BRIDGEHEALTH
BRidging Information and Data Generation for Evidence-based Health Policy and Research

Bridge Health EUBIROD Network Meeting
Hotel Archimede, Via dei Mille 19, Roma, Italy
23rd-24th November 2015

EUBIROD NETWORK

Updating the BIRO data collection

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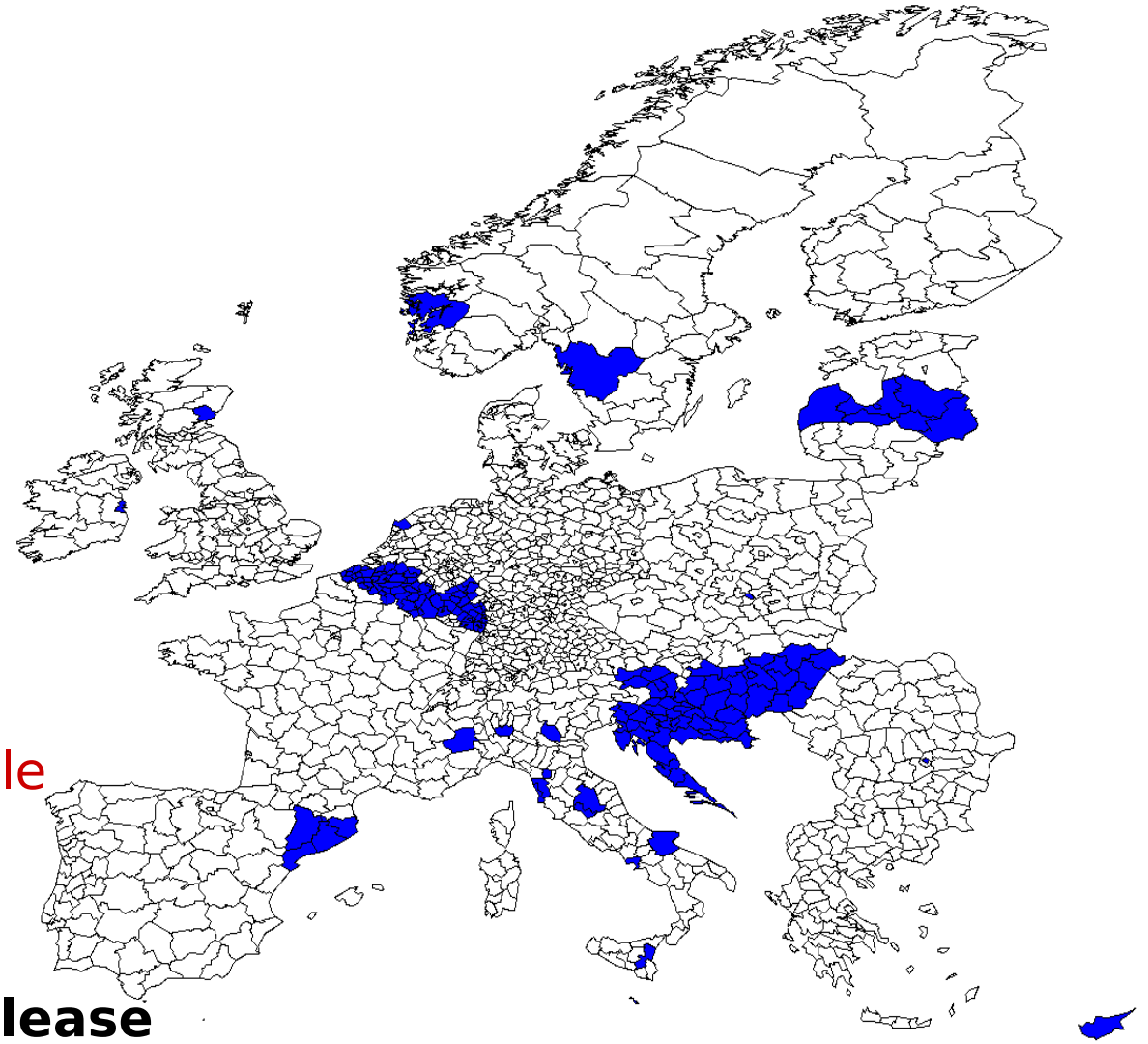
UNIVERSITY OF SURREY 4TH BEST UNIVERSITY IN THE UK GUARDIAN LEAGUE TABLE 2016
Athena SWAN Bronze Award

EUBIROD Report 2010



8/2/2012: New BIRO Release 2.1.12

15/2/2012: Collection of statistical objects closed

21/2/2012: EU Report available (N=79 indicators)

13 Days from Software Release to Online Publication of the results !

[Previously: 52 days (8/2011), 60 days (1/11)]

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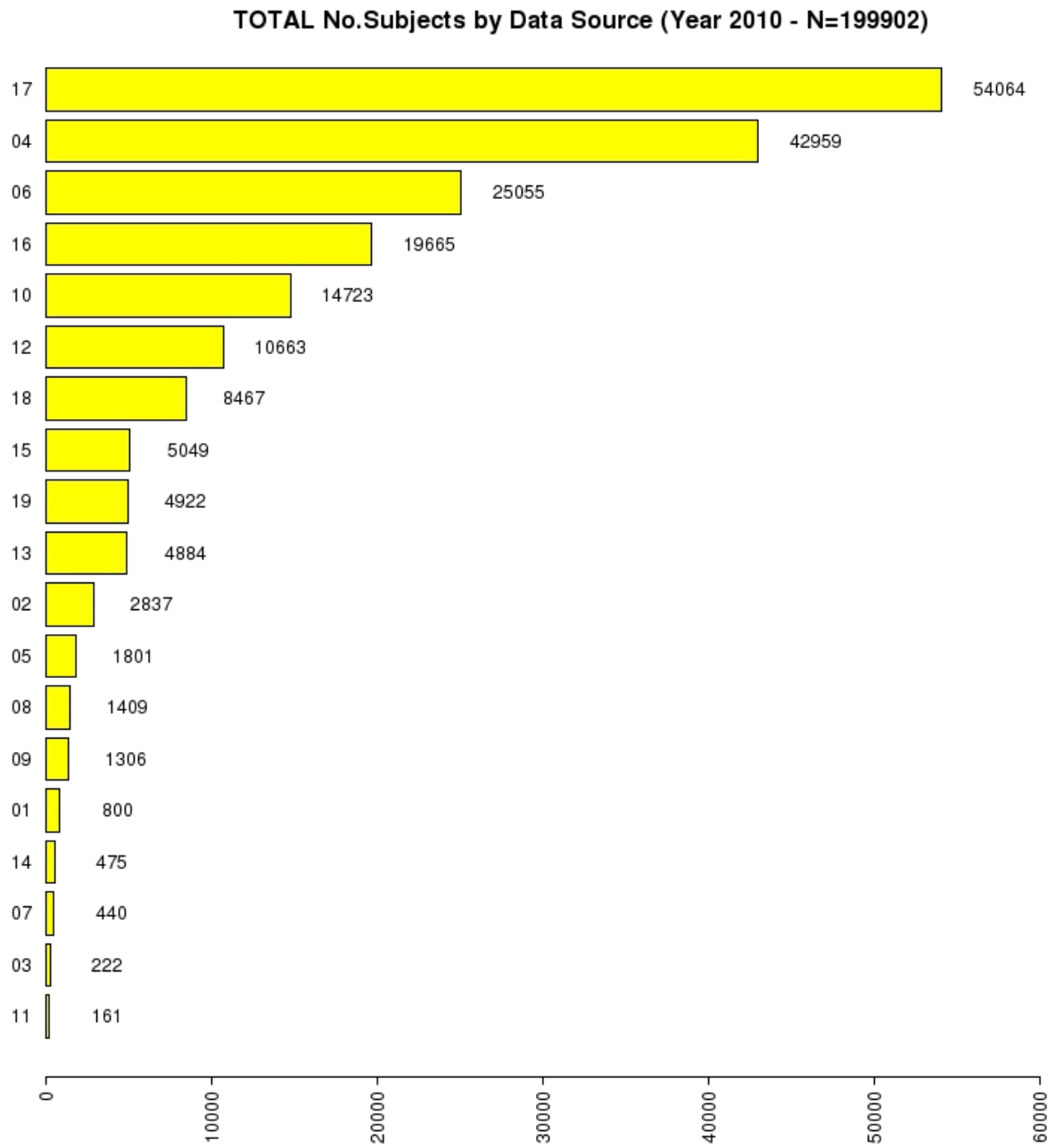
Total Cohort

EUBIROD Diabetes Report 2010



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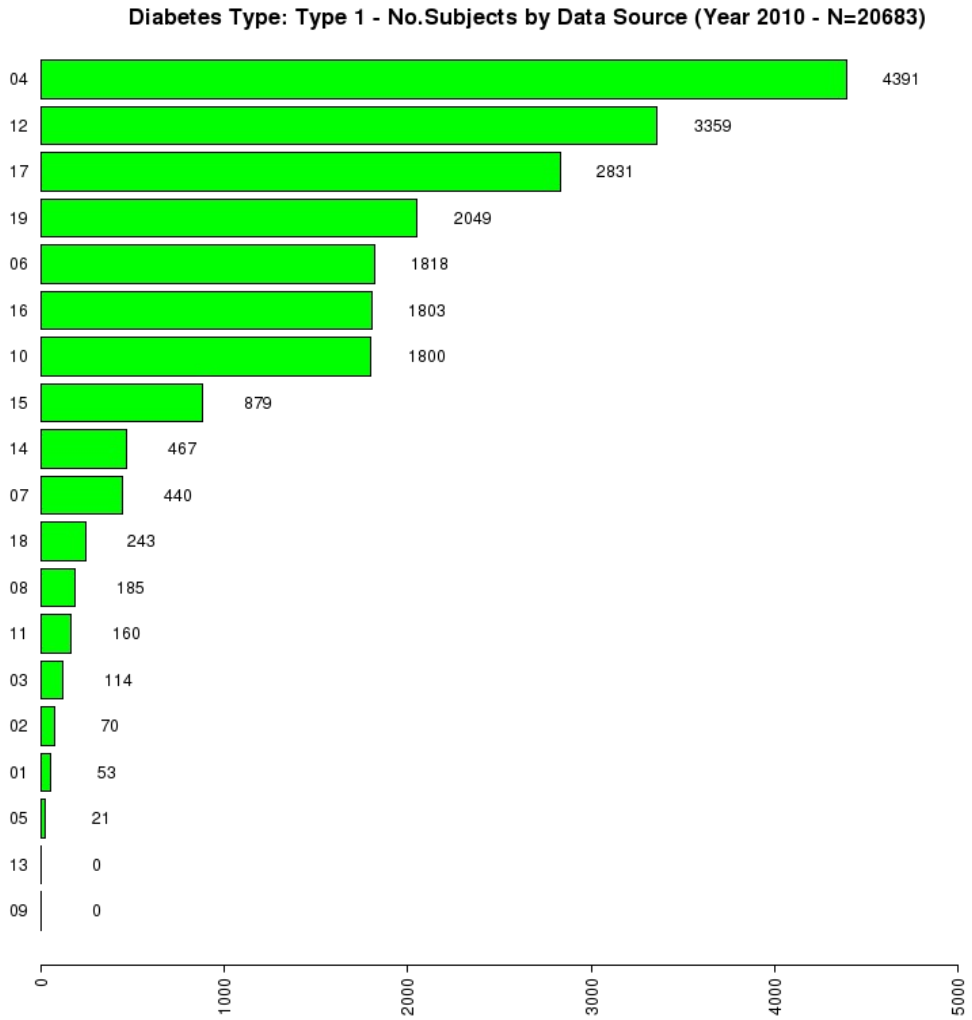
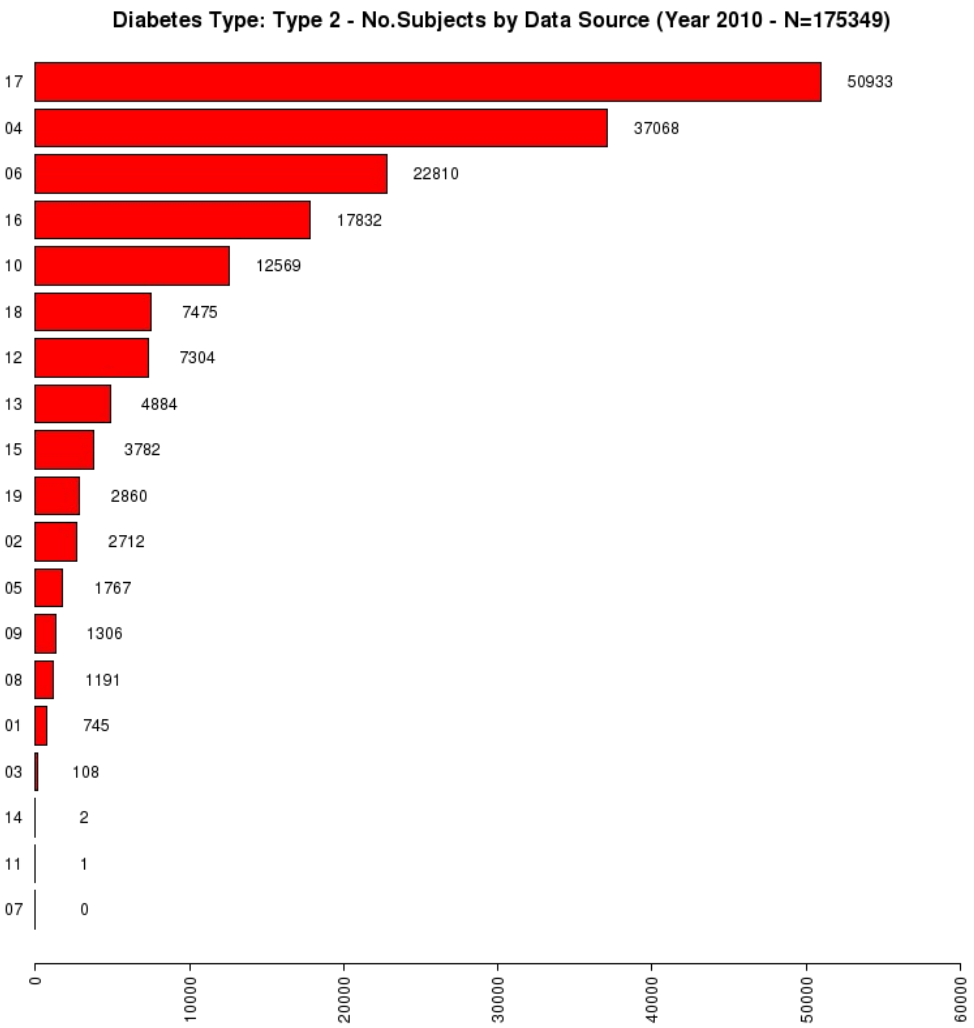
Total Cohort by Diabetes Type

EUBIROD Diabetes Report 2010





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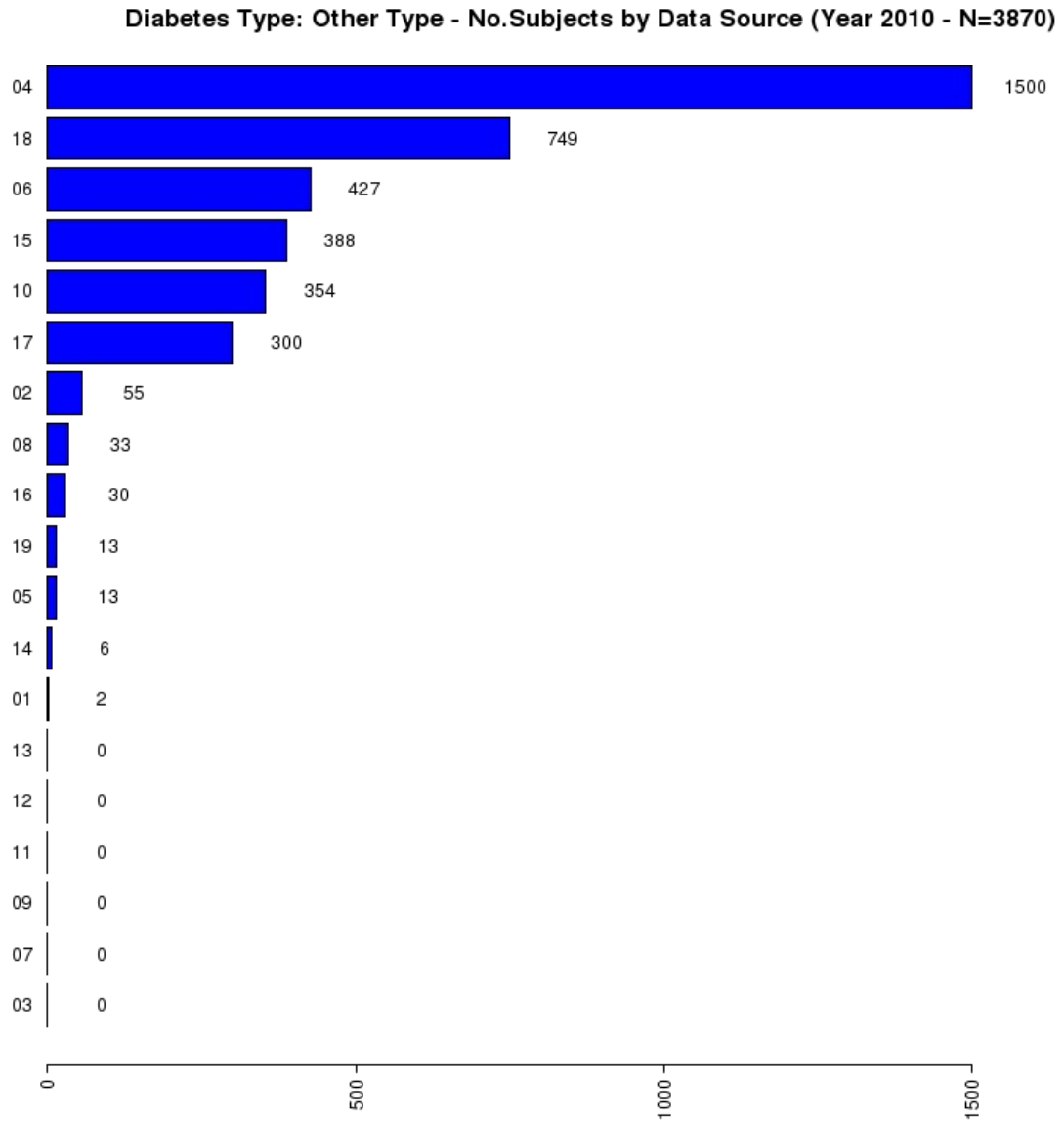
Total Cohort by Diabetes Type

EUBIROD Diabetes Report 2010



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Scientific paper

Automated cross-border reporting of standardized quality of care and outcomes indicators: results of the EUBIROD project from nineteen diabetes registers

Carinci F1, Azzopardi J3, Storms F17, Cunningham SG2, Beck P4, Pruna S15, Skeie S16, Lepiksone J20, Gualdi S1, Brillante M2, McAlpine RR2, Perner P4, Stotl I5, Di Iorio CT1, Bratina N5, De Beafourt C6, Boucquet V6, Doggen K7, Jarosz-Chobot PK8, Polanska J8, Jecht M9, Lindblad U10, Aberg M10, Moulton T11, Boran G11, Metelko Ž12, PolijicaninT12, Nagy A13, Ianos S13, Olympios G14, Traynor V14, Evripidou A14, Lovaas K16, Tysse T16, Canivell S19, and Massi Benedetti M18

Running title: results of the EUBIROD project
Word count for the abstract:
Word count for the text of the manuscript:
Keywords: health information, disease registers, diabetes, EUBIROD

Address for correspondence
Fabrizio Carinci

General characteristics and number of indicators delivered by Diabetes Registers contributing to the EUBIROD Report

Diabetes Register	ID	Site type	No. Indicators Delivered
Healthgate, Styria, Austria	AT	Regional Shared-data Register	67
IPH Survey, Belgium	BE	National Data – Complete	64
Larnaca Region, Cyprus	CY	Regional Shared-data Register	73
Rheinland-Pfalz, Germany	DE	Regional Shared-data Register	73
IDIBAPS Diabetes Clinical Data Collection, Spain	ES	Sample Regional Data	21
National Diabetes Register, Croatia	HR	National Data – Complete	75
GPMSSP Database, Hungary	HU	GP	51
Tallaght, Ireland	IE	Hospital Clinic (Diabetes)	57
Umbria Region and SID National Network, Italy	IT	Hospital Clinics (Diabetes, Internal Medicine)	78
Pediatric Registry, Luxembourg	LU	Hospital Clinic (Diabetes)	21
National Diabetes Registry Database, Latvia	LV	National Data – Complete	58
Mater Dei Hospital, Malta	MT	Disease Management Programme	30
West Friesland Region, Netherlands	NL	Regional Shared-data Register	52
National Diabetes Register, Norway	NO	National Data – Sample	57
Paediatric Diabetes Register of Silesia, Poland	PL	Regional Shared-data Register	70
Bucharest Diabetes Database, Romania	RO	Hospital Clinic (Diabetes)	41
Skaraborg Primary Care Diabetes Database, Sweden	SE	Regional Primary Care Project	63
Type 1 Childhood Diabetes Register, Slovenia	SI	National Data – Complete	38
DARTS, Tayside, Scotland, United Kingdom	UK	Regional Shared-data Register	68
OVERALL	**EU**		**79**

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General characteristics and number of indicators delivered by Diabetes Registers contributing to the EUBIROD Report

Select whole table

ID	Type 1									Type 2									Other Type
	Males %	Age %				Duration of Diabetes %			N	Males %	Age %				Duration of Diabetes %			N	N
		<15	15-25	25-65	≥65	<10	10-20	≥20			<50	50-65	65-80	≥80	<10	10-20	≥20		
AT	49.2	-	8.6	46.5	44.9	17.8	37.8	44.3	185	48.4	8.4	25.1	43.6	22.9	56.4	29.1	14.5	1,191	-
BE	57.7	-	8.0	50.1	41.9	28.6	30.2	41.2	3,359	48.9	6.6	31.2	46.1	16.0	30.8	41.8	27.4	7,304	-
CY	56.6	-	17.0	60.4	22.6	28.3	30.2	41.5	53	54.2	6.7	40.1	46.7	6.4	55.2	29.8	15.0	745	-
DE	56.9	4.8	12.1	38.4	44.7	34.6	30.1	35.3	1,800	49.2	8.7	26.8	47.5	16.9	54.0	32.0	14.0	12,569	354
ES	42.1	-	14.0	64.0	21.9	16.7	35.1	48.2	114	40.7	18.5	50.9	26.9	3.7	51.9	25.9	22.2	108	-
HR	50.3	0.7	8.6	55.9	34.8	32.1	30.5	37.4	1,818	52.1	8.6	40.3	44.4	6.7	51.2	33.1	15.7	22,810	427
HU	-	-	-	-	-	-	-	-	-	48.7	7.2	38.9	45.3	8.6	66.1	28.7	5.2	1,306	-
IE	54.6	17.7	24.0	39.9	18.3	80.1	8.8	11.1	879	59.4	13.9	41.5	35.0	9.5	91.7	6.9	1.3	3,782	388
IT	51.6	1.4	13.5	56.3	28.8	25.6	30.5	43.9	4,391	55.1	5.9	30.7	49.4	14.0	47.7	29.9	22.3	37,068	1,500
LU	42.5	46.2	47.5	6.2	0.0	83.1	15.0	1.9	160	-	-	-	-	-	-	-	-	-	-
LV	55.3	7.1	13.6	44.7	34.6	40.4	26.7	32.9	2,831	32.8	6.4	33.6	47.8	12.2	75.6	18.1	6.3	50,933	300
MT	58.6	2.9	30.0	48.6	18.6	50.0	24.3	25.7	70	56.7	10.4	40.7	40.0	8.9	77.4	16.0	6.6	2,712	55
NL	-	-	-	-	-	-	-	-	-	53.0	8.9	36.3	43.5	11.2	68.6	26.0	5.5	4,884	-
NO	53.5	-	13.9	54.9	31.2	23.0	27.5	49.5	2,049	56.8	13.5	34.3	39.2	12.9	61.4	30.1	8.5	2,860	-
PL	53.1	68.7	31.3	0.0	0.0	95.3	4.7	-	467	-	-	-	-	-	-	-	-	-	-
RO	-	-	-	-	-	-	-	-	-	49.7	19.3	51.0	27.2	2.5	100.0	0.0	0.0	1,767	-
SE	59.7	-	0.8	23.9	75.3	42.0	58.0	-	243	55.4	5.6	27.3	49.4	17.7	73.3	26.7	0.0	7,475	749
SI	52.3	34.3	60.2	5.5	0.0	68.4	28.2	3.4	440	-	-	-	-	-	-	-	-	-	-
UK	54.4	6.8	15.9	45.1	32.2	32.5	26.1	41.4	1,803	54.4	9.0	30.9	42.5	17.6	70.3	23.7	6.0	17,832	-
Overall	54.0	5.7	14.3	47.1	32.8	35.2	27.9	36.9	20,662	47.4	7.6	33.3	46.2	12.9	62.4	25.6	12.0	175,346	3,773

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Availability of BIRO EUBIROD Indicators (1)

Table 2: Availability of BIRO European Diabetes Indicators in EUBIROD diabetes registers

* Multivariate risk adjustment by Age, Gender, Age*Gender, Duration of Diabetes;**not adjusted; ***adjusted for standard EU population

◒ Only adult; ◓ Only pediatric

Section/Subsection			Ref.	Indicator	AT	BE	HR	CY	DE	HU	IE	IT	LV	LU	MT	NL	NO	PL	RO	SI	ES	SE	UK
1 DEMOGRAPHIC CHARACTERISTICS	1.1 Basic demographics		1.1.1	Age (Classes) * Gender [Adult, Pediatric]	◒	◒	●	◒	●	◒	●	●	●	●	◒	◒	●	●	●	●	◒	◒	●
2 CLINICAL CHARACTERISTICS	2.1 Diabetes status		2.1.1	Type of diabetes [Adult, Pediatric]	◒	◒	●	◒	●	◒	●	●	●	●	◒	◒	●	●	●	●	◒	◒	●
			2.1.2	Duration of diabetes (Classes) [Adult, Pediatric]	◒	◒	●	◒	●	◒	●	●	●	●	◒	◒	●	●	●	●	◒	◒	●
	2.2 Risk factors for diabetes complications	2.2.1 Obesity and Growth (most recent value in the last 12 months)	2.2.1.1	Weight (Classes and Continuous)	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
			2.2.1.2	BMI (Classes and Continuous) [Adult, Pediatric]		◒	●	◒			●	●	●			●	●	●	●		●	◒	●
			2.2.1.3	Height (Classes) [Pediatric]			◓		◓		◓	◓	◓				◓	◓	◓	◓			◓
		2.2.2 Lifestyle	2.2.2.1	Smoking status	●	●	●	●	●	●	●	●			●	●	●	●	●			●	●
		2.2.3 Clinical measurements (most recent value in the last 12 months)	2.2.3.1	Systolic Blood Pressure (Classes and Continuous)	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●
			2.2.3.2	Diastolic Blood Pressure (Classes and Continuous)	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●
			2.2.3.3	Total cholesterol (Classes and Continuous)	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●
			2.2.3.4	HDL-cholesterol (Classes and Continuous)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●
			2.2.3.5	Creatinine (Classes and Continuous)	●	●	●	●	●	●	●	●	●		●	●	●	●	●			●	●
			2.2.3.6	HbA1c (Classes and Continuous) [Adult, Pediatric]	◒	◒	●	◒	●	◒	●	●	●	●	◒	◒	●	●	●	●	◒	◒	●
	2.3 Diabetes complications		2.3.1	Retinopathy	●		●	●	●		●	●						●				●	●
			2.3.2	End stage renal failure	●	●	●	●	●			●	●		●	●		●					●
			2.3.3	Foot ulcer	●	●	●	●	●	●	●	●						●				●	●
			2.3.4	Lower extremity amputation	●	●	●	●	●	●	●	●			●		●	●				●	●
			2.3.5	Stroke	●	●	●	●	●	●		●	●		●		●	●				●	●
			2.3.6	Myocardial infarction	●	●	●	●	●	●		●	●		●							●	●
			2.3.7	Hypertension	●		●	●	●	●		●			●	●	●	●	●			●	●
3 HEALTH SYSTEM	3.1 Structure (provider level)		3.1.1	Type of provider	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
			3.1.2	Average diabetes population per Region	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	3.2 Structural quality		3.2.1	Hospital beds per 100,000 population	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
			3.2.2	Physicians employed per 100,000 population	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	3.3 Processes	3.3.1 Foot examination	3.3.1.1	Examination done	●	●	●	●	●	●	●	●			●	●	●					●	●
		3.3.2 Eye examination	3.3.2.1	Examination done	●	●	●	●	●	●	●	●			●	●	●			●		●	●
		3.3.3 Measurement done (in the last 12 months)	3.3.3.1	Blood Pressure	●	●	●	●	●	●	●	●			●	●	●	●	●	●		●	●
			3.3.3.2	Lipids	●	●	●	●	●	●	●	●			●	●	●	●	●			●	●
			3.3.3.3	Microalbumin	●	●	●	●	●		●	●				●	●	●		●			●
			3.3.3.4	HbA1c	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		3.3.4 Treatment (at least one prescription in the last 12 months)	3.3.4.1	Antihypertensive medication	●	●	●	●	●			●	●		●	●	●	●		●		●	●
			3.3.4.2	Lipid lowering treatment	●	●	●	●	●	●		●	●			●	●	●				●	
			3.3.4.3	Antiplatelet treatment	●	●		●	●	●		●					●	●				●	
			3.3.4.4.1	Glucose Lowering: Diet only	●		●	●	●		●	●	●		●							●	●
			3.3.4.4.2	Glucose Lowering: Tablets only (Oral Drug Therapy)	●		●	●	●		●	●	●		●	●							●

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Availability of BIRO EUBIROD Indicators (2)

Select table column

		3.3.4.4.3	Glucose Lowering: Insulin only	•	•	•	•	•		•	•	•		•			•		•	•		•
		3.3.4.4.4	Glucose Lowering: Insulin and tablets	•	•	•	•	•		•	•	•		•							•	•
		3.3.4.4.5	Glucose Lowering: Insulin pump	•	•	•	•	•			•	•					•		•		•	
	3.3.5 Management	3.3.5.1	Self-monitoring	•	•	•	•	•			•						•					•
		3.3.5.2	Percentage with more than one visit on record	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
4 POPULATION	**4.1 Area level**	4.1.1	Total population	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
		4.1.2	Life expectancy	•	•	•	•	•	•	•	•	•			•	•	•	•			•	
		4.1.3	Mortality	•	•	•	•	•	•	•	•	•			•	•	•	•			•	
5 RISK ADJUSTED INDICATORS*	**5.1 Epidemiology**	5.1.1	Prevalence of diabetes mellitus per 1,000	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
		5.1.2	Age at diagnosis by 10 year age bands**	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
	5.2 Process quality (in adults with diabetes in the last 12 months)	5.2.1	Percentage with one or more HbA1c tests	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
		5.2.2	Percentage with at least one test for microalbuminuria	•	•	•	•	•		•	•				•	•	•		•			•
		5.2.3	Percentage with dilated eye examination or evaluation of retinal photography by trained caregiver	•	•	•	•	•	•	•	•	•			•	•	•		•		•	•
		5.2.4	Percentage receiving at least one examination of the feet	•	•	•	•	•	•	•	•	•			•	•	•				•	•
		5.2.5	Percentage with smoking status ascertained and documented	•	•	•	•	•	•	•	•				•	•	•	•			•	•
		5.2.6	Percentage with one or more serum creatinine measurements	•	•	•	•	•	•	•	•	•			•	•	•	•			•	•
		5.2.7	Percentage with one or more valid blood pressure measurements	•	•	•	•	•	•	•	•	•			•	•	•	•	•		•	•
		5.2.8	Percentage with hypertension who receive antihypertensive medication	•		•	•	•			•					•	•				•	•
		5.2.9.1	Percentage with oral therapy: Sulphonylureas	•	•	•	•	•	•		•										•	•
		5.2.9.2	Percentage with oral therapy: Biguanides	•	•	•	•	•	•		•										•	•
		5.2.9.3	Percentage with oral therapy: Glucoxidase	•		•	•	•	•		•										•	
		5.2.9.4	Percentage with oral therapy: Glitazones		•	•	•		•		•										•	
		5.2.9.5	Percentage with oral therapy: Glinides			•	•		•		•										•	
		5.2.10	Percentage treated with insulin	•	•	•	•	•		•	•	•			•		•		•		•	•
		5.2.11	Percentage treated with insulin and OADs	•	•	•	•	•		•	•	•			•		•		•		•	•
		5.2.12	Percentage treated with insulin pump therapy	•	•	•	•	•			•	•					•		•		•	
		5.2.13	Percentage with anti hypertensive treatment	•		•	•	•			•				•	•	•				•	•
		5.2.14	Percentage with lipid lowering treatment	•	•	•	•	•	•		•	•			•	•	•				•	
		5.2.15	Percentage with anti platelet treatment	•	•		•	•	•		•					•	•				•	
		5.2.16	Percentage performing self-monitoring of blood glucose	•	•	•	•	•			•						•					•
	5.3 Outcome Quality: Intermediate outcomes (in adults with diabetes in the last 12 months)	5.3.1	Percentage with most recent HbA1c level >9.0%	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
		5.3.2	Percentage with most recent HbA1c level >7.5%	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
		5.3.3	Percentage with most recent blood pressure less than 140/90 mmHg	•	•	•	•	•	•	•	•	•			•	•	•	•	•		•	•
		5.3.4	Percentage with most recent BMI > 30		•	•	•			•	•	•			•	•	•	•		•	•	•
		5.3.5	Percentage with abnormal microalbuminuria (among those tested)	•	•	•	•	•		•	•				•	•	•		•			•
		5.3.6	Rates of current smokers	•	•	•	•	•	•	•	•				•	•	•	•			•	•
		5.3.7	Rates of foot ulceration	•	•	•	•	•	•	•	•	•					•				•	•
	5.4 Outcome Quality: Terminal Outcomes (in the last 12 months)	5.4.1	Annual incidence of dialysis and/or transplant in adults with diabetes				•								•		•					•
		5.4.2	End stage renal failure in adults with diabetes	•	•	•	•	•			•	•			•		•					•
		5.4.3	Annual death rate per 100,000 in the general population, for all causes and for those having diabetes as primary/secondary cause of death***																			

Risk Adjusted Diabetes Indicators in EUBIROD registers: multivariate odds ratios and distribution of adjusted values* for diabetes type 1

Table 6a. Risk Adjusted Diabetes Indicators in EUBIROD registers: multivariate odds ratios and distribution of adjusted values* for diabetes type 1
*odds ratios for age, age*sex and duration of diabetes computed as association between a unit change in ordinal categories and the outcome of interest

Section	Indicator	Type 1								
		O.R. (95% C.I.)				Observed	N	Overall Rate	Adjusted Rate Median (25%-75%)	
		Males	Age	Age*Sex	Duration of Diabetes					
ANNUAL EXAMINATIONS/ MEASUREMENTS	HbA1c	1.05 (0.80-1.39)	0.98 (0.94-1.02)	1.00 (0.94-1.06)	1.22 (1.15-1.29)	16,886	18,789	89.9	**89.3**	(88.5-98.6)
	Microalbuminuria	0.95 (0.79-1.14)	1.05 (1.02-1.09)	1.00 (0.97-1.05)	1.12 (1.06-1.17)	7,809	12,625	61.9	**58.8**	(54.6-85.3)
	Dilated eye, retinal photography	1.14 (0.94-1.39)	1.09 (1.05-1.12)	1.01 (0.97-1.05)	0.96 (0.92-1.00)	9,461	15,213	62.2	**68.9**	(53.7-82.6)
	Foot	0.98 (0.80-1.20)	1.20 (1.17-1.24)	1.02 (0.97-1.06)	0.84 (0.80-0.87)	8,770	14,298	61.3	**76.0**	(57.0-84.5)
	Smoking status ascertainment	0.80 (0.65-0.98)	1.16 (1.12-1.20)	0.98 (0.94-1.02)	0.83 (0.79-0.87)	10,248	15,310	66.9	**86.1**	(72.5-91.0)
	Serum creatinine	0.96 (0.75-1.22)	1.23 (1.18-1.28)	1.02 (0.97-1.08)	0.96 (0.91-1.02)	12,292	14,893	82.5	**78.1**	(74.4-89.6)
	Blood pressure	0.96 (0.76-1.22)	1.12 (1.08-1.16)	1.00 (0.95-1.05)	1.02 (0.96-1.07)	15,780	18,624	84.7	**86.6**	(73.7-96.3)
TREATMENTS	Antihypertensive in hypertension	1.06 (0.34-3.34)	1.89 (1.60-2.24)	1.08 (0.85-1.37)	1.62 (1.34-1.97)	1,136	1,358	83.7	**97.3**	(94.5-98.8)
	Sulphonylureas	0.80 (0.10-5.91)	2.30 (1.61-3.29)	0.96 (0.58-1.56)	0.28 (0.19-0.40)	63	7,256	0.9	**0.2**	(0.2-0.5)
	Biguanides	1.50 (0.80-2.82)	1.44 (1.29-1.61)	1.05 (0.89-1.24)	0.75 (0.68-0.83)	680	9,686	7.0	**5.4**	(4.4-5.8)
	Glucoxidase	0.44 (0.00-720.79)	0.77 (0.17- 2.50)	0.64 (0.06- 5.77)	0.78 (0.22- 2.51)	5	2,339	0.2	**0.2**	(0.0-0.4)
	Glitazones	0.02 (0.00- 26.26)	2.78 (0.69- 12.92)	0.36 (0.04- 2.36)	0.59 (0.17- 1.86)	5	4,734	0.1	**0.0**	(0.0-0.2)
	Glinides	0.38 (0.02-5.73)	2.91 (1.81-4.73)	0.80 (0.42-1.54)	0.48 (0.31-0.71)	39	3,662	1.1	**0.6**	(0.4-0.7)
	Insulin	0.80 (0.46- 1.40)	0.67 (0.62- 0.72)	0.94 (0.85- 1.04)	1.99 (1.79- 2.21)	13,017	13,626	95.5	**98.8**	(97.7-100.0)
	Insulin + Oral Anti Diabetic Drugs	1.35 (0.74-2.45)	1.34 (1.24-1.44)	0.99 (0.88-1.10)	0.75 (0.67-0.84)	480	10,187	4.7	**3.0**	(0.6-4.7)
	Insulin pump therapy	1.46 (0.86-2.47)	0.50 (0.45-0.55)	0.94 (0.81-1.09)	1.62 (1.43-1.84)	526	10,253	5.1	**6.9**	(1.2-9.7)
	Antihypertensive	0.49 (0.32-0.74)	2.11 (1.99-2.24)	0.91 (0.84-0.98)	1.45 (1.36-1.56)	2,559	7,932	32.3	**30.8**	(28.6-37.7)
	Lipid lowering	0.76 (0.55-1.04)	1.75 (1.68-1.83)	0.99 (0.93-1.05)	1.22 (1.15-1.29)	3,288	12,370	26.6	**24.2**	(17.8-28.6)
	Anti platelet	0.74 (0.45-1.20)	2.25 (2.12-2.40)	1.01 (0.92-1.10)	1.24 (1.15-1.33)	1,998	9,594	20.8	**11.0**	(8.6-17.0)
INTERMEDIATE OUTCOMES	HbA1c>9.0%	0.78 (0.62-0.97)	0.90 (0.87-0.94)	0.93 (0.89-0.98)	0.94 (0.89-0.99)	3,397	16,812	20.2	**17.1**	(13.8-23.0)
	HbA1c>7,5%	0.84 (0.70-1.01)	0.95 (0.92-0.97)	0.93 (0.90-0.97)	1.21 (1.16-1.26)	10,124	16,812	60.2	**61.4**	(53.3-67.6)
	Blood pressure≥140/90 mmHg	0.40 (0.30-0.54)	1.54 (1.48-1.60)	0.87 (0.83-0.92)	1.12 (1.06-1.18)	3,056	15,720	19.4	**16.5**	(14.2-18.1)
	BMI > 30	0.96 (0.71-1.30)	1.27 (1.22-1.32)	0.95 (0.89-1.01)	0.97 (0.91-1.03)	2,060	13,169	15.6	**13.3**	(10.7-15.7)
	Microalbuminuria Abnormal	0.84 (0.52-1.34)	1.08 (1.00- 1.16)	0.92 (0.84- 1.02)	0.70 (0.63- 0.77)	6,288	7,067	89.0	**88.3**	(83.5-96.7)
	Current smokers	0.94 (0.71-1.25)	0.87 (0.83-0.91)	1.05 (0.99-1.12)	0.83 (0.78-0.88)	2,308	10,200	22.6	**20.6**	(19.2-27.6)
	Foot ulceration	1.09 (0.38-3.09)	1.60 (1.41-1.83)	1.09 (0.92-1.29)	1.72 (1.43-2.09)	256	12,679	2.0	**2.1**	(0.6-2.3)
TERMINAL OUTCOMES	Dialysis and/or transplant in adults	0.21 (0.00-7.35)	1.04 (0.56- 1.90)	0.83 (0.40- 1.73)	4.01 (1.53-16.07)	17	2,173	0.8	**1.7**	(1.1-2.3)
	End stage renal failure in adults	1.09 (0.30-3.89)	1.18 (0.99-1.40)	1.10 (0.88-1.38)	2.54 (1.92-3.43)	141	8,683	1.6	**1.5**	(0.9-1.9)

Diabetes Complications in the EUBIROD Report for all types of diabetes

Table 4. Diabetes Complications in the EUBIROD Report for all types of diabetes
****Univariate Odds Ratio of a category falling into the highest class of risk factor, against the reference category (r.c.),**

Complications	Duration of Diabetes								Overall %	N
	<10		10-20		≥20		O.R. [10-20]* (95%C.I)	O.R [≥20]* (95%C.I)		
	N	%	N	%	N	%				
Retinopathy	**37,755**	**57.2**	**18,118**	**27.4**	**10,135**	**15.4**			**33.0**	**66,008**
No	37,486	99.3	17,617	97.2	9,568	94.4			98.0	64,671
Yes	269	0.7	501	2.8	567	5.6	3.96 (3.81-4.11)	8.26 (8.11-8.40)	2.0	1,337
End stage renal failure	**70,919**	**63.8**	**26,795**	**24.1**	**13,372**	**12**			**55.6**	**111,086**
No	70,424	99.3	26,352	98.3	12,774	95.5			98.6	109,550
Yes	495	0.7	443	1.7	598	4.5	2.39 (2.26-2.52)	6.66 (6.54-6.78)	1.4	1,536
Foot ulcer	**86,321**	**60.4**	**36,210**	**25.3**	**20,350**	**14.2**			**71.5**	**142,881**
No	85,386	98.9	35,252	97.4	19,438	95.5			98.0	140,076
Yes	935	1.1	958	2.6	912	4.5	2.48 (2.39-2.57)	4.28 (4.19-4.38)	2.0	2,805
Lower extremity amputation	**98,400**	**59.8**	**42,430**	**25.8**	**23,667**	**14.4**			**82.3**	**164,497**
No	97,966	99.6	41,954	98.9	23,164	97.9			99.1	163,084
Yes	434	0.4	476	1.1	503	2.1	2.56 (2.43-2.69)	4.90 (4.77-5.03)	0.9	1,413
Stroke	**93,933**	**60.0**	**39,911**	**25.5**	**22,638**	**14.5**			**78.3**	**156,482**
No	91,335	97.2	38,272	95.9	21,538	95.1			96.6	151,145
Yes	2,598	2.8	1,639	4.1	1,100	4.9	1.51 (1.44-1.57)	1.80 (1.72-1.87)	3.4	5,337
Myocardial infarction	**96,121**	**60.0**	**41,187**	**25.7**	**22,773**	**14.2**			**80.1**	**160,081**
No	92,770	96.5	38,891	94.4	21,254	93.3			95.5	152,915
Yes	3,351	3.5	2,296	5.6	1,519	6.7	1.63 (1.58-1.69)	1.98 (1.92-2.04)	4.5	7,166
Hypertension	**62,867**	**56.9**	**30,444**	**27.6**	**17,095**	**15.5**			**55.3**	**110,406**
No	38,627	61.4	17,525	57.6	11,030	64.5			60.8	67,182
Yes	24,240	38.6	12,919	42.4	6,065	35.5	1.17 (1.15-1.20)	0.88 (0.84-0.91)	39.2	43,224

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