantahame	no DGN	1024	31	677	45.78	32.19	65.09
21	Pirkanmaa	glargine	1790	40	2809	14.24	10.45	19.41
22	Pirkanmaa	detemir	736	7	825	8.49	4.05	17.81
23	Pirkanmaa	NPH	2329	42	6765	6.21	4.59	8.40
24	Pirkanmaa	no DGN	2659	12	1808	6.64	3.77	11.69
25	Paijat-Hame	glargine	708	32	1201	26.64	18.84	37.67
26	Paijat-Hame	detemir	346	7	375	18.66	8.89	39.14
27	Paijat-Hame	NPH	1147	301	3391	88.78	79.29	99.39
28	Paijat-Hame	no DGN	1199	40	781	51.24	37.58	69.85
29	Kymenlaakso	glargine	708	25	1147	21.79	14.72	32.24
30	Kymenlaakso	detemir	321	4	325	12.30	4.61	32.76
31	Kymenlaakso	NPH	1004	83	2998	27.69	22.33	34.33
32	Kymenlaakso	no DGN	1158	29	746	38.90	27.03	55.98
33	Etela-Karjala	glargine	559	26	989	26.29	17.90	38.62
34	Etela-Karjala	detemir	197	5	213	23.43	9.75	56.27
35	Etela-Karjala	NPH	641	39	1843	21.16	15.46	28.96
36	Etela-Karjala	no DGN	747	13	513	25.33	14.71	43.63
37	Etela-Savo	glargine	342	7	503	13.91	6.63	29.17
38	Etela-Savo	detemir	202	2	215	9.31	2.33	37.24
39	Etela-Savo	NPH	646	41	1829	22.42	16.51	30.45
40	Etela-Savo	no DGN	684	14	482	29.05	17.21	49.06
41	Ita-Savo	glargine	292	11	430	25.57	14.16	46.17
42	Ita-Savo	detemir	120	0	98	NA	NA	NA
43	Ita-Savo	NPH	440	15	1253	11.97	7.22	19.85
44	Ita-Savo	no DGN	476	10	393	25.47	13.70	47.33
45	Pohjois-Karjala	glargine	617	7	911	7.68	3.66	16.12
46	Pohjois-Karjala	detemir	405	1	366	2.73	0.38	19.37
47	Pohjois-Karjala	NPH	1157	34	3470	9.80	7.00	13.71
48	Pohjois-Karjala	no DGN	1169	0	843	NA	NA	NA
49	Pohjois-Savo	glargine	1191	58	2160	26.85	20.76	34.73
50	Pohjois-Savo	detemir	438	11	494	22.26	12.33	40.19
51	Pohjois-Savo	NPH	1154	83	3093	26.83	21.64	33.27
52	Pohjois-Savo	no DGN	1531	26	1059	24.56	16.72	36.07
53	Keski-Suomi	glargine	870	46	1485	30.98	23.21	41.36
54	Keski-Suomi	detemir	528	14	586	23.91	14.16	40.36
55	Keski-Suomi	NPH	1268	121	3465	34.92	29.22	41.73
56	Keski-Suomi	no DGN	1450	25	1026	24.37	16.47	36.06
57	Etela-Pohjanmaa	glargine	984	48	1539	31.18	23.50	41.38
58	Etela-Pohjanmaa	detemir	739	14	736	19.01	11.26	32.11
59	Etela-Pohjanmaa	NPH	1266	159	3604	44.12	37.77	51.54
60	Etela-Pohjanmaa	no DGN	1535	32	1064	30.07	21.27	42.53
61	Vaasa	glargine	254	28	401	69.79	48.19	101.08
62	Vaasa	detemir	293	6	284	21.14	9.50	47.04
63	Vaasa	NPH	498	51	1477	34.54	26.25	45.45
64	Vaasa	no DGN	574	17	456	37.30	23.19	60.01
65	Keski-Pohjanmaa	glargine	237	7	303	23.14	11.03	48.53
66	Keski-Pohjanmaa	detemir	200	3	195	15.38	4.96	47.69
67	Keski-Pohjanmaa	NPH	441	6	1414	4.24	1.91	9.44
68	Keski-Pohjanmaa	no DGN	472	1	325	3.08	0.43	21.86
69	Pohjois-Pohjanmaa	glargine	1506	61	2633	23.17	18.03	29.78
70	Pohjois-Pohjanmaa	detemir	502	12	585	20.52	11.65	36.13
71	Pohjois-Pohjanmaa	NPH	1593	154	4329	35.58	30.38	41.66
72	Pohjois-Pohjanmaa	no DGN	1968	29	1346	21.55	14.98	31.01
73	Kainuu	glargine	399	14	660	21.21	12.56	35.82
74	Kainuu	detemir	183	0	208	NA	NA	NA
75	Kainuu	NPH	623	24	1722	13.93	9.34	20.79
76	Kainuu	no DGN	647	4	367	10.89	4.09	29.01
77	Lansi-Pohja	glargine	374	36	575	62.63	45.18	86.83
78	Lansi-Pohja	detemir	96	6	98	60.97	27.39	135.72
79	Lansi-Pohja	NPH	421	76	1140	66.69	53.27	83.51
80	Lansi-Pohja	no DGN	482	22	370	59.46	39.15	90.31
81	Lappi	glargine	427	15	704	21.30	12.84	35.33
82	Lappi	detemir	154	5	180	27.79	11.57	66.76
83	Lappi	NPH	689	40	2012	19.89	14.59	27.11
84	Lappi	no DGN	712	9	465	19.37	10.08	37.24
85	Ahvenanmaa	glargine	15	0	20	NA	NA	NA
86	Ahvenanmaa	detemir	6	0	8	NA	NA	NA
87	Ahvenanmaa	NPH	77	2	193	10.38	2.60	41.49
88	Ahvenanmaa	no DGN	67	1	47	21.45	3.02	152.23
89	Total	glargine	20642	1129	35951	31.40	29.62	33.29
90	Total	detemir	9630	217	10609	20.45	17.91	23.36
91	Total	NPH	30722	3314	100796	32.88	31.78	34.02
92	Total	no DGN	34555	817	29285	27.90	26.05	29.88

Naive T2 cohort. Data 28th December 2011

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	-0.235	0.096	0.79	0.654	0.955	0.015
2	insulin NPH	0.038	0.061	1.039	0.922	1.17	0.534
3	insulin no DGN	-0.038	0.072	0.963	0.836	1.108	0.596
4	gender Female	-0.076	0.037	0.926	0.862	0.996	0.038
5	agegroupT2 0-19	-0.058	0.355	0.944	0.471	1.892	0.871
6	agegroupT2 30-39	-0.071	0.229	0.932	0.594	1.461	0.758
7	agegroupT2 40-49	0.206	0.212	1.229	0.811	1.864	0.331
8	agegroupT2 50-59	0.131	0.209	1.14	0.757	1.717	0.531
9	agegroupT2 60-69	0.32	0.209	1.378	0.915	2.075	0.125
10	agegroupT2 70-79	0.489	0.21	1.631	1.081	2.46	0.02
11	agegroupT2 80+	0.601	0.214	1.824	1.199	2.775	0.005
12	BB.stfup Yes	0.026	0.061	1.026	0.911	1.155	0.673
13	useBB Yes	0.038	0.042	1.039	0.957	1.127	0.364
14	A10A.stfup Yes	0.078	0.082	1.081	0.921	1.269	0.342
15	useA10A Yes	0.399	0.044	1.49	1.366	1.625	<0.001
16	hosph.stfup Yes	1.422	0.045	4.144	3.796	4.524	<0.001
17	Switch YES	0.115	0.074	1.122	0.97	1.298	0.122
18	time2diag 1-2	0.084	0.077	1.088	0.936	1.264	0.272
19	time2diag 2-5	-0.058	0.062	0.943	0.835	1.066	0.348
20	time2diag 5-10	-0.05	0.064	0.951	0.838	1.079	0.434
21	time2diag 10-	-0.012	0.101	0.988	0.811	1.203	0.903
22	calyear2 06	-0.282	0.07	0.755	0.658	0.865	<0.001
23	calyear2 07	-0.37	0.075	0.691	0.596	0.801	<0.001
24	calyear2 08	-0.447	0.091	0.639	0.535	0.764	<0.001
25	calyear2 09	-0.727	0.141	0.483	0.367	0.637	<0.001

Naive T2 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	-0.273	0.105	0.761	0.619	0.935	0.01
2	insulinNPH glargine	-0.038	0.061	0.963	0.854	1.085	0.534
3	insulinNPH no DGN	-0.076	0.053	0.927	0.836	1.028	0.149
4	gender Female	-0.076	0.037	0.926	0.862	0.996	0.038
5	agegroupT2 0-19	-0.058	0.355	0.944	0.471	1.892	0.871
6	agegroupT2 30-39	-0.071	0.229	0.932	0.594	1.461	0.758
7	agegroupT2 40-49	0.206	0.212	1.229	0.811	1.864	0.331
8	agegroupT2 50-59	0.131	0.209	1.14	0.757	1.717	0.531
9	agegroupT2 60-69	0.32	0.209	1.378	0.915	2.075	0.125
10	agegroupT2 70-79	0.489	0.21	1.631	1.081	2.46	0.02
11	agegroupT2 80+	0.601	0.214	1.824	1.199	2.775	0.005
12	BB.stfup Yes	0.026	0.061	1.026	0.911	1.155	0.673
13	useBB Yes	0.038	0.042	1.039	0.957	1.127	0.364
14	A10A.stfup Yes	0.078	0.082	1.081	0.921	1.269	0.342
15	useA10A Yes	0.399	0.044	1.49	1.366	1.625	<0.001
16	hosph.stfup Yes	1.422	0.045	4.144	3.796	4.524	<0.001
17	Switch YES	0.115	0.074	1.122	0.97	1.298	0.122
18	time2diag 1-2	0.084	0.077	1.088	0.936	1.264	0.272
19	time2diag 2-5	-0.058	0.062	0.943	0.835	1.066	0.348
20	time2diag 5-10	-0.05	0.064	0.951	0.838	1.079	0.434
21	time2diag 10-	-0.012	0.101	0.988	0.811	1.203	0.903
22	calyear2 06	-0.282	0.07	0.755	0.658	0.865	<0.001
23	calyear2 07	-0.37	0.075	0.691	0.596	0.801	<0.001
24	calyear2 08	-0.447	0.091	0.639	0.535	0.764	<0.001
25	calyear2 09	-0.727	0.141	0.483	0.367	0.637	<0.001

Naive T2 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	0.761	0.619	0.935	0.772	0.63	0.946	0.761	0.619	0.935	0.766	0.623	0.942	0.9	0.732	1.106
2	insulinNPH glargine	0.963	0.854	1.085	0.973	0.865	1.095	0.963	0.854	1.085	0.974	0.864	1.097	0.983	0.872	1.108
3	insulinNPH no DGN	0.927	0.836	1.028	NA	NA	NA	0.927	0.836	1.028	0.928	0.837	1.029	0.922	0.832	1.023
4	gender Female	0.926	0.862	0.996	0.926	0.861	0.995	0.926	0.862	0.996	0.924	0.859	0.993	0.934	0.869	1.004
5	agegroupT2 0-19	0.944	0.471	1.892	0.959	0.479	1.921	0.944	0.471	1.892	0.956	0.477	1.915	0.907	0.453	1.817
6	agegroupT2 30-39	0.932	0.594	1.461	0.934	0.596	1.465	0.932	0.594	1.461	0.891	0.568	1.397	0.833	0.531	1.306
7	agegroupT2 40-49	1.229	0.811	1.864	1.238	0.816	1.877	1.229	0.811	1.864	1.2	0.791	1.82	1.107	0.73	1.679
8	agegroupT2 50-59	1.14	0.757	1.717	1.149	0.763	1.73	1.14	0.757	1.717	1.119	0.743	1.685	1.072	0.712	1.615
9	agegroupT2 60-69	1.378	0.915	2.075	1.389	0.922	2.091	1.378	0.915	2.075	1.36	0.903	2.049	1.301	0.864	1.96
10	agegroupT2 70-79	1.631	1.081	2.46	1.64	1.087	2.475	1.631	1.081	2.46	1.603	1.063	2.419	1.451	0.962	2.189
11	agegroupT2 80+	1.824	1.199	2.775	1.83	1.203	2.785	1.824	1.199	2.775	1.813	1.191	2.758	1.675	1.101	2.548
12	BB.stfup Yes	1.026	0.911	1.155	1.029	0.914	1.158	1.026	0.911	1.155	1.024	0.909	1.153	1.04	0.924	1.171
13	useBB Yes	1.039	0.957	1.127	1.037	0.955	1.125	1.039	0.957	1.127	1.025	0.945	1.113	1.005	0.926	1.091
14	A10A.stfup Yes	1.081	0.921	1.269	1.081	0.92	1.269	1.081	0.921	1.269	1.085	0.924	1.274	1.055	0.899	1.239
15	useA10A Yes	1.49	1.366	1.625	1.483	1.36	1.618	1.49	1.366	1.625	1.476	1.353	1.609	1.483	1.359	1.617
16	hosph.stfup Yes	4.144	3.796	4.524	4.144	3.796	4.524	4.144	3.796	4.524	4.173	3.822	4.555	4.489	4.112	4.901
17	Switch YES	1.122	0.97	1.298	1.13	0.974	1.312	1.122	0.97	1.298	1.064	0.919	1.231	NA	NA	NA
18	time2diag 1-2	1.088	0.936	1.264	1.091	0.939	1.268	1.088	0.936	1.264	1.101	0.947	1.279	1.141	0.982	1.326
19	time2diag 2-5	0.943	0.835	1.066	0.947	0.838	1.069	0.943	0.835	1.066	0.937	0.83	1.059	0.936	0.829	1.057
20	time2diag 5-10	0.951	0.838	1.079	0.954	0.841	1.082	0.951	0.838	1.079	0.944	0.832	1.071	0.944	0.832	1.071
21	time2diag 10-	0.988	0.811	1.203	0.991	0.813	1.207	0.988	0.811	1.203	0.983	0.807	1.198	0.967	0.794	1.178
22	calyear2 06	0.755	0.658	0.865	0.754	0.657	0.864	0.755	0.658	0.865	0.761	0.664	0.873	0.782	0.682	0.896
23	calyear2 07	0.691	0.596	0.801	0.691	0.595	0.802	0.691	0.596	0.801	0.689	0.594	0.798	0.685	0.591	0.794
24	calyear2 08	0.639	0.535	0.764	0.64	0.534	0.767	0.639	0.535	0.764	0.627	0.524	0.749	0.625	0.523	0.747
25	calyear2 09	0.483	0.367	0.637	0.482	0.366	0.637	0.483	0.367	0.637	0.484	0.368	0.638	0.47	0.357	0.619

Naive T2 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	lower	upper	
1	insulinNPH detemir	0.761	0.619	0.935	0.801	0.642	0.998	0.734	0.566	0.953	0.732	0.564	0.95	0.372	0.287	0.483
2	insulinNPH glargine	0.963	0.854	1.085	0.961	0.846	1.092	0.954	0.823	1.106	0.947	0.817	1.097	0.95	0.82	1.102
3	insulinNPH no DGN	0.927	0.836	1.028	0.922	0.822	1.035	0.896	0.753	1.065	0.88	0.74	1.046	0.823	0.692	0.979
4	gender Female	0.926	0.862	0.996	0.931	0.858	1.01	0.946	0.837	1.07	0.924	0.817	1.044	0.969	0.857	1.095
5	agegroupT2 0-19	0.944	0.471	1.892	0.934	0.426	2.048	0.656	0.242	1.775	0.615	0.227	1.665	0.431	0.159	1.165
6	agegroupT2 30-39	0.932	0.594	1.461	0.911	0.54	1.536	0.82	0.356	1.889	0.913	0.396	2.103	1.072	0.465	2.471
7	agegroupT2 40-49	1.229	0.811	1.864	1.198	0.738	1.943	0.922	0.432	1.971	1	0.468	2.137	1.331	0.623	2.843
8	agegroupT2 50-59	1.14	0.757	1.717	1.172	0.729	1.887	0.949	0.448	2.008	1.027	0.485	2.175	1.221	0.577	2.585
9	agegroupT2 60-69	1.378	0.915	2.075	1.384	0.86	2.228	1.199	0.565	2.542	1.368	0.645	2.902	1.724	0.813	3.657
10	agegroupT2 70-79	1.631	1.081	2.46	1.606	0.997	2.589	1.294	0.609	2.751	1.408	0.662	2.992	1.838	0.865	3.907
11	agegroupT2 80+	1.824	1.199	2.775	1.723	1.058	2.804	1.415	0.654	3.062	1.552	0.717	3.356	1.979	0.915	4.281
12	BB.stfup Yes	1.026	0.911	1.155	0.991	0.866	1.134	0.985	0.799	1.214	1.028	0.834	1.268	1.097	0.89	1.353
13	useBB Yes	1.039	0.957	1.127	1.045	0.951	1.149	1.094	0.946	1.264	1.101	0.953	1.273	1.14	0.987	1.318
14	A10A.stfup Yes	1.081	0.921	1.269	1.092	0.908	1.314	1.127	0.876	1.45	1.111	0.864	1.43	1.115	0.867	1.435
15	useA10A Yes	1.49	1.366	1.625	1.493	1.348	1.653	1.442	1.231	1.689	1.402	1.197	1.642	1.374	1.173	1.61
16	hosph.stfup Yes	4.144	3.796	4.524	4.309	3.888	4.776	4.292	3.698	4.981	4.483	3.863	5.203	4.82	4.153	5.594
17	Switch YES	1.122	0.97	1.298	1.113	0.946	1.31	1.117	0.892	1.399	1.16	0.927	1.453	1.141	0.911	1.428
18	time2diag 1-2	1.088	0.936	1.264	1.098	0.925	1.303	1.177	0.897	1.543	1.132	0.863	1.484	1.1	0.839	1.443
19	time2diag 2-5	0.943	0.835	1.066	0.98	0.852	1.128	1.009	0.806	1.263	0.981	0.783	1.228	0.904	0.722	1.131
20	time2diag 5-10	0.951	0.838	1.079	0.968	0.837	1.118	0.988	0.787	1.24	0.976	0.777	1.225	0.938	0.747	1.177
21	time2diag 10-	0.988	0.811	1.203	1.008	0.806	1.261	1.007	0.729	1.39	0.932	0.675	1.286	0.893	0.647	1.234
22	calyear2 06	0.755	0.658	0.865	0.805	0.688	0.942	0.882	0.702	1.108	0.945	0.752	1.188	1.188	0.946	1.493
23	calyear2 07	0.691	0.596	0.801	0.685	0.588	0.798	0.706	0.588	0.849	0.714	0.594	0.858	0.913	0.759	1.097
24	calyear2 08	0.639	0.535	0.764	0.646	0.537	0.776	0.667	0.541	0.822	0.667	0.541	0.822	0.863	0.7	1.064
25	calyear2 09	0.483	0.367	0.637	0.504	0.375	0.676	0.624	0.436	0.894	0.614	0.429	0.879	0.783	0.547	1.121

Naive T2 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	-0.282	0.106	0.754	0.613	0.928	0.008
2	insulinNPH glargine	-0.04	0.061	0.961	0.853	1.083	0.517
3	insulinNPH no DGN	-0.077	0.053	0.926	0.835	1.027	0.145
4	gender Female	-0.08	0.037	0.923	0.857	0.993	0.031
5	agegroupT2 0-19	-0.054	0.372	0.948	0.457	1.965	0.885
6	agegroupT2 30-39	-0.08	0.231	0.923	0.587	1.452	0.73
7	agegroupT2 40-49	0.203	0.213	1.225	0.807	1.859	0.34
8	agegroupT2 50-59	0.126	0.21	1.135	0.752	1.712	0.548
9	agegroupT2 60-69	0.312	0.213	1.366	0.9	2.071	0.143
10	agegroupT2 70-79	0.488	0.215	1.629	1.069	2.482	0.023
11	agegroupT2 80+	0.613	0.219	1.846	1.202	2.837	0.005
12	BB.stfup Yes	0.036	0.068	1.037	0.907	1.184	0.598
13	useBB Yes	0.037	0.042	1.038	0.956	1.127	0.371
14	A10A.stfup Yes	0.065	0.093	1.067	0.89	1.28	0.482
15	useA10A Yes	0.399	0.044	1.49	1.366	1.625	<0.001
16	hosph.stfup Yes	1.433	0.046	4.19	3.83	4.585	<0.001
17	Switch YES	0.118	0.075	1.126	0.973	1.303	0.112
18	calyear2 06	-0.285	0.089	0.752	0.632	0.894	0.001
19	calyear2 07	-0.371	0.547	0.69	0.236	2.015	0.498
20	calyear2 08	-0.544	0.763	0.581	0.13	2.59	0.476
21	calyear2 09	-0.912	0.836	0.402	0.078	2.067	0.275
22	time2diag 1-2	0.079	0.077	1.082	0.93	1.258	0.308
23	time2diag 2-5	-0.06	0.066	0.941	0.827	1.072	0.363
24	time2diag 5-10	-0.049	0.077	0.953	0.819	1.108	0.529
25	time2diag 10-	0.009	0.115	1.009	0.805	1.264	0.939
26	Pdet	1.144	1.169	3.14	0.317	31.074	0.328
27	Pgla	-0.369	1.26	0.692	0.059	8.168	0.77

Naive T2 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	-0.067	0.118	0.936	0.743	1.178	0.572
2	insulin NPH	0.008	0.097	1.008	0.834	1.219	0.934
3	insulin no DGN	-0.005	0.135	0.995	0.764	1.296	0.973
4	gender Female	-0.144	0.077	0.866	0.744	1.008	0.062
5	agegroupT2 0-19	0.797	0.916	2.22	0.368	13.369	0.384
6	agegroupT2 30-39	0.176	0.763	1.193	0.268	5.319	0.817
7	agegroupT2 40-49	0.715	0.721	2.044	0.498	8.394	0.321
8	agegroupT2 50-59	0.765	0.715	2.15	0.529	8.737	0.285
9	agegroupT2 60-69	0.799	0.715	2.223	0.547	9.033	0.264
10	agegroupT2 70-79	0.881	0.717	2.413	0.592	9.835	0.219
11	agegroupT2 80+	0.871	0.721	2.389	0.582	9.809	0.227
12	BB.stfup Yes	-0.151	0.115	0.86	0.687	1.077	0.188
13	useBB Yes	0.045	0.092	1.046	0.873	1.254	0.624
14	A10A.stfup Yes	-0.028	0.152	0.973	0.722	1.311	0.855
15	useA10A Yes	0.45	0.092	1.569	1.309	1.88	<0.001
16	hosph.stfup Yes	1.702	0.08	5.484	4.692	6.408	<0.001
17	Switch YES	0.179	0.143	1.196	0.904	1.582	0.211
18	time2diag 1-2	-0.178	0.186	0.837	0.581	1.205	0.338
19	time2diag 2-5	0.022	0.125	1.022	0.799	1.306	0.863
20	time2diag 5-10	-0.102	0.129	0.903	0.701	1.164	0.431
21	time2diag 10-	-0.043	0.157	0.958	0.703	1.304	0.783
22	calyear3 07	-0.22	0.098	0.802	0.662	0.972	0.025
23	calyear3 08	-0.377	0.116	0.686	0.547	0.86	0.001
24	calyear3 09	-0.704	0.162	0.495	0.36	0.679	<0.001

Naive T2 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	-0.074	0.133	0.928	0.715	1.204	0.575
2	insulinNPH glargine	-0.008	0.097	0.992	0.82	1.2	0.934
3	insulinNPH no DGN	-0.013	0.132	0.988	0.762	1.28	0.925
4	gender Female	-0.144	0.077	0.866	0.744	1.008	0.062
5	agegroupT2 0-19	0.797	0.916	2.22	0.368	13.369	0.384
6	agegroupT2 30-39	0.176	0.763	1.193	0.268	5.319	0.817
7	agegroupT2 40-49	0.715	0.721	2.044	0.498	8.394	0.321
8	agegroupT2 50-59	0.765	0.715	2.15	0.529	8.737	0.285
9	agegroupT2 60-69	0.799	0.715	2.223	0.547	9.033	0.264
10	agegroupT2 70-79	0.881	0.717	2.413	0.592	9.835	0.219
11	agegroupT2 80+	0.871	0.721	2.389	0.582	9.809	0.227
12	BB.stfup Yes	-0.151	0.115	0.86	0.687	1.077	0.188
13	useBB Yes	0.045	0.092	1.046	0.873	1.254	0.624
14	A10A.stfup Yes	-0.028	0.152	0.973	0.722	1.311	0.855
15	useA10A Yes	0.45	0.092	1.569	1.309	1.88	<0.001
16	hosph.stfup Yes	1.702	0.08	5.484	4.692	6.408	<0.001
17	Switch YES	0.179	0.143	1.196	0.904	1.582	0.211
18	time2diag 1-2	-0.178	0.186	0.837	0.581	1.205	0.338
19	time2diag 2-5	0.022	0.125	1.022	0.799	1.306	0.863
20	time2diag 5-10	-0.102	0.129	0.903	0.701	1.164	0.431
21	time2diag 10-	-0.043	0.157	0.958	0.703	1.304	0.783
22	calyear3 07	-0.22	0.098	0.802	0.662	0.972	0.025
23	calyear3 08	-0.377	0.116	0.686	0.547	0.86	0.001
24	calyear3 09	-0.704	0.162	0.495	0.36	0.679	<0.001

Naive T2 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	-0.526	0.273	0.591	0.346	1.008	0.054
2	insulin NPH	0.15	0.125	1.162	0.909	1.486	0.231
3	insulin no DGN	-0.288	0.13	0.749	0.581	0.967	0.026
4	gender Female	-0.257	0.129	0.773	0.601	0.995	0.045
5	agegroupT2 0-19	0.326	0.611	1.386	0.418	4.592	0.594
6	agegroupT2 30-39	0.024	0.696	1.024	0.262	4.005	0.973
7	agegroupT2 40-49	-0.311	0.544	0.733	0.252	2.128	0.568
8	agegroupT2 50-59	-0.9	0.505	0.407	0.151	1.094	0.075
9	agegroupT2 60-69	-0.833	0.504	0.435	0.162	1.168	0.098
10	agegroupT2 70-79	-0.883	0.498	0.414	0.156	1.098	0.076
11	agegroupT2 80+	-1.08	0.514	0.34	0.124	0.929	0.036
12	BB.stfup Yes	-0.504	0.39	0.604	0.281	1.296	0.195
13	useBB Yes	-0.056	0.094	0.946	0.787	1.137	0.554
14	A10A.stfup Yes	0.237	0.391	1.267	0.589	2.725	0.545
15	useA10A Yes	0.489	0.145	1.631	1.229	2.166	<0.001
16	hosph.stfup Yes	-0.265	0.176	0.767	0.543	1.083	0.132
17	Switch YES	0.017	0.192	1.017	0.698	1.483	0.928
18	time2diag 1-2	0.31	0.347	1.364	0.691	2.689	0.371
19	time2diag 2-5	0.122	0.383	1.13	0.534	2.393	0.749
20	time2diag 5-10	0.41	0.444	1.507	0.631	3.594	0.356
21	time2diag 10-	1.306	0.828	3.693	0.728	18.727	0.115
22	calyear2 06	-0.15	0.229	0.861	0.55	1.348	0.512
23	calyear2 07	-0.368	0.24	0.692	0.432	1.108	0.125
24	calyear2 08	-0.475	0.233	0.622	0.394	0.981	0.041
25	calyear2 09	-0.723	0.437	0.485	0.206	1.142	0.098

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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	-0.677	0.289	0.508	0.289	0.895	0.019
2	insulinNPH glargine	-0.15	0.125	0.861	0.673	1.1	0.231
3	insulinNPH no DGN	-0.439	0.11	0.645	0.52	0.8	<0.001
4	gender Female	-0.257	0.129	0.773	0.601	0.995	0.045
5	agegroupT2 0-19	0.326	0.611	1.386	0.418	4.592	0.594
6	agegroupT2 30-39	0.024	0.696	1.024	0.262	4.005	0.973
7	agegroupT2 40-49	-0.311	0.544	0.733	0.252	2.128	0.568
8	agegroupT2 50-59	-0.9	0.505	0.407	0.151	1.094	0.075
9	agegroupT2 60-69	-0.833	0.504	0.435	0.162	1.168	0.098
10	agegroupT2 70-79	-0.883	0.498	0.414	0.156	1.098	0.076
11	agegroupT2 80+	-1.08	0.514	0.34	0.124	0.929	0.036
12	BB.stfup Yes	-0.504	0.39	0.604	0.281	1.296	0.195
13	useBB Yes	-0.056	0.094	0.946	0.787	1.137	0.554
14	A10A.stfup Yes	0.237	0.391	1.267	0.589	2.725	0.545
15	useA10A Yes	0.489	0.145	1.631	1.229	2.166	<0.001
16	hosph.stfup Yes	-0.265	0.176	0.767	0.543	1.083	0.132
17	Switch YES	0.017	0.192	1.017	0.698	1.483	0.928
18	time2diag 1-2	0.31	0.347	1.364	0.691	2.689	0.371
19	time2diag 2-5	0.122	0.383	1.13	0.534	2.393	0.749
20	time2diag 5-10	0.41	0.444	1.507	0.631	3.594	0.356
21	time2diag 10-	1.306	0.828	3.693	0.728	18.727	0.115
22	calyear2 06	-0.15	0.229	0.861	0.55	1.348	0.512
23	calyear2 07	-0.368	0.24	0.692	0.432	1.108	0.125
24	calyear2 08	-0.475	0.233	0.622	0.394	0.981	0.041
25	calyear2 09	-0.723	0.437	0.485	0.206	1.142	0.098

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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	0.508	0.289	0.895	0.499	0.274	0.909	0.347	0.175	0.687	0.461	0.233	0.915	0.648	0.327	1.286
2	insulinNPH glargine	0.861	0.673	1.1	0.88	0.691	1.122	0.841	0.641	1.103	0.842	0.642	1.104	0.775	0.591	1.016
3	insulinNPH no DGN	0.645	0.52	0.8	NA	NA	NA	0.624	0.486	0.803	0.646	0.503	0.831	0.651	0.506	0.837
4	gender Female	0.773	0.601	0.995	0.774	0.603	0.994	0.736	0.545	0.993	0.77	0.57	1.04	0.814	0.603	1.099
5	agegroupT2 0-19	1.386	0.418	4.592	1.449	0.436	4.82	2.102	0.519	8.509	1.496	0.37	6.058	1.617	0.4	6.548
6	agegroupT2 30-39	1.024	0.262	4.005	1.077	0.275	4.218	1.422	0.318	6.357	1.035	0.232	4.625	0.562	0.126	2.511
7	agegroupT2 40-49	0.733	0.252	2.128	0.776	0.269	2.238	1.033	0.296	3.609	0.736	0.211	2.57	0.529	0.152	1.848
8	agegroupT2 50-59	0.407	0.151	1.094	0.432	0.161	1.157	0.486	0.15	1.576	0.394	0.122	1.279	0.288	0.089	0.933
9	agegroupT2 60-69	0.435	0.162	1.168	0.455	0.169	1.22	0.537	0.166	1.739	0.435	0.134	1.408	0.321	0.099	1.041
10	agegroupT2 70-79	0.414	0.156	1.098	0.43	0.163	1.136	0.436	0.137	1.394	0.413	0.129	1.32	0.296	0.093	0.945
11	agegroupT2 80+	0.34	0.124	0.929	0.344	0.126	0.937	0.395	0.118	1.324	0.337	0.101	1.129	0.228	0.068	0.762
12	BB.stfup Yes	0.604	0.281	1.296	0.602	0.28	1.294	0.624	0.274	1.418	0.624	0.275	1.419	0.813	0.357	1.847
13	useBB Yes	0.946	0.787	1.137	0.938	0.781	1.128	0.94	0.758	1.167	0.94	0.757	1.167	0.912	0.735	1.132
14	A10A.stfup Yes	1.267	0.589	2.725	1.249	0.58	2.688	1.333	0.551	3.225	1.312	0.542	3.173	1.449	0.599	3.504
15	useA10A Yes	1.631	1.229	2.166	1.611	1.213	2.14	1.914	1.406	2.605	1.635	1.201	2.225	1.6	1.175	2.177
16	hosph.stfup Yes	0.767	0.543	1.083	0.772	0.548	1.087	0.848	0.585	1.231	0.763	0.526	1.108	0.64	0.441	0.928
17	Switch YES	1.017	0.698	1.483	1.093	0.725	1.649	0.973	0.639	1.481	0.949	0.623	1.445	NA	NA	NA
18	time2diag 1-2	1.364	0.691	2.689	1.363	0.694	2.678	1.202	0.579	2.496	1.333	0.642	2.768	1.056	0.509	2.192
19	time2diag 2-5	1.13	0.534	2.393	1.16	0.547	2.463	0.996	0.447	2.216	1.133	0.509	2.521	0.945	0.424	2.102
20	time2diag 5-10	1.507	0.631	3.594	1.536	0.642	3.675	1.408	0.544	3.648	1.5	0.579	3.887	1.232	0.475	3.191
21	time2diag 10-	3.693	0.728	18.727	3.782	0.746	19.18	4.097	0.769	21.814	3.698	0.695	19.69	2.13	0.4	11.343
22	calyear2 06	0.861	0.55	1.348	0.85	0.545	1.327	0.854	0.516	1.413	0.882	0.533	1.46	0.949	0.574	1.571
23	calyear2 07	0.692	0.432	1.108	0.707	0.45	1.11	0.609	0.353	1.053	0.723	0.418	1.25	0.846	0.489	1.462
24	calyear2 08	0.622	0.394	0.981	0.647	0.416	1.008	0.53	0.309	0.909	0.621	0.362	1.066	0.629	0.366	1.079
25	calyear2 09	0.485	0.206	1.142	0.489	0.21	1.142	0.396	0.159	0.987	0.51	0.205	1.272	0.464	0.186	1.157

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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, hosp.h.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	0.508	0.289	0.895	0.517	0.297	0.9	0.603	0.34	1.069	0.671	0.379	1.189	0.737	0.416	1.306
2	insulinNPH glargine	0.861	0.673	1.1	0.822	0.632	1.07	0.8	0.611	1.047	0.805	0.615	1.053	0.796	0.608	1.042
3	insulinNPH no DGN	0.645	0.52	0.8	0.483	0.384	0.608	0.476	0.379	0.599	0.47	0.373	0.59	0.466	0.37	0.585
4	gender Female	0.773	0.601	0.995	0.753	0.602	0.942	0.748	0.598	0.935	0.737	0.59	0.922	0.763	0.61	0.954
5	agegroupT2 0-19	1.386	0.418	4.592	4.046	1.177	13.908	4.279	1.278	14.321	4.438	1.326	14.854	4.221	1.261	14.128
6	agegroupT2 30-39	1.024	0.262	4.005	3.351	0.925	12.146	3.465	0.941	12.764	3.302	0.896	12.165	3.272	0.888	12.053
7	agegroupT2 40-49	0.733	0.252	2.128	1.927	0.702	5.286	1.98	0.723	5.422	1.785	0.652	4.887	1.799	0.657	4.925
8	agegroupT2 50-59	0.407	0.151	1.094	1.255	0.468	3.366	1.321	0.496	3.519	1.341	0.503	3.573	1.373	0.515	3.658
9	agegroupT2 60-69	0.435	0.162	1.168	1.495	0.545	4.1	1.546	0.568	4.209	1.547	0.568	4.213	1.678	0.616	4.569
10	agegroupT2 70-79	0.414	0.156	1.098	1.412	0.524	3.804	1.462	0.547	3.911	1.386	0.518	3.707	1.437	0.537	3.845
11	agegroupT2 80+	0.34	0.124	0.929	1.098	0.395	3.054	1.127	0.408	3.116	1.075	0.389	2.973	1.12	0.405	3.095
12	BB.stfup Yes	0.604	0.281	1.296	0.597	0.271	1.311	0.619	0.286	1.341	0.699	0.323	1.515	0.683	0.315	1.479
13	useBB Yes	0.946	0.787	1.137	0.958	0.786	1.167	1	0.804	1.244	1.007	0.81	1.253	1.015	0.816	1.263
14	A10A.stfup Yes	1.267	0.589	2.725	1.656	0.785	3.491	1.548	0.73	3.285	1.575	0.742	3.341	1.542	0.727	3.271
15	useA10A Yes	1.631	1.229	2.166	1.527	1.175	1.984	1.494	1.142	1.955	1.41	1.077	1.844	1.429	1.092	1.87
16	hosp.h.stfup Yes	0.767	0.543	1.083	0.849	0.602	1.198	0.851	0.602	1.204	0.851	0.601	1.203	0.907	0.641	1.283
17	Switch YES	1.017	0.698	1.483	1.207	0.807	1.806	1.257	0.835	1.891	1.289	0.856	1.94	1.29	0.857	1.941
18	time2diag 1-2	1.364	0.691	2.689	1.44	0.704	2.945	1.484	0.724	3.042	1.565	0.763	3.207	1.534	0.749	3.145
19	time2diag 2-5	1.13	0.534	2.393	1.092	0.505	2.362	1.109	0.514	2.393	1.079	0.5	2.328	1.059	0.491	2.285
20	time2diag 5-10	1.507	0.631	3.594	1.315	0.57	3.035	1.262	0.548	2.905	1.153	0.501	2.653	1.135	0.493	2.613
21	time2diag 10-	3.693	0.728	18.727	3.693	0.75	18.187	3.418	0.685	17.058	3.253	0.652	16.233	3.222	0.646	16.08
22	calyear2 06	0.861	0.55	1.348	0.77	0.482	1.23	0.804	0.497	1.302	0.8	0.494	1.295	0.787	0.486	1.274
23	calyear2 07	0.692	0.432	1.108	0.64	0.376	1.089	0.63	0.37	1.072	0.633	0.372	1.077	0.625	0.367	1.064
24	calyear2 08	0.622	0.394	0.981	0.63	0.387	1.025	0.651	0.408	1.038	0.667	0.418	1.063	0.664	0.416	1.058
25	calyear2 09	0.485	0.206	1.142	0.552	0.24	1.267	0.451	0.208	0.977	0.461	0.213	0.999	0.452	0.209	0.978

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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	-0.597	0.279	0.55	0.318	0.951	0.032
2	insulinNPH glargine	-0.148	0.127	0.862	0.672	1.106	0.244
3	insulinNPH no DGN	-0.436	0.108	0.647	0.524	0.799	<0.001
4	gender Female	-0.193	0.128	0.825	0.642	1.06	0.133
5	agegroupT2 0-19	0.731	0.898	2.078	0.357	12.074	0.415
6	agegroupT2 30-39	0.185	0.729	1.203	0.288	5.026	0.8
7	agegroupT2 40-49	-0.192	0.552	0.826	0.28	2.435	0.728
8	agegroupT2 50-59	-0.889	0.527	0.411	0.146	1.155	0.092
9	agegroupT2 60-69	-0.937	0.536	0.392	0.137	1.121	0.081
10	agegroupT2 70-79	-1.021	0.584	0.36	0.115	1.132	0.08
11	agegroupT2 80+	-1.298	0.598	0.273	0.085	0.882	0.03
12	BB.stfup Yes	-0.433	0.365	0.648	0.317	1.325	0.235
13	useBB Yes	-0.041	0.096	0.96	0.795	1.16	0.672
14	A10A.stfup Yes	0.373	0.603	1.452	0.445	4.734	0.536
15	useA10A Yes	0.48	0.142	1.616	1.224	2.133	<0.001
16	hosph.stfup Yes	-0.43	0.257	0.65	0.393	1.075	0.093
17	Switch YES	0.013	0.185	1.014	0.705	1.457	0.942
18	calyear2 06	0.172	0.421	1.188	0.52	2.714	0.682
19	calyear2 07	0.764	1.645	2.148	0.085	53.953	0.642
20	calyear2 08	1.398	2.098	4.049	0.066	247.194	0.505
21	calyear2 09	1.214	1.916	3.368	0.079	144.043	0.526
22	time2diag 1-2	0.412	0.388	1.51	0.705	3.232	0.289
23	time2diag 2-5	0.268	0.463	1.307	0.527	3.241	0.563
24	time2diag 5-10	0.568	0.489	1.765	0.677	4.604	0.245
25	time2diag 10-	1.735	0.977	5.667	0.835	38.481	0.076
26	Pdet	-5.519	3.153	0.004	0	1.935	0.08
27	Pgla	-2.069	4.781	0.126	0	1484.124	0.665

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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	P-value
1	insulin detemir	0.178	0.265	1.194	0.71	2.008	0.503
2	insulin NPH	0.152	0.202	1.164	0.783	1.731	0.453
3	insulin no DGN	-0.268	0.265	0.765	0.455	1.285	0.311
4	gender Female	0.137	0.174	1.146	0.815	1.613	0.433
5	agegroupT2 30-39	-2.941	1.093	0.053	0.006	0.45	0.007
6	agegroupT2 40-49	-1.101	0.605	0.333	0.102	1.09	0.069
7	agegroupT2 50-59	-1.584	0.642	0.205	0.058	0.723	0.014
8	agegroupT2 60-69	-1.494	0.648	0.225	0.063	0.8	0.021
9	agegroupT2 70-79	-1.727	0.654	0.178	0.049	0.64	0.008
10	agegroupT2 80+	-2.284	0.695	0.102	0.026	0.398	0.001
11	BB.stfup Yes	0.441	0.284	1.554	0.891	2.711	0.12
12	useBB Yes	-0.211	0.224	0.81	0.522	1.257	0.347
13	A10A.stfup Yes	-0.103	0.318	0.902	0.484	1.682	0.745
14	useA10A Yes	0.498	0.214	1.645	1.082	2.501	0.02
15	hosph.stfup Yes	-0.394	0.205	0.675	0.451	1.009	0.055
16	Switch YES	-0.311	0.292	0.733	0.414	1.298	0.287
17	time2diag 1-2	0.128	0.414	1.136	0.504	2.56	0.758
18	time2diag 2-5	-0.345	0.324	0.708	0.375	1.336	0.287
19	time2diag 5-10	-0.482	0.349	0.618	0.312	1.224	0.167
20	time2diag 10-	-0.47	0.361	0.625	0.308	1.27	0.194
21	calyear3 07	-0.23	0.236	0.794	0.5	1.261	0.329
22	calyear3 08	-0.591	0.242	0.554	0.345	0.89	0.015
23	calyear3 09	-0.969	0.475	0.379	0.15	0.962	0.041

Naive T2 cohort. Data 28th December 2011

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	0.026	0.277	1.026	0.596	1.767	0.926
2	insulinNPH glargine	-0.152	0.202	0.859	0.578	1.277	0.453
3	insulinNPH no DGN	-0.42	0.25	0.657	0.402	1.074	0.094
4	gender Female	0.137	0.174	1.146	0.815	1.613	0.433
5	agegroupT2 30-39	-2.941	1.093	0.053	0.006	0.45	0.007
6	agegroupT2 40-49	-1.101	0.605	0.333	0.102	1.09	0.069
7	agegroupT2 50-59	-1.584	0.642	0.205	0.058	0.723	0.014
8	agegroupT2 60-69	-1.494	0.648	0.225	0.063	0.8	0.021
9	agegroupT2 70-79	-1.727	0.654	0.178	0.049	0.64	0.008
10	agegroupT2 80+	-2.284	0.695	0.102	0.026	0.398	0.001
11	BB.stfup Yes	0.441	0.284	1.554	0.891	2.711	0.12
12	useBB Yes	-0.211	0.224	0.81	0.522	1.257	0.347
13	A10A.stfup Yes	-0.103	0.318	0.902	0.484	1.682	0.745
14	useA10A Yes	0.498	0.214	1.645	1.082	2.501	0.02
15	hosph.stfup Yes	-0.394	0.205	0.675	0.451	1.009	0.055
16	Switch YES	-0.311	0.292	0.733	0.414	1.298	0.287
17	time2diag 1-2	0.128	0.414	1.136	0.504	2.56	0.758
18	time2diag 2-5	-0.345	0.324	0.708	0.375	1.336	0.287
19	time2diag 5-10	-0.482	0.349	0.618	0.312	1.224	0.167
20	time2diag 10-	-0.47	0.361	0.625	0.308	1.27	0.194
21	calyear3 07	-0.23	0.236	0.794	0.5	1.261	0.329
22	calyear3 08	-0.591	0.242	0.554	0.345	0.89	0.015
23	calyear3 09	-0.969	0.475	0.379	0.15	0.962	0.041

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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. Gargine insulin as reference

S.No.	Variables	parameter est	std	Hazard ratio	lower	upper	P-value
1	insulin detemir	-0.309	0.121	0.734	0.579	0.931	0.011
2	insulin NPH	0.158	0.08	1.171	1.001	1.37	0.049
3	insulin no DGN	-0.029	0.079	0.972	0.833	1.134	0.716
4	gender Female	-0.146	0.064	0.864	0.763	0.979	0.021
5	agegroupT2 0-19	0.069	0.5	1.072	0.402	2.855	0.89
6	agegroupT2 30-39	0.111	0.597	1.118	0.347	3.602	0.852
7	agegroupT2 40-49	0.064	0.384	1.066	0.502	2.262	0.868
8	agegroupT2 50-59	-0.298	0.372	0.742	0.358	1.538	0.423
9	agegroupT2 60-69	-0.119	0.376	0.888	0.425	1.855	0.752
10	agegroupT2 70-79	-0.007	0.372	0.993	0.48	2.058	0.986
11	agegroupT2 80+	0.048	0.374	1.049	0.504	2.183	0.897
12	BB.stfup Yes	-0.172	0.267	0.842	0.499	1.419	0.518
13	useBB Yes	-0.015	0.051	0.985	0.891	1.089	0.766
14	A10A.stfup Yes	0.117	0.232	1.124	0.713	1.771	0.615
15	useA10A Yes	0.598	0.098	1.818	1.501	2.202	<0.001
16	hosph.stfup Yes	1.453	0.104	4.276	3.486	5.244	<0.001
17	Switch YES	0.188	0.125	1.206	0.945	1.541	0.133
18	time2diag 1-2	0.176	0.215	1.193	0.783	1.818	0.412
19	time2diag 2-5	-0.003	0.249	0.997	0.613	1.624	0.991
20	time2diag 5-10	0.145	0.288	1.156	0.658	2.033	0.614
21	time2diag 10-	0.637	0.665	1.891	0.514	6.957	0.338
22	calyear2 06	-0.339	0.149	0.713	0.532	0.954	0.023
23	calyear2 07	-0.478	0.169	0.62	0.445	0.864	0.005
24	calyear2 08	-0.546	0.158	0.579	0.425	0.79	<0.001
25	calyear2 09	-0.901	0.201	0.406	0.274	0.602	<0.001

Naive T2 cohort. Data 28th December 2011

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	-0.467	0.144	0.627	0.473	0.831	0.001
2	insulinNPH glargine	-0.158	0.08	0.854	0.73	0.999	0.049
3	insulinNPH no DGN	-0.186	0.066	0.83	0.73	0.944	0.004
4	gender Female	-0.146	0.064	0.864	0.763	0.979	0.021
5	agegroupT2 0-19	0.069	0.5	1.072	0.402	2.855	0.89
6	agegroupT2 30-39	0.111	0.597	1.118	0.347	3.602	0.852
7	agegroupT2 40-49	0.064	0.384	1.066	0.502	2.262	0.868
8	agegroupT2 50-59	-0.298	0.372	0.742	0.358	1.538	0.423
9	agegroupT2 60-69	-0.119	0.376	0.888	0.425	1.855	0.752
10	agegroupT2 70-79	-0.007	0.372	0.993	0.48	2.058	0.986
11	agegroupT2 80+	0.048	0.374	1.049	0.504	2.183	0.897
12	BB.stfup Yes	-0.172	0.267	0.842	0.499	1.419	0.518
13	useBB Yes	-0.015	0.051	0.985	0.891	1.089	0.766
14	A10A.stfup Yes	0.117	0.232	1.124	0.713	1.771	0.615
15	useA10A Yes	0.598	0.098	1.818	1.501	2.202	<0.001
16	hosph.stfup Yes	1.453	0.104	4.276	3.486	5.244	<0.001
17	Switch YES	0.188	0.125	1.206	0.945	1.541	0.133
18	time2diag 1-2	0.176	0.215	1.193	0.783	1.818	0.412
19	time2diag 2-5	-0.003	0.249	0.997	0.613	1.624	0.991
20	time2diag 5-10	0.145	0.288	1.156	0.658	2.033	0.614
21	time2diag 10-	0.637	0.665	1.891	0.514	6.957	0.338
22	calyear2 06	-0.339	0.149	0.713	0.532	0.954	0.023
23	calyear2 07	-0.478	0.169	0.62	0.445	0.864	0.005
24	calyear2 08	-0.546	0.158	0.579	0.425	0.79	<0.001
25	calyear2 09	-0.901	0.201	0.406	0.274	0.602	<0.001

Naive T2 cohort. Data 28th December 2011

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
1	glargine	glargine	580	57.41	15.00	7.76	8.10	11.72
2	glargine	detemir	3	66.67	0.00	33.33	0.00	0.00
3	glargine	NPH	27	81.48	11.11	7.41	0.00	0.00
4	glargine	no DGN	67	59.70	13.43	11.94	4.48	10.45
5	detemir	glargine	1	100.00	0.00	0.00	0.00	0.00
6	detemir	detemir	109	45.87	17.43	17.43	6.42	12.84
7	detemir	NPH	4	100.00	0.00	0.00	0.00	0.00
8	detemir	no DGN	5	60.00	20.00	0.00	0.00	20.00
9	NPH	glargine	548	65.88	10.77	8.03	5.11	10.22
10	NPH	detemir	105	64.76	14.29	8.57	4.76	7.62
11	NPH	NPH	3283	60.77	12.31	8.99	6.46	11.48
12	NPH	no DGN	745	52.35	13.96	9.53	8.19	15.97
13	Total	glargine	1129	61.56	12.93	7.88	6.64	10.98
14	Total	detemir	217	55.30	15.67	13.36	5.53	10.14
15	Total	NPH	3314	60.98	12.28	8.96	6.40	11.38
16	Total	no DGN	817	53.00	13.95	9.67	7.83	15.54

Naive T2 cohort. Data 28th December 2011

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		N	Min	25%	Median	Mean	75%
1	glargine	glargine	580	1	1	1	3.650	4.0	110
2	glargine	detemir	3	1	1	1	2.000	2.5	4
3	glargine	NPH	27	1	1	1	1.444	1.0	5
4	glargine	no DGN	67	1	1	1	4.896	4.0	102
5	detemir	glargine	1	1	1	1	1.000	1.0	1
6	detemir	detemir	109	1	1	2	4.119	5.0	38
7	detemir	NPH	4	1	1	1	1.000	1.0	1
8	detemir	no DGN	5	1	1	1	2.800	2.0	9
9	NPH	glargine	548	1	1	1	3.199	3.0	56
10	NPH	detemir	105	1	1	1	3.067	3.0	51
11	NPH	NPH	3283	1	1	1	3.631	4.0	486
12	NPH	no DGN	745	1	1	1	4.620	5.0	176
13	Total	glargine	1129	1	1	1	3.429	4.0	110
14	Total	detemir	217	1	1	1	3.581	4.0	51
15	Total	NPH	3314	1	1	1	3.610	4.0	486
16	Total	no DGN	817	1	1	1	4.632	5.0	176

Naive T2 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	1129	61.56	12.93	7.88	6.64	10.98
2	T1	detemir	217	55.30	15.67	13.36	5.53	10.14
3	T1	NPH	3314	60.98	12.28	8.96	6.40	11.38
4	T1	no DGN	817	53.00	13.95	9.67	7.83	15.54
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	1129	61.56	12.93	7.88	6.64	10.98
14	Total	detemir	217	55.30	15.67	13.36	5.53	10.14
15	Total	NPH	3314	60.98	12.28	8.96	6.40	11.38
16	Total	no DGN	817	53.00	13.95	9.67	7.83	15.54

Naive T2 cohort. Data 28th December 2011

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	1129	1	1	1	3.429	4	110
2	T1	detemir	217	1	1	1	3.581	4	51
3	T1	NPH	3314	1	1	1	3.610	4	486
4	T1	no DGN	817	1	1	1	4.632	5	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	1129	1	1	1	3.429	4	110
14	Total	detemir	217	1	1	1	3.581	4	51
15	Total	NPH	3314	1	1	1	3.610	4	486
16	Total	no DGN	817	1	1	1	4.632	5	176

Naive T2 cohort. Data 28th December 2011

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		0-1	2-3	4-5	6-7	7-
1	Male	glargine	722	65.65	10.94	7.34	5.40	10.66
2	Male	detemir	108	52.78	18.52	12.96	6.48	9.26
3	Male	NPH	1978	63.75	12.69	8.29	5.21	10.06
4	Male	no DGN	420	52.62	13.10	10.24	9.05	15.00
5	Female	glargine	407	54.30	16.46	8.85	8.85	11.55
6	Female	detemir	109	57.80	12.84	13.76	4.59	11.01
7	Female	NPH	1336	56.89	11.68	9.96	8.16	13.32
8	Female	no DGN	397	53.40	14.86	9.07	6.55	16.12
9	Total	glargine	1129	61.56	12.93	7.88	6.64	10.98
10	Total	detemir	217	55.30	15.67	13.36	5.53	10.14
11	Total	NPH	3314	60.98	12.28	8.96	6.40	11.38
12	Total	no DGN	817	53.00	13.95	9.67	7.83	15.54

Naive T2 cohort. Data 28th December 2011

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	722	1	1	1	3.266	3	110
2	Male	detemir	108	1	1	1	3.648	4	38
3	Male	NPH	1978	1	1	1	3.371	3	486
4	Male	no DGN	420	1	1	1	4.831	5	176
5	Female	glargine	407	1	1	1	3.717	4	79
6	Female	detemir	109	1	1	1	3.514	4	51
7	Female	NPH	1336	1	1	1	3.965	5	134
8	Female	no DGN	397	1	1	1	4.421	5	102
9	Total	glargine	1129	1	1	1	3.429	4	110
10	Total	detemir	217	1	1	1	3.581	4	51
11	Total	NPH	3314	1	1	1	3.610	4	486
12	Total	no DGN	817	1	1	1	4.632	5	176

Naive T2 cohort. Data 28th December 2011

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	0	NaN	NaN	NaN	NaN	NaN
2	0-9	detemir	0	NaN	NaN	NaN	NaN	NaN
3	0-9	NPH	1	100.00	0.00	0.00	0.00	0.00
4	0-9	no DGN	1	100.00	0.00	0.00	0.00	0.00
5	10-19	glargine	18	94.44	5.56	0.00	0.00	0.00
6	10-19	detemir	1	100.00	0.00	0.00	0.00	0.00
7	10-19	NPH	15	93.33	6.67	0.00	0.00	0.00
8	10-19	no DGN	7	85.71	14.29	0.00	0.00	0.00
9	20-29	glargine	5	60.00	20.00	20.00	0.00	0.00
10	20-29	detemir	6	100.00	0.00	0.00	0.00	0.00
11	20-29	NPH	32	90.62	6.25	0.00	0.00	3.12
12	20-29	no DGN	21	76.19	9.52	9.52	0.00	4.76
13	30-39	glargine	110	93.64	1.82	0.91	1.82	1.82
14	30-39	detemir	10	80.00	10.00	0.00	10.00	0.00
15	30-39	NPH	143	81.82	6.99	3.50	2.10	5.59
16	30-39	no DGN	32	81.25	6.25	3.12	0.00	9.38
17	40-49	glargine	150	71.33	9.33	4.67	2.67	12.00
18	40-49	detemir	33	75.76	3.03	6.06	9.09	6.06
19	40-49	NPH	453	80.13	6.40	4.19	4.19	5.08
20	40-49	no DGN	103	60.19	8.74	10.68	8.74	11.65
21	50-59	glargine	279	66.67	13.26	8.96	3.58	7.53
22	50-59	detemir	60	60.00	20.00	11.67	1.67	6.67
23	50-59	NPH	726	62.81	13.77	8.82	4.96	9.64
24	50-59	no DGN	210	56.19	12.86	8.10	7.62	15.24
25	60-69	glargine	261	56.32	10.73	8.43	11.88	12.64
26	60-69	detemir	47	57.45	10.64	12.77	4.26	14.89
27	60-69	NPH	934	62.63	12.21	7.82	6.53	10.81
28	60-69	no DGN	194	51.55	14.95	11.34	7.73	14.43
29	70-79	glargine	201	45.77	19.90	8.46	8.96	16.92
30	70-79	detemir	43	34.88	27.91	16.28	6.98	13.95
31	70-79	NPH	731	45.83	15.87	13.13	8.89	16.28
32	70-79	no DGN	171	45.03	15.79	9.94	9.36	19.88
33	80+	glargine	105	38.10	21.90	15.24	9.52	15.24
34	80+	detemir	17	11.76	17.65	41.18	11.76	17.65
35	80+	NPH	279	43.37	12.54	14.34	10.04	19.71
36	80+	no DGN	78	34.62	21.79	11.54	10.26	21.79
37	Total	glargine	1129	61.56	12.93	7.88	6.64	10.98
38	Total	detemir	217	55.30	15.67	13.36	5.53	10.14
39	Total	NPH	3314	60.98	12.28	8.96	6.40	11.38
40	Total	no DGN	817	53.00	13.95	9.67	7.83	15.54

Naive T2 cohort. Data 28th December 2011

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	0	NA	NA	NA	NaN	NA	NA
2	0-9	detemir	0	NA	NA	NA	NaN	NA	NA
3	0-9	NPH	1	1	1	1	1.000	1.00	1
4	0-9	no DGN	1	1	1	1	1.000	1.00	1
5	10-19	glargine	18	1	1	1	1.056	1.00	2
6	10-19	detemir	1	1	1	1	1.000	1.00	1
7	10-19	NPH	15	1	1	1	1.067	1.00	2
8	10-19	no DGN	7	1	1	1	1.143	1.00	2
9	20-29	glargine	5	1	1	1	1.800	2.00	4
10	20-29	detemir	6	1	1	1	1.000	1.00	1
11	20-29	NPH	32	1	1	1	1.344	1.00	9
12	20-29	no DGN	21	1	1	1	2.476	1.00	21
13	30-39	glargine	110	1	1	1	1.755	1.00	52
14	30-39	detemir	10	1	1	1	1.800	1.00	7
15	30-39	NPH	143	1	1	1	2.259	1.00	37
16	30-39	no DGN	32	1	1	1	5.531	1.00	102
17	40-49	glargine	150	1	1	1	3.240	2.00	56
18	40-49	detemir	33	1	1	1	3.182	1.00	38
19	40-49	NPH	453	1	1	1	2.146	1.00	32
20	40-49	no DGN	103	1	1	1	3.806	4.00	50
21	50-59	glargine	279	1	1	1	2.602	3.00	49
22	50-59	detemir	60	1	1	1	2.400	2.00	17
23	50-59	NPH	726	1	1	1	3.811	3.00	486
24	50-59	no DGN	210	1	1	1	5.110	5.00	176
25	60-69	glargine	261	1	1	1	4.364	5.00	99
26	60-69	detemir	47	1	1	1	4.149	4.50	35
27	60-69	NPH	934	1	1	1	3.588	4.00	113
28	60-69	no DGN	194	1	1	1	4.438	5.00	86
29	70-79	glargine	201	1	1	2	4.478	6.00	110
30	70-79	detemir	43	1	1	2	4.186	4.50	31
31	70-79	NPH	731	1	1	2	4.286	6.00	95
32	70-79	no DGN	171	1	1	2	4.965	6.00	55
33	80+	glargine	105	1	1	3	3.800	5.00	15
34	80+	detemir	17	1	2	4	7.529	6.00	51
35	80+	NPH	279	1	1	3	4.867	6.00	67
36	80+	no DGN	78	1	1	2	4.756	6.75	29
37	Total	glargine	1129	1	1	1	3.429	4.00	110
38	Total	detemir	217	1	1	1	3.581	4.00	51
39	Total	NPH	3314	1	1	1	3.610	4.00	486
40	Total	no DGN	817	1	1	1	4.632	5.00	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)	Days (%)				
	Calender year	Insulin		N	0-1	2-3	4-5	6-7
1	00-05	glargine	716	64.53	11.31	7.54	6.15	10.47
2	00-05	detemir	72	68.06	15.28	5.56	4.17	6.94
3	00-05	NPH	2874	60.75	12.35	9.05	5.95	11.90
4	00-05	no DGN	698	51.86	14.18	10.46	7.88	15.62
5	06	glargine	75	58.67	10.67	13.33	5.33	12.00
6	06	detemir	24	66.67	8.33	16.67	4.17	4.17
7	06	NPH	251	62.95	10.76	9.96	9.96	6.37
8	06	no DGN	62	61.29	6.45	6.45	6.45	19.35
9	07	glargine	174	58.05	17.24	6.90	8.05	9.77
10	07	detemir	42	35.71	26.19	14.29	9.52	14.29
11	07	NPH	117	64.96	12.82	8.55	5.98	7.69
12	07	no DGN	46	60.87	19.57	2.17	6.52	10.87
13	08	glargine	131	54.20	18.32	8.40	6.11	12.98
14	08	detemir	57	52.63	14.04	15.79	5.26	12.28
15	08	NPH	56	53.57	17.86	1.79	12.50	14.29
16	08	no DGN	8	62.50	12.50	0.00	25.00	0.00
17	09	glargine	33	51.52	9.09	6.06	15.15	18.18
18	09	detemir	22	45.45	9.09	27.27	4.55	13.64
19	09	NPH	16	68.75	0.00	6.25	12.50	12.50
20	09	no DGN	3	0.00	33.33	33.33	0.00	33.33
21	Total	glargine	1129	61.56	12.93	7.88	6.64	10.98
22	Total	detemir	217	55.30	15.67	13.36	5.53	10.14
23	Total	NPH	3314	60.98	12.28	8.96	6.40	11.38
24	Total	no DGN	817	53.00	13.95	9.67	7.83	15.54

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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	716	1	1.0	1.0	3.102	3.00	56
2	00-05	detemir	72	1	1.0	1.0	3.097	2.00	51
3	00-05	NPH	2874	1	1.0	1.0	3.709	4.00	486
4	00-05	no DGN	698	1	1.0	1.0	4.650	5.00	176
5	06	glargine	75	1	1.0	1.0	5.080	4.00	99
6	06	detemir	24	1	1.0	1.0	2.208	3.25	9
7	06	NPH	251	1	1.0	1.0	2.873	4.00	35
8	06	no DGN	62	1	1.0	1.0	5.484	5.75	102
9	07	glargine	174	1	1.0	1.0	3.305	3.00	79
10	07	detemir	42	1	1.0	2.0	4.333	5.00	35
11	07	NPH	117	1	1.0	1.0	2.641	3.00	19
12	07	no DGN	46	1	1.0	1.0	3.565	2.00	40
13	08	glargine	131	1	1.0	1.0	4.351	4.00	110
14	08	detemir	57	1	1.0	1.0	4.088	4.00	38
15	08	NPH	56	1	1.0	1.0	3.625	6.00	25
16	08	no DGN	8	1	1.0	1.0	2.375	3.00	6
17	09	glargine	33	1	1.0	1.0	3.758	7.00	13
18	09	detemir	22	1	1.0	2.5	3.909	5.00	16
19	09	NPH	16	1	1.0	1.0	4.500	5.25	29
20	09	no DGN	3	3	3.5	4.0	5.000	6.00	8
21	Total	glargine	1129	1	1.0	1.0	3.429	4.00	110
22	Total	detemir	217	1	1.0	1.0	3.581	4.00	51
23	Total	NPH	3314	1	1.0	1.0	3.610	4.00	486
24	Total	no DGN	817	1	1.0	1.0	4.632	5.00	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-
			N	0-1	2-3	4-5	6-7	
1	-1	glargine	254	70.87	12.60	4.72	3.15	8.66
2	-1	detemir	49	77.55	8.16	10.20	2.04	2.04
3	-1	NPH	1015	69.56	9.46	5.91	5.71	9.36
4	-1	no DGN	272	57.72	12.50	9.93	6.62	13.24
5	1-2	glargine	112	68.75	11.61	0.89	4.46	14.29
6	1-2	detemir	17	64.71	11.76	5.88	5.88	11.76
7	1-2	NPH	312	53.85	16.35	9.94	7.69	12.18
8	1-2	no DGN	80	45.00	16.25	10.00	12.50	16.25
9	2-5	glargine	292	56.16	13.70	8.22	9.59	12.33
10	2-5	detemir	60	43.33	18.33	18.33	6.67	13.33
11	2-5	NPH	858	55.13	14.80	10.72	6.41	12.94
12	2-5	no DGN	188	44.15	17.02	9.04	11.17	18.62
13	5-10	glargine	322	50.31	13.98	13.98	9.01	12.73
14	5-10	detemir	60	63.33	11.67	6.67	5.00	13.33
15	5-10	NPH	974	57.91	12.22	11.09	6.88	11.91
16	5-10	no DGN	241	54.77	13.28	9.13	6.22	16.60
17	10-	glargine	149	75.17	10.74	4.70	3.36	6.04
18	10-	detemir	31	22.58	32.26	25.81	9.68	9.68
19	10-	NPH	155	70.97	9.03	3.87	5.16	10.97
20	10-	no DGN	36	69.44	8.33	13.89	0.00	8.33
21	Total	glargine	1129	61.56	12.93	7.88	6.64	10.98
22	Total	detemir	217	55.30	15.67	13.36	5.53	10.14
23	Total	NPH	3314	60.98	12.28	8.96	6.40	11.38
24	Total	no DGN	817	53.00	13.95	9.67	7.83	15.54

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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	254	1	1	1	2.980	2.00	56
2	-1	detemir	49	1	1	1	2.143	1.00	29
3	-1	NPH	1015	1	1	1	3.559	3.00	486
4	-1	no DGN	272	1	1	1	4.397	4.00	176
5	1-2	glargine	112	1	1	1	3.911	2.00	110
6	1-2	detemir	17	1	1	1	5.882	2.00	38
7	1-2	NPH	312	1	1	1	3.596	5.00	42
8	1-2	no DGN	80	1	1	2	4.300	6.00	29
9	2-5	glargine	292	1	1	1	3.432	4.25	51
10	2-5	detemir	60	1	1	2	4.267	5.00	51
11	2-5	NPH	858	1	1	1	3.619	4.00	95
12	2-5	no DGN	188	1	1	2	4.840	6.25	55
13	5-10	glargine	322	1	1	1	3.941	5.00	99
14	5-10	detemir	60	1	1	1	3.267	3.25	31
15	5-10	NPH	974	1	1	1	3.772	4.00	134
16	5-10	no DGN	241	1	1	1	5.087	5.00	102
17	10-	glargine	149	1	1	1	2.718	1.00	79
18	10-	detemir	31	1	2	2	3.871	5.00	16
19	10-	NPH	155	1	1	1	2.910	2.00	21
20	10-	no DGN	36	1	1	1	3.000	2.25	30
21	Total	glargine	1129	1	1	1	3.429	4.00	110
22	Total	detemir	217	1	1	1	3.581	4.00	51
23	Total	NPH	3314	1	1	1	3.610	4.00	486
24	Total	no DGN	817	1	1	1	4.632	5.00	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		0-1	2-3	4-5	6-7	7-
1	Unknown	glargine	152	59.21	13.16	9.21	5.26	13.16
2	Unknown	detemir	27	66.67	18.52	7.41	0.00	7.41
3	Unknown	NPH	1005	55.72	13.03	9.85	6.37	15.02
4	Unknown	no DGN	270	46.30	17.78	11.11	9.26	15.56
5	HUS	glargine	358	65.64	12.29	6.42	5.59	10.06
6	HUS	detemir	54	51.85	18.52	12.96	9.26	7.41
7	HUS	NPH	601	62.56	10.32	8.15	7.15	11.81
8	HUS	no DGN	163	57.06	14.72	12.88	5.52	9.82
9	Varsinais-Suomi	glargine	90	76.67	8.89	7.78	2.22	4.44
10	Varsinais-Suomi	detemir	21	80.95	9.52	4.76	4.76	0.00
11	Varsinais-Suomi	NPH	198	71.72	10.61	7.58	1.52	8.59
12	Varsinais-Suomi	no DGN	52	59.62	11.54	7.69	1.92	19.23
13	Satakunta	glargine	18	66.67	22.22	0.00	0.00	11.11
14	Satakunta	detemir	15	73.33	13.33	6.67	6.67	0.00
15	Satakunta	NPH	98	61.22	16.33	9.18	9.18	4.08
16	Satakunta	no DGN	17	47.06	11.76	0.00	11.76	29.41
17	Kantahame	glargine	50	60.00	6.00	6.00	18.00	10.00
18	Kantahame	detemir	3	66.67	0.00	0.00	0.00	33.33
19	Kantahame	NPH	141	75.89	6.38	5.67	5.67	6.38
20	Kantahame	no DGN	31	64.52	6.45	9.68	6.45	12.90
21	Pirkanmaa	glargine	40	50.00	10.00	12.50	10.00	17.50
22	Pirkanmaa	detemir	7	85.71	0.00	0.00	14.29	0.00
23	Pirkanmaa	NPH	42	59.52	14.29	4.76	7.14	14.29
24	Pirkanmaa	no DGN	12	33.33	8.33	16.67	16.67	25.00
25	Paijat-Hame	glargine	32	81.25	9.38	0.00	0.00	9.38
26	Paijat-Hame	detemir	7	42.86	0.00	28.57	14.29	14.29
27	Paijat-Hame	NPH	301	84.05	4.65	3.99	2.33	4.98
28	Paijat-Hame	no DGN	40	77.50	7.50	2.50	5.00	7.50
29	Kymenlaakso	glargine	25	56.00	20.00	12.00	4.00	8.00
30	Kymenlaakso	detemir	4	50.00	0.00	0.00	0.00	50.00
31	Kymenlaakso	NPH	83	48.19	19.28	10.84	7.23	14.46
32	Kymenlaakso	no DGN	29	44.83	27.59	6.90	10.34	10.34
33	Etela-Karjala	glargine	26	42.31	11.54	23.08	11.54	11.54
34	Etela-Karjala	detemir	5	40.00	0.00	20.00	0.00	40.00
35	Etela-Karjala	NPH	39	30.77	28.21	5.13	17.95	17.95
36	Etela-Karjala	no DGN	13	46.15	15.38	15.38	0.00	23.08
37	Etela-Savo	glargine	7	42.86	28.57	14.29	0.00	14.29
38	Etela-Savo	detemir	2	50.00	50.00	0.00	0.00	0.00
39	Etela-Savo	NPH	41	34.15	31.71	21.95	4.88	7.32
40	Etela-Savo	no DGN	14	85.71	0.00	7.14	7.14	0.00
41	Ita-Savo	glargine	11	72.73	9.09	9.09	0.00	9.09
42	Ita-Savo	detemir	0	NaN	NaN	NaN	NaN	NaN
43	Ita-Savo	NPH	15	73.33	0.00	6.67	6.67	13.33
44	Ita-Savo	no DGN	10	60.00	0.00	20.00	0.00	20.00
45	Pohjois-Karjala	glargine	7	100.00	0.00	0.00	0.00	0.00
46	Pohjois-Karjala	detemir	1	100.00	0.00	0.00	0.00	0.00
47	Pohjois-Karjala	NPH	34	97.06	0.00	0.00	0.00	2.94
48	Pohjois-Karjala	no DGN	0	NaN	NaN	NaN	NaN	NaN
49	Pohjois-Savo	glargine	58	58.62	8.62	5.17	12.07	15.52
50	Pohjois-Savo	detemir	11	36.36	18.18	36.36	9.09	0.00
51	Pohjois-Savo	NPH	83	62.65	10.84	6.02	12.05	8.43
52	Pohjois-Savo	no DGN	26	65.38	7.69	3.85	11.54	11.54
53	Keski-Suomi	glargine	46	65.22	17.39	6.52	8.70	2.17
54	Keski-Suomi	detemir	14	85.71	7.14	7.14	0.00	0.00
55	Keski-Suomi	NPH	121	66.94	12.40	7.44	5.79	7.44
56	Keski-Suomi	no DGN	25	68.00	0.00	8.00	0.00	24.00
57	Etela-Pohjanmaa	glargine	48	41.67	20.83	18.75	12.50	6.25
58	Etela-Pohjanmaa	detemir	14	7.14	35.71	28.57	7.14	21.43
59	Etela-Pohjanmaa	NPH	159	35.22	19.50	20.13	15.09	10.06
60	Etela-Pohjanmaa	no DGN	32	31.25	15.62	12.50	18.75	21.88
61	Vaasa	glargine	28	82.14	10.71	0.00	3.57	3.57
62	Vaasa	detemir	6	33.33	16.67	16.67	0.00	33.33
63	Vaasa	NPH	51	74.51	13.73	1.96	0.00	9.80
64	Vaasa	no DGN	17	52.94	17.65	0.00	5.88	23.53
65	Keski-Pohjanmaa	glargine	7	71.43	14.29	0.00	0.00	14.29
66	Keski-Pohjanmaa	detemir	3	66.67	33.33	0.00	0.00	0.00
67	Keski-Pohjanmaa	NPH	6	50.00	0.00	0.00	0.00	50.00
68	Keski-Pohjanmaa	no DGN	1	100.00	0.00	0.00	0.00	0.00
69	Pohjois-Pohjanmaa	glargine	61	52.46	13.11	6.56	8.20	19.67
70	Pohjois-Pohjanmaa	detemir	12	41.67	25.00	16.67	0.00	16.67
71	Pohjois-Pohjanmaa	NPH	154	69.48	14.94	5.84	3.25	6.49
72	Pohjois-Pohjanmaa	no DGN	29	65.52	6.90	6.90	3.45	17.24
73	Kainuu	glargine	14	57.14	21.43	14.29	0.00	7.14
74	Kainuu	detemir	0	NaN	NaN	NaN	NaN	NaN
75	Kainuu	NPH	24	50.00	8.33	16.67	8.33	16.67
76	Kainuu	no DGN	4	25.00	50.00	0.00	0.00	25.00
77	Lansi-Pohja	glargine	36	38.89	25.00	8.33	8.33	19.44
78	Lansi-Pohja	detemir	6	33.33	16.67	16.67	16.67	16.67
79	Lansi-Pohja	NPH	76	34.21	13.16	18.42	10.53	23.68
80	Lansi-Pohja	no DGN	22	31.82	13.64	9.09	9.09	36.36
81	Lappi	glargine	15	26.67	13.33	13.33	13.33	33.33
82	Lappi	detemir	5	20.00	0.00	40.00	0.00	40.00
83	Lappi	NPH	40	32.50	25.00	20.00	7.50	15.00
84	Lappi	no DGN	9	33.33	11.11	0.00	44.44	11.11
85	Ahvenanmaa	glargine	0	NaN	NaN	NaN	NaN	NaN
86	Ahvenanmaa	detemir	0	NaN	NaN	NaN	NaN	NaN
87	Ahvenanmaa	NPH	2	0.00	50.00	0.00	0.00	50.00
88	Ahvenanmaa	no DGN	1	0.00	0.00	0.00	0.00	100.00
89	Total	glargine	1129	61.56	12.93	7.88	6.64	10.98
90	Total	detemir	217	55.30	15.67	13.36	5.53	10.14
91	Total	NPH	3314	60.98	12.28	8.96	6.40	11.38
92	Total	no DGN	817	53.00	13.95	9.67	7.83	15.54

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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	152	1	1.00	1.0	3.691	4.00	56
2	Unknown	detemir	27	1	1.00	1.0	4.333	2.00	51
3	Unknown	NPH	1005	1	1.00	1.0	4.543	5.00	486
4	Unknown	no DGN	270	1	1.00	2.0	5.581	5.00	176
5	HUS	glargine	358	1	1.00	1.0	3.425	3.00	110
6	HUS	detemir	54	1	1.00	1.0	3.037	4.00	17
7	HUS	NPH	601	1	1.00	1.0	3.649	4.00	105
8	HUS	no DGN	163	1	1.00	1.0	3.049	4.00	29
9	Varsinais-Suomi	glargine	90	1	1.00	1.0	2.056	1.00	17
10	Varsinais-Suomi	detemir	21	1	1.00	1.0	1.524	1.00	6
11	Varsinais-Suomi	NPH	198	1	1.00	1.0	2.611	2.00	27
12	Varsinais-Suomi	no DGN	52	1	1.00	1.0	4.058	4.25	29
13	Satakunta	glargine	18	1	1.00	1.0	4.611	2.75	52
14	Satakunta	detemir	15	1	1.00	1.0	1.867	1.50	7
15	Satakunta	NPH	98	1	1.00	1.0	2.429	3.00	11
16	Satakunta	no DGN	17	1	1.00	2.0	4.941	8.00	18
17	Kantahame	glargine	50	1	1.00	1.0	3.580	6.00	24
18	Kantahame	detemir	3	1	1.00	1.0	4.667	6.50	12
19	Kantahame	NPH	141	1	1.00	1.0	2.695	1.00	34
20	Kantahame	no DGN	31	1	1.00	1.0	3.323	4.00	21
21	Pirkanmaa	glargine	40	1	1.00	1.5	4.475	6.00	27
22	Pirkanmaa	detemir	7	1	1.00	1.0	1.857	1.00	7
23	Pirkanmaa	NPH	42	1	1.00	1.0	4.071	3.75	26
24	Pirkanmaa	no DGN	12	1	1.00	4.0	7.833	7.75	40
25	Paijat-Hame	glargine	32	1	1.00	1.0	1.969	1.00	13
26	Paijat-Hame	detemir	7	1	1.00	4.0	3.857	5.50	9
27	Paijat-Hame	NPH	301	1	1.00	1.0	1.887	1.00	34
28	Paijat-Hame	no DGN	40	1	1.00	1.0	2.175	1.00	12
29	Kymenlaakso	glargine	25	1	1.00	1.0	2.520	3.00	9
30	Kymenlaakso	detemir	4	1	1.00	4.5	5.500	9.00	12
31	Kymenlaakso	NPH	83	1	1.00	2.0	4.169	4.00	56
32	Kymenlaakso	no DGN	29	1	1.00	2.0	3.552	4.00	16
33	Etela-Karjala	glargine	26	1	1.00	3.0	3.769	5.00	13
34	Etela-Karjala	detemir	5	1	1.00	5.0	10.400	10.00	35
35	Etela-Karjala	NPH	39	1	1.00	2.0	6.410	7.00	95
36	Etela-Karjala	no DGN	13	1	1.00	2.0	3.769	5.00	11
37	Etela-Savo	glargine	7	1	1.00	2.0	4.000	4.00	15
38	Etela-Savo	detemir	2	1	1.50	2.0	2.000	2.50	3
39	Etela-Savo	NPH	41	1	1.00	2.0	3.463	5.00	18
40	Etela-Savo	no DGN	14	1	1.00	1.0	1.571	1.00	6
41	Ita-Savo	glargine	11	1	1.00	1.0	2.091	2.00	8
42	Ita-Savo	detemir	0	NA	NA	NA	NaN	NA	NA
43	Ita-Savo	NPH	15	1	1.00	1.0	4.267	2.50	35
44	Ita-Savo	no DGN	10	1	1.00	1.0	3.500	4.75	10
45	Pohjois-Karjala	glargine	7	1	1.00	1.0	1.000	1.00	1
46	Pohjois-Karjala	detemir	1	1	1.00	1.0	1.000	1.00	1
47	Pohjois-Karjala	NPH	34	1	1.00	1.0	1.206	1.00	8
48	Pohjois-Karjala	no DGN	0	NA	NA	NA	NaN	NA	NA
49	Pohjois-Savo	glargine	58	1	1.00	1.0	3.379	6.00	15
50	Pohjois-Savo	detemir	11	1	1.00	3.0	3.091	5.00	6
51	Pohjois-Savo	NPH	83	1	1.00	1.0	3.880	4.00	56
52	Pohjois-Savo	no DGN	26	1	1.00	1.0	3.654	3.75	21
53	Keski-Suomi	glargine	46	1	1.00	1.0	2.152	2.00	10
54	Keski-Suomi	detemir	14	1	1.00	1.0	1.357	1.00	5
55	Keski-Suomi	NPH	121	1	1.00	1.0	2.504	3.00	22
56	Keski-Suomi	no DGN	25	1	1.00	1.0	10.840	4.00	102
57	Etela-Pohjanmaa	glargine	48	1	1.00	3.0	3.542	5.00	23
58	Etela-Pohjanmaa	detemir	14	1	2.25	4.0	6.929	6.50	38
59	Etela-Pohjanmaa	NPH	159	1	1.00	3.0	4.031	5.50	25
60	Etela-Pohjanmaa	no DGN	32	1	1.00	4.0	5.312	7.00	22
61	Vaasa	glargine	28	1	1.00	1.0	1.571	1.00	8
62	Vaasa	detemir	6	1	1.25	3.0	9.000	12.25	31
63	Vaasa	NPH	51	1	1.00	1.0	2.706	1.50	22
64	Vaasa	no DGN	17	1	1.00	1.0	4.176	7.00	14
65	Keski-Pohjanmaa	glargine	7	1	1.00	1.0	2.286	2.00	8
66	Keski-Pohjanmaa	detemir	3	1	1.00	1.0	1.333	1.50	2
67	Keski-Pohjanmaa	NPH	6	1	1.00	5.5	6.333	10.00	15
68	Keski-Pohjanmaa	no DGN	1	1	1.00	1.0	1.000	1.00	1
69	Pohjois-Pohjanmaa	glargine	61	1	1.00	1.0	6.443	6.00	99
70	Pohjois-Pohjanmaa	detemir	12	1	1.00	2.0	3.583	4.00	15
71	Pohjois-Pohjanmaa	NPH	154	1	1.00	1.0	2.279	2.00	28
72	Pohjois-Pohjanmaa	no DGN	29	1	1.00	1.0	5.034	4.00	53
73	Kainuu	glargine	14	1	1.00	1.0	2.286	3.00	8
74	Kainuu	detemir	0	NA	NA	NA	NaN	NA	NA
75	Kainuu	NPH	24	1	1.00	1.5	3.542	5.25	13
76	Kainuu	no DGN	4	1	1.75	2.5	3.750	4.50	9
77	Lansi-Pohja	glargine	36	1	1.00	2.5	3.833	6.25	14
78	Lansi-Pohja	detemir	6	1	1.25	3.0	4.000	5.50	10
79	Lansi-Pohja	NPH	76	1	1.00	4.0	5.447	7.00	25
80	Lansi-Pohja	no DGN	22	1	1.00	4.5	7.182	8.00	50
81	Lappi	glargine	15	1	1.50	4.0	5.867	9.50	14
82	Lappi	detemir	5	1	4.00	5.0	5.600	9.00	9
83	Lappi	NPH	40	1	1.00	3.0	4.300	5.00	29
84	Lappi	no DGN	9	1	1.00	6.0	5.333	6.00	18
85	Ahvenanmaa	glargine	0	NA	NA	NA	NaN	NA	NA
86	Ahvenanmaa	detemir	0	NA	NA	NA	NaN	NA	NA
87	Ahvenanmaa	NPH	2	3	7.50	12.0	12.000	16.50	21
88	Ahvenanmaa	no DGN	1	17	17.00	17.0	17.000	17.00	17
89	Total	glargine	1129	1	1.00	1.0	3.429	4.00	110
90	Total	detemir	217	1	1.00	1.0	3.581	4.00	51
91	Total	NPH	3314	1	1.00	1.0	3.610	4.00	486
92	Total	no DGN	817	1	1.00	1.0	4.632	5.00	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	11955	672	20943	32.09	29.75	34.61
2	Male	detemir	5504	137	6044	22.67	19.17	26.80
3	Male	NPH	17121	2206	56240	39.22	37.62	40.90
4	Male	no DGN	19413	1539	15189	101.32	96.38	106.51
5	Female	glargine	8687	419	15008	27.92	25.37	30.72
6	Female	detemir	4126	90	4565	19.71	16.03	24.24
7	Female	NPH	13601	1583	44556	35.53	33.82	37.32
8	Female	no DGN	15142	1538	14096	109.11	103.79	114.70
9	Total	glargine	20642	1091	35951	30.35	28.60	32.20
10	Total	detemir	9630	227	10609	21.40	18.79	24.37
11	Total	NPH	30722	3789	100796	37.59	36.41	38.81
12	Total	no DGN	34555	3077	29285	105.07	101.42	108.85

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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	23	0	49	NA	NA	NA
2	0-9	detemir	28	0	47	NA	NA	NA
3	0-9	NPH	37	0	106	NA	NA	NA
4	0-9	no DGN	39	0	29	NA	NA	NA
5	10-19	glargine	54	0	161	NA	NA	NA
6	10-19	detemir	37	0	56	NA	NA	NA
7	10-19	NPH	54	1	144	6.96	0.98	49.43
8	10-19	no DGN	79	0	106	NA	NA	NA
9	20-29	glargine	152	0	287	NA	NA	NA
10	20-29	detemir	90	0	124	NA	NA	NA
11	20-29	NPH	239	3	565	5.31	1.71	16.46
12	20-29	no DGN	286	2	609	3.28	0.82	13.13
13	30-39	glargine	646	11	1242	8.86	4.90	15.99
14	30-39	detemir	377	4	476	8.40	3.15	22.38
15	30-39	NPH	1065	24	3130	7.67	5.14	11.44
16	30-39	no DGN	1257	13	2197	5.92	3.44	10.19
17	40-49	glargine	2183	38	4180	9.09	6.61	12.49
18	40-49	detemir	1226	12	1523	7.88	4.47	13.87
19	40-49	NPH	2970	146	10200	14.31	12.17	16.83
20	40-49	no DGN	3609	101	3465	29.14	23.98	35.42
21	50-59	glargine	5543	172	10634	16.17	13.93	18.78
22	50-59	detemir	2820	45	3314	13.58	10.14	18.19
23	50-59	NPH	7990	579	29455	19.66	18.12	21.33
24	50-59	no DGN	9146	293	7405	39.57	35.29	44.37
25	60-69	glargine	5543	234	9668	24.20	21.29	27.51
26	60-69	detemir	2710	53	2908	18.22	13.92	23.85
27	60-69	NPH	8254	933	29120	32.04	30.05	34.16
28	60-69	no DGN	9163	574	6700	85.67	78.94	92.97
29	70-79	glargine	4187	318	6703	47.44	42.50	52.95
30	70-79	detemir	1636	63	1584	39.77	31.07	50.91
31	70-79	NPH	6692	1223	20787	58.83	55.63	62.22
32	70-79	no DGN	7215	1027	5898	174.13	163.80	185.12
33	80+	glargine	2311	318	3025	105.11	94.17	117.33
34	80+	detemir	706	50	577	86.61	65.64	114.28
35	80+	NPH	3421	880	7289	120.73	113.01	128.98
36	80+	no DGN	3761	1067	2875	371.14	349.52	394.09
37	Total	glargine	20642	1091	35951	30.35	28.60	32.20
38	Total	detemir	9630	227	10609	21.40	18.79	24.37
39	Total	NPH	30722	3789	100796	37.59	36.41	38.81
40	Total	no DGN	34555	3077	29285	105.07	101.42	108.85

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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	7756	529	19452	27.20	24.97	29.61
2	00-05	detemir	3155	76	4143	18.35	14.65	22.97
3	00-05	NPH	21752	3106	86259	36.01	34.76	37.30
4	00-05	no DGN	21163	2385	24593	96.98	93.16	100.95
5	06	glargine	1441	99	2749	36.01	29.57	43.85
6	06	detemir	699	25	914	27.34	18.48	40.47
7	06	NPH	3796	346	8138	42.52	38.26	47.24
8	06	no DGN	3438	246	2103	116.96	103.22	132.53
9	07	glargine	3319	228	6397	35.64	31.30	40.58
10	07	detemir	1257	55	1997	27.55	21.15	35.88
11	07	NPH	2670	202	4357	46.37	40.39	53.22
12	07	no DGN	4310	227	1553	146.12	128.30	166.43
13	08	glargine	4158	166	5416	30.65	26.32	35.68
14	08	detemir	2057	52	2489	20.89	15.92	27.41
15	08	NPH	1525	96	1639	58.57	47.95	71.54
16	08	no DGN	3813	158	799	197.67	169.13	231.02
17	09	glargine	3968	69	1937	35.62	28.14	45.11
18	09	detemir	2462	19	1067	17.82	11.36	27.93
19	09	NPH	979	39	403	96.81	70.73	132.50
20	09	no DGN	1831	61	236	258.75	201.33	332.56
21	Total	glargine	20642	1091	35951	30.35	28.60	32.20
22	Total	detemir	9630	227	10609	21.40	18.79	24.37
23	Total	NPH	30722	3789	100796	37.59	36.41	38.81
24	Total	no DGN	34555	3077	29285	105.07	101.42	108.85

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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	4809	195	8004	24.36	21.17	28.03
2	-1	detemir	2439	47	2720	17.28	12.98	23.00
3	-1	NPH	8609	924	26475	34.90	32.72	37.23
4	-1	no DGN	9284	691	11822	58.45	54.25	62.97
5	1-2	glargine	1623	83	2981	27.84	22.45	34.52
6	1-2	detemir	785	16	957	16.72	10.25	27.30
7	1-2	NPH	2613	335	9168	36.54	32.83	40.67
8	1-2	no DGN	2855	240	2426	98.92	87.17	112.26
9	2-5	glargine	5382	282	10256	27.50	24.47	30.90
10	2-5	detemir	2564	57	2880	19.79	15.27	25.66
11	2-5	NPH	8852	1155	32566	35.47	33.48	37.57
12	2-5	no DGN	9819	882	7290	120.98	113.26	129.24
13	5-10	glargine	6827	401	12025	33.35	30.24	36.78
14	5-10	detemir	3043	81	3288	24.64	19.81	30.63
15	5-10	NPH	9209	1205	29759	40.49	38.27	42.84
16	5-10	no DGN	10631	1065	6914	154.03	145.06	163.57
17	10-	glargine	2001	130	2685	48.41	40.76	57.49
18	10-	detemir	799	26	764	34.01	23.16	49.95
19	10-	NPH	1439	170	2828	60.11	51.72	69.86
20	10-	no DGN	1966	199	832	239.15	208.13	274.79
21	Total	glargine	20642	1091	35951	30.35	28.60	32.20
22	Total	detemir	9630	227	10609	21.40	18.79	24.37
23	Total	NPH	30722	3789	100796	37.59	36.41	38.81
24	Total	no DGN	34555	3077	29285	105.07	101.42	108.85
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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	5514	208	8276	25.13	21.94	28.79
2	No	detemir	2989	52	3098	16.78	12.79	22.03
3	No	NPH	8435	802	24704	32.46	30.29	34.79
4	No	no DGN	9480	622	10936	56.88	52.58	61.53
5	Yes	glargine	15128	883	27674	31.91	29.87	34.08
6	Yes	detemir	6641	175	7511	23.30	20.09	27.02
7	Yes	NPH	22287	2987	76091	39.26	37.87	40.69
8	Yes	no DGN	25075	2455	18349	133.80	128.61	139.19
9	Total	glargine	20642	1091	35951	30.35	28.60	32.20
10	Total	detemir	9630	227	10609	21.40	18.79	24.37
11	Total	NPH	30722	3789	100796	37.59	36.41	38.81
12	Total	no DGN	34555	3077	29285	105.07	101.42	108.85

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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	19616	1015	34132	29.74	27.96	31.62
2	No	detemir	9060	207	9919	20.87	18.21	23.92
3	No	NPH	29485	3604	97771	36.86	35.68	38.09
4	No	no DGN	33070	2886	27756	103.98	100.25	107.84
5	Yes	glargine	1026	76	1819	41.78	33.37	52.31
6	Yes	detemir	570	20	691	28.96	18.68	44.89
7	Yes	NPH	1237	185	3025	61.16	52.95	70.64
8	Yes	no DGN	1485	191	1529	124.92	108.40	143.96
9	Total	glargine	20642	1091	35951	30.35	28.60	32.20
10	Total	detemir	9630	227	10609	21.40	18.79	24.37
11	Total	NPH	30722	3789	100796	37.59	36.41	38.81
12	Total	no DGN	34555	3077	29285	105.07	101.42	108.85

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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	19079	986	33335	29.58	27.79	31.48
2	No	detemir	9024	198	10028	19.74	17.18	22.69
3	No	NPH	28643	3447	95097	36.25	35.06	37.48
4	No	no DGN	32220	2821	27419	102.89	99.16	106.75
5	Yes	glargine	1563	105	2616	40.14	33.15	48.60
6	Yes	detemir	606	29	581	49.90	34.68	71.81
7	Yes	NPH	2079	342	5699	60.01	53.98	66.72
8	Yes	no DGN	2335	256	1866	137.18	121.37	155.06
9	Total	glargine	20642	1091	35951	30.35	28.60	32.20
10	Total	detemir	9630	227	10609	21.40	18.79	24.37
11	Total	NPH	30722	3789	100796	37.59	36.41	38.81
12	Total	no DGN	34555	3077	29285	105.07	101.42	108.85

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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	1743	86	4181	20.57	16.65	25.41
2	Unknown	detemir	796	17	1098	15.48	9.63	24.91
3	Unknown	NPH	6289	1143	31631	36.14	34.10	38.29
4	Unknown	no DGN	5896	921	9384	98.15	92.01	104.69
5	HUS	glargine	4568	225	7947	28.31	24.85	32.27
6	HUS	detemir	1962	52	2213	23.50	17.91	30.84
7	HUS	NPH	5538	561	15344	36.56	33.66	39.72
8	HUS	no DGN	6811	447	4856	92.05	83.90	100.99
9	Varsinais-Suomi	glargine	1626	90	2954	30.46	24.78	37.46
10	Varsinais-Suomi	detemir	619	11	679	16.19	8.97	29.24
11	Varsinais-Suomi	NPH	1499	156	4355	35.82	30.62	41.90
12	Varsinais-Suomi	no DGN	2003	145	1260	115.11	97.82	135.46
13	Satakunta	glargine	675	25	1047	23.87	16.13	35.32
14	Satakunta	detemir	568	18	603	29.83	18.79	47.35
15	Satakunta	NPH	1170	126	2988	42.17	35.41	50.21
16	Satakunta	no DGN	1291	122	1019	119.68	100.22	142.92
17	Kantahame	glargine	757	34	1351	25.17	17.98	35.23
18	Kantahame	detemir	219	7	223	31.35	14.95	65.76
19	Kantahame	NPH	832	108	2481	43.54	36.05	52.57
20	Kantahame	no DGN	1024	70	677	103.37	81.78	130.65
21	Pirkanmaa	glargine	1790	71	2809	25.28	20.03	31.90
22	Pirkanmaa	detemir	736	14	825	16.98	10.06	28.67
23	Pirkanmaa	NPH	2329	218	6765	32.23	28.22	36.80
24	Pirkanmaa	no DGN	2659	200	1808	110.61	96.29	127.05
25	Paijat-Hame	glargine	708	41	1201	34.13	25.13	46.35
26	Paijat-Hame	detemir	346	10	375	26.65	14.34	49.54
27	Paijat-Hame	NPH	1147	147	3391	43.36	36.88	50.96
28	Paijat-Hame	no DGN	1199	102	781	130.65	107.60	158.63
29	Kymenlaakso	glargine	708	29	1147	25.27	17.56	36.37
30	Kymenlaakso	detemir	321	5	325	15.37	6.40	36.93
31	Kymenlaakso	NPH	1004	117	2998	39.03	32.56	46.78
32	Kymenlaakso	no DGN	1158	107	746	143.52	118.75	173.46
33	Etela-Karjala	glargine	559	48	989	48.54	36.58	64.42
34	Etela-Karjala	detemir	197	5	213	23.43	9.75	56.27
35	Etela-Karjala	NPH	641	71	1843	38.52	30.53	48.61
36	Etela-Karjala	no DGN	747	53	513	103.28	78.90	135.19
37	Etela-Savo	glargine	342	17	503	33.77	20.99	54.32
38	Etela-Savo	detemir	202	4	215	18.63	6.99	49.62
39	Etela-Savo	NPH	646	91	1829	49.76	40.52	61.11
40	Etela-Savo	no DGN	684	48	482	99.61	75.07	132.18
41	Ita-Savo	glargine	292	14	430	32.54	19.27	54.95
42	Ita-Savo	detemir	120	2	98	20.45	5.11	81.74
43	Ita-Savo	NPH	440	67	1253	53.46	42.08	67.92
44	Ita-Savo	no DGN	476	39	393	99.33	72.57	135.95
45	Pohjois-Karjala	glargine	617	35	911	38.42	27.59	53.52
46	Pohjois-Karjala	detemir	405	10	366	27.29	14.68	50.72
47	Pohjois-Karjala	NPH	1157	135	3470	38.90	32.86	46.05
48	Pohjois-Karjala	no DGN	1169	92	843	109.15	88.98	133.90
49	Pohjois-Savo	glargine	1191	75	2160	34.72	27.69	43.54
50	Pohjois-Savo	detemir	438	8	494	16.19	8.10	32.37
51	Pohjois-Savo	NPH	1154	123	3093	39.76	33.32	47.45
52	Pohjois-Savo	no DGN	1531	115	1059	108.62	90.47	130.40
53	Keski-Suomi	glargine	870	43	1485	28.96	21.48	39.05
54	Keski-Suomi	detemir	528	13	586	22.20	12.89	38.23
55	Keski-Suomi	NPH	1268	124	3465	35.78	30.01	42.67
56	Keski-Suomi	no DGN	1450	111	1026	108.19	89.83	130.32
57	Etela-Pohjanmaa	glargine	984	64	1539	41.58	32.54	53.12
58	Etela-Pohjanmaa	detemir	739	17	736	23.09	14.35	37.14
59	Etela-Pohjanmaa	NPH	1266	134	3604	37.18	31.39	44.04
60	Etela-Pohjanmaa	no DGN	1535	129	1064	121.23	102.02	144.07
61	Vaasa	glargine	254	8	401	19.94	9.97	39.87
62	Vaasa	detemir	293	3	284	10.57	3.41	32.77
63	Vaasa	NPH	498	41	1477	27.77	20.45	37.71
64	Vaasa	no DGN	574	49	456	107.52	81.26	142.26
65	Keski-Pohjanmaa	glargine	237	14	303	46.28	27.41	78.14
66	Keski-Pohjanmaa	detemir	200	5	195	25.64	10.67	61.59
67	Keski-Pohjanmaa	NPH	441	40	1414	28.28	20.74	38.55
68	Keski-Pohjanmaa	no DGN	472	32	325	98.54	69.69	139.34
69	Pohjois-Pohjanmaa	glargine	1506	92	2633	34.95	28.49	42.87
70	Pohjois-Pohjanmaa	detemir	502	11	585	18.81	10.42	33.96
71	Pohjois-Pohjanmaa	NPH	1593	173	4329	39.97	34.43	46.39
72	Pohjois-Pohjanmaa	no DGN	1968	159	1346	118.15	101.14	138.02
73	Kainuu	glargine	399	23	660	34.85	23.16	52.45
74	Kainuu	detemir	183	9	208	43.24	22.50	83.11
75	Kainuu	NPH	623	85	1722	49.35	39.90	61.04
76	Kainuu	no DGN	647	46	367	125.23	93.80	167.19
77	Lansi-Pohja	glargine	374	19	575	33.06	21.08	51.82
78	Lansi-Pohja	detemir	96	2	98	20.32	5.08	81.26
79	Lansi-Pohja	NPH	421	46	1140	40.37	30.24	53.89
80	Lansi-Pohja	no DGN	482	43	370	116.22	86.20	156.71
81	Lappi	glargine	427	37	704	52.54	38.07	72.52
82	Lappi	detemir	154	4	180	22.23	8.34	59.22
83	Lappi	NPH	689	77	2012	38.28	30.62	47.86
84	Lappi	no DGN	712	43	465	92.57	68.65	124.81
85	Ahvenanmaa	glargine	15	1	20	48.98	6.90	347.73
86	Ahvenanmaa	detemir	6	0	8	NA	NA	NA
87	Ahvenanmaa	NPH	77	6	193	31.13	13.99	69.30
88	Ahvenanmaa	no DGN	67	4	47	85.79	32.20	228.60
89	Total	glargine	20642	1091	35951	30.35	28.60	32.20
90	Total	detemir	9630	227	10609	21.40	18.79	24.37
91	Total	NPH	30722	3789	100796	37.59	36.41	38.81
92	Total	no DGN	34555	3077	29285	105.07	101.42	108.85

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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	-0.241	0.074	0.786	0.68	0.908	0.001
2	insulin NPH	0.447	0.042	1.564	1.44	1.699	<0.001
3	insulin no DGN	1.44	0.042	4.22	3.888	4.579	<0.001
4	gender Female	-0.4	0.023	0.67	0.64	0.701	<0.001
5	agegroupD 40-49	0.99	0.144	2.691	2.029	3.569	<0.001
6	agegroupD 50-59	1.391	0.136	4.02	3.082	5.245	<0.001
7	agegroupD 60-69	1.968	0.135	7.159	5.499	9.319	<0.001
8	agegroupD 70-79	2.681	0.134	14.605	11.23	18.994	<0.001
9	agegroupD 80+	3.48	0.135	32.452	24.93	42.243	<0.001
10	BB.stfup Yes	0.243	0.04	1.275	1.18	1.378	<0.001
11	useBB Yes	-0.481	0.027	0.618	0.587	0.652	<0.001
12	A10A.stfup Yes	0.43	0.049	1.537	1.397	1.692	<0.001
13	useA10A Yes	-0.343	0.03	0.71	0.668	0.753	<0.001
14	hosph.stfup Yes	-0.304	0.054	0.738	0.664	0.82	<0.001
15	nhosph2 1-2	0.668	0.041	1.95	1.798	2.115	<0.001
16	nhosph2 3+	1.071	0.079	2.918	2.5	3.405	<0.001
17	Switch YES	0.307	0.045	1.359	1.245	1.483	<0.001
18	time2diag 1-2	0.006	0.051	1.006	0.911	1.111	0.901
19	time2diag 2-5	-0.035	0.04	0.966	0.893	1.045	0.387
20	time2diag 5-10	-0.095	0.041	0.909	0.839	0.985	0.02
21	time2diag 10-	0.012	0.06	1.012	0.901	1.138	0.839
22	calyear2 06	0.004	0.043	1.004	0.923	1.092	0.927
23	calyear2 07	0.149	0.046	1.161	1.061	1.27	0.001
24	calyear2 08	0.09	0.057	1.094	0.979	1.224	0.114
25	calyear2 09	0.183	0.084	1.201	1.018	1.417	0.03

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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	-0.688	0.076	0.503	0.433	0.583	<0.001
2	insulinNPH glargine	-0.447	0.042	0.639	0.588	0.694	<0.001
3	insulinNPH no DGN	0.992	0.025	2.697	2.566	2.836	<0.001
4	gender Female	-0.4	0.023	0.67	0.64	0.701	<0.001
5	agegroupD 40-49	0.99	0.144	2.691	2.029	3.569	<0.001
6	agegroupD 50-59	1.391	0.136	4.02	3.082	5.245	<0.001
7	agegroupD 60-69	1.968	0.135	7.159	5.499	9.319	<0.001
8	agegroupD 70-79	2.681	0.134	14.605	11.23	18.994	<0.001
9	agegroupD 80+	3.48	0.135	32.452	24.93	42.243	<0.001
10	BB.stfup Yes	0.243	0.04	1.275	1.18	1.378	<0.001
11	useBB Yes	-0.481	0.027	0.618	0.587	0.652	<0.001
12	A10A.stfup Yes	0.43	0.049	1.537	1.397	1.692	<0.001
13	useA10A Yes	-0.343	0.03	0.71	0.668	0.753	<0.001
14	hosph.stfup Yes	-0.304	0.054	0.738	0.664	0.82	<0.001
15	nhosph2 1-2	0.668	0.041	1.95	1.798	2.115	<0.001
16	nhosph2 3+	1.071	0.079	2.918	2.5	3.405	<0.001
17	Switch YES	0.307	0.045	1.359	1.245	1.483	<0.001
18	time2diag 1-2	0.006	0.051	1.006	0.911	1.111	0.901
19	time2diag 2-5	-0.035	0.04	0.966	0.893	1.045	0.387
20	time2diag 5-10	-0.095	0.041	0.909	0.839	0.985	0.02
21	time2diag 10-	0.012	0.06	1.012	0.901	1.138	0.839
22	calyear2 06	0.004	0.043	1.004	0.923	1.092	0.927
23	calyear2 07	0.149	0.046	1.161	1.061	1.27	0.001
24	calyear2 08	0.09	0.057	1.094	0.979	1.224	0.114
25	calyear2 09	0.183	0.084	1.201	1.018	1.417	0.03

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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, hosph.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	0.503	0.433	0.583	0.489	0.576	0.581	0.478	0.705	0.596	0.491	0.723	0.412	0.339	0.5
2	insulinNPH glargine	0.639	0.588	0.694	0.677	0.74	0.734	0.66	0.816	0.736	0.663	0.819	0.735	0.661	0.817
3	insulinNPH no DGN	2.697	2.566	2.836	2.758	2.919	2.684	2.483	2.901	2.676	2.475	2.892	2.69	2.488	2.908
4	gender Female	0.67	0.64	0.701	0.675	0.641	0.711	0.684	0.738	0.687	0.636	0.742	0.691	0.64	0.746
5	agegroupD 40-49	2.691	2.029	3.569	2.757	2.019	3.098	1.947	4.929	3.258	2.048	5.183	4.945	3.108	7.867
6	agegroupD 50-59	4.02	3.082	5.245	4.08	3.045	4.65	3.009	7.186	4.699	3.04	7.262	8.289	5.344	12.764
7	agegroupD 60-69	7.159	5.499	9.319	7.336	5.488	9.807	5.499	13.016	8.397	5.458	12.919	12.673	8.237	19.498
8	agegroupD 70-79	14.605	11.23	18.994	14.769	11.06	19.721	16.824	25.86	17.246	11.22	26.508	28.634	18.629	44.013
9	agegroupD 80+	32.452	24.93	42.243	32.026	23.964	42.799	35.477	54.592	36.205	23.528	55.713	59.236	38.495	91.154
10	BB.stfup Yes	1.275	1.18	1.378	1.29	1.177	1.413	1.309	1.507	1.331	1.156	1.533	1.329	1.154	1.531
11	useBB Yes	0.618	0.587	0.652	0.612	0.577	0.65	0.583	0.638	0.58	0.529	0.635	0.6	0.548	0.657
12	A10A.stfup Yes	1.537	1.397	1.692	1.57	1.4	1.76	1.669	1.429	1.739	1.488	2.031	1.738	1.487	2.03
13	useA10A Yes	0.71	0.668	0.753	0.711	0.662	0.764	0.671	0.603	0.747	0.651	0.585	0.725	0.61	0.548
14	hosph.stfup Yes	0.738	0.664	0.82	0.724	0.637	0.823	0.708	0.579	0.867	0.691	0.564	0.845	0.728	0.595
15	hosph2 1-2	1.95	1.798	2.115	1.977	1.789	2.186	1.977	1.685	2.319	1.984	2.327	1.937	1.651	2.272
16	hosph2 3+	2.918	2.5	3.405	3.085	2.538	3.749	3.307	2.432	4.515	3.205	2.347	4.375	3.177	4.338
17	Switch YES	1.359	1.245	1.483	1.317	1.191	1.457	1.141	0.992	1.124	0.977	1.294	1.043	0.906	1.2
18	time2diag 1-2	1.006	0.911	1.111	1.014	0.903	1.138	1.033	0.858	1.244	1.012	0.841	1.218	0.911	1.097
19	time2diag 2-5	0.966	0.893	1.045	0.987	0.901	1.082	1.009	0.872	1.168	1.001	0.865	1.158	0.875	1.013
20	time2diag 5-10	0.909	0.839	0.985	0.917	0.835	1.006	0.926	0.8	1.071	0.9	0.777	1.041	0.803	0.694
21	time2diag 10+	1.012	0.901	1.138	1.012	0.886	1.156	1.008	0.831	1.223	1.013	0.835	1.228	0.94	0.775
22	calyear2 06	1.004	0.923	1.092	1.042	0.947	1.146	1.084	0.938	1.253	1.076	0.931	1.243	1.238	1.071
23	calyear2 07	1.161	1.061	1.27	1.156	1.051	1.271	1.153	1.019	1.304	1.158	1.023	1.31	1.387	1.226
24	calyear2 08	1.094	0.979	1.224	1.1	0.974	1.242	1.119	0.966	1.295	1.133	0.978	1.311	1.389	1.2
25	calyear2 09	1.201	1.018	1.417	1.244	1.041	1.488	1.432	1.148	1.788	1.449	1.161	1.808	1.785	2.228

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