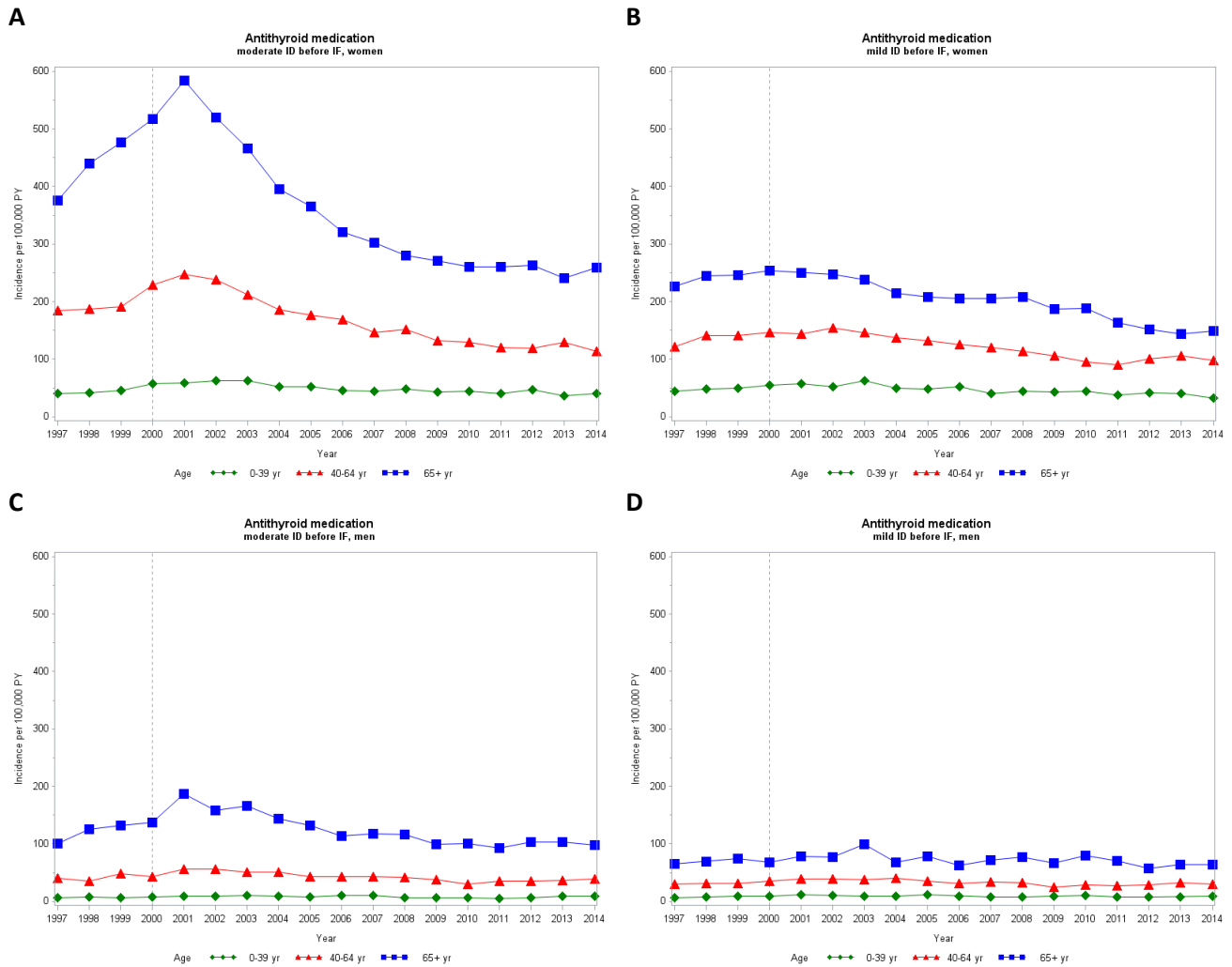


## SUPPLEMENTARY MATERIAL

Year	Antithyroid medication				Thyroid hormone therapy				Thyroid surgeries		Radioiodine treatments <sup>3</sup>	
	IRR	95%CI	PRR	95%CI	IRR	95%CI	PRR	95%CI	Treatment RR	95%CI	Treatment RR	95%CI
1995	-	-	0.73	0.68-0.78	-	-	0.74	0.70-0.79	0.89	0.77-1.04	-	-
1996	-	-	0.83	0.78-0.89	-	-	0.83	0.78-0.88	0.96	0.82-1.11	-	-
1997	0.82	0.76-0.88	0.86	0.80-0.92	0.82	0.76-0.89	0.87	0.82-0.93	0.97	0.83-1.13	-	-
1998 <sup>1</sup>	0.88	0.82-0.95	0.90	0.84-0.96	0.85	0.78-0.92	0.91	0.85-0.96	0.96	0.83-1.12	-	-
1999	0.94	0.87-1.01	0.95	0.89-1.01	0.95	0.88-1.03	0.95	0.89-1.01	0.97	0.83-1.12	-	-
2000 <sup>2</sup>	1 (ref.)	-	1 (ref.)	-	1 (ref.)	-	1 (ref.)	-	1 (ref.)	-	-	-
2001	1.11	1.03-1.19	1.09	1.02-1.16	1.12	1.03-1.21	1.07	1.00-1.13	0.94	0.81-1.09	-	-
2002	1.07	1.00-1.15	1.15	1.07-1.22	1.19	1.09-1.28	1.13	1.06-1.20	0.91	0.78-1.06	-	-
2003	1.06	0.98-1.13	1.19	1.11-1.27	1.26	1.17-1.37	1.20	1.12-1.27	0.92	0.79-1.07	-	-
2004	0.93	0.87-1.00	1.18	1.10-1.26	1.24	1.15-1.35	1.26	1.18-1.34	0.92	0.79-1.07	1 (ref.)	-
2005	0.89	0.83-0.96	1.14	1.07-1.22	1.21	1.11-1.31	1.31	1.23-1.39	0.95	0.82-1.10	1.04	0.92-1.18
2006	0.84	0.78-0.90	1.12	1.05-1.20	1.36	1.26-1.48	1.37	1.29-1.46	0.96	0.83-1.12	1.13	0.99-1.28
2007	0.80	0.74-0.86	1.09	1.02-1.16	1.50	1.38-1.62	1.44	1.35-1.53	0.98	0.84-1.14	1.22	1.07-1.38
2008	0.79	0.73-0.85	1.07	1.00-1.14	1.54	1.43-1.67	1.51	1.42-1.61	0.94	0.81-1.10	0.85	0.75-0.97
2009	0.72	0.67-0.78	1.03	0.97-1.10	1.63	1.50-1.76	1.59	1.49-1.69	1.11	0.96-1.29	0.95	0.84-1.08
2010	0.72	0.67-0.77	1.01	0.95-1.08	1.75	1.62-1.89	1.68	1.58-1.79	1.12	0.97-1.30	1.15	1.01-1.30
2011	0.67	0.62-0.72	0.98	0.92-1.04	1.70	1.57-1.84	1.76	1.65-1.87	1.09	0.94-1.26	1.22	1.08-1.38
2012	0.70	0.65-0.75	0.97	0.91-1.04	1.65	1.52-1.78	1.82	1.71-1.94	1.05	0.90-1.22	1.20	1.06-1.35
2013	0.70	0.65-0.76	0.96	0.90-1.03	1.77	1.64-1.92	1.89	1.78-2.01	1.11	0.95-1.28	1.10	0.97-1.24
2014	0.68	0.63-0.74	0.95	0.89-1.02	1.78	1.64-1.92	1.96	1.84-2.08	1.20	1.04-1.40	1.12	0.99-1.27
2015	-	-	-	-	-	-	-	-	1.24	1.07-1.43	1.18	1.04-1.33

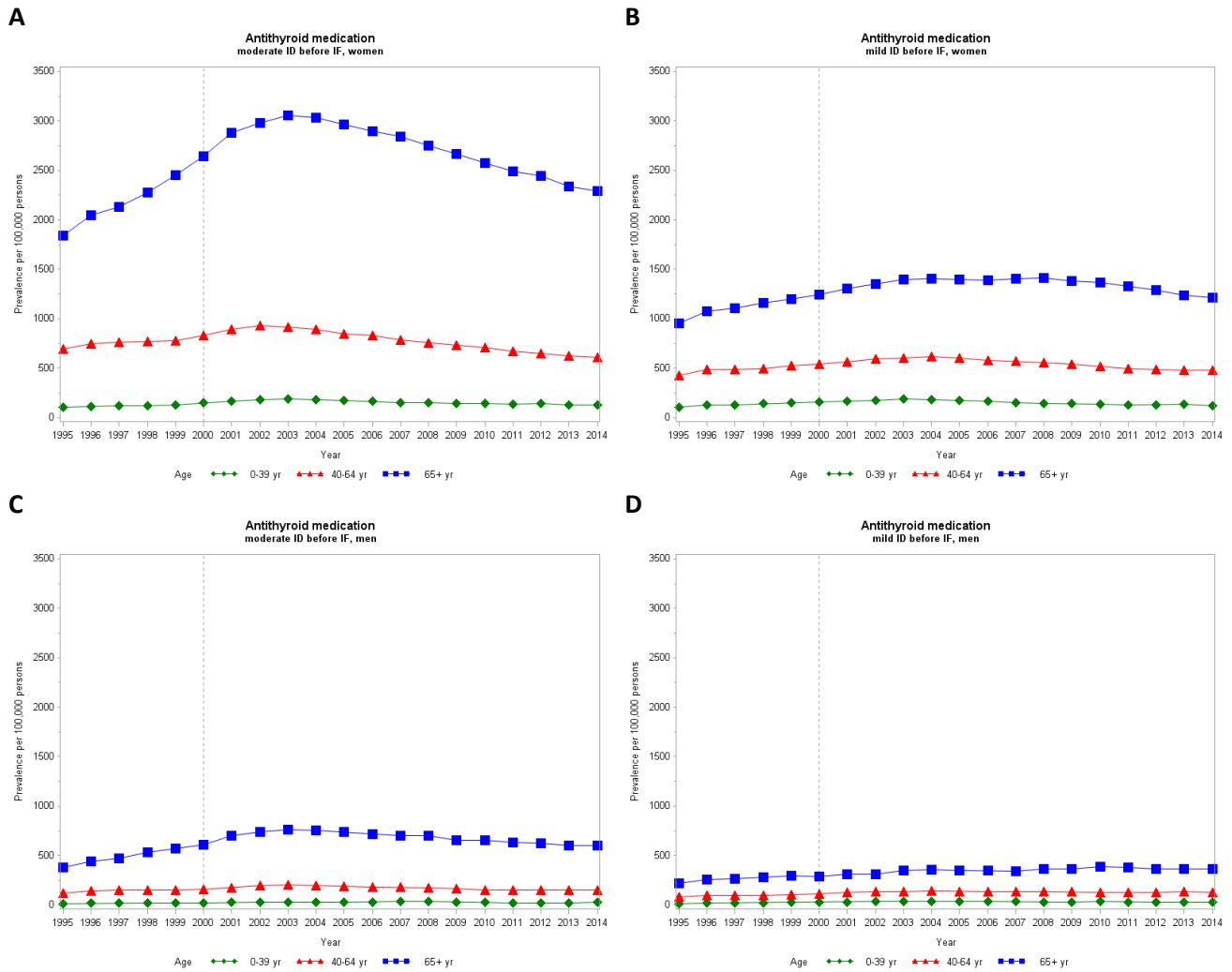
**Supplementary Table S1:** Incidence and prevalence RRs.

IRR: incidence rate ratio. PRR: prevalence rate ratio. RR: rate ratio. Adjusted for population, age, sex and region. <sup>1</sup>Implementation of voluntary iodine fortification. <sup>2</sup>Implementation of mandatory iodine fortification and reference. <sup>3</sup>Number of radioiodine treatments was obtained from the National Institute of Radiation Protection in 1995-2003 and thus only data from the Danish National Patient Registry in 2004-2015 was used.



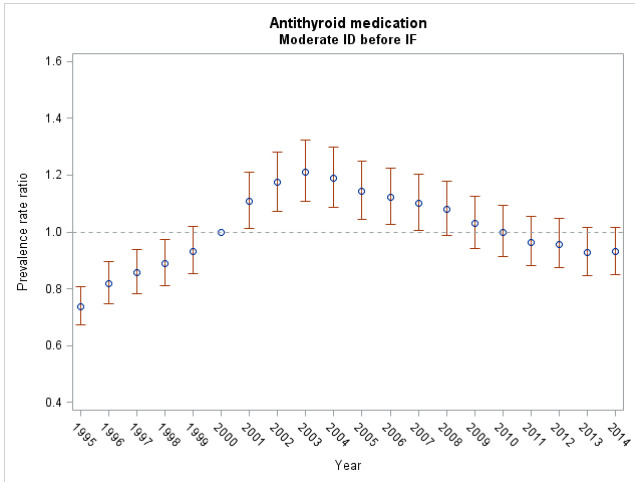
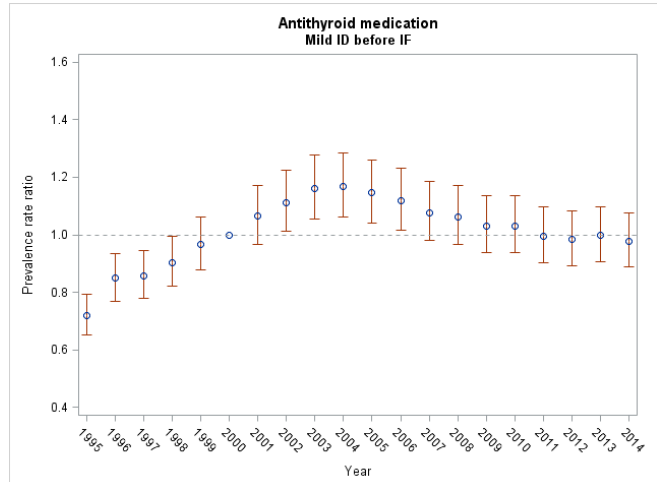
**Supplementary Figure S1:** Incident antithyroid treatment per 100,000 PY in the age groups 0-39 years, 40-64 years, and 65+ years in (A) the region with moderate ID before IF in women (B) the region with mild ID before IF in women (C) the region with moderate ID before IF in men, and (D) the region with moderate ID before IF in men.

Standardized for changes in population size, age and sex distribution. The vertical line marks the implementation of mandatory iodine fortification in 2000.



**Supplementary Figure S2:** Prevalent antithyroid treatment per 100,000 persons in the age groups 0-39 years, 40-64 years, and 65+ years in (A) the region with moderate ID before IF in women (B) the region with mild ID before IF in women (C) the region with moderate ID before IF in men, and (D) the region with moderate ID before IF in men.

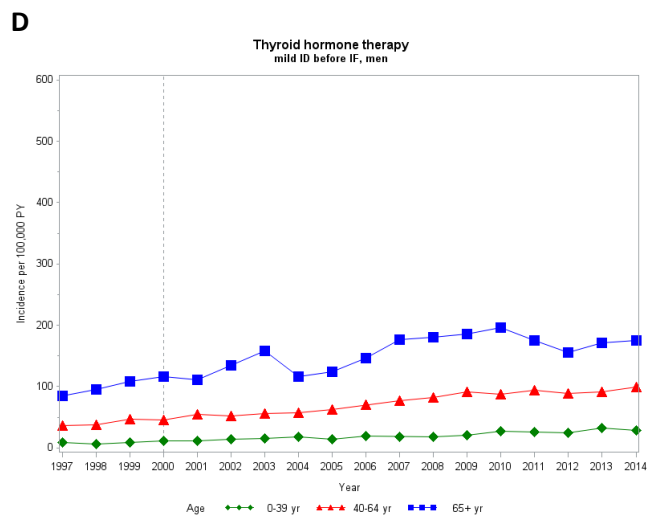
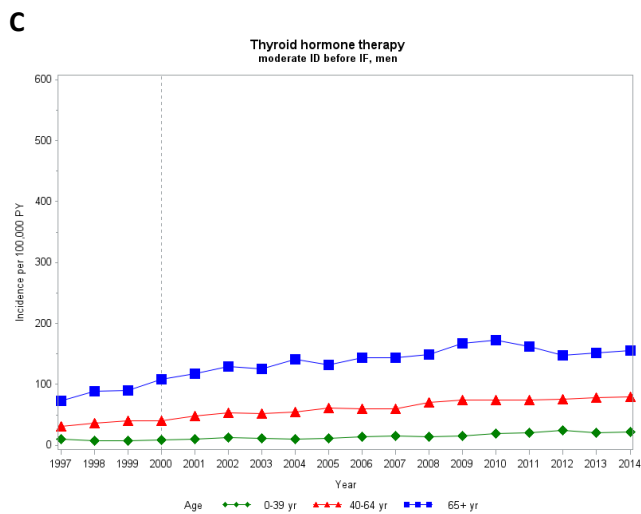
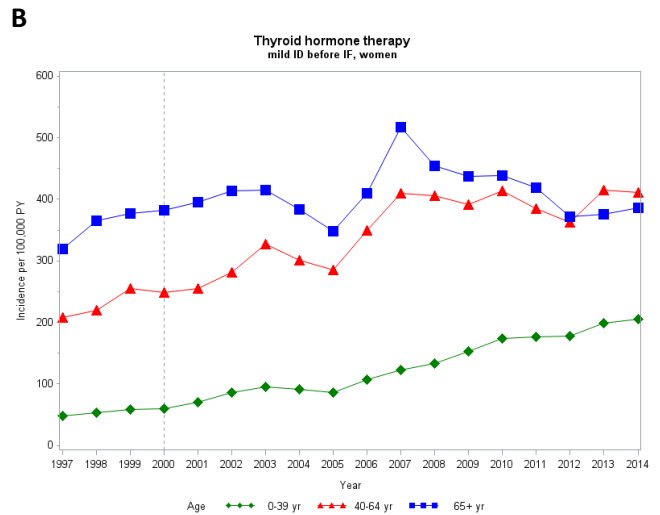
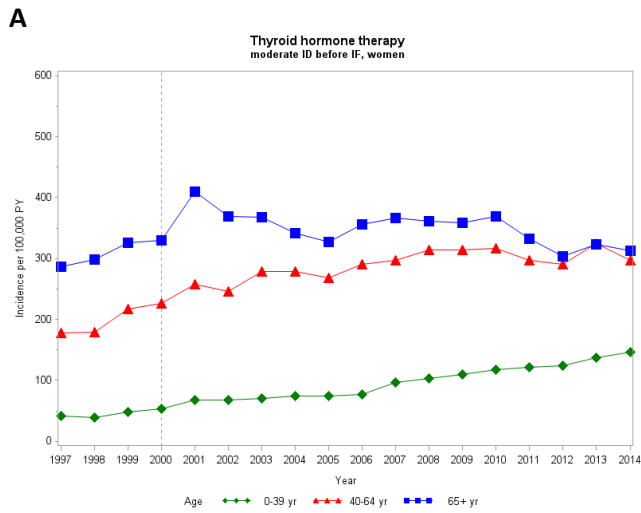
Standardized for changes in population size, age and sex distribution. The vertical line marks the implementation of mandatory iodine fortification in 2000.

**A****B**

**Supplementary Figure S3:** Prevalence rate ratios and 95% CIs of antithyroid medication compared to 2000

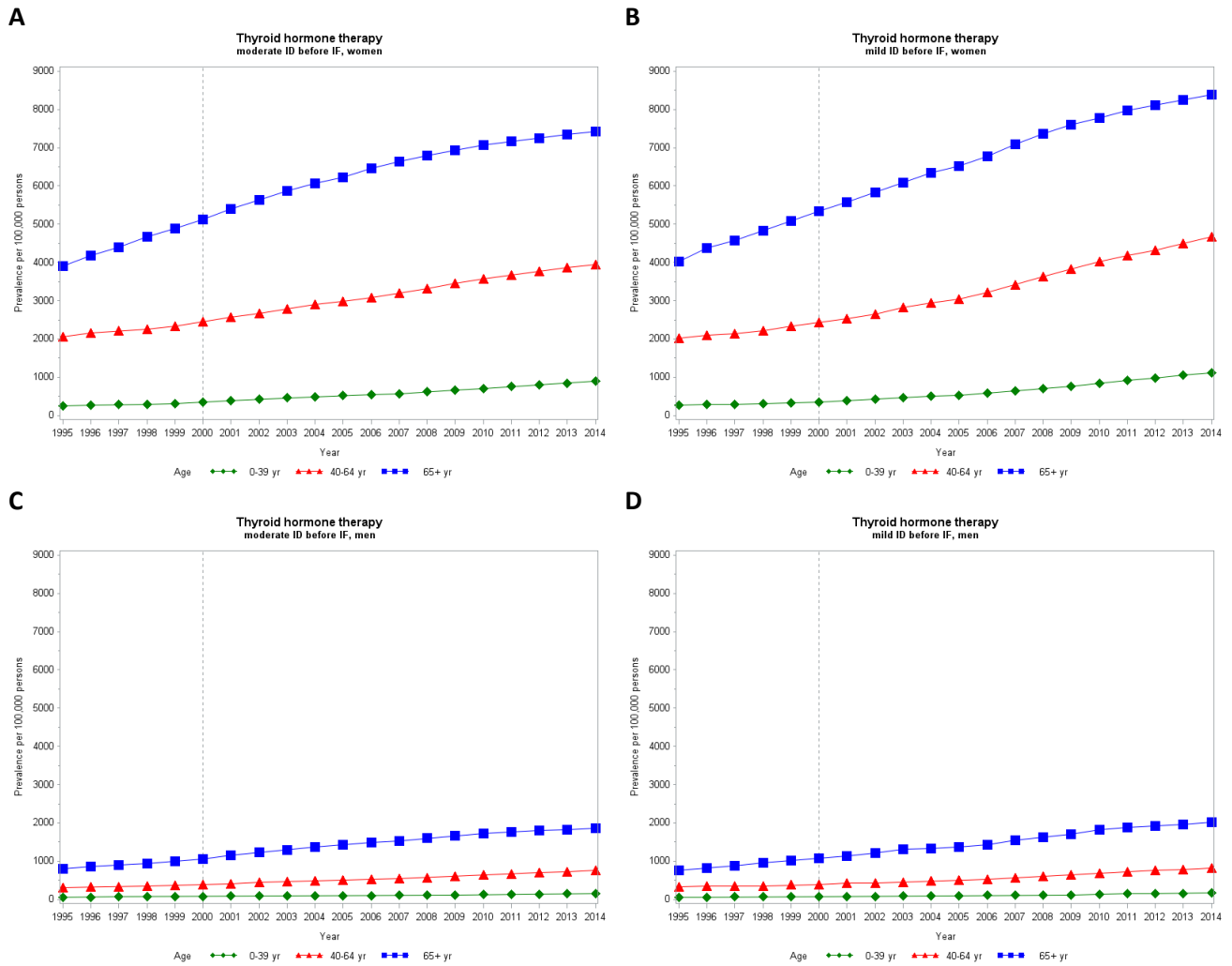
in (A) the region with moderate ID before IF and (B) the region with mild ID before IF

95%CI: confidence interval, ID: iodine deficiency, IF: iodine fortification. The analyses were adjusted for region, sex, age, and the interaction between calendar year and region.



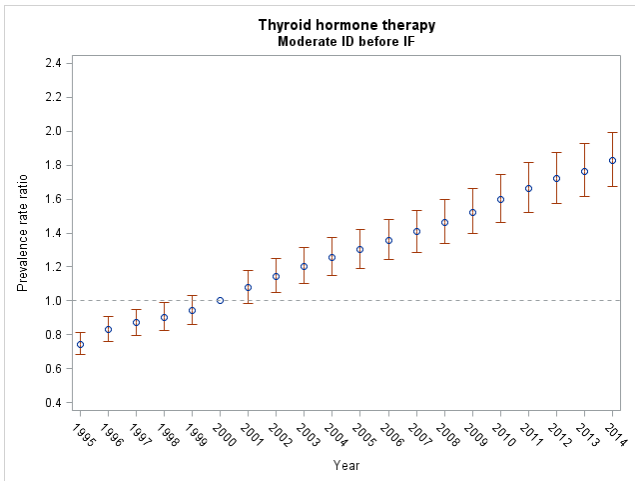
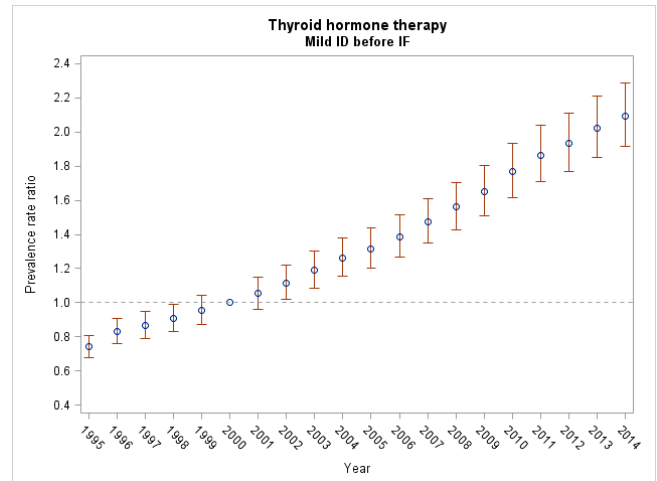
**Supplementary Figure S4:** Incident thyroid hormone therapy per 100,000 PY in the age groups 0-39 years, 40-64 years, and 65+ years in (A) the region with moderate ID before IF in women (B) the region with mild ID before IF in women (C) the region with moderate ID before IF in men, and (D) the region with moderate ID before IF in men.

Standardized for changes in population size, age and sex distribution. The vertical line marks the implementation of mandatory iodine fortification in 2000.

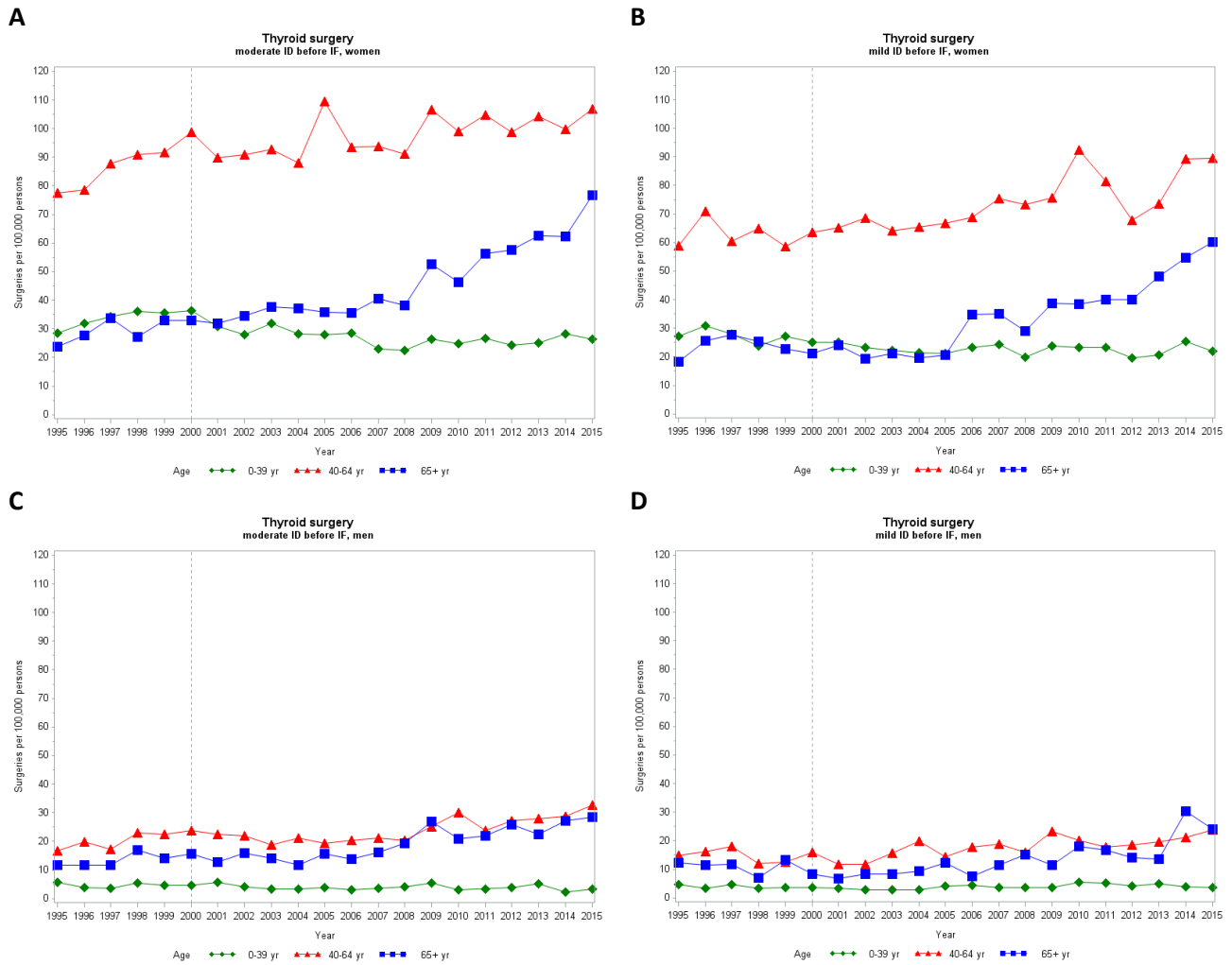


**Supplementary Figure S5:** Prevalent thyroid hormone therapy per 100,000 persons in the age groups 0-39 years, 40-64 years, and 65+ years in (A) the region with moderate ID before IF in women (B) the region with mild ID before IF in women (C) the region with moderate ID before IF in men, and (D) the region with moderate ID before IF in men.

Standardized for changes in population size, age and sex distribution. The vertical line marks the implementation of mandatory iodine fortification in 2000.

**A****B**

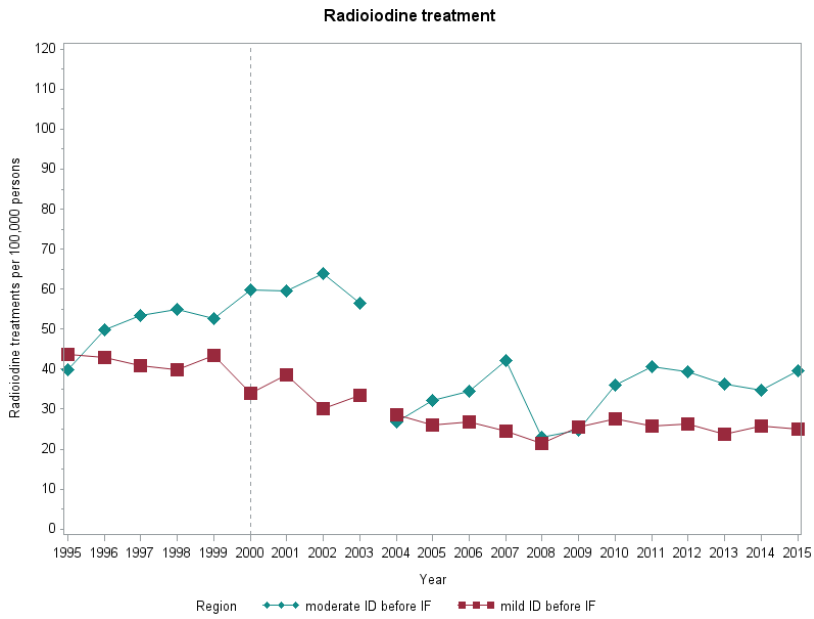
**Supplementary Figure S6:** Prevalence rate ratios and 95% CIs of thyroid hormone therapy compared to 2000 in (A) the region with moderate ID before IF and (B) the region with mild ID before IF  
 95%CI: confidence interval, ID: iodine deficiency, IF: iodine fortification. The analyses were adjusted for region, sex, age, and the interaction between calendar year and region.



**Supplementary Figure 7:** Thyroid surgery per 100,000 persons in the age groups 0-39 years, 40-64 years, and 65+ years in (A) the region with moderate ID before IF in women (B) the region with mild ID before IF in women (C) the region with moderate ID before IF in men, and (D) the region with moderate ID before IF in men.

Standardized for changes in population size, age and sex distribution. The vertical line marks the implementation of mandatory iodine fortification in 2000.





**Supplementary Figure S8:** Radioiodine treatment per 100,000 persons in the age groups 0-39 years, 40-64 years, and 65+ years in the region with moderate and mild ID before IF. Standardized for changes in population size. The vertical line marks the implementation of mandatory iodine fortification in 2000. Number of radioiodine treatments were obtained from the National Institute of Radiation Protection in 1995-2003 and from the Danish National Patient Registry in 2004-2015.