EUBIROD

EUropean Best Information through Regional Outcomes in Diabetes

Materials, Methods and Data Analysis of Diabetes Registers

The Diabetes Register of AMNCH Dublin, Ireland

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Special BIRO Academy Meeting
"Coordinated Information Delivery from Diabetes Registers to improve quality and outcomes in Europe"
Rome 4-5th June 2010

Directorate-General for Health & Consumers

Executive Agency for Health and Consumers

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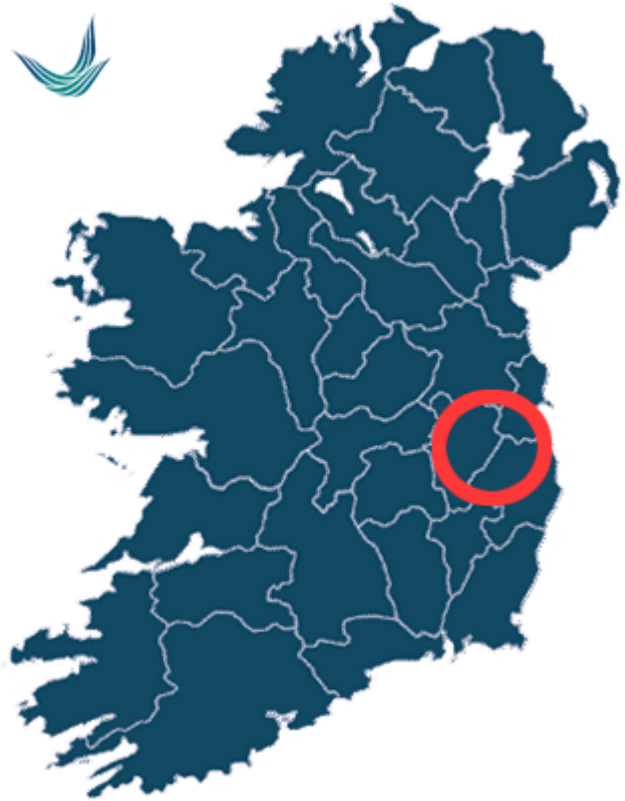
Reference Population



Country: Ireland
Region: Tallaght (Dublin South West)
Estimated Population: 123,500
Diabetes Prevalence: 5%*

Type I	0.4%
Type II	4.6%

Type of Data Source: Diabetes Clinic

Participating Centre: AMNCH

* Making Diabetes Count – What does the future hold? – INIsPHO / IPH 2007

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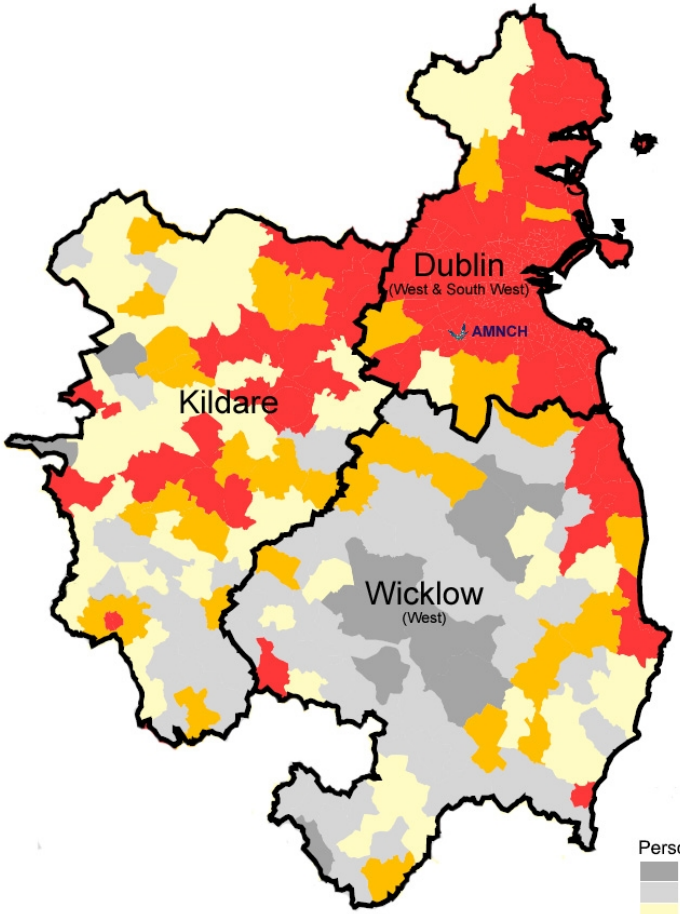
Reference Diabetes Data



Year: 2008
Region: Tallaght (Dublin South West)

Total N. Subjects: ~4000 (incl. paediatrics)
Total N. Episodes: 8650 clinical / 32450 lab

T1: 19%
T2: 80%
Other: 1%

6500 active patients in register
~700 new patients every year

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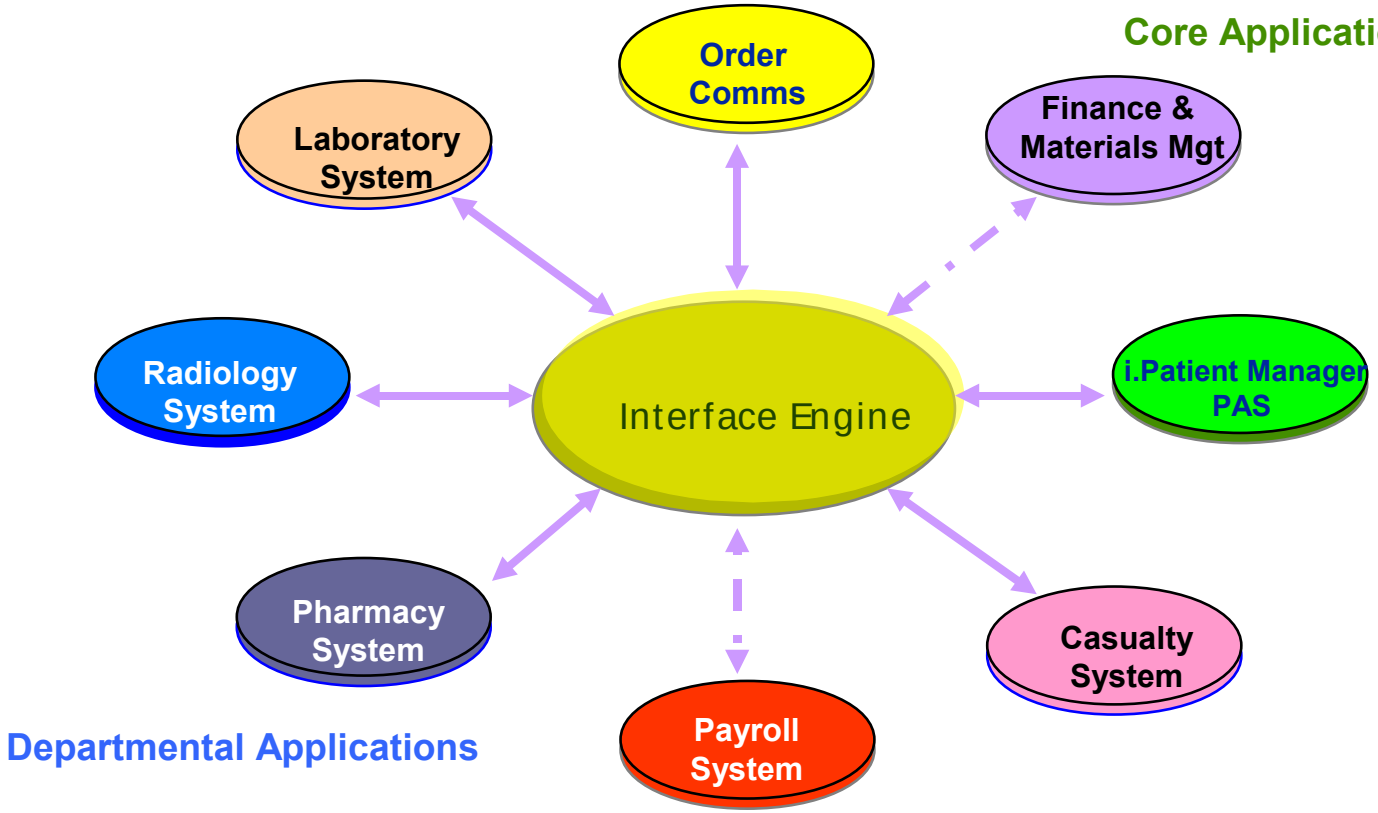
Local Systems Structure: IT



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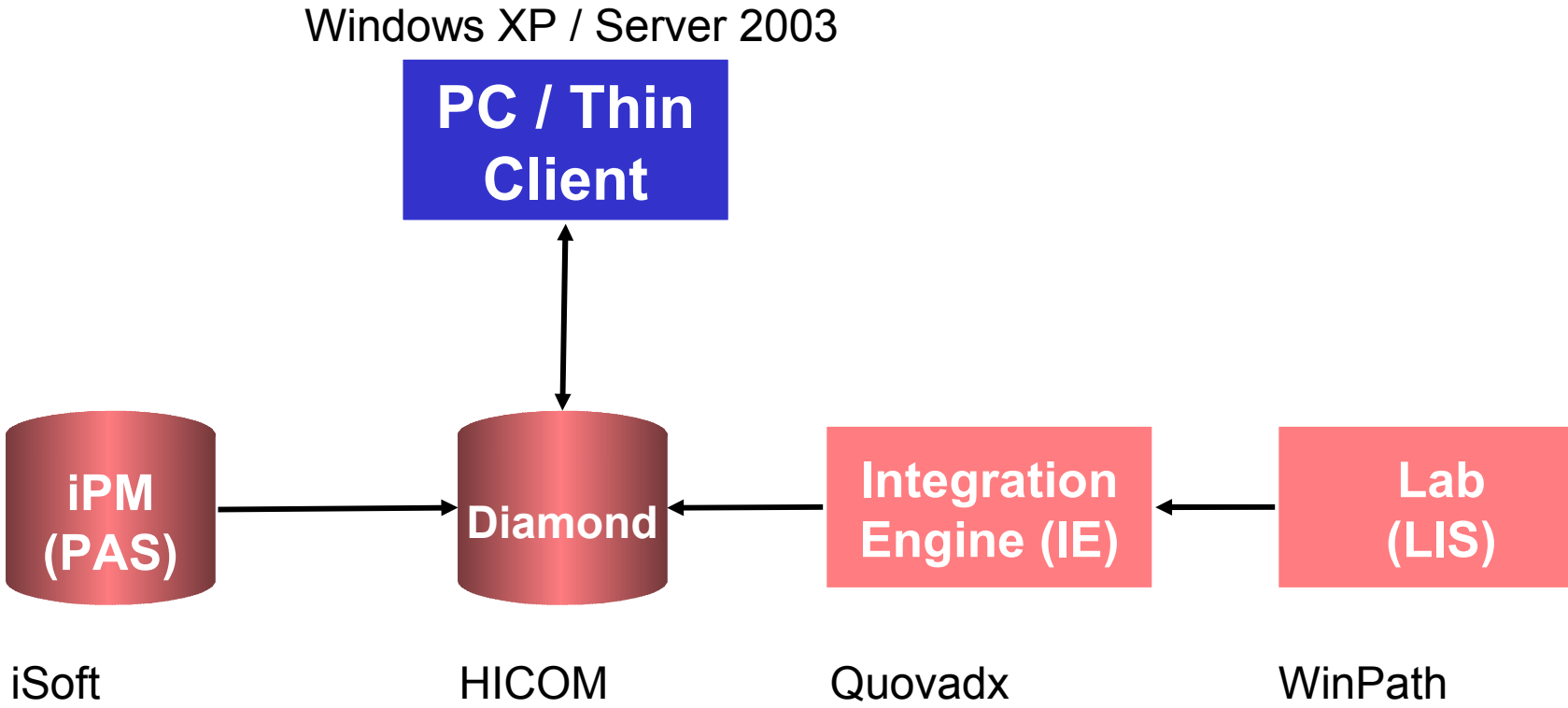
Diamond Diabetes Database



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Data Manipulation

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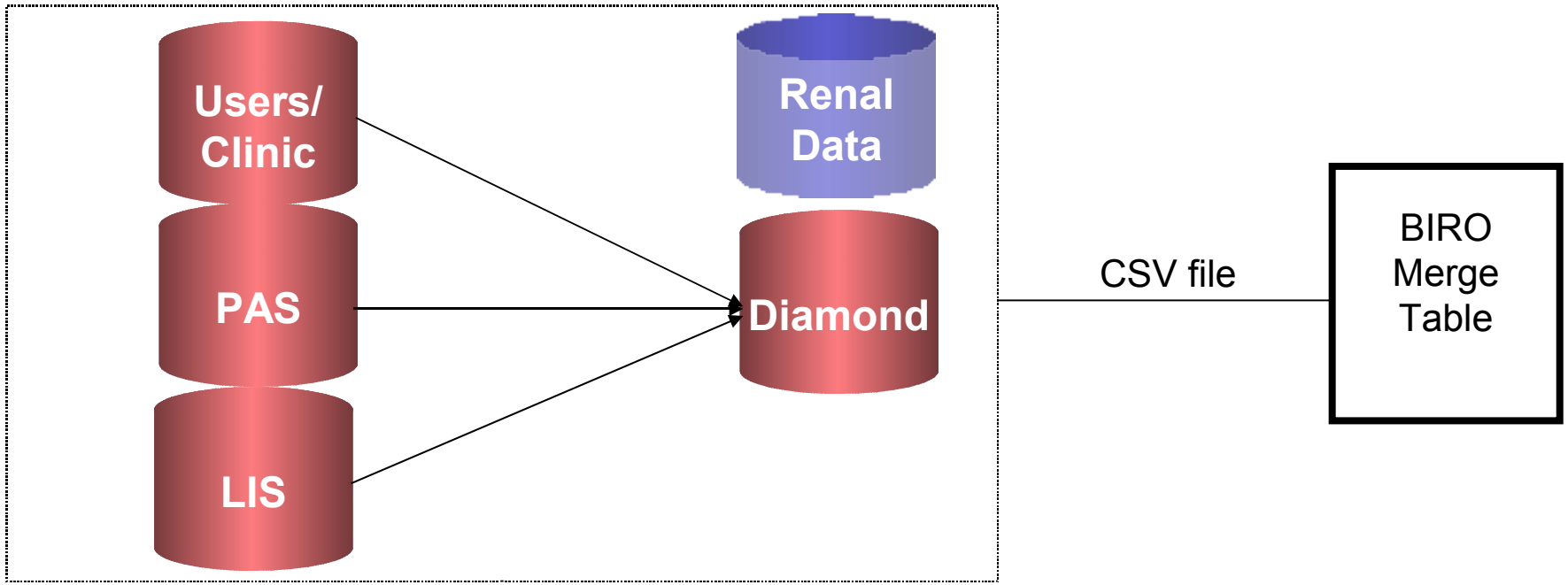
Local Database Structure and the BIRO Merge Table



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Merge Table Contents

Patient ID
Data Source ID
Type Of Diabetes
Sex
Date of Birth
Date of Diagnosis
Episode Date
Smoking Status
Cigarettes per day
Alcohol Intake
Weight
Height
Body Mass Index
Systolic Blood Pressure
Diastolic Blood Pressure
HbA1c
Creatinine
Microalbumin

Total Cholesterol
HDL
Triglycerides
Eye Examination
Retinopathy Status
Maculopathy Status
Foot Examination
Foot Pulses
Foot Sensation
Nasal Therapy
Average Injections
Self Monitoring
Diabetes Specific Education
Lipid Lowering Therapy
Anti-platelet Therapy
Patient Enrolment in DMP

End Stage Renal Therapy
Renal Dialysis
Renal Transplant
Stroke
Active Foot Ulcer
Myocardial Infarction
Laser
Hypertension
Blindness
Amputation
Antihypertensive Medication
Hypoglycemic Drug Therapy
Oral Drug Therapy
Pump Therapy

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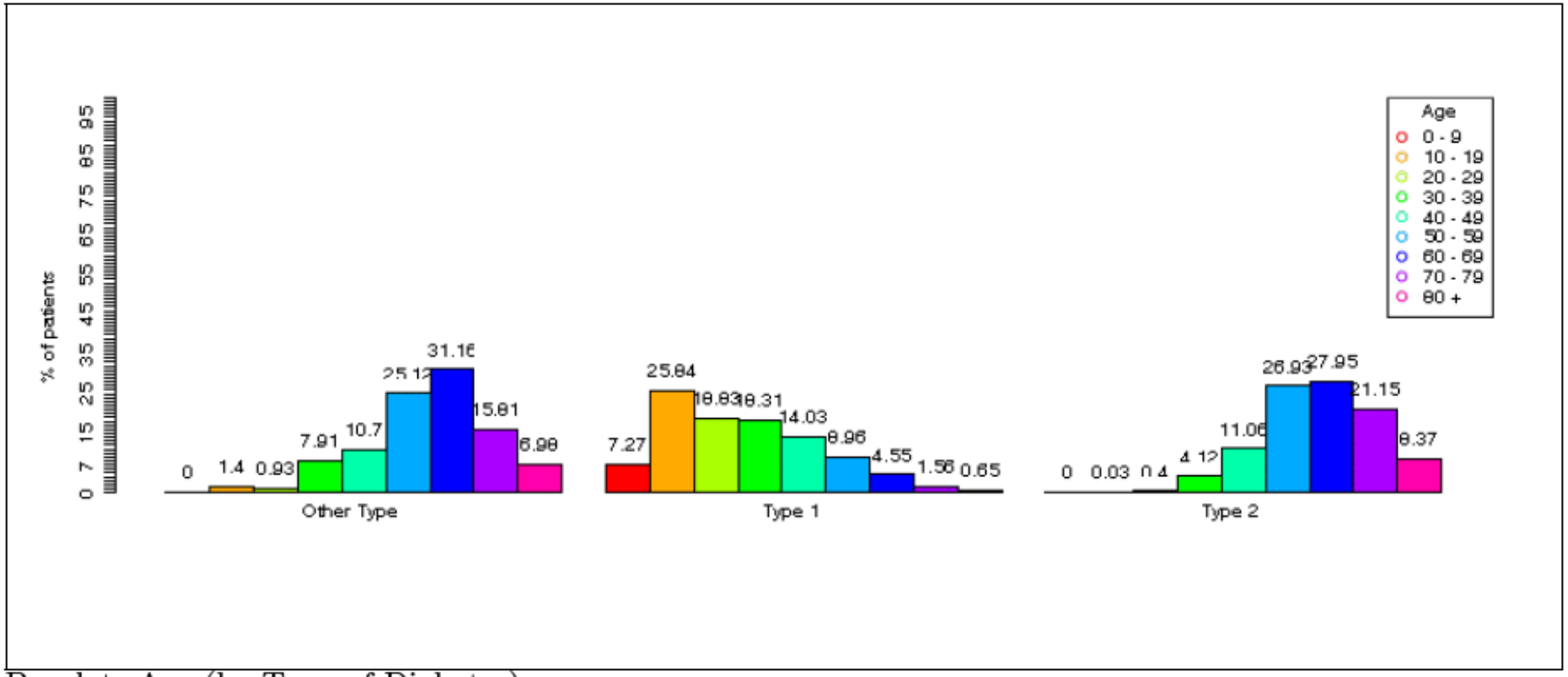
Sample Report: Age (by type of Diabetes)



Barplot: Age (by Type of Diabetes)

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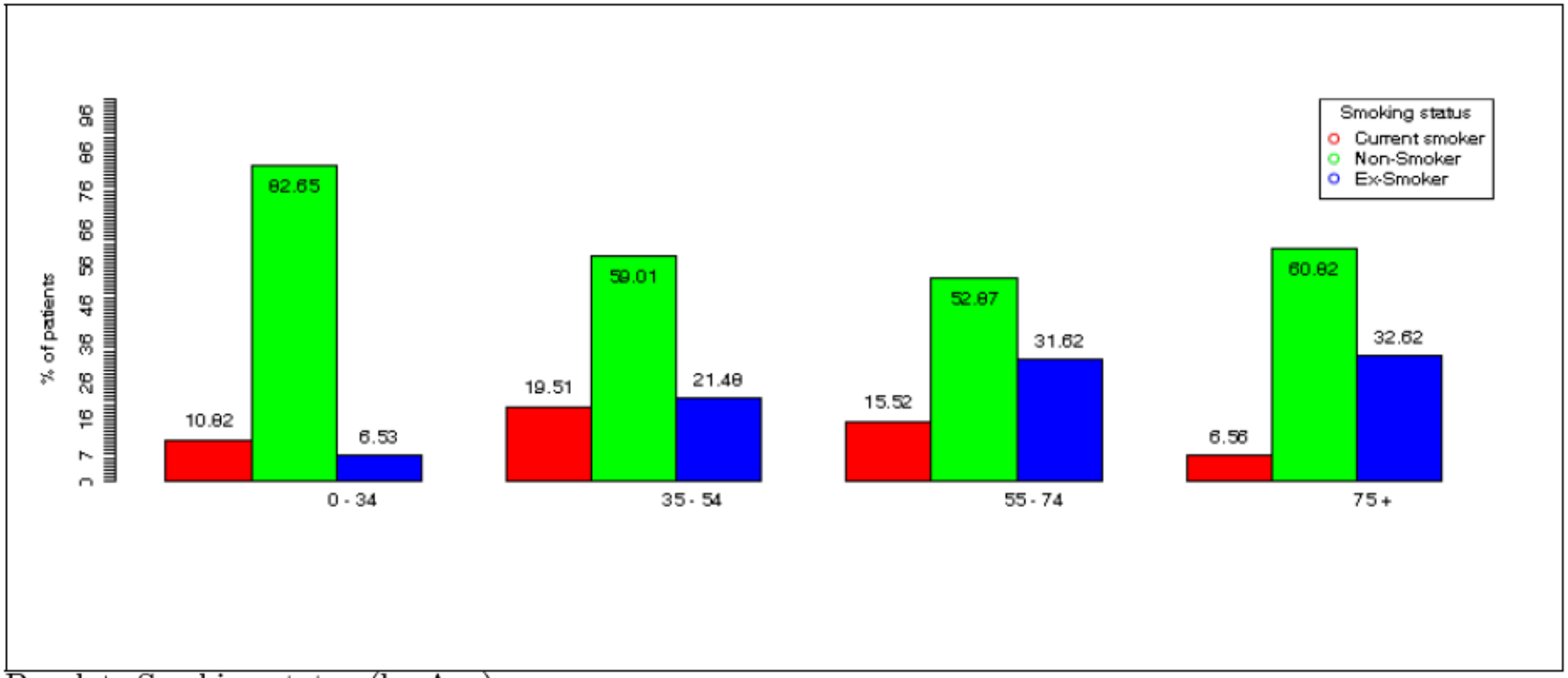
Sample Report: Smoking Status (by Age)



Barplot: Smoking status (by Age)

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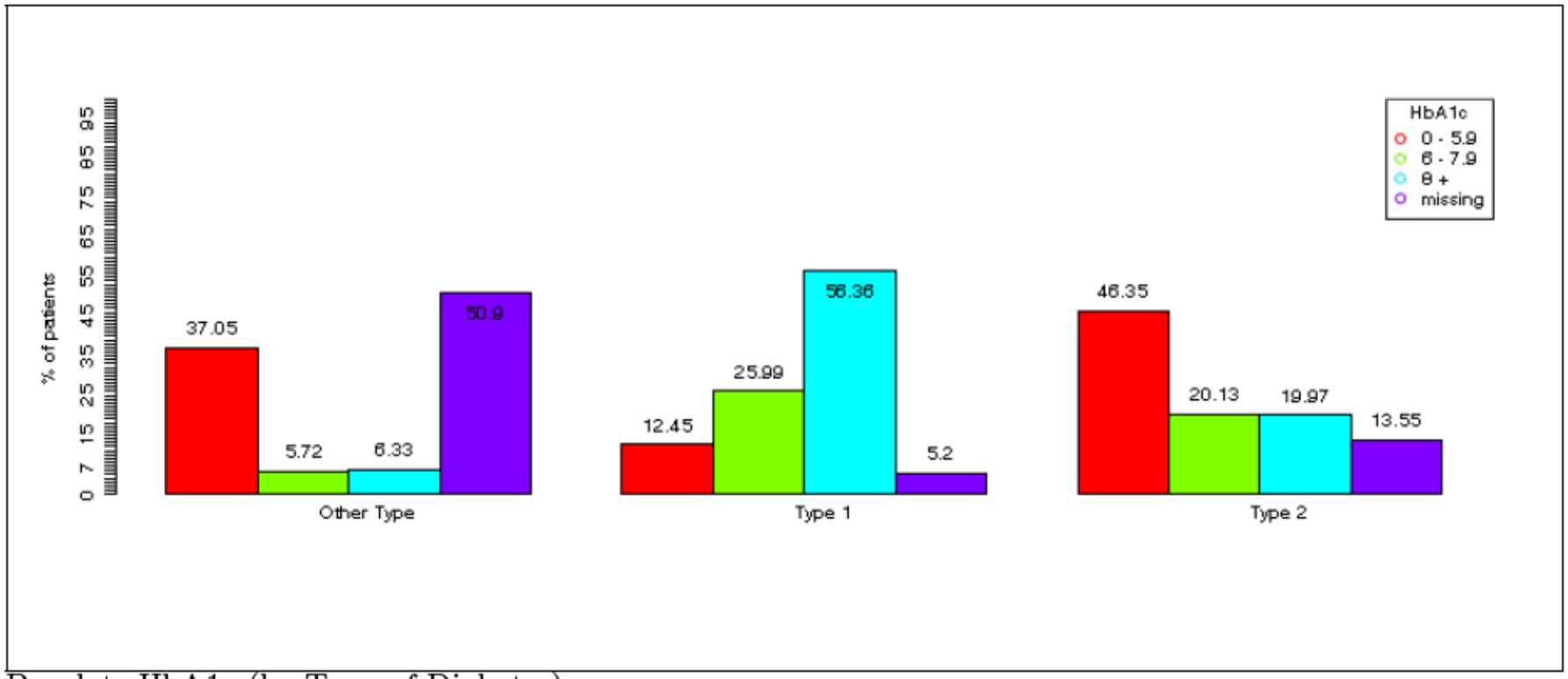
Sample Report: HbA1c (by Type of Diabetes)



Barplot: HbA1c (by Type of Diabetes)

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Sample Results: Lipids (measured in last 12 months)

Lipids	Other Type					
	0 - 34 (%)	35 - 54 (%)	55 - 74 (%)	75 + (%)		
Yes	8 (50)	51 (67.11)	133 (70.37)	32 (62.75)		224
No	8 (50)	25 (32.89)	56 (29.63)	19 (37.25)		108
	16 (4.82)	76 (22.89)	189 (56.93)	51 (15.36)		332

Lipids	Type 1					
	0 - 34 (%)	35 - 54 (%)	55 - 74 (%)	75 + (%)		
Yes	229 (52.4)	143 (72.59)	69 (82.14)	7 (53.85)		448
No	208 (47.6)	54 (27.41)	15 (17.86)	6 (46.15)		283
	437 (59.78)	197 (26.95)	84 (11.49)	13 (1.78)		731

Lipids	Type 2					
	0 - 34 (%)	35 - 54 (%)	55 - 74 (%)	75 + (%)		
Yes	24 (57.14)	566 (77.43)	1466 (80.51)	390 (67.36)		2446
No	18 (42.86)	165 (22.57)	355 (19.49)	189 (32.64)		727
	42 (1.32)	731 (23.04)	1821 (57.39)	579 (18.25)		3173

Lipids (by Age,Type of Diabetes)

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Using BIRO

- Problems/Weaknesses
  - Translating local values into something usable
  - Local data quality ('missing')

- Strengths
  - Setup / Installation
  - Ease of use
  - Support

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Future LOCAL Perspectives

- Review of patient problem lists
  - e.g. Stroke, MI, Hypertension
  - Rationalisation of problem list
  - ICD 10 Coded for audit purposes

- Setting up of DSIG (Diabetes Service Implementation Group)
  - Increased cooperation with GP services for Type2 patient care
  - New care model, data collection issues

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Future BIRO Perspectives

- Investigate the possibility of importing 2 or more data files/sources into one database
  - data combined into single report
  - e.g. clinical and lab data

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Thank you for your attention!